

MBS CocoaControls Plugin Documentation

Christian Schmitz

July 16, 2017

0.1 Introduction

This is the PDF version of the documentation for the Xojo (Real Studio) Plug-in from Monkeybread Software Germany. Plugin part: MBS CocoaControls Plugin

0.2 Content

• 1 List of all topics	3
• 2 List of all classes	137
• 3 List of all controls	147
• 4 List of all global methods	149
• 5 All items in this plugin	151
• 17 List of Questions in the FAQ	1283
• 18 The FAQ	1293

Chapter 1

List of Topics

- 6 Cocoa Controls 189
 - 8.1.1 class Bevelbutton 587
 - * 8.1.3 NSButtonMBS as NSButtonMBS 587

• 6 Cocoa Controls	189
– 8.2.1 class Checkbox	588
* 8.2.3 NSButtonMBS as NSButtonMBS	588
– 6.1.1 class ComboBox	189
* 6.1.3 NSComboBoxMBS as NSComboBoxMBS	189
– 6.2.1 class CustomNSScrollerMBS	190
* 6.2.3 Constructor	190
* 6.2.4 Constructor(Handle as Integer)	190
* 6.2.5 Constructor(left as Double, top as Double, width as Double, height as Double)	190
* 6.2.6 Destructor	191
* 6.2.8 acceptsFirstMouse(e as NSEventMBS) as boolean	191
* 6.2.9 acceptsFirstResponder as boolean	191
* 6.2.10 becomeFirstResponder as boolean	191
* 6.2.11 beginGestureWithEvent(e as NSEventMBS) as boolean	191
* 6.2.12 canBecomeKeyView as boolean	192
* 6.2.13 Close	192
* 6.2.14 concludeDragOperation(sender as NSDraggingInfoMBS)	192
* 6.2.15 draggingEnded(sender as NSDraggingInfoMBS)	193
* 6.2.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer	193
* 6.2.17 draggingExited(sender as NSDraggingInfoMBS)	193
* 6.2.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)	194
* 6.2.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	194
* 6.2.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	194
* 6.2.21 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	195
* 6.2.22 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	195
* 6.2.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	196
* 6.2.24 drawArrow(g as NSGraphicsMBS, Arrow as Integer, highlight as boolean)	196
* 6.2.25 drawKnob(g as NSGraphicsMBS)	197
* 6.2.26 drawKnobSlotInRect(g as NSGraphicsMBS, slotRect as NSRectMBS, highlight as boolean)	197
* 6.2.27 drawParts(g as NSGraphicsMBS)	197
* 6.2.28 endGestureWithEvent(e as NSEventMBS) as boolean	197
* 6.2.29 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	197
* 6.2.30 isOpaque as boolean	198
* 6.2.31 keyDown(e as NSEventMBS) as boolean	198
* 6.2.32 keyUp(e as NSEventMBS) as boolean	198

* 6.2.33	magnifyWithEvent(e as NSEventMBS) as boolean	198
* 6.2.34	menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS) as NSMenuMBS	198
* 6.2.35	mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	199
* 6.2.36	mouseDownCanMoveWindow as boolean	199
* 6.2.37	mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	199
* 6.2.38	mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	199
* 6.2.39	mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	200
* 6.2.40	mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	200
* 6.2.41	mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	200
* 6.2.42	Open	200
* 6.2.43	otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	200
* 6.2.44	otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	200
* 6.2.45	otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	201
* 6.2.46	performDragOperation(sender as NSDraggingInfoMBS) as boolean	201
* 6.2.47	prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	201
* 6.2.48	pressureChange(e as NSEventMBS) as boolean	202
* 6.2.49	resignFirstResponder as boolean	202
* 6.2.50	rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	202
* 6.2.51	rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	202
* 6.2.52	rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	202
* 6.2.53	rotateWithEvent(e as NSEventMBS) as boolean	203
* 6.2.54	scrollWheel(e as NSEventMBS) as boolean	203
* 6.2.55	swipeWithEvent(e as NSEventMBS) as boolean	203
* 6.2.56	updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	203
* 6.2.57	viewDidMoveToWindow	204
* 6.2.58	wantsPeriodicDraggingUpdates as boolean	204
– 6.3.1	class CustomNSSearchFieldMBS	205
* 6.3.3	Constructor	205
* 6.3.4	Constructor(Handle as Integer)	205
* 6.3.5	Constructor(left as Double, top as Double, width as Double, height as Double)	205
* 6.3.6	Destructor	206
* 6.3.8	acceptsFirstMouse(e as NSEventMBS) as boolean	206
* 6.3.9	acceptsFirstResponder as boolean	206
* 6.3.10	becomeFirstResponder as boolean	206
* 6.3.11	beginGestureWithEvent(e as NSEventMBS) as boolean	206
* 6.3.12	canBecomeKeyView as boolean	207
* 6.3.13	Close	207
* 6.3.14	concludeDragOperation(sender as NSDraggingInfoMBS)	207
* 6.3.15	draggingEnded(sender as NSDraggingInfoMBS)	208
* 6.3.16	draggingEntered(sender as NSDraggingInfoMBS) as Integer	208
* 6.3.17	draggingExited(sender as NSDraggingInfoMBS)	208

* 6.3.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)	209
* 6.3.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	209
* 6.3.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	209
* 6.3.21 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	210
* 6.3.22 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	210
* 6.3.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	211
* 6.3.24 endGestureWithEvent(e as NSEventMBS) as boolean	211
* 6.3.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	212
* 6.3.26 isOpaque as boolean	212
* 6.3.27 keyDown(e as NSEventMBS) as boolean	212
* 6.3.28 keyUp(e as NSEventMBS) as boolean	212
* 6.3.29 magnifyWithEvent(e as NSEventMBS) as boolean	213
* 6.3.30 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuItemMBS) as NSMenuItemMBS	213
* 6.3.31 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	213
* 6.3.32 mouseDownCanMoveWindow as boolean	213
* 6.3.33 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	214
* 6.3.34 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	214
* 6.3.35 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	214
* 6.3.36 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	214
* 6.3.37 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	214
* 6.3.38 Open	215
* 6.3.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	215
* 6.3.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	215
* 6.3.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	215
* 6.3.42 performDragOperation(sender as NSDraggingInfoMBS) as boolean	215
* 6.3.43 prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	216
* 6.3.44 pressureChange(e as NSEventMBS) as boolean	216
* 6.3.45 resignFirstResponder as boolean	216
* 6.3.46 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	217
* 6.3.47 rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	217
* 6.3.48 rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	217
* 6.3.49 rotateWithEvent(e as NSEventMBS) as boolean	217
* 6.3.50 scrollWheel(e as NSEventMBS) as boolean	217
* 6.3.51 swipeWithEvent(e as NSEventMBS) as boolean	218
* 6.3.52 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	218
* 6.3.53 viewDidMoveToWindow	218
* 6.3.54 wantsPeriodicDraggingUpdates as boolean	219

– 6.4.1 class CustomNSTextFieldMBS	220
* 6.4.3 Constructor	220
* 6.4.4 Constructor(Handle as Integer)	220
* 6.4.5 Constructor(left as Double, top as Double, width as Double, height as Double)	220
* 6.4.6 Destructor	221
* 6.4.8 acceptsFirstMouse(e as NSEventMBS) as boolean	221
* 6.4.9 acceptsFirstResponder as boolean	221
* 6.4.10 becomeFirstResponder as boolean	221
* 6.4.11 beginGestureWithEvent(e as NSEventMBS) as boolean	221
* 6.4.12 canBecomeKeyView as boolean	222
* 6.4.13 Close	222
* 6.4.14 concludeDragOperation(sender as NSDraggingInfoMBS)	222
* 6.4.15 draggingEnded(sender as NSDraggingInfoMBS)	223
* 6.4.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer	223
* 6.4.17 draggingExited(sender as NSDraggingInfoMBS)	223
* 6.4.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NS-PointMBS, operation as Integer)	224
* 6.4.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NS-PointMBS)	224
* 6.4.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	224
* 6.4.21 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	225
* 6.4.22 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	225
* 6.4.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	226
* 6.4.24 endGestureWithEvent(e as NSEventMBS) as boolean	226
* 6.4.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	227
* 6.4.26 isOpaque as boolean	227
* 6.4.27 keyDown(e as NSEventMBS) as boolean	227
* 6.4.28 keyUp(e as NSEventMBS) as boolean	227
* 6.4.29 magnifyWithEvent(e as NSEventMBS) as boolean	228
* 6.4.30 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS) as NSMenuMBS	228
* 6.4.31 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	228
* 6.4.32 mouseDownCanMoveWindow as boolean	228
* 6.4.33 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	229
* 6.4.34 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	229
* 6.4.35 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	229
* 6.4.36 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	229
* 6.4.37 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	229
* 6.4.38 Open	230
* 6.4.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	230

* 6.4.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	230
* 6.4.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	230
* 6.4.42 performDragOperation(sender as NSDraggingInfoMBS) as boolean	230
* 6.4.43 prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	231
* 6.4.44 pressureChange(e as NSEventMBS) as boolean	231
* 6.4.45 resignFirstResponder as boolean	231
* 6.4.46 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	232
* 6.4.47 rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	232
* 6.4.48 rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	232
* 6.4.49 rotateWithEvent(e as NSEventMBS) as boolean	232
* 6.4.50 scrollWheel(e as NSEventMBS) as boolean	232
* 6.4.51 swipeWithEvent(e as NSEventMBS) as boolean	233
* 6.4.52 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	233
* 6.4.53 viewDidMoveToWindow	233
* 6.4.54 wantsPeriodicDraggingUpdates as boolean	234
– 6.5.1 class CustomNSTextViewMBS	235
* 6.5.3 Constructor	235
* 6.5.4 Constructor(Handle as Integer)	235
* 6.5.5 Constructor(left as Double, top as Double, width as Double, height as Double)	235
* 6.5.6 Destructor	236
* 6.5.8 acceptsFirstMouse(e as NSEventMBS) as boolean	236
* 6.5.9 acceptsFirstResponder as boolean	236
* 6.5.10 becomeFirstResponder as boolean	236
* 6.5.11 beginGestureWithEvent(e as NSEventMBS) as boolean	236
* 6.5.12 canBecomeKeyView as boolean	237
* 6.5.13 Close	237
* 6.5.14 concludeDragOperation(sender as NSDraggingInfoMBS)	237
* 6.5.15 draggingEnded(sender as NSDraggingInfoMBS)	238
* 6.5.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer	238
* 6.5.17 draggingExited(sender as NSDraggingInfoMBS)	238
* 6.5.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NS-PointMBS, operation as Integer)	239
* 6.5.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NS-PointMBS)	239
* 6.5.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	239
* 6.5.21 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	240
* 6.5.22 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	240
* 6.5.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	241
* 6.5.24 endGestureWithEvent(e as NSEventMBS) as boolean	241

* 6.5.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	242
* 6.5.26 isOpaque as boolean	242
* 6.5.27 keyDown(e as NSEventMBS) as boolean	242
* 6.5.28 keyUp(e as NSEventMBS) as boolean	242
* 6.5.29 magnifyWithEvent(e as NSEventMBS) as boolean	243
* 6.5.30 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuItemMBS) as NSMenuItemMBS	243
* 6.5.31 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	243
* 6.5.32 mouseDownCanMoveWindow as boolean	243
* 6.5.33 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	244
* 6.5.34 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	244
* 6.5.35 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	244
* 6.5.36 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	244
* 6.5.37 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	244
* 6.5.38 Open	245
* 6.5.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	245
* 6.5.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	245
* 6.5.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	245
* 6.5.42 performDragOperation(sender as NSDraggingInfoMBS) as boolean	245
* 6.5.43 prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	246
* 6.5.44 pressureChange(e as NSEventMBS) as boolean	246
* 6.5.45 resignFirstResponder as boolean	246
* 6.5.46 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	247
* 6.5.47 rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	247
* 6.5.48 rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	247
* 6.5.49 rotateWithEvent(e as NSEventMBS) as boolean	247
* 6.5.50 scrollWheel(e as NSEventMBS) as boolean	247
* 6.5.51 swipeWithEvent(e as NSEventMBS) as boolean	248
* 6.5.52 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	248
* 6.5.53 viewDidMoveToWindow	248
* 6.5.54 wantsPeriodicDraggingUpdates as boolean	249

• 5 Cocoa	151
– 6.6.1 class CustomNSTextFieldMBS	250
* 6.6.8 acceptsFirstMouse(e as NSEventMBS) as boolean	251
* 6.6.12 canBecomeKeyView as boolean	252
* 6.6.32 mouseDownCanMoveWindow as boolean	258
* 6.6.53 viewDidMoveToWindow	263

	11
• 6 Cocoa Controls	189
– 6.6.1 class CustomNSTextFieldMBS	250
* 6.6.3 Constructor	250
* 6.6.4 Constructor(Handle as Integer)	250
* 6.6.5 Constructor(left as Double, top as Double, width as Double, height as Double)	250
* 6.6.6 Destructor	251
* 6.6.9 acceptsFirstResponder as boolean	251
* 6.6.10 becomeFirstResponder as boolean	251
* 6.6.11 beginGestureWithEvent(e as NSEventMBS) as boolean	251
* 6.6.13 Close	252
* 6.6.14 concludeDragOperation(sender as NSDraggingInfoMBS)	252
* 6.6.15 draggingEnded(sender as NSDraggingInfoMBS)	253
* 6.6.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer	253
* 6.6.17 draggingExited(sender as NSDraggingInfoMBS)	253
* 6.6.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NS-PointMBS, operation as Integer)	254
* 6.6.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NS-PointMBS)	254
* 6.6.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	254
* 6.6.21 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	255
* 6.6.22 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	255
* 6.6.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	256
* 6.6.24 endGestureWithEvent(e as NSEventMBS) as boolean	256
* 6.6.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	257
* 6.6.26 isOpaque as boolean	257
* 6.6.27 keyDown(e as NSEventMBS) as boolean	257
* 6.6.28 keyUp(e as NSEventMBS) as boolean	257
* 6.6.29 magnifyWithEvent(e as NSEventMBS) as boolean	258
* 6.6.30 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS) as NSMenuMBS	258
* 6.6.31 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	258
* 6.6.33 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.34 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.35 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.36 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.37 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.38 Open	260
* 6.6.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	260
* 6.6.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	260
* 6.6.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	260

* 6.6.42	performDragOperation(sender as NSDraggingInfoMBS) as boolean	260
* 6.6.43	prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	261
* 6.6.44	pressureChange(e as NSEventMBS) as boolean	261
* 6.6.45	resignFirstResponder as boolean	261
* 6.6.46	rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.47	rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.48	rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.49	rotateWithEvent(e as NSEventMBS) as boolean	262
* 6.6.50	scrollWheel(e as NSEventMBS) as boolean	262
* 6.6.51	swipeWithEvent(e as NSEventMBS) as boolean	263
* 6.6.52	updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	263
* 6.6.54	wantsPeriodicDraggingUpdates as boolean	264

	13
• 5 Cocoa	151
– 6.6.1 class CustomNSTextFieldMBS	250
* 6.6.8 acceptsFirstMouse(e as NSEventMBS) as boolean	251
* 6.6.12 canBecomeKeyView as boolean	252
* 6.6.32 mouseDownCanMoveWindow as boolean	258
* 6.6.53 viewDidMoveToWindow	263

• 6 Cocoa Controls	189
– 6.6.1 class CustomNSTextFieldMBS	250
* 6.6.3 Constructor	250
* 6.6.4 Constructor(Handle as Integer)	250
* 6.6.5 Constructor(left as Double, top as Double, width as Double, height as Double)	250
* 6.6.6 Destructor	251
* 6.6.9 acceptsFirstResponder as boolean	251
* 6.6.10 becomeFirstResponder as boolean	251
* 6.6.11 beginGestureWithEvent(e as NSEventMBS) as boolean	251
* 6.6.13 Close	252
* 6.6.14 concludeDragOperation(sender as NSDraggingInfoMBS)	252
* 6.6.15 draggingEnded(sender as NSDraggingInfoMBS)	253
* 6.6.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer	253
* 6.6.17 draggingExited(sender as NSDraggingInfoMBS)	253
* 6.6.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)	254
* 6.6.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	254
* 6.6.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	254
* 6.6.21 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	255
* 6.6.22 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	255
* 6.6.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	256
* 6.6.24 endGestureWithEvent(e as NSEventMBS) as boolean	256
* 6.6.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	257
* 6.6.26 isOpaque as boolean	257
* 6.6.27 keyDown(e as NSEventMBS) as boolean	257
* 6.6.28 keyUp(e as NSEventMBS) as boolean	257
* 6.6.29 magnifyWithEvent(e as NSEventMBS) as boolean	258
* 6.6.30 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuItemMBS) as NSMenuItemMBS	258
* 6.6.31 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	258
* 6.6.33 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.34 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.35 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.36 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.37 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.38 Open	260
* 6.6.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	260
* 6.6.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	260
* 6.6.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	260

* 6.6.42 performDragOperation(sender as NSDraggingInfoMBS) as boolean	260
* 6.6.43 prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	261
* 6.6.44 pressureChange(e as NSEventMBS) as boolean	261
* 6.6.45 resignFirstResponder as boolean	261
* 6.6.46 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.47 rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.48 rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.49 rotateWithEvent(e as NSEventMBS) as boolean	262
* 6.6.50 scrollWheel(e as NSEventMBS) as boolean	262
* 6.6.51 swipeWithEvent(e as NSEventMBS) as boolean	263
* 6.6.52 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	263
* 6.6.54 wantsPeriodicDraggingUpdates as boolean	264

• 5 Cocoa	151
– 6.6.1 class CustomNSTextFieldMBS	250
* 6.6.8 acceptsFirstMouse(e as NSEventMBS) as boolean	251
* 6.6.12 canBecomeKeyView as boolean	252
* 6.6.32 mouseDownCanMoveWindow as boolean	258
* 6.6.53 viewDidMoveToWindow	263

	17
• 6 Cocoa Controls	189
– 6.6.1 class CustomNSTextFieldMBS	250
* 6.6.3 Constructor	250
* 6.6.4 Constructor(Handle as Integer)	250
* 6.6.5 Constructor(left as Double, top as Double, width as Double, height as Double)	250
* 6.6.6 Destructor	251
* 6.6.9 acceptsFirstResponder as boolean	251
* 6.6.10 becomeFirstResponder as boolean	251
* 6.6.11 beginGestureWithEvent(e as NSEventMBS) as boolean	251
* 6.6.13 Close	252
* 6.6.14 concludeDragOperation(sender as NSDraggingInfoMBS)	252
* 6.6.15 draggingEnded(sender as NSDraggingInfoMBS)	253
* 6.6.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer	253
* 6.6.17 draggingExited(sender as NSDraggingInfoMBS)	253
* 6.6.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)	254
* 6.6.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	254
* 6.6.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	254
* 6.6.21 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	255
* 6.6.22 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	255
* 6.6.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	256
* 6.6.24 endGestureWithEvent(e as NSEventMBS) as boolean	256
* 6.6.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	257
* 6.6.26 isOpaque as boolean	257
* 6.6.27 keyDown(e as NSEventMBS) as boolean	257
* 6.6.28 keyUp(e as NSEventMBS) as boolean	257
* 6.6.29 magnifyWithEvent(e as NSEventMBS) as boolean	258
* 6.6.30 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS) as NSMenuMBS	258
* 6.6.31 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	258
* 6.6.33 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.34 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.35 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.36 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.37 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.38 Open	260
* 6.6.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	260
* 6.6.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	260
* 6.6.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	260

* 6.6.42	performDragOperation(sender as NSDraggingInfoMBS) as boolean	260
* 6.6.43	prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	261
* 6.6.44	pressureChange(e as NSEventMBS) as boolean	261
* 6.6.45	resignFirstResponder as boolean	261
* 6.6.46	rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.47	rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.48	rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.49	rotateWithEvent(e as NSEventMBS) as boolean	262
* 6.6.50	scrollWheel(e as NSEventMBS) as boolean	262
* 6.6.51	swipeWithEvent(e as NSEventMBS) as boolean	263
* 6.6.52	updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	263
* 6.6.54	wantsPeriodicDraggingUpdates as boolean	264

	19
• 5 Cocoa	151
– 6.6.1 class CustomNSTextFieldMBS	250
* 6.6.8 acceptsFirstMouse(e as NSEventMBS) as boolean	251
* 6.6.12 canBecomeKeyView as boolean	252
* 6.6.32 mouseDownCanMoveWindow as boolean	258
* 6.6.53 viewDidMoveToWindow	263

• 6 Cocoa Controls	189
– 6.6.1 class CustomNSTextFieldMBS	250
* 6.6.3 Constructor	250
* 6.6.4 Constructor(Handle as Integer)	250
* 6.6.5 Constructor(left as Double, top as Double, width as Double, height as Double)	250
* 6.6.6 Destructor	251
* 6.6.9 acceptsFirstResponder as boolean	251
* 6.6.10 becomeFirstResponder as boolean	251
* 6.6.11 beginGestureWithEvent(e as NSEventMBS) as boolean	251
* 6.6.13 Close	252
* 6.6.14 concludeDragOperation(sender as NSDraggingInfoMBS)	252
* 6.6.15 draggingEnded(sender as NSDraggingInfoMBS)	253
* 6.6.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer	253
* 6.6.17 draggingExited(sender as NSDraggingInfoMBS)	253
* 6.6.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)	254
* 6.6.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	254
* 6.6.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	254
* 6.6.21 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	255
* 6.6.22 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	255
* 6.6.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	256
* 6.6.24 endGestureWithEvent(e as NSEventMBS) as boolean	256
* 6.6.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	257
* 6.6.26 isOpaque as boolean	257
* 6.6.27 keyDown(e as NSEventMBS) as boolean	257
* 6.6.28 keyUp(e as NSEventMBS) as boolean	257
* 6.6.29 magnifyWithEvent(e as NSEventMBS) as boolean	258
* 6.6.30 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS) as NSMenuMBS	258
* 6.6.31 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	258
* 6.6.33 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.34 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.35 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.36 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.37 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	259
* 6.6.38 Open	260
* 6.6.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	260
* 6.6.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	260
* 6.6.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	260

	21
* 6.6.42 performDragOperation(sender as NSDraggingInfoMBS) as boolean	260
* 6.6.43 prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	261
* 6.6.44 pressureChange(e as NSEventMBS) as boolean	261
* 6.6.45 resignFirstResponder as boolean	261
* 6.6.46 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.47 rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.48 rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	262
* 6.6.49 rotateWithEvent(e as NSEventMBS) as boolean	262
* 6.6.50 scrollWheel(e as NSEventMBS) as boolean	262
* 6.6.51 swipeWithEvent(e as NSEventMBS) as boolean	263
* 6.6.52 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	263
* 6.6.54 wantsPeriodicDraggingUpdates as boolean	264

• 5 Cocoa	151
– 5.1.1 class CustomNSToolbarItemMBS	151
* 5.1.3 Constructor(itemIdentifier as string)	151
* 5.1.4 Destructor	151
* 5.1.6 Action	152
* 5.1.7 allowsDuplicatesInToolbar as boolean	152
* 5.1.8 validate as boolean	152
– 5.2.1 class CustomNSToolbarMBS	153
* 5.2.3 Constructor(Identifier as string)	153
* 5.2.4 Destructor	153
* 5.2.6 allowsSizeMode(mode as Integer, SuperAllows as boolean) as boolean	153
* 5.2.7 itemForItemIdentifier(identifier as string, willBeInsertedIntoToolbar as boolean) as NSToolbarItemMBS	154
* 5.2.8 toolbarAllowedItemIdentifiers as string()	154
* 5.2.9 toolbarDefaultItemIdentifiers as string()	155
* 5.2.10 toolbarDidRemoveItem(item as NSToolbarItemMBS, notification as NSNotificationMBS)	155
* 5.2.11 toolbarItemAction(item as NSToolbarItemMBS)	155
* 5.2.12 toolbarItemAllowsDuplicatesInToolbar(item as NSToolbarItemMBS) as boolean	156
* 5.2.13 toolbarItemValidate(item as NSToolbarItemMBS) as boolean	156
* 5.2.14 toolbarSelectableItemIdentifiers as string()	156
* 5.2.15 toolbarWillAddItem(item as NSToolbarItemMBS, notification as NSNotificationMBS)	157

	23
• 6 Cocoa Controls	189
– 6.7.1 class CustomNSViewMBS	265
* 6.7.3 Constructor	265
* 6.7.4 Constructor(Handle as Integer)	265
* 6.7.5 Constructor(left as Double, top as Double, width as Double, height as Double)	265
* 6.7.6 Destructor	266
* 6.7.8 acceptsFirstMouse(e as NSEventMBS) as boolean	266
* 6.7.9 acceptsFirstResponder as boolean	266
* 6.7.10 becomeFirstResponder as boolean	266
* 6.7.11 beginGestureWithEvent(e as NSEventMBS) as boolean	266
* 6.7.12 canBecomeKeyView as boolean	267
* 6.7.13 Close	267
* 6.7.14 concludeDragOperation(sender as NSDraggingInfoMBS)	267
* 6.7.15 draggingEnded(sender as NSDraggingInfoMBS)	268
* 6.7.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer	268
* 6.7.17 draggingExited(sender as NSDraggingInfoMBS)	268
* 6.7.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NS-PointMBS, operation as Integer)	269
* 6.7.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NS-PointMBS)	269
* 6.7.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	269
* 6.7.21 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	270
* 6.7.22 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	270
* 6.7.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	271
* 6.7.24 drawFocusRingMask(g as NSGraphicsMBS) as boolean	271
* 6.7.25 DrawRect(g as NSGraphicsMBS, left as Double, top as Double, width as Double, height as Double)	272
* 6.7.26 endGestureWithEvent(e as NSEventMBS) as boolean	272
* 6.7.27 focusRingMaskBounds as NSRectMBS	272
* 6.7.28 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	273
* 6.7.29 isFlipped as Boolean	273
* 6.7.30 isOpaque as boolean	273
* 6.7.31 keyDown(e as NSEventMBS) as boolean	273
* 6.7.32 keyUp(e as NSEventMBS) as boolean	274
* 6.7.33 magnifyWithEvent(e as NSEventMBS) as boolean	274
* 6.7.34 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS) as NSMenuMBS	274
* 6.7.35 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	275
* 6.7.36 mouseDownCanMoveWindow as boolean	275
* 6.7.37 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	275

* 6.7.38	mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	275
* 6.7.39	mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	275
* 6.7.40	mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	276
* 6.7.41	mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	276
* 6.7.42	Open	276
* 6.7.43	otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	276
* 6.7.44	otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	276
* 6.7.45	otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	277
* 6.7.46	performDragOperation(sender as NSDraggingInfoMBS) as boolean	277
* 6.7.47	prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	277
* 6.7.48	pressureChange(e as NSEventMBS) as boolean	278
* 6.7.49	resignFirstResponder as boolean	278
* 6.7.50	rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	278
* 6.7.51	rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	278
* 6.7.52	rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	278
* 6.7.53	rotateWithEvent(e as NSEventMBS) as boolean	278
* 6.7.54	scrollWheel(e as NSEventMBS) as boolean	279
* 6.7.55	swipeWithEvent(e as NSEventMBS) as boolean	279
* 6.7.56	updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	279
* 6.7.57	viewDidMoveToWindow	280
* 6.7.58	wantsPeriodicDraggingUpdates as boolean	280

• 13 PDFKit	1095
– 13.1.1 class CustomPDFViewMBS	1095
* 13.1.3 Constructor	1095
* 13.1.4 Constructor(Handle as Integer)	1095
* 13.1.5 Constructor(left as Double, top as Double, width as Double, height as Double)	1096
* 13.1.6 Destructor	1096
* 13.1.8 acceptsFirstMouse(e as NSEventMBS) as boolean	1096
* 13.1.9 acceptsFirstResponder as boolean	1096
* 13.1.10 AfterDrawPage(graphics as NSGraphicsMBS, page as PDFPageMBS)	1097
* 13.1.11 AfterDrawPagePost(graphics as NSGraphicsMBS, page as PDFPageMBS)	1097
* 13.1.12 AfterDrawRect(graphics as NSGraphicsMBS, x as Double, y as Double, w as Double, h as Double)	1097
* 13.1.13 becomeFirstResponder as boolean	1097
* 13.1.14 BeforeDrawPage(graphics as NSGraphicsMBS, page as PDFPageMBS) as boolean	1098
* 13.1.15 BeforeDrawPagePost(graphics as NSGraphicsMBS, page as PDFPageMBS) as boolean	1098
* 13.1.16 BeforeDrawRect(graphics as NSGraphicsMBS, x as Double, y as Double, w as Double, h as Double) as boolean	1098
* 13.1.17 beginGestureWithEvent(e as NSEventMBS) as boolean	1098
* 13.1.18 canBecomeKeyView as boolean	1099
* 13.1.19 Close	1099
* 13.1.20 concludeDragOperation(sender as NSDraggingInfoMBS)	1099
* 13.1.21 draggingEnded(sender as NSDraggingInfoMBS)	1099
* 13.1.22 draggingEntered(sender as NSDraggingInfoMBS) as Integer	1100
* 13.1.23 draggingExited(sender as NSDraggingInfoMBS)	1100
* 13.1.24 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)	1101
* 13.1.25 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	1101
* 13.1.26 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	1101
* 13.1.27 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	1102
* 13.1.28 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	1102
* 13.1.29 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	1102
* 13.1.30 endGestureWithEvent(e as NSEventMBS) as boolean	1103
* 13.1.31 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	1103
* 13.1.32 isOpaque as boolean	1104
* 13.1.33 keyDown(e as NSEventMBS) as boolean	1104
* 13.1.34 keyUp(e as NSEventMBS) as boolean	1104

* 13.1.35	magnifyWithEvent(e as NSEventMBS) as boolean	1104
* 13.1.36	menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS) as NSMenuMBS	1104
* 13.1.37	mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	1105
* 13.1.38	mouseDownCanMoveWindow as boolean	1105
* 13.1.39	mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	1105
* 13.1.40	mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	1106
* 13.1.41	mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	1106
* 13.1.42	mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	1106
* 13.1.43	mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	1106
* 13.1.44	Open	1106
* 13.1.45	otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	1106
* 13.1.46	otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	1107
* 13.1.47	otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	1107
* 13.1.48	performDragOperation(sender as NSDraggingInfoMBS) as boolean	1107
* 13.1.49	prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	1108
* 13.1.50	pressureChange(e as NSEventMBS) as boolean	1108
* 13.1.51	resignFirstResponder as boolean	1108
* 13.1.52	rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	1108
* 13.1.53	rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	1108
* 13.1.54	rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	1109
* 13.1.55	rotateWithEvent(e as NSEventMBS) as boolean	1109
* 13.1.56	scrollWheel(e as NSEventMBS) as boolean	1109
* 13.1.57	swipeWithEvent(e as NSEventMBS) as boolean	1109
* 13.1.58	updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	1110
* 13.1.59	viewDidMoveToWindow	1110
* 13.1.60	wantsPeriodicDraggingUpdates as boolean	1110

	27
• 6 Cocoa Controls	189
– 6.8.1 class DisclosureTriangle	281
* 6.8.3 NSButtonMBS as NSButtonMBS	281

• 11 HTMLViewer Mac	731
– 11.1.1 class DOMAbstractViewMBS	731
* 11.1.3 document as DOMDocumentMBS	731
– 11.2.1 class DOMAttrMBS	732
* 11.2.3 name as String	732
* 11.2.4 ownerElement as DOMELEMENTMBS	732
* 11.2.5 specified as boolean	732
* 11.2.7 value as String	732
– 11.4.1 class DOMCharacterDataMBS	735
* 11.4.3 appendData(arg as string)	735
* 11.4.4 deleteData(offset as Integer, count as Integer)	735
* 11.4.5 insertData(offset as Integer, arg as string)	735
* 11.4.6 length as Integer	735
* 11.4.7 replaceData(offset as Integer, count as Integer, arg as string)	736
* 11.4.8 substringData(offset as Integer, count as Integer) as string	736
* 11.4.10 data as string	736
– 11.6.1 class DOMCounterMBS	738
* 11.6.3 identifier as String	738
* 11.6.4 listStyle as String	738
* 11.6.5 separator as String	738
– 11.7.1 class DOMCSSCharsetRuleMBS	739
* 11.7.3 encoding as String	739
– 11.8.1 class DOMCSSFontFaceRuleMBS	740
* 11.8.3 style as DOMCSSStyleDeclarationMBS	740
– 11.9.1 class DOMCSSImportRuleMBS	741
* 11.9.3 href as String	741
* 11.9.4 media as DOMMediaListMBS	741
* 11.9.5 styleSheet as DOMCSSStyleSheetMBS	741
– 11.10.1 class DOMCSSMediaRuleMBS	742
* 11.10.3 cssRules as DOMCSSRuleListMBS	742
* 11.10.4 deleteRule(index as Integer)	742
* 11.10.5 insertRule(rule as string, index as Integer) as Integer	742
* 11.10.6 media as DOMMediaListMBS	742
– 11.11.1 class DOMCSSPageRuleMBS	743
* 11.11.3 style as DOMCSSStyleDeclarationMBS	743
* 11.11.5 selectorText as String	743
– 11.12.1 class DOMCSSPrimitiveValueMBS	744
* 11.12.3 getCounterValue as DOMCounterMBS	744
* 11.12.4 getRectValue as DOMRectMBS	744

* 11.12.5	getRGBColorValue as DOMRGBColorMBS	744
* 11.12.6	getStringValue as String	744
* 11.12.7	primitiveType as Integer	745
* 11.12.8	setStringValue(StringType as Integer, StringValue as string)	745
* 11.12.10	getFloatValue(unitType as Integer) as single	745
* 11.12.12	DOM_CSS_ATTR = 22	745
* 11.12.13	DOM_CSS_CM = 6	745
* 11.12.14	DOM_CSS_COUNTER = 23	745
* 11.12.15	DOM_CSS_DEG = 11	746
* 11.12.16	DOM_CSS_DIMENSION = 18	746
* 11.12.17	DOM_CSS_EMS = 3	746
* 11.12.18	DOM_CSS_EXS = 4	746
* 11.12.19	DOM_CSS_GRAD = 13	746
* 11.12.20	DOM_CSS_HZ = 16	746
* 11.12.21	DOM_CSS_IDENT = 21	746
* 11.12.22	DOM_CSS_IN = 8	746
* 11.12.23	DOM_CSS_KHZ = 17	747
* 11.12.24	DOM_CSS_MM = 7	747
* 11.12.25	DOM_CSS_MS = 14	747
* 11.12.26	DOM_CSS_NUMBER = 1	747
* 11.12.27	DOM_CSS_PC = 10	747
* 11.12.28	DOM_CSS_PERCENTAGE = 2	747
* 11.12.29	DOM_CSS_PT = 9	747
* 11.12.30	DOM_CSS_PX = 5	747
* 11.12.31	DOM_CSS_RAD = 12	748
* 11.12.32	DOM_CSS_RECT = 24	748
* 11.12.33	DOM_CSS_RGBCOLOR = 25	748
* 11.12.34	DOM_CSS_S = 15	748
* 11.12.35	DOM_CSS_STRING = 19	748
* 11.12.36	DOM_CSS_UNKNOWN = 0	748
* 11.12.37	DOM_CSS_URI = 20	748
– 11.13.1	class DOMCSSRuleListMBS	749
* 11.13.3	item(index as UInt32) as DOMCSSRuleMBS	749
* 11.13.4	length as Integer	749
– 11.14.1	class DOMCSSRuleMBS	750
* 11.14.3	parentRule as DOMCSSRuleMBS	750
* 11.14.4	parentStyleSheet as DOMCSSStyleSheetMBS	750
* 11.14.5	type as Integer	750
* 11.14.7	cssText as String	750
* 11.14.9	DOM_CHARSET_RULE = 2	751
* 11.14.10	DOM_IMPORT_RULE = 3	751

* 11.14.11	DOM_MEDIA_RULE = 4	751
* 11.14.12	DOM_STYLE_RULE = 1	751
* 11.14.13	DOM_UNKNOWN_RULE = 0	751
– 11.15.1	class DOMCSSStyleDeclarationMBS	752
* 11.15.3	Constructor	752
* 11.15.4	getPropertyCSSValue(propertyName as string) as DOMCSSValueMBS	752
* 11.15.5	getPropertyPriority(propertyName as string) as string	752
* 11.15.6	getPropertyValue(propertyName as string) as string	752
* 11.15.7	item(index as UInt32) as string	753
* 11.15.8	length as Integer	753
* 11.15.9	parentRule as DOMCSSRuleMBS	753
* 11.15.10	removeProperty(propertyName as string) as string	753
* 11.15.11	setProperty(propertyName as string, value as string, priority as string)	753
* 11.15.13	azimuth as String	753
* 11.15.14	background as String	754
* 11.15.15	backgroundAttachment as String	754
* 11.15.16	backgroundColor as String	754
* 11.15.17	backgroundImage as String	754
* 11.15.18	backgroundPosition as String	754
* 11.15.19	backgroundRepeat as String	754
* 11.15.20	border as String	755
* 11.15.21	borderBottom as String	755
* 11.15.22	borderBottomColor as String	755
* 11.15.23	borderBottomStyle as String	755
* 11.15.24	borderBottomWidth as String	755
* 11.15.25	borderCollapse as String	755
* 11.15.26	borderColor as String	756
* 11.15.27	borderLeft as String	756
* 11.15.28	borderLeftColor as String	756
* 11.15.29	borderLeftStyle as String	756
* 11.15.30	borderLeftWidth as String	756
* 11.15.31	borderRight as String	756
* 11.15.32	borderRightColor as String	757
* 11.15.33	borderRightStyle as String	757
* 11.15.34	borderRightWidth as String	757
* 11.15.35	borderSpacing as String	757
* 11.15.36	borderStyle as String	757
* 11.15.37	borderTop as String	757
* 11.15.38	borderTopColor as String	758
* 11.15.39	borderTopStyle as String	758
* 11.15.40	borderTopWidth as String	758

* 11.15.41 borderWidth as String	758
* 11.15.42 bottom as String	758
* 11.15.43 captionSide as String	758
* 11.15.44 clear as String	759
* 11.15.45 clip as String	759
* 11.15.46 colorValue as String	759
* 11.15.47 content as String	759
* 11.15.48 counterIncrement as String	759
* 11.15.49 counterReset as String	759
* 11.15.50 cssFloat as String	760
* 11.15.51 cssText as String	760
* 11.15.52 cue as String	760
* 11.15.53 cueAfter as String	760
* 11.15.54 cueBefore as String	760
* 11.15.55 cursor as String	760
* 11.15.56 direction as String	761
* 11.15.57 display as String	761
* 11.15.58 elevation as String	761
* 11.15.59 emptyCells as String	761
* 11.15.60 font as String	761
* 11.15.61 fontFamily as String	761
* 11.15.62 fontSize as String	762
* 11.15.63 fontSizeAdjust as String	762
* 11.15.64 fontStretch as String	762
* 11.15.65 fontStyle as String	762
* 11.15.66 fontVariant as String	762
* 11.15.67 fontWeight as String	762
* 11.15.68 height as String	763
* 11.15.69 left as String	763
* 11.15.70 letterSpacing as String	763
* 11.15.71 lineHeight as String	763
* 11.15.72 listStyle as String	763
* 11.15.73 listStyleImage as String	763
* 11.15.74 listStylePosition as String	764
* 11.15.75 listStyleType as String	764
* 11.15.76 margin as String	764
* 11.15.77 marginBottom as String	764
* 11.15.78 marginLeft as String	764
* 11.15.79 marginRight as String	764
* 11.15.80 marginTop as String	765
* 11.15.81 markerOffset as String	765
* 11.15.82 marks as String	765

* 11.15.83 maxHeight as String	765
* 11.15.84 maxWidth as String	765
* 11.15.85 minHeight as String	765
* 11.15.86 minWidth as String	766
* 11.15.87 orphans as String	766
* 11.15.88 outline as String	766
* 11.15.89 outlineColor as String	766
* 11.15.90 outlineStyle as String	766
* 11.15.91 outlineWidth as String	766
* 11.15.92 overflow as String	767
* 11.15.93 padding as String	767
* 11.15.94 paddingBottom as String	767
* 11.15.95 paddingLeft as String	767
* 11.15.96 paddingRight as String	767
* 11.15.97 paddingTop as String	767
* 11.15.98 page as String	768
* 11.15.99 pageBreakAfter as String	768
* 11.15.100 pageBreakBefore as String	768
* 11.15.101 pageBreakInside as String	768
* 11.15.102 pause as String	768
* 11.15.103 pauseAfter as String	768
* 11.15.104 pauseBefore as String	769
* 11.15.105 pitch as String	769
* 11.15.106 pitchRange as String	769
* 11.15.107 playDuring as String	769
* 11.15.108 position as String	769
* 11.15.109 quotes as String	769
* 11.15.110 richness as String	770
* 11.15.111 right as String	770
* 11.15.112 size as String	770
* 11.15.113 speak as String	770
* 11.15.114 speakHeader as String	770
* 11.15.115 speakNumeral as String	770
* 11.15.116 speakPunctuation as String	771
* 11.15.117 speechRate as String	771
* 11.15.118 stress as String	771
* 11.15.119 tableLayout as String	771
* 11.15.120 textAlign as String	771
* 11.15.121 textDecoration as String	771
* 11.15.122 textIndent as String	772
* 11.15.123 textShadow as String	772
* 11.15.124 textTransform as String	772

* 11.15.125 top as String	772
* 11.15.126 unicodeBidi as String	772
* 11.15.127 verticalAlign as String	772
* 11.15.128 visibility as String	773
* 11.15.129 voiceFamily as String	773
* 11.15.130 volume as String	773
* 11.15.131 whiteSpace as String	773
* 11.15.132 widows as String	773
* 11.15.133 width as String	773
* 11.15.134 wordSpacing as String	774
* 11.15.135 zIndex as String	774
– 11.16.1 class DOMCSSStyleRuleMBS	775
* 11.16.3 style as DOMCSSStyleDeclarationMBS	775
* 11.16.5 selectorText as String	775
– 11.17.1 class DOMCSSStyleSheetMBS	776
* 11.17.3 cssRules as DOMCSSRuleListMBS	776
* 11.17.4 deleteRule(index as Integer)	776
* 11.17.5 insertRule(rule as string, index as Integer) as Integer	776
* 11.17.6 ownerRule as DOMCSSRuleMBS	776
– 11.19.1 class DOMCSSValueListMBS	778
* 11.19.3 item(index as UInt32) as DOMCSSValueMBS	778
* 11.19.4 length as Integer	778
– 11.20.1 class DOMCSSValueMBS	779
* 11.20.3 cssValueType as Integer	779
* 11.20.5 cssText as String	779
* 11.20.7 DOM_CSS_CUSTOM = 3	779
* 11.20.8 DOM_CSS_INHERIT = 0	780
* 11.20.9 DOM_CSS_PRIMITIVE_VALUE = 1	780
* 11.20.10 DOM_CSS_VALUE_LIST = 2	780
– 11.22.1 class DOMDocumentMBS	782
* 11.22.3 createAttribute(name as string) as DOMAttrMBS	782
* 11.22.4 createAttributeNS(namespaceURI as string, qualifiedName as string) as DOMAttrMBS	782
* 11.22.5 createCDATASection(data as string) as DOMCDATASectionMBS	782
* 11.22.6 createComment(data as string) as DOMCommentMBS	782
* 11.22.7 createCSSStyleDeclaration as DOMCSSStyleDeclarationMBS	783
* 11.22.8 createDocumentFragment as DOMDocumentFragmentMBS	783
* 11.22.9 createElement(tagName as string) as DOMElementMBS	783
* 11.22.10 createElementNS(namespaceURI as string, qualifiedName as string) as DOMElementMBS	783
* 11.22.11 createEntityReference(name as string) as DOMEntityReferenceMBS	783

* 11.22.12	createProcessingInstruction(target as string, data as string) as DOMProcessingInstructionMBS	783
* 11.22.13	createRange as DOMRangeMBS	784
* 11.22.14	createTextNode(data as string) as DOMTextMBS	784
* 11.22.15	defaultView as DOMAbstractViewMBS	784
* 11.22.16	doctype as DOMDocumentTypeMBS	784
* 11.22.17	documentElement as DOMELEMENTMBS	784
* 11.22.18	getComputedStyle(elt as DOMELEMENTMBS, pseudoElt as string) as DOMCSSStyleDeclarationMBS	784
* 11.22.19	getElementById(elementId as string) as DOMELEMENTMBS	784
* 11.22.20	getElementsByTagName(name as string) as DOMNodeListMBS	785
* 11.22.21	getElementsByTagNameNS(namespaceURI as string, localName as string) as DOMNodeListMBS	785
* 11.22.22	getOverrideStyle(elt as DOMELEMENTMBS, pseudoElt as string) as DOMCSSStyleDeclarationMBS	785
* 11.22.23	implementation as DOMImplementationMBS	785
* 11.22.24	importNode(importedNode as DOMNodeMBS, deep as boolean) as DOMNodeMBS	785
* 11.22.25	styleSheets as DOMStyleSheetListMBS	785
– 11.23.1	class DOMDocumentTypeMBS	786
* 11.23.3	entities as DOMELEMENTMBS	786
* 11.23.4	internalSubset as String	786
* 11.23.5	name as String	786
* 11.23.6	notations as DOMELEMENTMBS	786
* 11.23.7	publicId as String	787
* 11.23.8	systemId as String	787
– 11.24.1	class DOMELEMENTMBS	788
* 11.24.3	getAttribute(name as string) as string	788
* 11.24.4	getAttributeNode(name as string) as DOMAttrMBS	788
* 11.24.5	getAttributeNodeNS(namespaceURI as string, localName as string) as DOMAttrMBS	788
* 11.24.6	getAttributeNS(namespaceURI as string, localName as string) as String	788
* 11.24.7	getElementsByTagName(name as string) as DOMNodeListMBS	789
* 11.24.8	getElementsByTagNameNS(namespaceURI as string, localName as string) as DOMNodeListMBS	789
* 11.24.9	hasAttribute(name as string) as boolean	789
* 11.24.10	hasAttributeNS(namespaceURI as string, localName as string) as boolean	789
* 11.24.11	removeAttribute(name as string)	789
* 11.24.12	removeAttributeNode(oldAttr as DOMAttrMBS) as DOMAttrMBS	789
* 11.24.13	removeAttributeNS(namespaceURI as string, qualifiedName as string)	789
* 11.24.14	setAttribute(name as string, value as string)	790
* 11.24.15	setAttributeNode(newAttr as DOMAttrMBS) as DOMAttrMBS	790

* 11.24.16 setAttributeNodeNS(newAttr as DOMAttrMBS) as DOMAttrMBS	790
* 11.24.17 setAttributeNS(namespaceURI as string, qualifiedName as string, value as string)	790
* 11.24.18 style as DOMCSSStyleDeclarationMBS	790
* 11.24.19 tagName as String	790
– 11.25.1 class DOMEntityMBS	791
* 11.25.3 notationName as String	791
* 11.25.4 publicId as String	791
* 11.25.5 systemId as String	791
– 11.27.1 class DOMHTMLAnchorElementMBS	793
* 11.27.3 blur	793
* 11.27.4 focus	793
* 11.27.6 accessKey as String	793
* 11.27.7 charset as String	793
* 11.27.8 coords as String	794
* 11.27.9 href as String	794
* 11.27.10 hreflang as String	794
* 11.27.11 name as String	794
* 11.27.12 rel as String	794
* 11.27.13 rev as String	794
* 11.27.14 shape as String	795
* 11.27.15 tabIndex as Integer	795
* 11.27.16 target as String	795
* 11.27.17 type as String	795
– 11.28.1 class DOMHTMLAppletElementMBS	796
* 11.28.3 align as String	796
* 11.28.4 alt as String	796
* 11.28.5 archive as string	796
* 11.28.6 code as string	796
* 11.28.7 codeBase as string	797
* 11.28.8 height as String	797
* 11.28.9 hspace as Integer	797
* 11.28.10 name as String	797
* 11.28.11 objectValue as String	797
* 11.28.12 vspace as Integer	797
* 11.28.13 width as String	798
– 11.29.1 class DOMHTMLAreaElementMBS	799
* 11.29.3 accessKey as String	799
* 11.29.4 alt as String	799
* 11.29.5 coords as String	799
* 11.29.6 href as String	799

* 11.29.7 noHref as boolean	800
* 11.29.8 shape as String	800
* 11.29.9 tabIndex as Integer	800
* 11.29.10 target as String	800
– 11.30.1 class DOMHTMLBaseElementMBS	801
* 11.30.3 href as String	801
* 11.30.4 target as String	801
– 11.31.1 class DOMHTMLBaseFontElementMBS	802
* 11.31.3 colorValue as String	802
* 11.31.4 face as String	802
* 11.31.5 size as String	802
– 11.32.1 class DOMHTMLBodyElementMBS	803
* 11.32.3 aLink as String	803
* 11.32.4 background as String	803
* 11.32.5 bgColor as String	803
* 11.32.6 link as String	803
* 11.32.7 text as String	804
* 11.32.8 vLink as String	804
– 11.33.1 class DOMHTMLBRElementMBS	805
* 11.33.3 clear as String	805
– 11.34.1 class DOMHTMLButtonElementMBS	806
* 11.34.3 form as DOMHTMLFormElementMBS	806
* 11.34.4 type as String	806
* 11.34.6 accessKey as String	806
* 11.34.7 disabled as boolean	806
* 11.34.8 name as String	807
* 11.34.9 tabIndex as Integer	807
* 11.34.10 value as String	807
– 11.35.1 class DOMHTMLCollectionMBS	808
* 11.35.3 item(index as UInt32) as DOMNodeMBS	808
* 11.35.4 length as Integer	808
* 11.35.5 namedItem(name as string) as DOMNodeMBS	808
– 11.36.1 class DOMHTMLDirectoryElementMBS	809
* 11.36.3 compact as boolean	809
– 11.37.1 class DOMHTMLDivElementMBS	810
* 11.37.3 align as String	810
– 11.38.1 class DOMHTMLDListElementMBS	811
* 11.38.3 compact as boolean	811
– 11.39.1 class DOMHTMLDocumentMBS	812

* 11.39.3 anchors as DOMHTMLCollectionMBS	812
* 11.39.4 applets as DOMHTMLCollectionMBS	812
* 11.39.5 close	812
* 11.39.6 domain as String	812
* 11.39.7 forms as DOMHTMLCollectionMBS	813
* 11.39.8 getElementById(elementId as string) as DOMElementMBS	813
* 11.39.9 getElementsByName(elementName as string) as DOMNodeListMBS	813
* 11.39.10 images as DOMHTMLCollectionMBS	813
* 11.39.11 links as DOMHTMLCollectionMBS	813
* 11.39.12 open	813
* 11.39.13 referrer as String	813
* 11.39.14 URL as String	814
* 11.39.15 write(text as string)	814
* 11.39.16 writeln(text as string)	814
* 11.39.18 body as DOMHTMLMElementMBS	814
* 11.39.19 cookie as String	814
* 11.39.20 title as String	814
– 11.40.1 class DOMHTMLMElementMBS	816
* 11.40.3 children as DOMHTMLCollectionMBS	816
* 11.40.4 isContentEditable as boolean	816
* 11.40.6 className as String	816
* 11.40.7 contentEditable as String	816
* 11.40.8 dir as String	817
* 11.40.9 idName as String	817
* 11.40.10 innerHTML as String	817
* 11.40.11 innerText as String	817
* 11.40.12 lang as String	817
* 11.40.13 outerHTML as String	817
* 11.40.14 outerText as String	818
* 11.40.15 title as String	818
– 11.41.1 class DOMHTMLMEmbedElementMBS	819
* 11.41.3 align as String	819
* 11.41.4 height as Integer	819
* 11.41.5 name as String	819
* 11.41.6 src as String	819
* 11.41.7 type as String	820
* 11.41.8 width as Integer	820
– 11.42.1 class DOMHTMLMFieldSetElementMBS	821
* 11.42.3 form as DOMHTMLMFormElementMBS	821
– 11.43.1 class DOMHTMLMFontElementMBS	822
* 11.43.3 colorValue as String	822

* 11.43.4 face as String	822
* 11.43.5 size as String	822
– 11.44.1 class DOMHTMLFormElementMBS	823
* 11.44.3 elements as DOMHTMLCollectionMBS	823
* 11.44.4 length as Integer	823
* 11.44.5 reset	823
* 11.44.6 submit	823
* 11.44.8 acceptCharset as String	824
* 11.44.9 action as String	824
* 11.44.10 enctype as String	824
* 11.44.11 method as String	824
* 11.44.12 name as String	824
* 11.44.13 target as String	824
– 11.45.1 class DOMHTMLFrameElementMBS	826
* 11.45.3 contentDocument as DOMDocumentMBS	826
* 11.45.5 frameBorder as String	826
* 11.45.6 longDesc as String	826
* 11.45.7 marginHeight as String	827
* 11.45.8 marginWidth as String	827
* 11.45.9 name as String	827
* 11.45.10 noResize as Boolean	827
* 11.45.11 scrolling as String	827
* 11.45.12 src as String	827
– 11.46.1 class DOMHTMLFrameSetElementMBS	828
* 11.46.3 cols as String	828
* 11.46.4 rows as String	828
– 11.47.1 class DOMHTMLHeadElementMBS	829
* 11.47.3 profile as String	829
– 11.48.1 class DOMHTMLHeadingElementMBS	830
* 11.48.3 align as String	830
– 11.49.1 class DOMHTMLHRElementMBS	831
* 11.49.3 align as String	831
* 11.49.4 noShade as Boolean	831
* 11.49.5 size as String	831
* 11.49.6 width as String	831
– 11.50.1 class DOMHTMLHtmlElementMBS	833
* 11.50.3 version as String	833
– 11.51.1 class DOMHTMLIFrameElementMBS	834
* 11.51.3 contentDocument as DOMDocumentMBS	834

* 11.51.5 align as String	834
* 11.51.6 frameBorder as String	834
* 11.51.7 height as String	835
* 11.51.8 longDesc as String	835
* 11.51.9 marginHeight as String	835
* 11.51.10 marginWidth as String	835
* 11.51.11 name as String	835
* 11.51.12 scrolling as String	835
* 11.51.13 src as String	836
* 11.51.14 width as String	836
– 11.52.1 class DOMHTMLImageElementMBS	837
* 11.52.3 align as String	837
* 11.52.4 alt as String	837
* 11.52.5 border as String	837
* 11.52.6 height as Integer	837
* 11.52.7 hspace as Integer	838
* 11.52.8 isMap as boolean	838
* 11.52.9 longDesc as String	838
* 11.52.10 name as String	838
* 11.52.11 src as String	838
* 11.52.12 useMap as String	838
* 11.52.13 vspace as Integer	839
* 11.52.14 width as Integer	839
– 11.53.1 class DOMHTMLInputElementMBS	840
* 11.53.3 blur	840
* 11.53.4 click	840
* 11.53.5 focus	840
* 11.53.6 form as DOMHTMLFormElementMBS	840
* 11.53.7 selectMethod	841
* 11.53.9 accept as String	841
* 11.53.10 accessKey as String	841
* 11.53.11 align as String	841
* 11.53.12 alt as String	841
* 11.53.13 checked as boolean	841
* 11.53.14 defaultChecked as boolean	842
* 11.53.15 defaultValue as String	842
* 11.53.16 disabled as boolean	842
* 11.53.17 maxLength as Integer	842
* 11.53.18 name as String	842
* 11.53.19 readOnly as boolean	842
* 11.53.20 size as String	843

* 11.53.21 src as String	843
* 11.53.22 tabIndex as Integer	843
* 11.53.23 type as String	843
* 11.53.24 useMap as String	843
* 11.53.25 value as String	843
– 11.54.1 class DOMHTMLIsIndexElementMBS	844
* 11.54.3 form as DOMHTMLFormElementMBS	844
* 11.54.5 prompt as String	844
– 11.55.1 class DOMHTMLLabelElementMBS	845
* 11.55.3 form as DOMHTMLFormElementMBS	845
* 11.55.5 accessKey as String	845
* 11.55.6 htmlFort as String	845
– 11.56.1 class DOMHTMLLegendElementMBS	846
* 11.56.3 form as DOMHTMLFormElementMBS	846
* 11.56.5 accessKey as String	846
* 11.56.6 align as String	846
– 11.57.1 class DOMHTMLLIElementMBS	847
* 11.57.3 type as string	847
* 11.57.4 value as Integer	847
– 11.58.1 class DOMHTMLLinkElementMBS	848
* 11.58.3 charset as String	848
* 11.58.4 disabled as boolean	848
* 11.58.5 href as String	848
* 11.58.6 hreflang as String	848
* 11.58.7 media as String	849
* 11.58.8 rel as String	849
* 11.58.9 rev as String	849
* 11.58.10 target as String	849
* 11.58.11 type as String	849
– 11.59.1 class DOMHTMLMapElementMBS	850
* 11.59.3 areas as DOMHTMLCollectionMBS	850
* 11.59.5 name as String	850
– 11.60.1 class DOMHTMLMenuElementMBS	851
* 11.60.3 compact as boolean	851
– 11.61.1 class DOMHTMLMetaElementMBS	852
* 11.61.3 content as String	852
* 11.61.4 httpEquiv as String	852
* 11.61.5 name as String	852
* 11.61.6 scheme as String	852

	41
– 11.62.1 class DOMHTMLModElementMBS	854
* 11.62.3 cite as String	854
* 11.62.4 dateTime as String	854
– 11.63.1 class DOMHTMLObjectElementMBS	855
* 11.63.3 cells as DOMDocumentMBS	855
* 11.63.4 form as DOMHTMLFormElementMBS	855
* 11.63.6 align as string	855
* 11.63.7 archive as string	855
* 11.63.8 border as string	856
* 11.63.9 code as string	856
* 11.63.10 codeBase as string	856
* 11.63.11 codeType as string	856
* 11.63.12 data as string	856
* 11.63.13 declareValue as boolean	856
* 11.63.14 height as string	857
* 11.63.15 hspace as Integer	857
* 11.63.16 name as string	857
* 11.63.17 standby as string	857
* 11.63.18 tabIndex as Integer	857
* 11.63.19 type as string	857
* 11.63.20 useMap as string	858
* 11.63.21 vspace as Integer	858
* 11.63.22 width as string	858
– 11.64.1 class DOMHTMLListElementMBS	859
* 11.64.3 compact as boolean	859
* 11.64.4 start as Integer	859
* 11.64.5 type as string	859
– 11.65.1 class DOMHTMLOptGroupElementMBS	860
* 11.65.3 content as boolean	860
* 11.65.4 label as String	860
– 11.66.1 class DOMHTMLOptionElementMBS	861
* 11.66.3 form as DOMHTMLFormElementMBS	861
* 11.66.4 index as Integer	861
* 11.66.5 text as String	861
* 11.66.7 defaultSelected as boolean	861
* 11.66.8 disabled as boolean	862
* 11.66.9 label as String	862
* 11.66.10 selected as boolean	862
* 11.66.11 value as String	862
– 11.67.1 class DOMHTMLOptionsCollectionMBS	863

* 11.67.3 item(index as Integer) as DOMNodeMBS	863
* 11.67.4 namedItem(name as string) as DOMNodeMBS	863
* 11.67.6 length as Integer	863
– 11.68.1 class DOMHTMLParagraphElementMBS	864
* 11.68.3 align as String	864
– 11.69.1 class DOMHTMLParamElementMBS	865
* 11.69.3 name as String	865
* 11.69.4 type as String	865
* 11.69.5 value as String	865
* 11.69.6 valueType as String	865
– 11.70.1 class DOMHTMLPreElementMBS	867
* 11.70.3 width as Integer	867
– 11.71.1 class DOMHTMLQuoteElementMBS	868
* 11.71.3 cite as String	868
– 11.72.1 class DOMHTMLScriptElementMBS	869
* 11.72.3 charset as String	869
* 11.72.4 defer as boolean	869
* 11.72.5 eventValue as String	869
* 11.72.6 htmlFor as String	869
* 11.72.7 src as String	870
* 11.72.8 text as String	870
* 11.72.9 type as String	870
– 11.73.1 class DOMHTMLSelectElementMBS	871
* 11.73.3 add(element as DOMHTMLElementMBS, before as DOMHTMLElementMBS)	871
* 11.73.4 blur	871
* 11.73.5 focus	871
* 11.73.6 form as DOMHTMLFormElementMBS	871
* 11.73.7 length as Integer	872
* 11.73.8 options as DOMHTMLOptionsCollectionMBS	872
* 11.73.9 remove(index as Integer)	872
* 11.73.10 type as String	872
* 11.73.12 disabled as boolean	872
* 11.73.13 multiple as boolean	872
* 11.73.14 name as String	873
* 11.73.15 selectedIndex as Integer	873
* 11.73.16 size as Integer	873
* 11.73.17 tabIndex as Integer	873
* 11.73.18 value as String	873
– 11.74.1 class DOMHTMLStyleElementMBS	874
* 11.74.3 content as boolean	874

* 11.74.4 media as String	874
* 11.74.5 type as String	874
– 11.75.1 class DOMHTMLTableCaptionElementMBS	875
* 11.75.3 align as String	875
– 11.76.1 class DOMHTMLTableCellElementMBS	876
* 11.76.3 cellIndex as Integer	876
* 11.76.5 abbr as string	876
* 11.76.6 align as string	876
* 11.76.7 axis as string	877
* 11.76.8 bgColor as string	877
* 11.76.9 ch as string	877
* 11.76.10 chOff as string	877
* 11.76.11 colSpan as Integer	877
* 11.76.12 headers as string	877
* 11.76.13 height as string	878
* 11.76.14 noWrap as boolean	878
* 11.76.15 rowSpan as Integer	878
* 11.76.16 scope as string	878
* 11.76.17 vAlign as string	878
* 11.76.18 width as string	878
– 11.77.1 class DOMHTMLTableColElementMBS	879
* 11.77.3 align as string	879
* 11.77.4 ch as string	879
* 11.77.5 chOff as string	879
* 11.77.6 span as Integer	879
* 11.77.7 vAlign as string	880
* 11.77.8 width as string	880
– 11.78.1 class DOMHTMLTableElementMBS	881
* 11.78.3 createCaption as DOMHTMLElementMBS	881
* 11.78.4 createTFoot as DOMHTMLElementMBS	881
* 11.78.5 createTHead as DOMHTMLElementMBS	881
* 11.78.6 deleteCaption	881
* 11.78.7 deleteRow(index as Integer)	882
* 11.78.8 deleteTFoot	882
* 11.78.9 deleteTHead	882
* 11.78.10 insertRow(index as Integer) as DOMHTMLElementMBS	882
* 11.78.11 rows as DOMHTMLCollectionMBS	882
* 11.78.12 tBodies as DOMHTMLCollectionMBS	882
* 11.78.14 align as string	883
* 11.78.15 bgColor as string	883
* 11.78.16 border as string	883

* 11.78.17 caption as DOMHTMLTableCaptionElementMBS	883
* 11.78.18 cellPadding as string	883
* 11.78.19 cellSpacing as string	883
* 11.78.20 frameBorders as string	884
* 11.78.21 rules as string	884
* 11.78.22 summary as string	884
* 11.78.23 tFoot as DOMHTMLTableSectionElementMBS	884
* 11.78.24 tHead as DOMHTMLTableSectionElementMBS	884
* 11.78.25 width as string	884
– 11.79.1 class DOMHTMLTableRowElementMBS	886
* 11.79.3 cells as DOMHTMLCollectionMBS	886
* 11.79.4 deleteCell(index as Integer)	886
* 11.79.5 insertCell(index as Integer) as DOMHTMLMElementMBS	886
* 11.79.6 rowIndex as Integer	886
* 11.79.7 sectionRowIndex as Integer	887
* 11.79.9 align as string	887
* 11.79.10 bgColor as string	887
* 11.79.11 ch as string	887
* 11.79.12 chOff as string	887
* 11.79.13 vAlign as string	887
– 11.80.1 class DOMHTMLTableSectionElementMBS	888
* 11.80.3 deleteRow(index as Integer)	888
* 11.80.4 insertRow(index as Integer) as DOMHTMLMElementMBS	888
* 11.80.5 rows as DOMHTMLCollectionMBS	888
* 11.80.7 align as string	888
* 11.80.8 ch as string	889
* 11.80.9 chOff as string	889
* 11.80.10 vAlign as string	889
– 11.81.1 class DOMHTMLTextAreaElementMBS	890
* 11.81.3 blur	890
* 11.81.4 focus	890
* 11.81.5 form as DOMHTMLFormElementMBS	890
* 11.81.6 selectMethod	890
* 11.81.7 type as String	891
* 11.81.9 accessKey as String	891
* 11.81.10 cols as Integer	891
* 11.81.11 defaultValue as String	891
* 11.81.12 disabled as boolean	891
* 11.81.13 name as String	891
* 11.81.14 readOnly as boolean	892
* 11.81.15 rows as Integer	892

	45
* 11.81.16 tabIndex as Integer	892
* 11.81.17 value as String	892
– 11.82.1 class DOMHTMLTitleElementMBS	893
* 11.82.3 text as String	893
– 11.83.1 class DOMHTMLULListElementMBS	894
* 11.83.3 compact as boolean	894
* 11.83.4 type as String	894
– 11.84.1 class DOMImplementationMBS	895
* 11.84.3 createCSSStyleSheet(title as string, media as string) as DOMCSSStyleSheetMBS	895
* 11.84.4 createDocument(namespaceURI as string, qualifiedName as string, doctype as string) as DOMDocumentTypeMBS	895
* 11.84.5 createDocumentType(qualifiedName as string, publicId as string, systemId as string) as DOMDocumentTypeMBS	895
* 11.84.6 hasFeature(feature as string, version as string) as boolean	895
– 11.85.1 class DOMMediaListMBS	896
* 11.85.3 appendMedium(newMedium as string)	896
* 11.85.4 deleteMedium(oldMedium as string)	896
* 11.85.5 item(index as Integer) as string	896
* 11.85.6 length as Integer	896
* 11.85.8 mediaText as String	897
– 11.86.1 class DOMNamedNodeMapMBS	898
* 11.86.3 getNamedItem(name as string) as DOMNodeMBS	898
* 11.86.4 getNamedItemNS(namespaceURI as string, localName as string) as DOMNodeMBS	898
* 11.86.5 item(index as UInt32) as DOMNodeMBS	898
* 11.86.6 length as Integer	899
* 11.86.7 removeNamedItem(name as string) as DOMNodeMBS	899
* 11.86.8 removeNamedItemNS(namespaceURI as string, localName as string) as DOMNodeMBS	899
* 11.86.9 setNamedItem(arg as DOMNodeMBS) as DOMNodeMBS	899
* 11.86.10 setNamedItemNS(arg as DOMNodeMBS) as DOMNodeMBS	899
– 11.87.1 class DOMNodeListMBS	900
* 11.87.3 item(index as UInt32) as DOMNodeMBS	900
* 11.87.4 length as Integer	900
– 11.88.1 class DOMNodeMBS	901
* 11.88.3 appendChild(newChild as DOMNodeMBS) as DOMNodeMBS	901
* 11.88.4 childNodes as DOMNodeListMBS	901
* 11.88.5 cloneNode(deep as boolean) as DOMNodeMBS	901
* 11.88.6 firstChild as DOMNodeMBS	901
* 11.88.7 getAttributes as DOMNamedNodeMapMBS	902

* 11.88.8	hasAttributes as boolean	902
* 11.88.9	hasChildNodes as boolean	902
* 11.88.10	insertBefore(newChild as DOMNodeMBS, refChild as DOMNodeMBS) as DOMNodeMBS	902
* 11.88.11	isSupported(feature as string, version as string) as boolean	902
* 11.88.12	lastChild as DOMNodeMBS	902
* 11.88.13	localName as String	903
* 11.88.14	namespaceURI as String	903
* 11.88.15	nextSibling as DOMNodeMBS	903
* 11.88.16	nodeName as String	903
* 11.88.17	nodeType as Integer	903
* 11.88.18	normalize	903
* 11.88.19	ownerDocument as DOMDocumentMBS	903
* 11.88.20	parentNode as DOMNodeMBS	904
* 11.88.21	previousSibling as DOMNodeMBS	904
* 11.88.22	removeChild(oldChild as DOMNodeMBS) as DOMNodeMBS	904
* 11.88.23	replaceChild(newChild as DOMNodeMBS, oldChild as DOMNodeMBS) as DOMNodeMBS	904
* 11.88.25	nodeValue as String	904
* 11.88.26	prefix as String	904
* 11.88.28	DOM_ATTRIBUTE_NODE = 2	905
* 11.88.29	DOM_CDATA_SECTION_NODE = 4	905
* 11.88.30	DOM_COMMENT_NODE = 8	905
* 11.88.31	DOM_DOCUMENT_FRAGMENT_NODE = 11	905
* 11.88.32	DOM_DOCUMENT_NODE = 9	905
* 11.88.33	DOM_DOCUMENT_TYPE_NODE = 10	905
* 11.88.34	DOM_ELEMENT_NODE = 1	905
* 11.88.35	DOM_ENTITY_NODE = 6	906
* 11.88.36	DOM_ENTITY_REFERENCE_NODE = 5	906
* 11.88.37	DOM_NOTATION_NODE = 12	906
* 11.88.38	DOM_PROCESSING_INSTRUCTION_NODE = 7	906
* 11.88.39	DOM_TEXT_NODE = 3	906
– 11.89.1	class DOMNotationMBS	907
* 11.89.3	publicId as String	907
* 11.89.4	systemId as String	907
– 11.90.1	class DOMObjectMBS	908
* 11.90.3	sheet as DOMStyleSheetMBS	908
– 11.91.1	class DOMProcessingInstructionMBS	909
* 11.91.3	target as String	909
* 11.91.5	data as String	909
– 11.92.1	class DOMRangeMBS	910

* 11.92.3 cloneContents as DOMDocumentFragmentMBS	910
* 11.92.4 cloneRange as DOMRangeMBS	910
* 11.92.5 collapse(toStart as boolean)	910
* 11.92.6 collapsed as boolean	910
* 11.92.7 commonAncestorContainer as DOMNodeMBS	911
* 11.92.8 compareBoundaryPoints(how as Integer, sourceRange as DOMRangeMBS) as Integer	911
* 11.92.9 deleteContents	911
* 11.92.10 detach	911
* 11.92.11 endContainer as DOMNodeMBS	911
* 11.92.12 endOffset as Integer	911
* 11.92.13 extractContents as DOMDocumentFragmentMBS	911
* 11.92.14 insertNode(newNode as DOMNodeMBS)	912
* 11.92.15 selectNode(refNode as DOMNodeMBS)	912
* 11.92.16 selectNodeContents(refNode as DOMNodeMBS)	912
* 11.92.17 setEnd(refNode as DOMNodeMBS, offset as Integer)	912
* 11.92.18 setEndAfter(refNode as DOMNodeMBS)	912
* 11.92.19 setEndBefore(refNode as DOMNodeMBS)	912
* 11.92.20 setStart(refNode as DOMNodeMBS, offset as Integer)	912
* 11.92.21 setStartAfter(refNode as DOMNodeMBS)	913
* 11.92.22 setStartBefore(refNode as DOMNodeMBS)	913
* 11.92.23 startContainer as DOMNodeMBS	913
* 11.92.24 startOffset as Integer	913
* 11.92.25 surroundContents(newParent as DOMNodeMBS)	913
* 11.92.26 toString as string	913
* 11.92.28 DOM_BAD_BOUNDARYPOINTS_ERR = 1	914
* 11.92.29 DOM_END_TO_END = 2	914
* 11.92.30 DOM_END_TO_START = 3	914
* 11.92.31 DOM_INVALID_NODE_TYPE_ERR = 2	914
* 11.92.32 DOM_START_TO_END = 1	914
* 11.92.33 DOM_START_TO_START = 0	914
– 11.93.1 class DOMRectMBS	915
* 11.93.3 bottom as DOMCSSPrimitiveValueMBS	915
* 11.93.4 left as DOMCSSPrimitiveValueMBS	915
* 11.93.5 right as DOMCSSPrimitiveValueMBS	915
* 11.93.6 top as DOMCSSPrimitiveValueMBS	915
– 11.94.1 class DOMRGBColorMBS	916
* 11.94.3 alpha as DOMCSSPrimitiveValueMBS	916
* 11.94.4 blue as DOMCSSPrimitiveValueMBS	916
* 11.94.5 green as DOMCSSPrimitiveValueMBS	916
* 11.94.6 red as DOMCSSPrimitiveValueMBS	916

– 11.95.1 class DOMStyleSheetListMBS	917
* 11.95.3 item(index as UInt32) as DOMStyleSheetMBS	917
* 11.95.4 length as Integer	917
– 11.96.1 class DOMStyleSheetMBS	918
* 11.96.3 href as String	918
* 11.96.4 media as DOMMediaListMBS	918
* 11.96.5 ownerNode as DOMNodeMBS	918
* 11.96.6 parentStyleSheet as DOMStyleSheetMBS	918
* 11.96.7 title as String	919
* 11.96.8 type as String	919
* 11.96.10 disabled as boolean	919
– 11.97.1 class DOMTextMBS	920
* 11.97.3 splitText(offset as Integer) as DOMTextMBS	920

• 10 DiscRecording	601
– 10.1.1 class DRBurnMBS	601
* 10.1.3 abort	602
* 10.1.4 burnForDevice(device as DRDeviceMBS) as DRBurnMBS	602
* 10.1.5 Constructor(device as DRDeviceMBS)	602
* 10.1.6 device as DRDeviceMBS	602
* 10.1.7 DRBurnAppendableKey as string	602
* 10.1.8 DRBurnCompletionActionEject as string	603
* 10.1.9 DRBurnCompletionActionKey as string	603
* 10.1.10 DRBurnCompletionActionMount as string	603
* 10.1.11 DRBurnDoubleLayerL0DataZoneBlocksKey as string	603
* 10.1.12 DRBurnFailureActionEject as string	604
* 10.1.13 DRBurnFailureActionKey as string	604
* 10.1.14 DRBurnFailureActionNone as string	604
* 10.1.15 DRBurnOverwriteDiscKey as string	604
* 10.1.16 DRBurnRequestedSpeedKey as string	604
* 10.1.17 DRBurnStatusChangedNotification as string	605
* 10.1.18 DRBurnStrategyBDDAO as string	605
* 10.1.19 DRBurnStrategyCDSAO as string	605
* 10.1.20 DRBurnStrategyCDTAO as string	605
* 10.1.21 DRBurnStrategyDVDDAO as string	605
* 10.1.22 DRBurnStrategyIsRequiredKey as string	605
* 10.1.23 DRBurnStrategyKey as string	606
* 10.1.24 DRBurnTestingKey as string	606
* 10.1.25 DRBurnUnderrunProtectionKey as string	607
* 10.1.26 DRBurnVerifyDiscKey as string	607
* 10.1.27 DRCDTextKey as string	607
* 10.1.28 DRErrorStatusAdditionalSenseStringKey as string	607
* 10.1.29 DRErrorStatusErrorInfoStringKey as string	608
* 10.1.30 DRErrorStatusErrorKey as string	608
* 10.1.31 DRErrorStatusErrorStringKey as string	608
* 10.1.32 DRErrorStatusKey as string	608
* 10.1.33 DRErrorStatusSenseCodeStringKey as string	608
* 10.1.34 DRErrorStatusSenseKey as string	609
* 10.1.35 DRMediaCatalogNumberKey as string	609
* 10.1.36 DRStatusCurrentSessionKey as string	609
* 10.1.37 DRStatusCurrentSpeedKey as string	609
* 10.1.38 DRStatusCurrentTrackKey as string	609
* 10.1.39 DRStatusEraseTypeKey as string	610
* 10.1.40 DRStatusPercentCompleteKey as string	610
* 10.1.41 DRStatusProgressCurrentKPS as string	610

* 10.1.42 DRStatusProgressCurrentXFactor as string	610
* 10.1.43 DRStatusProgressInfoKey as string	610
* 10.1.44 DRStatusStateDone as string	611
* 10.1.45 DRStatusStateErasing as string	611
* 10.1.46 DRStatusStateFailed as string	611
* 10.1.47 DRStatusStateFinishing as string	611
* 10.1.48 DRStatusStateKey as string	611
* 10.1.49 DRStatusStateNone as string	612
* 10.1.50 DRStatusStatePreparing as string	612
* 10.1.51 DRStatusStateSessionClose as string	612
* 10.1.52 DRStatusStateSessionOpen as string	612
* 10.1.53 DRStatusStateTrackClose as string	612
* 10.1.54 DRStatusStateTrackOpen as string	612
* 10.1.55 DRStatusStateTrackWrite as string	613
* 10.1.56 DRStatusStateVerifying as string	613
* 10.1.57 DRStatusTotalSessionsKey as string	613
* 10.1.58 DRStatusTotalTracksKey as string	613
* 10.1.59 DRSynchronousBehaviorKey as string	613
* 10.1.60 status as dictionary	614
* 10.1.61 writeImageFile(ImageFile as FolderItem) as boolean	614
* 10.1.62 writeImageFile(ImagePath as String) as boolean	614
* 10.1.63 writeLayout(track as DRTrackMBS)	615
* 10.1.64 writeLayout(tracks() as DRTrackMBS)	615
* 10.1.66 appendable as boolean	615
* 10.1.67 BurnFailureAction as string	615
* 10.1.68 completionAction as string	616
* 10.1.69 DoubleLayerL0DataZoneBlocks as Double	616
* 10.1.70 MediaCatalogNumber as memoryblock	616
* 10.1.71 Overwrite as boolean	617
* 10.1.72 properties as dictionary	617
* 10.1.73 requestedBurnSpeed as single	617
* 10.1.74 Testing as boolean	617
* 10.1.75 UnderrunProtection as boolean	618
* 10.1.76 verifyDisc as boolean	618
– 10.2.1 class DRBurnProgressPanelMBS	619
* 10.2.3 beginProgressPanelForBurn(burn as DRBurnMBS, track as DRTrackMBS)	620
* 10.2.4 beginProgressPanelForBurn(burn as DRBurnMBS, tracks() as DRTrackMBS)	620
* 10.2.5 beginProgressPanelForImageFile(burn as DRBurnMBS, file as folderitem) as boolean	620
* 10.2.6 beginProgressPanelForImageFile(burn as DRBurnMBS, file as string) as boolean	621
* 10.2.7 beginProgressSheetForBurn(burn as DRBurnMBS, track as DRTrackMBS, docWindow as NSWindowMBS)	621

* 10.2.8	beginProgressSheetForBurn(burn as DRBurnMBS, tracks() as DRTrackMBS, docWindow as NSWindowMBS)	622
* 10.2.9	beginProgressSheetForImageFile(burn as DRBurnMBS, file as folderitem, docWindow as NSWindowMBS) as boolean	622
* 10.2.10	beginProgressSheetForImageFile(burn as DRBurnMBS, file as string, docWindow as NSWindowMBS) as boolean	623
* 10.2.11	Constructor	623
* 10.2.12	DRBurnProgressPanelDidFinishNotification as string	623
* 10.2.13	DRBurnProgressPanelWillBeginNotification as string	623
* 10.2.14	stopBurn	624
* 10.2.16	Description as string	624
* 10.2.17	VerboseProgressStatus as boolean	624
* 10.2.19	burnProgressPanelBurnDidFinish(burn as DRBurnMBS) as boolean	625
* 10.2.20	burnProgressPanelDidFinish	625
* 10.2.21	burnProgressPanelWillBegin	625
– 10.3.1	class DRBurnSetupPanelMBS	626
* 10.3.3	appendable	627
* 10.3.4	burnObject as DRBurnMBS	627
* 10.3.5	burnSpeed	627
* 10.3.6	completionAction	627
* 10.3.7	Constructor	628
* 10.3.8	DRBurnSetupPanelDefaultButtonDefaultTitle as string	628
* 10.3.9	expand	628
* 10.3.10	setCanSelectAppendableMedia(flag as boolean)	628
* 10.3.11	setCanSelectTestBurn(flag as boolean)	628
* 10.3.12	setDefaultButtonTitle(title as string)	629
* 10.3.13	testBurn	629
* 10.3.14	verifyBurn	629
– 10.4.1	class DRCDTextBlockMBS	630
* 10.4.3	Constructor	630
* 10.4.4	encoding as Integer	630
* 10.4.5	language as string	630
– 10.5.1	class DRDeviceMBS	631
* 10.5.3	acquireExclusiveAccess as boolean	631
* 10.5.4	acquireMediaReservation	631
* 10.5.5	bsdName as string	632
* 10.5.6	closeTray as boolean	632
* 10.5.7	Constructor	632
* 10.5.8	device(index as UInt32) as DRDeviceMBS	632
* 10.5.9	deviceCount as UInt32	632
* 10.5.10	deviceForBSDName(bsdName as string) as DRDeviceMBS	633

* 10.5.11 deviceForIORegistryEntryPath(path as string) as DRDeviceMBS	633
* 10.5.12 devices as DRDeviceMBS()	633
* 10.5.13 displayName as string	633
* 10.5.14 DRDeviceAppearedNotification as string	633
* 10.5.15 DRDeviceBurnSpeedBD1x as single	634
* 10.5.16 DRDeviceBurnSpeedCD1x as single	634
* 10.5.17 DRDeviceBurnSpeedDVD1x as single	634
* 10.5.18 DRDeviceBurnSpeedHDDVD1x as single	634
* 10.5.19 DRDeviceBurnSpeedMax as single	634
* 10.5.20 DRDeviceBurnSpeedsKey as string	635
* 10.5.21 DRDeviceCanTestWriteCDKey as string	635
* 10.5.22 DRDeviceCanTestWriteDVDKey as string	635
* 10.5.23 DRDeviceCanUnderrunProtectCDKey as string	635
* 10.5.24 DRDeviceCanUnderrunProtectDVDKey as string	635
* 10.5.25 DRDeviceCanWriteBDKey as string	636
* 10.5.26 DRDeviceCanWriteBDREKey as string	636
* 10.5.27 DRDeviceCanWriteBDRKey as string	636
* 10.5.28 DRDeviceCanWriteCDKey as string	636
* 10.5.29 DRDeviceCanWriteCDRawKey as string	636
* 10.5.30 DRDeviceCanWriteCDRKey as string	636
* 10.5.31 DRDeviceCanWriteCDRWKey as string	637
* 10.5.32 DRDeviceCanWriteCDSAOKeY as string	637
* 10.5.33 DRDeviceCanWriteCDTAOKeY as string	637
* 10.5.34 DRDeviceCanWriteCDTextKey as string	637
* 10.5.35 DRDeviceCanWriteDVDDAOKeY as string	637
* 10.5.36 DRDeviceCanWriteDVDKey as string	637
* 10.5.37 DRDeviceCanWriteDVDPlusRDoubleLayerKey as string	638
* 10.5.38 DRDeviceCanWriteDVDPlusRKey as string	638
* 10.5.39 DRDeviceCanWriteDVDPlusRWDoubleLayerKey as string	638
* 10.5.40 DRDeviceCanWriteDVDPlusRWKey as string	638
* 10.5.41 DRDeviceCanWriteDVDRAMKey as string	638
* 10.5.42 DRDeviceCanWriteDVDRDualLayerKey as string	638
* 10.5.43 DRDeviceCanWriteDVDRKey as string	639
* 10.5.44 DRDeviceCanWriteDVDRWDualLayerKey as string	639
* 10.5.45 DRDeviceCanWriteDVDRWKey as string	639
* 10.5.46 DRDeviceCanWriteHDDVDKey as string	639
* 10.5.47 DRDeviceCanWriteHDDVDRAMKey as string	639
* 10.5.48 DRDeviceCanWriteHDDVDRDualLayerKey as string	639
* 10.5.49 DRDeviceCanWriteHDDVDRKey as string	640
* 10.5.50 DRDeviceCanWriteHDDVDRWDualLayerKey as string	640
* 10.5.51 DRDeviceCanWriteHDDVDRWKey as string	640
* 10.5.52 DRDeviceCanWriteIndexPointsKey as string	640

* 10.5.53 DRDeviceCanWriteISRCKey as string	640
* 10.5.54 DRDeviceCanWriteKey as string	640
* 10.5.55 DRDeviceCurrentWriteSpeedKey as string	641
* 10.5.56 DRDeviceDisappearedNotification as string	641
* 10.5.57 DRDeviceFirmwareRevisionKey as string	641
* 10.5.58 DRDeviceIORegistryEntryPathKey as string	641
* 10.5.59 DRDeviceIsBusyKey as string	641
* 10.5.60 DRDeviceIsTrayOpenKey as string	642
* 10.5.61 DRDeviceLoadingMechanismCanEjectKey as string	642
* 10.5.62 DRDeviceLoadingMechanismCanInjectKey as string	642
* 10.5.63 DRDeviceLoadingMechanismCanOpenKey as string	642
* 10.5.64 DRDeviceMaximumWriteSpeedKey as string	642
* 10.5.65 DRDeviceMediaBlocksFreeKey as string	642
* 10.5.66 DRDeviceMediaBlocksOverwritableKey as string	643
* 10.5.67 DRDeviceMediaBlocksUsedKey as string	643
* 10.5.68 DRDeviceMediaBSDNameKey as string	643
* 10.5.69 DRDeviceMediaClassBD as string	643
* 10.5.70 DRDeviceMediaClassCD as string	643
* 10.5.71 DRDeviceMediaClassDVD as string	644
* 10.5.72 DRDeviceMediaClassHDDVD as string	644
* 10.5.73 DRDeviceMediaClassKey as string	644
* 10.5.74 DRDeviceMediaClassUnknown as string	644
* 10.5.75 DRDeviceMediaDoubleLayerL0DataZoneBlocksKey as string	644
* 10.5.76 DRDeviceMediaFreeSpaceKey as string	644
* 10.5.77 DRDeviceMediaInfoKey as string	645
* 10.5.78 DRDeviceMediaIsAppendableKey as string	645
* 10.5.79 DRDeviceMediaIsBlankKey as string	645
* 10.5.80 DRDeviceMediaIsErasableKey as string	645
* 10.5.81 DRDeviceMediaIsOverwritableKey as string	645
* 10.5.82 DRDeviceMediaIsReservedKey as string	646
* 10.5.83 DRDeviceMediaOverwritableSpaceKey as string	646
* 10.5.84 DRDeviceMediaSessionCountKey as string	646
* 10.5.85 DRDeviceMediaStateInTransition as string	646
* 10.5.86 DRDeviceMediaStateKey as string	647
* 10.5.87 DRDeviceMediaStateMediaPresent as string	647
* 10.5.88 DRDeviceMediaStateNone as string	647
* 10.5.89 DRDeviceMediaTrackCountKey as string	647
* 10.5.90 DRDeviceMediaTypeBDR as string	647
* 10.5.91 DRDeviceMediaTypeBDRE as string	647
* 10.5.92 DRDeviceMediaTypeBDROM as string	648
* 10.5.93 DRDeviceMediaTypeCDR as string	648
* 10.5.94 DRDeviceMediaTypeCDROM as string	648

* 10.5.95 DRDeviceMediaTypeCDRW as string	648
* 10.5.96 DRDeviceMediaTypeDVDPlusR as string	648
* 10.5.97 DRDeviceMediaTypeDVDPlusRDoubleLayer as string	648
* 10.5.98 DRDeviceMediaTypeDVDPlusRW as string	649
* 10.5.99 DRDeviceMediaTypeDVDPlusRWDoubleLayer as string	649
* 10.5.100 DRDeviceMediaTypeDVDR as string	649
* 10.5.101 DRDeviceMediaTypeDVDRAM as string	649
* 10.5.102 DRDeviceMediaTypeDVDRDualLayer as string	649
* 10.5.103 DRDeviceMediaTypeDVDROM as string	650
* 10.5.104 DRDeviceMediaTypeDVDRW as string	650
* 10.5.105 DRDeviceMediaTypeDVDRWDualLayer as string	650
* 10.5.106 DRDeviceMediaTypeHDDVDR as string	650
* 10.5.107 DRDeviceMediaTypeHDDVDRAM as string	650
* 10.5.108 DRDeviceMediaTypeHDDVDRDualLayer as string	650
* 10.5.109 DRDeviceMediaTypeHDDVDROM as string	651
* 10.5.110 DRDeviceMediaTypeHDDVDRW as string	651
* 10.5.111 DRDeviceMediaTypeHDDVDRWDualLayer as string	651
* 10.5.112 DRDeviceMediaTypeKey as string	651
* 10.5.113 DRDeviceMediaTypeUnknown as string	651
* 10.5.114 DRDeviceMediaUsedSpaceKey as string	651
* 10.5.115 DRDevicePhysicalInterconnectATAPI as string	652
* 10.5.116 DRDevicePhysicalInterconnectFibreChannel as string	652
* 10.5.117 DRDevicePhysicalInterconnectFireWire as string	652
* 10.5.118 DRDevicePhysicalInterconnectKey as string	652
* 10.5.119 DRDevicePhysicalInterconnectLocationExternal as string	652
* 10.5.120 DRDevicePhysicalInterconnectLocationInternal as string	652
* 10.5.121 DRDevicePhysicalInterconnectLocationKey as string	653
* 10.5.122 DRDevicePhysicalInterconnectLocationUnknown as string	653
* 10.5.123 DRDevicePhysicalInterconnectSCSI as string	653
* 10.5.124 DRDevicePhysicalInterconnectUSB as string	653
* 10.5.125 DRDeviceProductNameKey as string	653
* 10.5.126 DRDeviceStatusChangedNotification as string	654
* 10.5.127 DRDeviceSupportLevelAppleShipping as string	654
* 10.5.128 DRDeviceSupportLevelAppleSupported as string	654
* 10.5.129 DRDeviceSupportLevelKey as string	654
* 10.5.130 DRDeviceSupportLevelNone as string	654
* 10.5.131 DRDeviceSupportLevelUnsupported as string	655
* 10.5.132 DRDeviceSupportLevelVendorSupported as string	655
* 10.5.133 DRDeviceTrackInfoKey as string	655
* 10.5.134 DRDeviceTrackRefsKey as string	655
* 10.5.135 DRDeviceVendorNameKey as string	655
* 10.5.136 DRDeviceWriteBufferSizeKey as string	655

* 10.5.137 DRDeviceWriteCapabilitiesKey as string	656
* 10.5.138 ejectMedia as boolean	656
* 10.5.139 info as dictionary	656
* 10.5.140 ioRegistryEntryPath as string	656
* 10.5.141 isEqualToDevice(value as DRDeviceMBS) as boolean	656
* 10.5.142 isValid as boolean	657
* 10.5.143 mediaIsAppendable as boolean	657
* 10.5.144 mediaIsBlank as boolean	657
* 10.5.145 mediaIsBusy as boolean	657
* 10.5.146 mediaIsErasable as boolean	657
* 10.5.147 mediaIsOverwritable as boolean	657
* 10.5.148 mediaIsPresent as boolean	658
* 10.5.149 mediaIsReserved as boolean	658
* 10.5.150 mediaIsTransitioning as boolean	658
* 10.5.151 mediaSpaceFree as DRMSFMBS	658
* 10.5.152 mediaSpaceOverwritable as DRMSFMBS	658
* 10.5.153 mediaSpaceUsed as DRMSFMBS	658
* 10.5.154 mediaType as string	658
* 10.5.155 openTray as boolean	659
* 10.5.156 PhysicalInterconnect as string	659
* 10.5.157 PhysicalInterconnectLocation as string	659
* 10.5.158 releaseExclusiveAccess	659
* 10.5.159 releaseMediaReservation	659
* 10.5.160 status as dictionary	660
* 10.5.161 trayIsOpen as boolean	660
* 10.5.162 writesCD as boolean	660
* 10.5.163 writesDVD as boolean	660
– 10.6.1 class DREraseMBS	661
* 10.6.3 Constructor(device as DRDeviceMBS)	661
* 10.6.4 device as DRDeviceMBS	661
* 10.6.5 DREraseStatusChangedNotification as string	661
* 10.6.6 DREraseTypeComplete as string	661
* 10.6.7 DREraseTypeKey as string	662
* 10.6.8 DREraseTypeQuick as string	662
* 10.6.9 eraseForDevice(device as DRDeviceMBS) as DREraseMBS	662
* 10.6.10 start	662
* 10.6.11 status as dictionary	662
* 10.6.13 eraseType as string	662
* 10.6.14 properties as dictionary	663
– 10.7.1 class DREraseProgressPanelMBS	664
* 10.7.3 beginProgressPanelForErase(erase as DREraseMBS)	664

* 10.7.4	beginProgressSheetForErase(erase as DREraseMBS, docWindow as NSWindowMBS)	664
* 10.7.5	Constructor	664
* 10.7.6	DREraseProgressPanelDidFinishNotification as string	665
* 10.7.7	DREraseProgressPanelWillBeginNotification as string	665
* 10.7.9	Description as string	665
* 10.7.11	eraseProgressPanelDidFinish	666
* 10.7.12	eraseProgressPanelEraseDidFinish(erase as DREraseMBS) as boolean	666
* 10.7.13	eraseProgressPanelWillBegin	666
– 10.8.1	class DREraseSetupPanelMBS	667
* 10.8.3	Constructor	667
* 10.8.4	eraseObject as DREraseMBS	667
– 10.9.1	class DRFileMBS	668
* 10.9.3	Constructor	668
* 10.9.4	Constructor(name as string)	668
* 10.9.5	Constructor(name as string, data as memoryblock)	669
* 10.9.6	Constructor(path as folderitem)	669
* 10.9.7	DRLinkTypeFinderAlias as string	669
* 10.9.8	DRLinkTypeHardLink as string	669
* 10.9.9	DRLinkTypeSymbolicLink as string	669
* 10.9.10	fileWithPath(path as folderitem) as DRFileMBS	670
* 10.9.11	fileWithPath(path as string) as DRFileMBS	670
* 10.9.12	finderAliasPointingTo(original as DRFSObjectMBS, filesystem as string) as DRFileMBS	670
* 10.9.13	hardLinkPointingTo(original as DRFileMBS, filesystem as string) as DRFileMBS	671
* 10.9.14	linkWithLinkType(linkType as string, original as DRFSObjectMBS, filesystem as string) as DRFileMBS	671
* 10.9.15	symLinkPointingTo(original as DRFSObjectMBS, filesystem as string) as DRFileMBS	672
* 10.9.16	virtualFileWithName(name as string, data as memoryblock) as DRFileMBS	672
* 10.9.18	calculateSizeOfFile(fork as Integer, estimating as boolean) as uint64	673
* 10.9.19	cleanupFileAfterBurn	673
* 10.9.20	prepareFileForBurn as boolean	674
* 10.9.21	prepareFileForVerification as boolean	674
* 10.9.22	produceFile(fork as Integer, buffer as memoryblock, Bufferlen as uint32, address as uint64, blocksize as uint32) as uint32	674
* 10.9.24	DRFileForkData = 0	675
* 10.9.25	DRFileForkResource = 1	675
– 10.10.1	class DRFolderMBS	676
* 10.10.3	addChild(child as DRFSObjectMBS)	676
* 10.10.4	children as DRFSObjectMBS()	676

* 10.10.5 Constructor	677
* 10.10.6 Constructor(name as string)	677
* 10.10.7 Constructor(path as folderitem)	677
* 10.10.8 count as Integer	677
* 10.10.9 folderWithPath(path as folderitem) as DRFolderMBS	677
* 10.10.10 folderWithPath(path as string) as DRFolderMBS	678
* 10.10.11 makeVirtual	678
* 10.10.12 removeChild(child as DRFSObjectMBS)	678
* 10.10.13 virtualFolderWithName(name as string) as DRFolderMBS	678
– 10.11.1 class DRFSObjectMBS	679
* 10.11.3 Constructor	679
* 10.11.4 DRAccessDate as string	679
* 10.11.5 DRAllFilesystems as string	679
* 10.11.6 DRAttributeModificationDate as string	679
* 10.11.7 DRBackupDate as string	680
* 10.11.8 DRContentModificationDate as string	680
* 10.11.9 DRCreationDate as string	680
* 10.11.10 DREffectiveDate as string	680
* 10.11.11 DRExpirationDate as string	680
* 10.11.12 DRHFSPPlus as string	680
* 10.11.13 DRHFSPPlusCatalogNodeID as string	681
* 10.11.14 DRHFSPPlusTextEncodingHint as string	681
* 10.11.15 DRInvisible as string	681
* 10.11.16 DRISO9660 as string	681
* 10.11.17 DRISO9660LevelOne as string	682
* 10.11.18 DRISO9660LevelTwo as string	682
* 10.11.19 DRISO9660VersionNumber as string	682
* 10.11.20 DRJoliet as string	682
* 10.11.21 DRMacExtendedFinderFlags as string	683
* 10.11.22 DRMacFileCreator as string	683
* 10.11.23 DRMacFileType as string	683
* 10.11.24 DRMacFinderFlags as string	683
* 10.11.25 DRMacFinderHideExtension as string	683
* 10.11.26 DRMacIconLocation as string	683
* 10.11.27 DRMacScrollPosition as string	684
* 10.11.28 DRMacWindowBounds as string	684
* 10.11.29 DRMacWindowView as string	684
* 10.11.30 DRPosixFileMode as string	684
* 10.11.31 DRPosixGID as string	684
* 10.11.32 DRPosixUID as string	684
* 10.11.33 DRRecordingDate as string	685

* 10.11.34 DRUDF as string	685
* 10.11.35 DRUDFApplicationIdentifierSuffix as string	685
* 10.11.36 DRUDFExtendedFilePermissions as string	685
* 10.11.37 DRUDFInterchangeLevel as string	685
* 10.11.38 DRUDFMaxInterchangeLevel as string	686
* 10.11.39 DRUDFMaxVolumeSequenceNumber as string	686
* 10.11.40 DRUDFPrimaryVolumeDescriptorNumber as string	686
* 10.11.41 DRUDFRealTimeFile as string	686
* 10.11.42 DRUDFVersion102 as string	686
* 10.11.43 DRUDFVersion150 as string	687
* 10.11.44 DRUDFVolumeSequenceNumber as string	687
* 10.11.45 DRUDFVolumeSetIdentifier as string	687
* 10.11.46 DRUDFVolumeSetImplementationUse as string	687
* 10.11.47 DRUDFVolumeSetTimestamp as string	687
* 10.11.48 DRUDFWriteVersion as string	687
* 10.11.49 effectiveFilesystemMask as Integer	688
* 10.11.50 isVirtual as boolean	688
* 10.11.51 mangledNameForFilesystem(filesystem as string) as string	688
* 10.11.52 mangledNames as dictionary	688
* 10.11.53 parent as DRFolderMBS	688
* 10.11.54 propertiesForFilesystem(filesystem as string, mergeWithOtherFilesystems as boolean) as dictionary	689
* 10.11.55 propertyForKey(key as string, filesystem as string, mergeWithOtherFilesystems as boolean) as Variant	689
* 10.11.56 setProperties(Value as dictionary, filesystem as string)	689
* 10.11.57 setProperty(Value as Variant, key as string, filesystem as string)	690
* 10.11.58 sourcePath as string	690
* 10.11.60 baseName as string	690
* 10.11.61 explicitFilesystemMask as Integer	691
* 10.11.62 specificNameForFilesystem(filesystem as string) as string	691
* 10.11.63 specificNames as dictionary	691
* 10.11.65 DRFilesystemInclusionMaskHFSPlus = 8	692
* 10.11.66 DRFilesystemInclusionMaskISO9660 = 1	692
* 10.11.67 DRFilesystemInclusionMaskJoliet = 2	692
* 10.11.68 DRFilesystemInclusionMaskUDF = 4	692
– 10.12.1 class DRMSFMBS	693
* 10.12.3 Constructor	693
* 10.12.4 Constructor(frames as Integer)	693
* 10.12.5 Constructor(s as string)	694
* 10.12.6 description as string	694
* 10.12.7 descriptionWithFormat(format as string) as string	694
* 10.12.8 frames as Integer	695

* 10.12.9 isEqualToMSF(value as DRMSFMBS) as boolean	695
* 10.12.10 minutes as Integer	695
* 10.12.11 msf as DRMSFMBS	695
* 10.12.12 msfByAdding(value as DRMSFMBS) as DRMSFMBS	695
* 10.12.13 msfBySubtracting(value as DRMSFMBS) as DRMSFMBS	695
* 10.12.14 msfWithFrames(frames as Integer) as DRMSFMBS	696
* 10.12.15 msfWithString(s as string) as DRMSFMBS	696
* 10.12.16 seconds as Integer	696
* 10.12.17 sectors as Integer	696
– 10.13.1 class DRSetupPanelMBS	697
* 10.13.3 cancel	697
* 10.13.4 close	697
* 10.13.5 Constructor	697
* 10.13.6 eject	698
* 10.13.7 ok	698
* 10.13.8 open	698
* 10.13.9 runSetupPanel as Integer	698
* 10.13.11 determineBestDevice(deviceA as DRDeviceMBS, deviceB as DRDeviceMBS) as DRDeviceMBS	698
* 10.13.12 DeviceContainsSuitableMedia(device as DRDeviceMBS, byref prompt as string) as boolean	699
* 10.13.13 DeviceCouldBeTarget(device as DRDeviceMBS) as boolean	699
* 10.13.14 DeviceSelectionChanged(device as DRDeviceMBS)	699
* 10.13.15 SetupPanelShouldHandleMediaReservations as boolean	699
* 10.13.17 NSCancelButton = 0	700
* 10.13.18 NSOKButton = 1	700
– 10.14.1 class DRTrackMBS	701
* 10.14.3 Constructor	702
* 10.14.4 DRAbstractFile as string	702
* 10.14.5 DRApplicationIdentifier as string	702
* 10.14.6 DRAudioFourChannelKey as string	702
* 10.14.7 DRAudioPreEmphasisKey as string	702
* 10.14.8 DRBibliographicFile as string	703
* 10.14.9 DRBlockSize as string	703
* 10.14.10 DRBlockSizeKey as string	703
* 10.14.11 DRBlockTypeKey as string	703
* 10.14.12 DRCopyrightFile as string	703
* 10.14.13 DRDataFormKey as string	704
* 10.14.14 DRDataPreparer as string	704
* 10.14.15 DRDefaultDate as string	704
* 10.14.16 DRDVDCopyrightInfoKey as string	704

* 10.14.17 DRDVDTimestampKey as string	704
* 10.14.18 DRFreeBlocksKey as string	704
* 10.14.19 DRIndexPointsKey as string	705
* 10.14.20 DRISOLevel as string	705
* 10.14.21 DRISOMacExtensions as string	705
* 10.14.22 DRISORockRidgeExtensions as string	705
* 10.14.23 DRMaxBurnSpeedKey as string	705
* 10.14.24 DRNextWritableAddressKey as string	706
* 10.14.25 DRPreGapIsRequiredKey as string	706
* 10.14.26 DRPreGapLengthKey as string	706
* 10.14.27 DRPublisher as string	706
* 10.14.28 DRSCMSCopyrightFree as string	707
* 10.14.29 DRSCMSCopyrightProtectedCopy as string	707
* 10.14.30 DRSCMSCopyrightProtectedOriginal as string	707
* 10.14.31 DRSerialCopyManagementStateKey as string	707
* 10.14.32 DRSessionFormatKey as string	708
* 10.14.33 DRSessionNumberKey as string	708
* 10.14.34 DRSubchannelDataFormKey as string	708
* 10.14.35 DRSubchannelDataFormNone as string	708
* 10.14.36 DRSubchannelDataFormPack as string	709
* 10.14.37 DRSubchannelDataFormRaw as string	709
* 10.14.38 DRSuppressMacSpecificFiles as string	709
* 10.14.39 DRSystemIdentifier as string	709
* 10.14.40 DRTrackIsEmptyKey as string	709
* 10.14.41 DRTrackISRCKey as string	710
* 10.14.42 DRTrackLengthKey as string	710
* 10.14.43 DRTrackModeKey as string	710
* 10.14.44 DRTrackNumberKey as string	710
* 10.14.45 DRTrackPacketSizeKey as string	710
* 10.14.46 DRTrackPacketTypeFixed as string	711
* 10.14.47 DRTrackPacketTypeKey as string	711
* 10.14.48 DRTrackPacketTypeVariable as string	711
* 10.14.49 DRTrackStartAddressKey as string	711
* 10.14.50 DRTrackTypeClosed as string	711
* 10.14.51 DRTrackTypeIncomplete as string	712
* 10.14.52 DRTrackTypeInvisible as string	712
* 10.14.53 DRTrackTypeKey as string	712
* 10.14.54 DRTrackTypeReserved as string	712
* 10.14.55 DRVerificationTypeChecksum as string	712
* 10.14.56 DRVerificationTypeKey as string	712
* 10.14.57 DRVerificationTypeNone as string	713
* 10.14.58 DRVerificationTypeProduceAgain as string	713

* 10.14.59 DRVerificationTypeReceiveData as string	713
* 10.14.60 DRVolumeCheckedDate as string	713
* 10.14.61 DRVolumeCreationDate as string	713
* 10.14.62 DRVolumeEffectiveDate as string	713
* 10.14.63 DRVolumeExpirationDate as string	714
* 10.14.64 DRVolumeModificationDate as string	714
* 10.14.65 DRVolumeSet as string	714
* 10.14.66 estimateLength as UInt64	714
* 10.14.67 testProductionSpeedForInterval(seconds as Double) as Double	715
* 10.14.68 testProductionSpeedForLength(length as Integer) as Double	715
* 10.14.69 trackForAudioFile(path as folderitem) as DRTrackMBS	715
* 10.14.70 trackForAudioFile(path as string) as DRTrackMBS	716
* 10.14.71 trackForRootFolder(folder as DRFolderMBS) as DRTrackMBS	717
* 10.14.72 trackForRootFolder(folder as folderitem) as DRTrackMBS	717
* 10.14.74 BlockSize as Integer	717
* 10.14.75 BlockType as Integer	717
* 10.14.76 DataForm as Integer	717
* 10.14.77 length as DRMSFMBS	718
* 10.14.78 MaxBurnSpeed as Double	718
* 10.14.79 preGap as DRMSFMBS	718
* 10.14.80 PreGapIsRequired as boolean	718
* 10.14.81 PreGapLength as Double	719
* 10.14.82 properties as dictionary	719
* 10.14.83 SessionFormat as Integer	719
* 10.14.84 TrackISRC as memoryblock	719
* 10.14.85 TrackMode as Integer	720
* 10.14.86 VerificationType as string	720
* 10.14.88 cleanupTrackAfterBurn	720
* 10.14.89 cleanupTrackAfterVerification as boolean	721
* 10.14.90 estimateLengthOfTrack as uint64	721
* 10.14.91 prepareTrack(burn as DRBurnMBS) as boolean	721
* 10.14.92 prepareTrackForVerification as boolean	722
* 10.14.93 produceDataForTrack(buffer as memoryblock, Bufferlen as uint32, address as uint64, blocksize as uint32, byref flags as uint32) as uint32	722
* 10.14.94 producePreGapForTrack(buffer as memoryblock, Bufferlen as uint32, address as uint64, blocksize as uint32, byref flags as uint32) as uint32	722
* 10.14.95 verifyDataForTrack(buffer as memoryblock, Bufferlen as uint32, address as uint64, blocksize as uint32, byref flags as uint32) as boolean	723
* 10.14.96 verifyPreGapForTrack(buffer as memoryblock, Bufferlen as uint32, address as uint64, blocksize as uint32, byref flags as uint32) as boolean	724
* 10.14.98 DRFlagSubchannelDataRequested = 2	724
* 10.14.99 kDRBlockSizeAudio = 2352	724

* 10.14.100 kDRBlockSizeDVDDData = 2048	725
* 10.14.101 kDRBlockSizeMode1Data = 2048	725
* 10.14.102 kDRBlockSizeMode2Data = 2332	725
* 10.14.103 kDRBlockSizeMode2Form1Data = 2048	725
* 10.14.104 kDRBlockSizeMode2Form2Data = 2324	725
* 10.14.105 kDRBlockTypeAudio = 0	725
* 10.14.106 kDRBlockTypeDVDDData = 8	726
* 10.14.107 kDRBlockTypeMode1Data = 8	726
* 10.14.108 kDRBlockTypeMode2Data = 13	726
* 10.14.109 kDRBlockTypeMode2Form1Data = 10	726
* 10.14.110 kDRBlockTypeMode2Form2Data = 12	726
* 10.14.111 kDRDataFormAudio = 0	726
* 10.14.112 kDRDataFormDVDDData = 16	726
* 10.14.113 kDRDataFormMode1Data = 16	727
* 10.14.114 kDRDataFormMode2Data = 32	727
* 10.14.115 kDRDataFormMode2Form1Data = 32	727
* 10.14.116 kDRDataFormMode2Form2Data = 32	727
* 10.14.117 kDRSessionFormatAudio = 0	727
* 10.14.118 kDRSessionFormatCDI = 16	727
* 10.14.119 kDRSessionFormatCDXA = 32	727
* 10.14.120 kDRSessionFormatDVDDData = 0	728
* 10.14.121 kDRSessionFormatMode1Data = 0	728
* 10.14.122 kDRTrackMode1Data = 4	728
* 10.14.123 kDRTrackMode2Data = 4	728
* 10.14.124 kDRTrackMode2Form1Data = 4	728
* 10.14.125 kDRTrackMode2Form2Data = 4	728
* 10.14.126 kDRTrackModeAudio = 0	728
* 10.14.127 kDRTrackModeDVDDData = 5	729

	63
• 6 Cocoa Controls	189
– 6.9.1 class Groupbox	282
* 6.9.3 NSBoxMBS as NSBoxMBS	282

• 11 HTMLViewer Mac	731
– 11.98.1 class HTMLViewer	921
* 11.98.3 backForwardListMBS as WebBackForwardListMBS	921
* 11.98.4 canGoBackMBS as boolean	921
* 11.98.5 canGoForwardMBS as boolean	921
* 11.98.6 canMakeTextLargerMBS as boolean	921
* 11.98.7 canMakeTextSmallerMBS as boolean	922
* 11.98.8 canResetPageZoomMBS as boolean	922
* 11.98.9 CanShowMIMETypeAsHTMLMBS(mime as string) as boolean	922
* 11.98.10 CanShowMIMETypeMBS(mime as string) as boolean	923
* 11.98.11 canZoomPageInMBS as boolean	923
* 11.98.12 canZoomPageOutMBS as boolean	923
* 11.98.13 ClearFocusMBS	924
* 11.98.14 EstimatedProgressMBS as Double	924
* 11.98.15 EvaluateJavaScriptMBS(code as string) as string	924
* 11.98.16 GetPageFormatMBS as string	925
* 11.98.17 GoBackMBS	925
* 11.98.18 GoForwardMBS	926
* 11.98.19 goToBackForwardItemMBS(item as WebHistoryItemMBS) as boolean	926
* 11.98.20 HandleMBS as Integer	926
* 11.98.21 HTMLTextMBS as string	926
* 11.98.22 InstallWebDownloadDelegateMBS(WebDownloadDelegate as WebDownloadDelegateMBS)	927
* 11.98.23 InstallWebFrameLoadDelegateMBS(WebFrameLoadDelegate as WebFrameLoadDelegateMBS)	927
* 11.98.24 InstallWebPolicyDelegateMBS(WebPolicyDelegate as WebPolicyDelegateMBS)	927
* 11.98.25 InstallWebResourceLoadDelegateMBS(WebResourceLoadDelegate as WebResourceLoadDelegateMBS)	927
* 11.98.26 InstallWebUIDelegateMBS(WebUIDelegate as WebUIDelegateMBS)	927
* 11.98.27 LoadHTMLStringMBS(data as memoryblock, mime as string, encoding as string, url as string)	928
* 11.98.28 LoadHTMLStringMBS(text as string, url as string)	928
* 11.98.29 LoadRequest(request as NSURLRequestMBS)	929
* 11.98.30 LoadURLMBS(url as string)	929
* 11.98.31 LoadURLMBS(url as string, CachePolicy as Integer, TimeOut as Double)	929
* 11.98.32 mainFrameMBS as WebFrameMBS	930
* 11.98.33 makeTextLargerMBS	930
* 11.98.34 makeTextSmallerMBS	931
* 11.98.35 mediaVolumeMBS as Double	931
* 11.98.36 NSScrollViewMBS as Variant	931
* 11.98.37 PageSetupDialogMBS(sheetTarget as window=nil) as boolean	932
* 11.98.38 pageSizeMultiplierMBS as Double	932

* 11.98.39 PrintDialogMBS(sheetTarget as window=nil, PDFFile as folderitem=nil) as boolean	933
* 11.98.40 PrintDialogVisibleMBS as boolean	933
* 11.98.41 PrintingEndMBS	933
* 11.98.42 PrintingPageMBS(index as UInt32) as Memoryblock	934
* 11.98.43 PrintingStartMBS(width as Double, height as Double) as Integer	934
* 11.98.44 PrintMBS(PDFFile as folderitem=nil) as boolean	935
* 11.98.45 PrintToPDFFileMBS(PDFFile as folderitem, LeftMargin as Double = 50.0, TopMargin as Double = 50.0, RightMargin as Double = 50.0, BottomMargin as Double = 50.0) as boolean	935
* 11.98.46 reloadFromOriginMBS	936
* 11.98.47 ReloadMBS	936
* 11.98.48 RenderDocumentToEPSMBS as Memoryblock	936
* 11.98.49 RenderDocumentToPDFMBS as Memoryblock	937
* 11.98.50 RenderEPSMBS as Memoryblock	937
* 11.98.51 RenderPDFMBS as Memoryblock	938
* 11.98.52 RenderWebsiteImageMBS(ResolutionScale as Double = 1.0) as NSImageMBS	938
* 11.98.53 resetPageZoomMBS	939
* 11.98.54 SearchForMBS(text as string, Forward as boolean, CaseSensitive as boolean, Wrap as Boolean) as boolean	939
* 11.98.55 setMaintainsBackForwardListMBS(value as boolean)	940
* 11.98.56 setMediaVolumeMBS(value as Double)	940
* 11.98.57 SetPageFormatMBS(data as string) as boolean	940
* 11.98.58 setPageSizeMultiplierMBS(value as Double)	941
* 11.98.59 StopLoadingMBS	941
* 11.98.60 SupportsTextEncodingMBS as boolean	941
* 11.98.61 userAgentForURLMBS(url as string) as String	941
* 11.98.62 VisibleHeightMBS as Double	942
* 11.98.63 VisibleLeftMBS as Double	942
* 11.98.64 VisibleTopMBS as Double	942
* 11.98.65 VisibleWidthMBS as Double	943
* 11.98.66 WebViewMBS as WebViewMBS	943
* 11.98.67 zoomPageInMBS	943
* 11.98.68 zoomPageOutMBS	943
* 11.98.70 ApplicationNameForUserAgentMBS as String	944
* 11.98.71 BoundsHeightMBS as Double	944
* 11.98.72 BoundsLeftMBS as Double	945
* 11.98.73 BoundsTopMBS as Double	945
* 11.98.74 BoundsWidthMBS as Double	945
* 11.98.75 ContinuousSpellCheckingEnabledMBS as boolean	946
* 11.98.76 CustomTextEncodingNameMBS as String	946
* 11.98.77 CustomUserAgentMBS as String	947

* 11.98.78 dashboardBehaviorMBS(behavior as Integer) as boolean	947
* 11.98.79 DrawsBackgroundMBS as Boolean	947
* 11.98.80 EditableMBS as boolean	948
* 11.98.81 FrameHeightMBS as Double	948
* 11.98.82 FrameLeftMBS as Double	948
* 11.98.83 FrameTopMBS as Double	949
* 11.98.84 FrameWidthMBS as Double	949
* 11.98.85 GroupNameMBS as string	949
* 11.98.86 mediaStyleMBS as String	950
* 11.98.87 PreferencesIdentifierMBS as string	950
* 11.98.88 preferencesMBS as WebPreferencesMBS	950
* 11.98.89 ScrollHeightMBS as single	951
* 11.98.90 ScrollLeftMBS as single	951
* 11.98.91 ScrollTopMBS as single	951
* 11.98.92 ScrollWidthMBS as single	952
* 11.98.93 TextSizeMultiplierMBS as single	952
* 11.98.94 toolTipMBS as String	952
* 11.98.95 visibleMBS as boolean	952
– ?? Globals	??
* 11.99.1 InstallWebDownloadDelegate(extends w as WebViewMBS, theDelegate as WebDownloadDelegateMBS)	954
* 11.99.2 InstallWebFrameLoadDelegate(extends w as WebViewMBS, theDelegate as WebFrameLoadDelegateMBS)	954
* 11.99.3 InstallWebPolicyDelegate(extends w as WebViewMBS, theDelegate as WebPolicyDelegateMBS)	954
* 11.99.4 InstallWebResourceLoadDelegate(extends w as WebViewMBS, theDelegate as WebResourceLoadDelegateMBS)	954
* 11.99.5 InstallWebUIDelegate(extends w as WebViewMBS, theDelegate as WebUIDelegateMBS)	955

	67
• 6 Cocoa Controls	189
– 6.10.1 class ImageWell	283
* 6.10.3 UIImageViewMBS as UIImageViewMBS	283
– 6.11.1 class KeyValueCollectionMBS	284
* 6.11.3 Constructor	284
* 6.11.4 sortedArrayUsingDescriptor(values() as KeyValueCollectionMBS, sortDescriptor as NSSortDescriptorMBS) as KeyValueCollectionMBS()	284
* 6.11.5 sortedArrayUsingDescriptors(values() as KeyValueCollectionMBS, sortDescriptor() as NSSortDescriptorMBS) as KeyValueCollectionMBS()	284
* 6.11.7 Description as String	285
* 6.11.8 Handle as Integer	285
* 6.11.9 Tag as Variant	285
* 6.11.10 valueForKey(key as String) as Variant	285
* 6.11.12 Description as String	286
* 6.11.13 setValueForKey(key as string, value as Variant)	286
* 6.11.14 setValueForUndefinedKey(key as string, value as Variant)	286
* 6.11.15 valueForKey(key as string) as Variant	287
* 6.11.16 valueForUndefinedKey(key as string) as Variant	287

• 8 Controls	587
– 8.3.1 class Listbox	589
* 8.3.3 HorizontalNSScrollerMBS as NSScrollerMBS	589
* 8.3.4 VerticalNSScrollerMBS as NSScrollerMBS	589

	69
• 6 Cocoa Controls	189
– 6.12.1 class NSBoxMBS	288
* 6.12.3 borderRect as NSRectMBS	288
* 6.12.4 Constructor	288
* 6.12.5 Constructor(Handle as Integer)	288
* 6.12.6 Constructor(left as Double, top as Double, width as Double, height as Double)	289
* 6.12.7 setFrameFromContentFrame(contentFrame as NSRectMBS)	289
* 6.12.8 setTitleWithMnemonic(stringWithAmpersand as string)	289
* 6.12.9 sizeToFit	290
* 6.12.10 titleCell as NSCellMBS	290
* 6.12.11 titleRect as NSRectMBS	291
* 6.12.13 borderColor as NSColorMBS	291
* 6.12.14 borderType as Integer	291
* 6.12.15 borderWidth as Double	291
* 6.12.16 boxType as Integer	292
* 6.12.17 contentView as NSViewMBS	292
* 6.12.18 contentViewMargins as NSSizeMBS	292
* 6.12.19 cornerRadius as Double	293
* 6.12.20 fillColor as NSColorMBS	293
* 6.12.21 title as string	293
* 6.12.22 titleFont as NSFontMBS	293
* 6.12.23 titlePosition as Integer	294
* 6.12.24 Transparent as Boolean	294
* 6.12.26 NSAboveBottom = 4	294
* 6.12.27 NSAboveTop = 1	294
* 6.12.28 NSAtBottom = 5	294
* 6.12.29 NSAtTop = 2	295
* 6.12.30 NSBelowBottom = 6	295
* 6.12.31 NSBelowTop = 3	295
* 6.12.32 NSBoxCustom = 4	295
* 6.12.33 NSBoxOldStyle = 3	295
* 6.12.34 NSBoxPrimary = 0	295
* 6.12.35 NSBoxSecondary = 1	296
* 6.12.36 NSBoxSeparator = 2	296
* 6.12.37 NSNoTitle = 0	296
– 6.13.1 control NSButtonControlMBS	297
* 6.13.3 AlternateTitle as String	297
* 6.13.4 BezelStyle as Integer	297
* 6.13.5 ButtonType as Integer	298
* 6.13.6 Title as String	298
* 6.13.7 View as NSButtonMBS	298

* 6.13.9 Action	298
* 6.13.10 BoundsChanged	298
* 6.13.11 EnableMenuItems	299
* 6.13.12 FrameChanged	299
* 6.13.13 GotFocus	299
* 6.13.14 LostFocus	299
* 6.13.15 MenuAction(HitItem as MenuItem) As Boolean	299
* 6.13.16MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean	299
* 6.13.17 MouseDrag(x as Integer, y as Integer)	300
* 6.13.18 MouseUp(x as Integer, y as Integer)	300
* 6.13.19 ScaleFactorChanged(NewFactor as Double)	300
– 6.14.1 class NSButtonMBS	301
* 6.14.3 Constructor	301
* 6.14.4 Constructor(Handle as Integer)	301
* 6.14.5 Constructor(left as Double, top as Double, width as Double, height as Double)	302
* 6.14.6 Constructor(Title as String, Image as NSImageMBS = nil, Type as Integer = 0)	302
* 6.14.7 setButtonType(buttonType as Integer)	302
* 6.14.8 setNextState	303
* 6.14.10 allowsMixedState as boolean	303
* 6.14.11 alternateImage as NSImageMBS	303
* 6.14.12 alternateTitle as string	304
* 6.14.13 attributedAlternateTitle as NSAttributedStringMBS	304
* 6.14.14 attributedTitle as NSAttributedStringMBS	304
* 6.14.15 backgroundColor as NSColorMBS	304
* 6.14.16 bezelColor as NSColorMBS	304
* 6.14.17 bezelStyle as Integer	304
* 6.14.18 image as NSImageMBS	305
* 6.14.19 imageDimsWhenDisabled as Boolean	305
* 6.14.20 imageHugsTitle as Boolean	306
* 6.14.21 imagePosition as Integer	306
* 6.14.22 imageScaling as Integer	306
* 6.14.23 isBordered as boolean	307
* 6.14.24 isTransparent as boolean	307
* 6.14.25 keyEquivalent as string	307
* 6.14.26 keyEquivalentModifierMask as Integer	307
* 6.14.27 maxAcceleratorLevel as Integer	309
* 6.14.28 showsBorderOnlyWhileMouseInside as boolean	309
* 6.14.29 sound as Variant	309
* 6.14.30 SpringLoaded as Boolean	309
* 6.14.31 state as Integer	310
* 6.14.32 title as string	310

* 6.14.34 NSCircularBezelStyle=7	310
* 6.14.35 NSDisclosureBezelStyle=5	310
* 6.14.36 NSHelpButtonBezelStyle=9	311
* 6.14.37 NSInlineBezelStyle=15	311
* 6.14.38 NSMomentaryChangeButton=5	311
* 6.14.39 NSMomentaryLightButton=0	311
* 6.14.40 NSMomentaryPushInButton=7	311
* 6.14.41 NSOnOffButton=6	312
* 6.14.42 NSPushOnPushOffButton=1	312
* 6.14.43 NSRadioButton=4	312
* 6.14.44 NSRecessedBezelStyle=13	312
* 6.14.45 NSRegularSquareBezelStyle=2	312
* 6.14.46 NSRoundedBezelStyle=1	312
* 6.14.47 NSRoundedDisclosureBezelStyle=14	313
* 6.14.48 NSRoundRectBezelStyle=12	313
* 6.14.49 NSShadowlessSquareBezelStyle=6	313
* 6.14.50 NSSmallSquareBezelStyle=10	313
* 6.14.51 NSSwitchButton=3	313
* 6.14.52 NSTexturedRoundedBezelStyle=11	313
* 6.14.53 NSTexturedSquareBezelStyle=8	314
* 6.14.54 NSThickerSquareBezelStyle=4	314
* 6.14.55 NSThickSquareBezelStyle=3	314
* 6.14.56 NSToggleButton=2	314
– 6.15.1 class NSClipViewMBS	315
* 6.15.3 autoscroll(theEvent as NSEventMBS) as boolean	316
* 6.15.4 constrainScrollPoint(newOrigin as NSPointMBS) as NSPointMBS	316
* 6.15.5 Constructor	316
* 6.15.6 Constructor(Handle as Integer)	317
* 6.15.7 Constructor(left as Double, top as Double, width as Double, height as Double)	317
* 6.15.8 documentRect as NSRectMBS	317
* 6.15.9 documentVisibleRect as NSRectMBS	318
* 6.15.10 reflectScrolledClipView(clipView as NSClipViewMBS)	318
* 6.15.11 scrollClipView(clipview as NSClipViewMBS, toPoint as NSPointMBS)	318
* 6.15.12 scrollToPoint(newOrigin as NSPointMBS)	318
* 6.15.13 viewBoundsChanged(notification as NSNotificationMBS)	318
* 6.15.14 viewFrameChanged(notification as NSNotificationMBS)	319
* 6.15.16 backgroundColor as NSColorMBS	319
* 6.15.17 copiesOnScroll as boolean	319
* 6.15.18 documentCursor as NSCursorMBS	319
* 6.15.19 documentView as NSViewMBS	319
* 6.15.20 drawsBackground as boolean	320

* 6.15.22	NSClipViewFindBarPositionAboveContent = 1	320
* 6.15.23	NSClipViewFindBarPositionAboveHorizontalRuler = 0	320
* 6.15.24	NSClipViewFindBarPositionBelowContent = 2	321
* 6.15.25	NSScrollElasticityAllowed = 2	321
* 6.15.26	NSScrollElasticityAutomatic = 0	321
* 6.15.27	NSScrollElasticityNone = 1	321
– 6.16.1	class NSComboBoxMBS	322
* 6.16.3	addItemWithObjectValue(value as Variant)	322
* 6.16.4	Constructor	322
* 6.16.5	Constructor(Handle as Integer)	323
* 6.16.6	Constructor(left as Double, top as Double, width as Double, height as Double)	323
* 6.16.7	deselectItemAtIndex(index as Integer)	323
* 6.16.8	indexOfItemWithObjectValue(value as Variant) as Integer	324
* 6.16.9	indexOfSelectedItem as Integer	324
* 6.16.10	noteNumberOfItemsChanged	324
* 6.16.11	numberOfItems as Integer	325
* 6.16.12	reloadData	325
* 6.16.13	removeAllItems	325
* 6.16.14	removeItemAtIndex(index as Integer)	325
* 6.16.15	removeItemWithObjectValue(value as Variant)	325
* 6.16.16	scrollItemAtIndexToTop(index as Integer)	326
* 6.16.17	scrollItemAtIndexToVisible(index as Integer)	326
* 6.16.18	selectItemAtIndex(index as Integer)	326
* 6.16.19	selectItemWithObjectValue(value as Variant)	326
* 6.16.21	completes as boolean	327
* 6.16.22	hasVerticalScroller as boolean	327
* 6.16.23	intercellSpacing as NSSizeMBS	327
* 6.16.24	isButtonBordered as boolean	328
* 6.16.25	itemHeight as Double	328
* 6.16.26	numberOfVisibleItems as Integer	328
* 6.16.27	usesDataSource as boolean	328
– 6.17.1	control NSDatePickerControlMBS	329
* 6.17.3	View as NSDatePickerMBS	329
* 6.17.5	Action	329
* 6.17.6	BoundsChanged	329
* 6.17.7	EnableMenuItems	329
* 6.17.8	FrameChanged	330
* 6.17.9	GotFocus	330
* 6.17.10	LostFocus	330
* 6.17.11	MenuItemAction(HitItem as MenuItem) As Boolean	330
* 6.17.12	MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean	330

* 6.17.13	MouseDown(x as Integer, y as Integer)	331
* 6.17.14	MouseUp(x as Integer, y as Integer)	331
* 6.17.15	ScaleFactorChanged(NewFactor as Double)	331
– 6.18.1	class NSDatePickerMBS	332
* 6.18.3	Constructor	332
* 6.18.4	Constructor(Handle as Integer)	332
* 6.18.5	Constructor(left as Double, top as Double, width as Double, height as Double)	333
* 6.18.7	backgroundColor as NSColorMBS	333
* 6.18.8	Bezeled as Boolean	333
* 6.18.9	Bordered as Boolean	334
* 6.18.10	calendar as NSCalendarMBS	334
* 6.18.11	datePickerElements as Integer	334
* 6.18.12	datePickerMode as Integer	334
* 6.18.13	datePickerStyle as Integer	334
* 6.18.14	dateValue as date	334
* 6.18.15	drawsBackground as Boolean	335
* 6.18.16	locale as NSLocaleMBS	335
* 6.18.17	maxDate as date	335
* 6.18.18	minDate as date	335
* 6.18.19	textColor as NSColorMBS	335
* 6.18.20	timeInterval as Double	336
* 6.18.21	timeZone as NSTimeZoneMBS	336
* 6.18.23	NSClockAndCalendarDatePickerStyle = 1	336
* 6.18.24	NSEraDatePickerElementFlag = & h100	336
* 6.18.25	NSHourMinuteDatePickerElementFlag = & hC	336
* 6.18.26	NSHourMinuteSecondDatePickerElementFlag = & hE	337
* 6.18.27	NSRangeDateMode = 1	337
* 6.18.28	NSSingleDateMode = 0	337
* 6.18.29	NSTextFieldAndStepperDatePickerStyle = 0	337
* 6.18.30	NSTextFieldDatePickerStyle = 2	337
* 6.18.31	NSTimeZoneDatePickerElementFlag = & h10	337
* 6.18.32	NSYearMonthDatePickerElementFlag = & hC0	338
* 6.18.33	NSYearMonthDayDatePickerElementFlag = & hE0	338

• 7 Cocoa Networking	567
– 7.1.1 class NSHTTPCookieMBS	567
* 7.1.3 comment as string	568
* 7.1.4 commentURL as string	568
* 7.1.5 Constructor(properties as dictionary)	569
* 7.1.6 cookiesWithResponseHeaderFields(headerFields as dictionary, URL as string) as NSHTTPCookieMBS()	570
* 7.1.7 cookieWithProperties(dic as dictionary) as NSHTTPCookieMBS	570
* 7.1.8 domain as string	571
* 7.1.9 expiresDate as date	571
* 7.1.10 isHTTPOnly as boolean	572
* 7.1.11 isSecure as boolean	573
* 7.1.12 isSessionOnly as boolean	573
* 7.1.13 name as string	573
* 7.1.14 NSHTTPCookieComment as string	574
* 7.1.15 NSHTTPCookieCommentURL as string	574
* 7.1.16 NSHTTPCookieDiscard as string	574
* 7.1.17 NSHTTPCookieDomain as string	575
* 7.1.18 NSHTTPCookieExpires as string	575
* 7.1.19 NSHTTPCookieMaximumAge as string	575
* 7.1.20 NSHTTPCookieName as string	575
* 7.1.21 NSHTTPCookieOriginURL as string	575
* 7.1.22 NSHTTPCookiePath as string	576
* 7.1.23 NSHTTPCookiePort as string	576
* 7.1.24 NSHTTPCookieSecure as string	576
* 7.1.25 NSHTTPCookieValue as string	576
* 7.1.26 NSHTTPCookieVersion as string	577
* 7.1.27 path as string	577
* 7.1.28 portList as Integer()	577
* 7.1.29 properties as dictionary	578
* 7.1.30 requestHeaderFieldsWithCookies(cookies() as NSHTTPCookieMBS) as dictionary	579
* 7.1.31 value as string	580
* 7.1.32 version as Integer	580
* 7.1.34 Handle as Integer	580
– 7.2.1 class NSHTTPCookieStorageMBS	581
* 7.2.3 Constructor	581
* 7.2.4 cookies as NSHTTPCookieMBS()	581
* 7.2.5 cookiesForURL(URL as string) as NSHTTPCookieMBS()	582
* 7.2.6 cookiesToArray(cookies() as NSHTTPCookieMBS) as Integer	582
* 7.2.7 deleteCookie(cookie as NSHTTPCookieMBS)	583
* 7.2.8 NSHTTPCookieManagerAcceptPolicyChangedNotification as string	583

* 7.2.9 NSHTTPCookieManagerCookiesChangedNotification as string	584
* 7.2.10 setCookie(cookie as NSHTTPCookieMBS)	584
* 7.2.11 setCookies(cookies() as NSHTTPCookieMBS, URL as string, mainDocumentURL as string)	584
* 7.2.12 sharedHTTPCookieStorage as NSHTTPCookieStorageMBS	585
* 7.2.14 Handle as Integer	585
* 7.2.15 cookieAcceptPolicy as Integer	585
* 7.2.17 NSHTTPCookieAcceptPolicyAlways = 0	586
* 7.2.18 NSHTTPCookieAcceptPolicyNever = 1	586
* 7.2.19 NSHTTPCookieAcceptPolicyOnlyFromMainDocumentDomain = 2	586

• 6 Cocoa Controls	189
– 6.19.1 class <code>NSImageViewMBS</code>	339
* 6.19.3 Constructor	339
* 6.19.4 Constructor(Handle as Integer)	339
* 6.19.5 Constructor(left as Double, top as Double, width as Double, height as Double)	340
* 6.19.7 <code>allowsCutCopyPaste</code> as Boolean	340
* 6.19.8 <code>animates</code> as Boolean	340
* 6.19.9 <code>image</code> as <code>NSImageMBS</code>	341
* 6.19.10 <code>imageAlignment</code> as Integer	341
* 6.19.11 <code>imageFrameStyle</code> as Integer	341
* 6.19.12 <code>imageScaling</code> as Integer	342
* 6.19.13 <code>isEditable</code> as Boolean	342
* 6.19.15 <code>NSImageAlignBottom</code> = 5	342
* 6.19.16 <code>NSImageAlignBottomLeft</code> = 6	342
* 6.19.17 <code>NSImageAlignBottomRight</code> = 7	343
* 6.19.18 <code>NSImageAlignCenter</code> = 0	343
* 6.19.19 <code>NSImageAlignLeft</code> = 4	343
* 6.19.20 <code>NSImageAlignRight</code> = 8	343
* 6.19.21 <code>NSImageAlignTop</code> = 1	343
* 6.19.22 <code>NSImageAlignTopLeft</code> = 2	343
* 6.19.23 <code>NSImageAlignTopRight</code> = 3	344
* 6.19.24 <code>NSImageFrameButton</code> = 4	344
* 6.19.25 <code>NSImageFrameGrayBezel</code> = 2	344
* 6.19.26 <code>NSImageFrameGroove</code> = 3	344
* 6.19.27 <code>NSImageFrameNone</code> = 0	344
* 6.19.28 <code>NSImageFramePhoto</code> = 1	344
* 6.19.29 <code>NSScaleNone</code> = 2	345
* 6.19.30 <code>NSScaleProportionally</code> = 0	345
* 6.19.31 <code>NSScaleToFit</code> = 1	345

	77
• 5 Cocoa	151
– 5.3.1 class NSLevelIndicatorMBS	158
* 5.3.3 Constructor	158
* 5.3.4 Constructor(Handle as Integer)	159
* 5.3.5 Constructor(left as Double, top as Double, width as Double, height as Double)	159
* 5.3.6 rectOfTickMarkAtIndex(index as Integer) as NSRectMBS	159
* 5.3.7 tickMarkValueAtIndex(index as Integer) as Double	160
* 5.3.9 criticalValue as Double	160
* 5.3.10 levelIndicatorStyle as Integer	160
* 5.3.11 maxValue as Double	160
* 5.3.12 minValue as Double	160
* 5.3.13 numberOfMajorTickMarks as Integer	160
* 5.3.14 numberOfTickMarks as Integer	161
* 5.3.15 tickMarkPosition as Integer	161
* 5.3.16 warningValue as Double	161
* 5.3.18 NSContinuousCapacityLevelIndicatorStyle = 1	161
* 5.3.19 NSDiscreteCapacityLevelIndicatorStyle = 2	162
* 5.3.20 NSRatingLevelIndicatorStyle = 3	162
* 5.3.21 NSRelevancyLevelIndicatorStyle = 0	162
* 5.3.22 NSTickMarkAbove = 1	162
* 5.3.23 NSTickMarkBelow = 0	162
* 5.3.24 NSTickMarkLeft = 0	162
* 5.3.25 NSTickMarkRight = 1	162

• 6 Cocoa Controls	189
– 6.20.1 control NSOutlineControlMBS	346
* 6.20.3 AcceptTabs as Boolean	346
* 6.20.4 allowsColumnReordering as Boolean	346
* 6.20.5 allowsColumnResizing as Boolean	346
* 6.20.6 allowsColumnSelection as Boolean	347
* 6.20.7 allowsEmptySelection as Boolean	347
* 6.20.8 allowsMultipleSelection as Boolean	347
* 6.20.9 autohidesScrollers as Boolean	347
* 6.20.10 hasHorizontalScroller as Boolean	348
* 6.20.11 hasVerticalScroller as Boolean	348
* 6.20.12 ScrollView as NSScrollViewMBS	348
* 6.20.13 View as NSOutlineViewMBS	348
* 6.20.15 acceptDrop(info as NSDraggingInfoMBS, item as NSOutlineViewItemMBS, index as Integer) as Boolean	349
* 6.20.16 BoundsChanged	349
* 6.20.17 childOfItem(index as Integer, item as NSOutlineViewItemMBS) as NSOutlineViewItemMBS	349
* 6.20.18 ColumnDidMove(notification as NSNotificationMBS, OldColumn as Integer, NewColumn as Integer)	350
* 6.20.19 ColumnDidResize(notification as NSNotificationMBS, tableColumn as NSTableColumnMBS, OldWidth as Double)	350
* 6.20.20 concludeDragOperation(info as NSDraggingInfoMBS)	350
* 6.20.21 dataCell(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as NSCellMBS	350
* 6.20.22 didAddRowView(rowView as NSTableRowViewMBS, row as Integer)	351
* 6.20.23 didClickTableColumn(tableColumn as NSTableColumnMBS)	351
* 6.20.24 didDragTableColumn(tableColumn as NSTableColumnMBS)	351
* 6.20.25 didRemoveRowView(rowView as NSTableRowViewMBS, row as Integer)	352
* 6.20.26 didTile	352
* 6.20.27 DoubleClick	352
* 6.20.28 draggingEnded(info as NSDraggingInfoMBS)	352
* 6.20.29 draggingExited(info as NSDraggingInfoMBS)	352
* 6.20.30 draggingSessionEnded(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)	353
* 6.20.31 draggingSessionWillBegin(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, draggedItems() as NSOutlineViewItemMBS)	353
* 6.20.32 EnableMenuItems	354
* 6.20.33 FrameChanged	354
* 6.20.34 GotFocus	354
* 6.20.35 heightOfRowByItem(item as NSOutlineViewItemMBS) as Double	354
* 6.20.36 isGroupItem(item as NSOutlineViewItemMBS) as Boolean	355

* 6.20.37 isItemExpandable(item as NSOutlineViewItemMBS) as Boolean	355
* 6.20.38 ItemDidCollapse(notification as NSNotificationMBS, item as NSOutlineViewItemMBS)	356
* 6.20.39 ItemDidExpand(notification as NSNotificationMBS, item as NSOutlineViewItemMBS)	356
* 6.20.40 itemForPersistentObject(PersistentObject as Variant) as NSOutlineViewItemMBS	356
* 6.20.41 ItemWillCollapse(notification as NSNotificationMBS, item as NSOutlineViewItemMBS)	356
* 6.20.42 ItemWillExpand(notification as NSNotificationMBS, item as NSOutlineViewItemMBS)	357
* 6.20.43 LeftMouseDown(e as NSEventMBS) as Boolean	357
* 6.20.44 LeftMouseDragged(e as NSEventMBS) as Boolean	357
* 6.20.45 LeftMouseUp(e as NSEventMBS) as Boolean	357
* 6.20.46 LostFocus	357
* 6.20.47 MenuAction(HitItem as MenuItem) as Boolean	357
* 6.20.48 MouseDown(x as Integer, y as Integer, Modifiers as Integer) as Boolean	358
* 6.20.49 mouseDownInHeaderOfTableColumn(tableColumn as NSTableColumnMBS)	358
* 6.20.50 MouseDrag(x as Integer, y as Integer)	358
* 6.20.51 MouseUp(x as Integer, y as Integer)	358
* 6.20.52 namesOfPromisedFilesDroppedAtDestination(dropDestination as folderItem, DraggedItems() as NSOutlineViewItemMBS) as string()	359
* 6.20.53 nextTypeSelectMatchFromItem(startItem as NSOutlineViewItemMBS, endItem as NSOutlineViewItemMBS, searchString as String) as NSOutlineViewItemMBS	359
* 6.20.54 numberOfChildrenOfItem(item as NSOutlineViewItemMBS) as Integer	360
* 6.20.55 objectValue(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as Variant	360
* 6.20.56 OtherMouseDown(e as NSEventMBS) as Boolean	360
* 6.20.57 OtherMouseDragged(e as NSEventMBS) as Boolean	361
* 6.20.58 OtherMouseUp(e as NSEventMBS) as Boolean	361
* 6.20.59 pasteboardWriterForItem(item as NSOutlineViewItemMBS) as NSPasteboardItemMBS	361
* 6.20.60 persistentObjectForItem(item as NSOutlineViewItemMBS) as Variant	361
* 6.20.61 RightMouseDown(e as NSEventMBS) as Boolean	362
* 6.20.62 RightMouseDragged(e as NSEventMBS) as Boolean	362
* 6.20.63 RightMouseUp(e as NSEventMBS) as Boolean	362
* 6.20.64 rowViewForItem(item as NSOutlineViewItemMBS) as NSTableRowViewMBS	362
* 6.20.65 ScaleFactorChanged(NewFactor as Double)	363
* 6.20.66 SelectionDidChange(notification as NSNotificationMBS)	363
* 6.20.67 selectionIndexesForProposedSelection(proposedSelectionIndexes as NSIndexSetMBS) as NSIndexSetMBS	363
* 6.20.68 SelectionIsChanging(notification as NSNotificationMBS)	363
* 6.20.69 selectionShouldChangeInOutlineView as Boolean	364

* 6.20.70 setObjectValue(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS, value as Variant)	364
* 6.20.71 shouldCollapseAutoExpandedItemsForDeposited(deposited as Boolean, superResult as Boolean) as Boolean	364
* 6.20.72 shouldCollapseItem(item as NSOutlineViewItemMBS) as Boolean	365
* 6.20.73 shouldEdit(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as Boolean	365
* 6.20.74 shouldExpandItem(item as NSOutlineViewItemMBS) as Boolean	366
* 6.20.75 shouldReorderColumn(columnIndex as Integer, newIndex as Integer) as Boolean	366
* 6.20.76 shouldSelectItem(item as NSOutlineViewItemMBS) as Boolean	366
* 6.20.77 shouldSelectTableColumn(tableColumn as NSTableColumnMBS) as Boolean	367
* 6.20.78 shouldShowCellExpansion(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as Boolean	367
* 6.20.79 shouldShowOutlineCellForItem(item as NSOutlineViewItemMBS) as Boolean	367
* 6.20.80 shouldTrackCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as Boolean	368
* 6.20.81 shouldTypeSelectForEvent(e as NSEventMBS, searchString as String) as Boolean	368
* 6.20.82 sizeToFitWidthOfColumn(column as Integer) as Double	369
* 6.20.83 sortDescriptorsDidChange(oldDescriptors() as NSSortDescriptorMBS)	369
* 6.20.84 textShouldBeginEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as Boolean	369
* 6.20.85 textShouldEndEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as Boolean	369
* 6.20.86 toolTipForCell(cell as NSCellMBS, byref rect as NSRectMBS, tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS, mouseLocation as NSPointMBS) as String	370
* 6.20.87 typeSelectString(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as String	370
* 6.20.88 updateDraggingItemsForDrag(draggingInfo as NSDraggingInfoMBS)	371
* 6.20.89 validateDrop(info as NSDraggingInfoMBS, proposedItem as NSOutlineViewItemMBS, proposedChildIndex as Integer) as Integer	371
* 6.20.90 view(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as NSViewMBS	371
* 6.20.91 willDisplayCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS)	372
* 6.20.92 willDisplayOutlineCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS)	372
* 6.20.93 willTile	373
* 6.20.94 writeItems(items() as NSOutlineViewItemMBS, pasteboard as NSPasteboardMBS) as Boolean	373
– 6.21.1 class NSOutlineViewItemMBS	374
* 6.21.3 Constructor	374

* 6.21.4	sortedArrayUsingDescriptor(values() as NSOutlineViewItemMBS, sortDescriptor as NSSortDescriptorMBS) as NSOutlineViewItemMBS()	374
* 6.21.5	sortedArrayUsingDescriptors(values() as NSOutlineViewItemMBS, sortDescriptor() as NSSortDescriptorMBS) as NSOutlineViewItemMBS()	374
* 6.21.7	Description as String	375
* 6.21.8	Handle as Integer	375
* 6.21.9	valueForKey(key as String) as Variant	375
* 6.21.11	Description as String	375
* 6.21.12	setValueForKey(key as string, value as Variant)	375
* 6.21.13	setValueForUndefinedKey(key as string, value as Variant)	376
* 6.21.14	valueForKey(key as string) as Variant	376
* 6.21.15	valueForUndefinedKey(key as string) as Variant	377
– 6.22.1	class NSOutlineViewMBS	378
* 6.22.3	child(index as Integer, offItem as NSOutlineViewItemMBS) as NSOutlineViewItemMBS	378
* 6.22.4	childIndexForItem(item as NSOutlineViewItemMBS) as Integer	379
* 6.22.5	collapseItem(item as NSOutlineViewItemMBS)	379
* 6.22.6	collapseItem(item as NSOutlineViewItemMBS, collapseChildren as Boolean)	379
* 6.22.7	Constructor	380
* 6.22.8	Constructor(Handle as Integer)	380
* 6.22.9	Constructor(left as Double, top as Double, width as Double, height as Double)	380
* 6.22.10	expandItem(item as NSOutlineViewItemMBS)	381
* 6.22.11	expandItem(item as NSOutlineViewItemMBS, expandChildren as Boolean)	381
* 6.22.12	frameOfOutlineCellAtRow(row as Integer) as NSRectMBS	381
* 6.22.13	insertItemsAtIndexes(indexes as NSIndexSetMBS, Parent as NSOutlineViewItemMBS, animationOptions as Integer)	382
* 6.22.14	insertRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)	382
* 6.22.15	isExpandable(item as NSOutlineViewItemMBS) as Boolean	383
* 6.22.16	isItemExpanded(item as NSOutlineViewItemMBS) as Boolean	383
* 6.22.17	itemAtRow(row as Integer) as NSOutlineViewItemMBS	383
* 6.22.18	levelForItem(item as NSOutlineViewItemMBS) as Integer	383
* 6.22.19	levelForRow(row as Integer) as Integer	383
* 6.22.20	moveItemAtIndex(oldIndex as Integer, oldParent as NSOutlineViewItemMBS, newIndex as Integer, newParent as NSOutlineViewItemMBS)	384
* 6.22.21	moveRowAtIndex(oldIndex as Integer, newIndex as Integer)	384
* 6.22.22	NSOutlineViewColumnDidMoveNotification as String	384
* 6.22.23	NSOutlineViewColumnDidResizeNotification as String	385
* 6.22.24	NSOutlineViewDisclosureButtonKey as String	385
* 6.22.25	NSOutlineViewItemDidCollapseNotification as String	385
* 6.22.26	NSOutlineViewItemDidExpandNotification as String	385
* 6.22.27	NSOutlineViewItemWillCollapseNotification as String	386
* 6.22.28	NSOutlineViewItemWillExpandNotification as String	386

* 6.22.29	NSOutlineViewSelectionDidChangeNotification as String	386
* 6.22.30	NSOutlineViewSelectionIsChangingNotification as String	386
* 6.22.31	NSOutlineViewShowHideButtonKey as String	387
* 6.22.32	numberOfChildrenOfItem(item as NSOutlineViewItemMBS) as Integer	387
* 6.22.33	parentForItem(item as NSOutlineViewItemMBS) as NSOutlineViewItemMBS	387
* 6.22.34	reloadItem(item as NSOutlineViewItemMBS)	387
* 6.22.35	reloadItem(item as NSOutlineViewItemMBS, reloadChildren as Boolean)	388
* 6.22.36	removeItemsAtIndexes(indexes as NSIndexSetMBS, Parent as NSOutlineViewItemMBS, animationOptions as Integer)	388
* 6.22.37	removeRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)	389
* 6.22.38	rowForItem(item as NSOutlineViewItemMBS) as Integer	389
* 6.22.39	setDropItem(item as NSOutlineViewItemMBS, dropChildIndex as Integer)	389
* 6.22.41	autoresizesOutlineColumn as Boolean	389
* 6.22.42	autosaveExpandedItems as Boolean	390
* 6.22.43	indentationMarkerFollowsCell as Boolean	390
* 6.22.44	indentationPerLevel as Double	390
* 6.22.45	outlinetableColumn as NSTableColumnMBS	390
* 6.22.46	stronglyReferencesItems as Boolean	391
* 6.22.47	userInterfaceLayoutDirection as Integer	391
* 6.22.49	NSOutlineViewDropOnItemIndex = -1	391
– 6.23.1	control NSPopUpButtonControlMBS	392
* 6.23.3	View as NSPopUpButtonMBS	392
* 6.23.5	Action	392
* 6.23.6	BoundsChanged	392
* 6.23.7	EnableMenuItems	392
* 6.23.8	FrameChanged	393
* 6.23.9	GotFocus	393
* 6.23.10	LostFocus	393
* 6.23.11	MenuItemAction(HitItem as MenuItem) As Boolean	393
* 6.23.12	MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean	393
* 6.23.13	MouseDown(x as Integer, y as Integer)	394
* 6.23.14	MouseDown(x as Integer, y as Integer)	394
* 6.23.15	ScaleFactorChanged(NewFactor as Double)	394
– 6.24.1	class NSPopUpButtonMBS	395
* 6.24.3	addItemWithTitle(titles() as string)	395
* 6.24.4	addItemWithTitle(title as string)	396
* 6.24.5	Constructor	396
* 6.24.6	Constructor(Handle as Integer)	397
* 6.24.7	Constructor(left as Double, top as Double, width as Double, height as Double)	397
* 6.24.8	Constructor(left as Double, top as Double, width as Double, height as Double, pull-Down as boolean)	397

* 6.24.9	indexOfItem(item as NSMenuItemMBS) as Integer	398
* 6.24.10	indexOfItemWithTag(tag as Integer) as Integer	398
* 6.24.11	indexOfItemWithTitle(title as string) as Integer	398
* 6.24.12	indexOfSelectedItem as Integer	399
* 6.24.13	insertItemWithTitle(title as string, atIndex as Integer)	399
* 6.24.14	itemAtIndex(index as Integer) as NSMenuItemMBS	399
* 6.24.15	itemWithTitle(title as string) as NSMenuItemMBS	400
* 6.24.16	lastItem as NSMenuItemMBS	400
* 6.24.17	removeAllItems	400
* 6.24.18	removeItemAtIndex(index as Integer)	400
* 6.24.19	removeItemWithTitle(title as string)	400
* 6.24.20	selectItem(item as NSMenuItemMBS)	401
* 6.24.21	selectItemAtIndex(index as Integer)	401
* 6.24.22	selectItemWithTag(tag as Integer) as boolean	401
* 6.24.23	selectItemWithTitle(title as string)	402
* 6.24.24	setTitle(title as string)	402
* 6.24.25	synchronizeTitleAndSelectedItem	402
* 6.24.26	titleOfSelectedItem as string	402
* 6.24.28	arrowPosition as Integer	402
* 6.24.29	autoenablesItems as boolean	403
* 6.24.30	menu as NSMenuMBS	403
* 6.24.31	numberOfItems as Integer	403
* 6.24.32	pullsDown as boolean	403
* 6.24.33	selectedItem as NSMenuItemMBS	404
* 6.24.35	NSPopUpArrowAtBottom = 2	404
* 6.24.36	NSPopUpArrowAtCenter = 1	404
* 6.24.37	NSPopUpNoArrow = 0	404
– 6.25.1	class NSProgressIndicatorMBS	405
* 6.25.3	Constructor	405
* 6.25.4	Constructor(Handle as Integer)	405
* 6.25.5	Constructor(left as Double, top as Double, width as Double, height as Double)	406
* 6.25.6	incrementBy(delta as Double)	406
* 6.25.7	sizeToFit	406
* 6.25.8	startAnimation	407
* 6.25.9	stopAnimation	407
* 6.25.11	controlSize as Integer	407
* 6.25.12	controlTint as Integer	407
* 6.25.13	doubleValue as Double	407
* 6.25.14	isBezeled as boolean	408
* 6.25.15	isDisplayedWhenStopped as boolean	408
* 6.25.16	isIndeterminate as boolean	408

* 6.25.17	maxValue as Double	408
* 6.25.18	minValue as Double	409
* 6.25.19	style as Integer	409
* 6.25.20	usesThreadedAnimation as boolean	409
* 6.25.22	NSBlueControlTint=1	409
* 6.25.23	NSClearControlTint=7	410
* 6.25.24	NSDefaultControlTint=0	410
* 6.25.25	NSGraphiteControlTint=6	410
* 6.25.26	NSMiniControlSize=2	410
* 6.25.27	NSProgressIndicatorBarStyle=0	410
* 6.25.28	NSProgressIndicatorPreferredAquaThickness=12	410
* 6.25.29	NSProgressIndicatorPreferredLargeThickness=18	410
* 6.25.30	NSProgressIndicatorPreferredSmallThickness=10	411
* 6.25.31	NSProgressIndicatorPreferredThickness=14	411
* 6.25.32	NSProgressIndicatorSpinningStyle=1	411
* 6.25.33	NSRegularControlSize=0	411
* 6.25.34	NSSmallControlSize=1	411
– 6.26.1	class NSScrollerMBS	412
* 6.26.3	checkSpaceForParts	412
* 6.26.4	Constructor	412
* 6.26.5	Constructor(Handle as Integer)	413
* 6.26.6	Constructor(left as Double, top as Double, width as Double, height as Double)	413
* 6.26.7	drawArrow(Arrow as Integer, highlight as boolean)	413
* 6.26.8	drawKnob	414
* 6.26.9	drawKnobSlotInRect(slotRect as NSRectMBS, highlight as boolean)	414
* 6.26.10	drawParts	414
* 6.26.11	highlight(flag as boolean)	414
* 6.26.12	hitPart as Integer	415
* 6.26.13	isCompatibleWithOverlayScrollers as boolean	415
* 6.26.14	NSPreferredScrollerStyleDidChangeNotification as string	415
* 6.26.15	preferredScrollerStyle as Integer	415
* 6.26.16	rectForPart(part as Integer) as NSRectMBS	416
* 6.26.17	scrollerWidth as Double	416
* 6.26.18	scrollerWidthForControlSize(controlsize as Integer) as Double	416
* 6.26.19	setFloatValue(aFloat as Double, proportion as Double)	417
* 6.26.20	testPart(p as NSPointMBS) as Integer	417
* 6.26.21	trackKnob(theEvent as NSEventMBS)	417
* 6.26.22	trackScrollButtons(theEvent as NSEventMBS)	417
* 6.26.23	usableParts as Integer	417
* 6.26.25	arrowsPosition as Integer	418
* 6.26.26	controlSize as Integer	418

* 6.26.27 controlTint as Integer	418
* 6.26.28 knobProportion as Double	418
* 6.26.29 knobStyle as Integer	419
* 6.26.30 scrollerStyle as Integer	419
* 6.26.32 NSAllScrollerParts = 2	419
* 6.26.33 NSBlueControlTint = 1	419
* 6.26.34 NSClearControlTint = 7	420
* 6.26.35 NSDefaultControlTint = 0	420
* 6.26.36 NSGraphiteControlTint = 6	420
* 6.26.37 NSMiniControlSize = 2	420
* 6.26.38 NSNoScrollerParts = 0	420
* 6.26.39 NSOnlyScrollerArrows = 1	420
* 6.26.40 NSRegularControlSize = 0	420
* 6.26.41 NSScrollerArrowsDefaultSetting = 0	421
* 6.26.42 NSScrollerArrowsMaxEnd = 0	421
* 6.26.43 NSScrollerArrowsMinEnd = 1	421
* 6.26.44 NSScrollerArrowsNone = 2	421
* 6.26.45 NSScrollerDecrementArrow = 1	421
* 6.26.46 NSScrollerDecrementLine = 4	421
* 6.26.47 NSScrollerDecrementPage = 1	422
* 6.26.48 NSScrollerIncrementArrow = 0	422
* 6.26.49 NSScrollerIncrementLine = 5	422
* 6.26.50 NSScrollerIncrementPage = 3	422
* 6.26.51 NSScrollerKnob = 2	422
* 6.26.52 NSScrollerKnobSlot = 6	422
* 6.26.53 NSScrollerKnobStyleDark = 1	422
* 6.26.54 NSScrollerKnobStyleDefault = 0	423
* 6.26.55 NSScrollerKnobStyleLight = 2	423
* 6.26.56 NSScrollerNoPart = 0	423
* 6.26.57 NSScrollerStyleLegacy = 0	423
* 6.26.58 NSScrollerStyleOverlay = 1	423
* 6.26.59 NSSmallControlSize = 1	424
– 6.27.1 class NSScrollViewMBS	425
* 6.27.3 Constructor	425
* 6.27.4 Constructor(Handle as Integer)	425
* 6.27.5 Constructor(left as Double, top as Double, width as Double, height as Double)	426
* 6.27.6 flashScrollers	426
* 6.27.7 reflectScrolledClipView(clipView as NSClipViewMBS)	426
* 6.27.8 tile	427
* 6.27.10 autohidesScrollers as boolean	427
* 6.27.11 backgroundColor as NSColorMBS	427

* 6.27.12	borderType as Integer	427
* 6.27.13	contentSize as NSSizeMBS	428
* 6.27.14	contentView as NSClipViewMBS	428
* 6.27.15	documentCursor as NSCursorMBS	428
* 6.27.16	documentView as NSViewMBS	428
* 6.27.17	documentVisibleRect as NSRectMBS	428
* 6.27.18	drawsBackground as boolean	429
* 6.27.19	hasHorizontalRuler as boolean	429
* 6.27.20	hasHorizontalScroller as boolean	429
* 6.27.21	hasVerticalRuler as boolean	429
* 6.27.22	hasVerticalScroller as boolean	429
* 6.27.23	horizontalLineScroll as Double	429
* 6.27.24	horizontalPageScroll as Double	430
* 6.27.25	horizontalScrollElasticity as Integer	430
* 6.27.26	horizontalScroller as NSScrollerMBS	431
* 6.27.27	lineScroll as Double	431
* 6.27.28	pageScroll as Double	431
* 6.27.29	rulersVisible as boolean	432
* 6.27.30	scrollerKnobStyle as Integer	432
* 6.27.31	scrollerStyle as Integer	432
* 6.27.32	scrollsDynamically as boolean	432
* 6.27.33	usesPredominantAxisScrolling as boolean	433
* 6.27.34	verticalLineScroll as Double	433
* 6.27.35	verticalPageScroll as Double	433
* 6.27.36	verticalScrollElasticity as Integer	434
* 6.27.37	verticalScroller as NSScrollerMBS	434
* 6.27.39	NSScrollElasticityAllowed = 2	434
* 6.27.40	NSScrollElasticityAutomatic = 0	435
* 6.27.41	NSScrollElasticityNone = 1	435
* 6.27.42	NSScrollViewFindBarPositionAboveContent = 1	435
* 6.27.43	NSScrollViewFindBarPositionAboveHorizontalRuler = 0	435
* 6.27.44	NSScrollViewFindBarPositionBelowContent = 2	436
– 6.28.1	class NSSliderMBS	437
* 6.28.3	acceptsFirstMouse(event as NSEventMBS) as boolean	437
* 6.28.4	closestTickMarkValueToValue(value as Double) as Double	437
* 6.28.5	Constructor	438
* 6.28.6	Constructor(Handle as Integer)	438
* 6.28.7	Constructor(left as Double, top as Double, width as Double, height as Double)	438
* 6.28.8	indexOfTickMarkAtPoint(p as NSPointMBS) as Integer	439
* 6.28.9	indexOfTickMarkAtPoint(x as Double, y as Double) as Integer	439
* 6.28.10	isVertical as Integer	439

* 6.28.11 rectOfTickMarkAtIndex(index as Integer) as NSRectMBS	439
* 6.28.12 tickMarkValueAtIndex(index as Integer) as Double	440
* 6.28.14 allowsTickMarkValuesOnly as boolean	440
* 6.28.15 altIncrementValue as Double	440
* 6.28.16 image as NSImageMBS	440
* 6.28.17 knobThickness as Double	441
* 6.28.18 maxValue as Double	441
* 6.28.19 minValue as Double	441
* 6.28.20 numberOfTickMarks as Integer	441
* 6.28.21 sliderType as Integer	442
* 6.28.22 tickMarkPosition as Integer	442
* 6.28.23 title as string	442
* 6.28.24 titleCell as NSCellMBS	442
* 6.28.25 titleColor as NSColorMBS	443
* 6.28.26 titleFont as NSFontMBS	443
* 6.28.28 NSCircularSlider=1	443
* 6.28.29 NSLinearSlider=0	443
* 6.28.30 NSTickMarkAbove=1	443
* 6.28.31 NSTickMarkBelow=0	444
* 6.28.32 NSTickMarkLeft=1	444
* 6.28.33 NSTickMarkRight=0	444

- **15 Statusitem** 1279
 - 15.1.1 class NSStatusBarButtonMBS 1279
 - * 15.1.3 Available as boolean 1279
 - * 15.1.5 appearsDisabled as Boolean 1280

• 6 Cocoa Controls	189
– 6.29.1 class NSStepperMBS	445
* 6.29.3 Constructor	445
* 6.29.4 Constructor(Handle as Integer)	445
* 6.29.5 Constructor(left as Double, top as Double, width as Double, height as Double)	446
* 6.29.7 autorepeat as boolean	446
* 6.29.8 increment as Double	446
* 6.29.9 maxValue as Double	447
* 6.29.10 minValue as Double	447
* 6.29.11 valueWraps as boolean	447
– 6.30.1 class NSTableColumnMBS	448
* 6.30.3 Constructor(identifier as string)	448
* 6.30.4 dataCellForRow(row as Integer) as NSCellMBS	448
* 6.30.5 sizeToFit	448
* 6.30.7 dataCell as NSCellMBS	449
* 6.30.8 Editable as boolean	449
* 6.30.9 headerCell as NSTableHeaderCellMBS	449
* 6.30.10 headerToolTip as string	449
* 6.30.11 Hidden as boolean	449
* 6.30.12 identifier as string	450
* 6.30.13 maxWidth as Double	450
* 6.30.14 minWidth as Double	450
* 6.30.15 Resizable as boolean	450
* 6.30.16 resizingMask as Integer	450
* 6.30.17 sortDescriptorPrototype as NSSortDescriptorMBS	451
* 6.30.18 tableView as NSTableViewMBS	451
* 6.30.19 title as String	451
* 6.30.20 width as Double	451
* 6.30.22 NSTableColumnAutoresizingMask=1	451
* 6.30.23 NSTableColumnNoResizing=0	452
* 6.30.24 NSTableColumnUserResizingMask=2	452
– 6.31.1 control NSTableControlMBS	453
* 6.31.3 AcceptTabs as Boolean	453
* 6.31.4 allowsColumnReordering as Boolean	453
* 6.31.5 allowsColumnResizing as Boolean	453
* 6.31.6 allowsColumnSelection as Boolean	454
* 6.31.7 allowsEmptySelection as Boolean	454
* 6.31.8 allowsMultipleSelection as Boolean	454
* 6.31.9 autohidesScrollers as Boolean	454
* 6.31.10 disableCellEvents as Boolean	455
* 6.31.11 disableViewEvents as Boolean	455

* 6.31.12	hasHorizontalScroller as Boolean	455
* 6.31.13	hasVerticalScroller as Boolean	455
* 6.31.14	ScrollView as NSScrollViewMBS	456
* 6.31.15	View as NSTableViewMBS	456
* 6.31.17	acceptDrop(info as NSDraggingInfoMBS, row as Integer, dropOperation as Integer) as boolean	456
* 6.31.18	BoundsChanged	456
* 6.31.19	ColumnDidMove(notification as NSNotificationMBS, oldColumn as Integer, newColumn as Integer)	457
* 6.31.20	ColumnDidResize(notification as NSNotificationMBS, tableColumn as NSTableColumnMBS, OldWidth as Double)	457
* 6.31.21	dataCell(tableColumn as NSTableColumnMBS, row as Int64) as NSCellMBS	457
* 6.31.22	didAddRowView(rowView as NSTableRowViewMBS, row as Integer)	457
* 6.31.23	didClickTableColumn(tableColumn as NSTableColumnMBS)	458
* 6.31.24	didDragTableColumn(tableColumn as NSTableColumnMBS)	458
* 6.31.25	didRemoveRowView(rowView as NSTableRowViewMBS, row as Integer)	458
* 6.31.26	didTile	458
* 6.31.27	DoubleClick	459
* 6.31.28	draggingSessionEnded(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)	459
* 6.31.29	draggingSessionWillBegin(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, rowIndexes as NSIndexSetMBS)	459
* 6.31.30	EnableMenuItems	460
* 6.31.31	FrameChanged	460
* 6.31.32	GotFocus	460
* 6.31.33	heightOfRow(row as Int64) as Double	460
* 6.31.34	isGroupRow(row as Int64) as boolean	460
* 6.31.35	LeftMouseDown(e as NSEventMBS) as boolean	461
* 6.31.36	LeftMouseDragged(e as NSEventMBS) as boolean	461
* 6.31.37	LeftMouseUp(e as NSEventMBS) as boolean	461
* 6.31.38	LostFocus	461
* 6.31.39	MenuItemAction(HitItem as MenuItem) As Boolean	462
* 6.31.40	MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean	462
* 6.31.41	mouseDownInHeaderOfTableColumn(tableColumn as NSTableColumnMBS)	462
* 6.31.42	MouseDown(x as Integer, y as Integer)	462
* 6.31.43	MouseUp(x as Integer, y as Integer)	463
* 6.31.44	namesOfPromisedFilesDroppedAtDestination(dropDestination as folderItem, DraggedRowsWithIndexes as NSIndexSetMBS) as string()	463
* 6.31.45	nextTypeSelectMatchFromRow(startRow as Int64, endRow as Int64, searchString as string) as Int64	463
* 6.31.46	numberOfRowsInTableView as Integer	464
* 6.31.47	objectValue(column as NSTableColumnMBS, row as Integer) as Variant	464
* 6.31.48	OtherMouseDown(e as NSEventMBS) as boolean	464

* 6.31.49 OtherMouseDragged(e as NSEventMBS) as boolean	464
* 6.31.50 OtherMouseUp(e as NSEventMBS) as boolean	464
* 6.31.51 pasteboardItemForRow(row as Integer) as NSPasteboardItemMBS	464
* 6.31.52 RightMouseDown(e as NSEventMBS) as boolean	465
* 6.31.53 RightMouseDragged(e as NSEventMBS) as boolean	465
* 6.31.54 RightMouseUp(e as NSEventMBS) as boolean	465
* 6.31.55 rowActionsForRow(row as Integer, edge as Integer) as NSTableViewRowActionMBS()	465
* 6.31.56 rowViewForRow(row as Integer) as NSTableRowViewMBS	466
* 6.31.57 scaleFactorChanged(NewFactor as Double)	466
* 6.31.58 SelectionDidChange(notification as NSNotificationMBS)	467
* 6.31.59 selectionIndexesForProposedSelection(proposedSelectionIndexes as NSIndexSetMBS) as NSIndexSetMBS	467
* 6.31.60 SelectionIsChanging(notification as NSNotificationMBS)	467
* 6.31.61 selectionShouldChangeInTableView as boolean	467
* 6.31.62 setObjectValue(value as Variant, column as NSTableColumnMBS, row as Integer)	468
* 6.31.63 shouldEditTableColumn(tableColumn as NSTableColumnMBS, row as Int64) as boolean	468
* 6.31.64 shouldReorderColumn(columnIndex as Int64, newIndex as Int64) as boolean	468
* 6.31.65 shouldSelectRow(row as Int64) as boolean	469
* 6.31.66 shouldSelectTableColumn(tableColumn as NSTableColumnMBS) as boolean	469
* 6.31.67 shouldShowCellExpansion(tableColumn as NSTableColumnMBS, row as Int64) as Boolean	469
* 6.31.68 shouldTrackCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, row as Int64) as Boolean	470
* 6.31.69 shouldTypeSelectForEvent(e as NSEventMBS, searchString as string) as Boolean	470
* 6.31.70 sizeToFitWidthOfColumn(column as Int64) as Double	471
* 6.31.71 sortDescriptorsDidChange(oldDescriptors() as NSSortDescriptorMBS)	471
* 6.31.72 textShouldBeginEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as boolean	472
* 6.31.73 textShouldEndEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as boolean	472
* 6.31.74 tooltipForCell(cell as NSCellMBS, r as NSRectMBS, tableColumn as NSTableColumnMBS, row as Int64, mouseLocation as NSPointMBS) as string	472
* 6.31.75 typeSelectString(tableColumn as NSTableColumnMBS, row as Int64) as string	472
* 6.31.76 updateDraggingItemsForDrag(draggingInfo as NSDraggingInfoMBS)	473
* 6.31.77 validateDrop(info as NSDraggingInfoMBS, proposedRow as Integer, dropOperation as Integer) as Integer	473
* 6.31.78 view(tableColumn as NSTableColumnMBS, row as Integer) as NSViewMBS	474
* 6.31.79 willDisplayCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, row as Int64)	474

* 6.31.80 willTile	474
* 6.31.81 writeRowsWithIndexes(rowIndexes as NSIndexSetMBS, pboard as NSPasteboardMBS) as boolean	475
– 6.32.1 class NSTableDataSourceMBS	476
* 6.32.3 Close	476
* 6.32.4 numberOfRowsInTableView as Integer	476
* 6.32.5 objectValue(column as NSTableColumnMBS, row as Integer) as Variant	476
* 6.32.6 setObjectValue(value as Variant, column as NSTableColumnMBS, row as Integer)	476
* 6.32.7 sortDescriptorsDidChange(oldDescriptors() as NSSortDescriptorMBS)	477
– 6.33.1 class NSTableHeaderCellMBS	478
* 6.33.3 drawSortIndicatorWithFrame(cellFrame as NSRectMBS, inView as NSViewMBS, ascending as boolean, priority as Integer)	478
* 6.33.4 sortIndicatorRectForBounds(r as NSRectMBS) as NSRectMBS	478
– 6.34.1 class NSTableHeaderViewMBS	479
* 6.34.3 columnAtPoint(point as NSPointMBS) as Integer	479
* 6.34.4 Constructor	479
* 6.34.5 Constructor(Handle as Integer)	479
* 6.34.6 Constructor(left as Double, top as Double, width as Double, height as Double)	480
* 6.34.7 draggedColumn as Integer	480
* 6.34.8 draggedDistance as Double	480
* 6.34.9 headerRectOfColumn(Column as Integer) as NSRectMBS	481
* 6.34.10 resizedColumn as Integer	481
* 6.34.12 tableView as NSTableViewMBS	481
– 6.35.1 class NSTableRowViewMBS	482
* 6.35.3 Constructor	482
* 6.35.5 backgroundColor as NSColorMBS	482
* 6.35.6 emphasized as Boolean	482
* 6.35.7 Floating as Boolean	483
* 6.35.8 groupRowStyle as Boolean	483
* 6.35.9 NextRowSelected as Boolean	483
* 6.35.10 PreviousRowSelected as Boolean	483
* 6.35.11 selected as Boolean	483
* 6.35.12 selectionHighlightStyle as Integer	484
– 6.36.1 class NSTableViewMBS	485
* 6.36.3 addTableColumn(column as NSTableColumnMBS)	485
* 6.36.4 beginUpdates	485
* 6.36.5 canDragRowsWithIndexes(rowIndexes as NSIndexSetMBS, mouseDownPoint as NSPointMBS) as Boolean	486
* 6.36.6 columnAtPoint(p as NSPointMBS) as Integer	486
* 6.36.7 columnAtPoint(x as Double, y as Double) as Integer	486
* 6.36.8 columnForView(view as NSViewMBS) as Integer	486

* 6.36.9 columnIndexesInRect(rect as NSRectMBS) as NSIndexSetMBS	487
* 6.36.10 columnWithIdentifier(identifier as string) as Integer	487
* 6.36.11 Constructor	487
* 6.36.12 Constructor(Handle as Integer)	487
* 6.36.13 Constructor(left as Double, top as Double, width as Double, height as Double)	488
* 6.36.14 deselectAll	488
* 6.36.15 deselectColumn(column as Integer)	488
* 6.36.16 deselectRow(row as Integer)	489
* 6.36.17 Destructor	489
* 6.36.18 dragImageForRowsWithIndexes(dragRows as NSIndexSetMBS, tableColumns() as NSTableColumnMBS, theEvent as NSEventMBS, byref dragImageOffset as NSPointMBS) as NSImageMBS	489
* 6.36.19 edit(column as Integer, row as Integer, selectit as boolean)	489
* 6.36.20 endUpdates	490
* 6.36.21 frameOfCellAtColumnRow(column as Integer, row as Integer) as NSRectMBS	490
* 6.36.22 hiddenRowIndexes as NSIndexSetMBS	490
* 6.36.23 hideRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)	491
* 6.36.24 insertRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)	491
* 6.36.25 isColumnSelected(column as Integer) as boolean	491
* 6.36.26 isRowSelected(row as Integer) as boolean	492
* 6.36.27 moveColumn(column as Integer, toIndex as Integer)	492
* 6.36.28 moveRowAtIndex(oldIndex as Integer, newIndex as Integer)	492
* 6.36.29 noteHeightOfRowsWithIndexesChanged(indexSet as NSIndexSetMBS)	492
* 6.36.30 noteNumberOfRowsChanged	493
* 6.36.31 rectOfColumn(column as Integer) as NSRectMBS	493
* 6.36.32 rectOfRow(row as Integer) as NSRectMBS	493
* 6.36.33 reloadData	494
* 6.36.34 reloadData(rowIndexes as NSIndexSetMBS, columnIndexes as NSIndexSetMBS)	494
* 6.36.35 removeRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)	494
* 6.36.36 removeTableColumn(column as NSTableColumnMBS)	495
* 6.36.37 rowAtPoint(p as NSPointMBS) as Integer	495
* 6.36.38 rowAtPoint(x as Double, y as Double) as Integer	495
* 6.36.39 rowForView(view as NSViewMBS) as Integer	496
* 6.36.40 rowsInRect(rect as NSRectMBS) as NSRangeMBS	496
* 6.36.41 rowViewAtRow(row as Integer, makeIfNecessary as Boolean) as NSViewMBS	496
* 6.36.42 scrollColumnToVisible(column as Integer)	497
* 6.36.43 scrollRowToVisible(row as Integer)	497
* 6.36.44 ScrollToLine(Line as Integer, Animated as Boolean)	497
* 6.36.45 selectAll	497
* 6.36.46 selectColumnIndexes(indexes as NSIndexSetMBS, extend as boolean)	498
* 6.36.47 selectedColumnIndexes as NSIndexSetMBS	498
* 6.36.48 selectedRowIndexes as NSIndexSetMBS	498

* 6.36.49	selectRowIndexes(indexes as NSIndexSetMBS, extend as boolean)	498
* 6.36.50	setDraggingSourceOperationMask(mask as Integer, isLocal as Boolean)	498
* 6.36.51	setDropRow(row as Integer, dropOperation as Integer)	499
* 6.36.52	setSortDescriptor(sortDescriptor as NSSortDescriptorMBS)	499
* 6.36.53	setSortDescriptors(sortDescriptors() as NSSortDescriptorMBS)	499
* 6.36.54	sizeLastColumnToFit	500
* 6.36.55	sizeToFit	500
* 6.36.56	sortDescriptors as NSSortDescriptorMBS()	500
* 6.36.57	tableColumns as NSTableColumnMBS()	500
* 6.36.58	tableColumnWithIdentifier(identifier as string) as NSTableColumnMBS	500
* 6.36.59	tile	501
* 6.36.60	unhideRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)	501
* 6.36.61	viewAtColumn(column as Integer, row as Integer, makeIfNecessary as Boolean) as NSViewMBS	501
* 6.36.63	allowsColumnReordering as boolean	502
* 6.36.64	allowsColumnResizing as boolean	502
* 6.36.65	allowsColumnSelection as boolean	502
* 6.36.66	allowsEmptySelection as boolean	502
* 6.36.67	allowsMultipleSelection as boolean	502
* 6.36.68	allowsTypeSelect as boolean	503
* 6.36.69	autosaveName as string	503
* 6.36.70	autosaveTableColumns as boolean	503
* 6.36.71	backgroundColor as NSColorMBS	504
* 6.36.72	clickedColumn as Integer	504
* 6.36.73	clickedRow as Integer	504
* 6.36.74	columnAutoresizingStyle as Integer	504
* 6.36.75	cornerView as NSViewMBS	505
* 6.36.76	dataSource as NSTableDataSourceMBS	505
* 6.36.77	draggingDestinationFeedbackStyle as Integer	505
* 6.36.78	editedColumn as Integer	505
* 6.36.79	editedRow as Integer	506
* 6.36.80	effectiveRowSizeStyle as Integer	506
* 6.36.81	floatsGroupRows as Boolean	506
* 6.36.82	focusedColumn as Integer	506
* 6.36.83	gridColor as NSColorMBS	507
* 6.36.84	gridStyleMask as Integer	507
* 6.36.85	headerView as NSTableHeaderViewMBS	507
* 6.36.86	highlightedtableColumn as NSTableColumnMBS	508
* 6.36.87	intercellSpacing as NSSizeMBS	508
* 6.36.88	numberOfColumns as Integer	508
* 6.36.89	numberOfRows as Integer	508
* 6.36.90	numberOfSelectedColumns as Integer	509

* 6.36.91 numberOfSelectedRows as Integer	509
* 6.36.92 rowActionsVisible as Boolean	509
* 6.36.93 rowHeight as Double	509
* 6.36.94 rowSizeStyle as Integer	509
* 6.36.95 selectedColumn as Integer	510
* 6.36.96 selectedRow as Integer	510
* 6.36.97 selectionHighlightStyle as Integer	510
* 6.36.98 usesAlternatingRowBackgroundColors as boolean	511
* 6.36.99 usesStaticContents as Boolean	511
* 6.36.100 verticalMotionCanBeginDrag as boolean	511
* 6.36.101 indicatorImageInTableColumn(column as NSTableColumnMBS) as NSImageMBS	512
* 6.36.103 ColumnDidMove(notification as NSNotificationMBS, oldColumn as Integer, newColumn as Integer)	512
* 6.36.104 ColumnDidResize(notification as NSNotificationMBS, column as NSTableColumnMBS, index as Integer)	512
* 6.36.105 dataCell(tableColumn as NSTableColumnMBS, row as Int64) as NSCellMBS	513
* 6.36.106 didAddRowView(rowView as NSTableRowViewMBS, row as Integer)	513
* 6.36.107 didClickTableColumn(tableColumn as NSTableColumnMBS)	513
* 6.36.108 didDragTableColumn(tableColumn as NSTableColumnMBS)	513
* 6.36.109 didRemoveRowView(rowView as NSTableRowViewMBS, row as Integer)	514
* 6.36.110 DoubleClick	514
* 6.36.111 heightOfRow(row as Int64) as Double	514
* 6.36.112 isGroupRow(row as Int64) as boolean	515
* 6.36.113 mouseDownInHeaderOfTableColumn(tableColumn as NSTableColumnMBS)	515
* 6.36.114 nextTypeSelectMatchFromRow(startRow as Int64, endRow as Int64, searchString as string) as Int64	515
* 6.36.115 rowViewForRow(row as Integer) as NSTableRowViewMBS	516
* 6.36.116 SelectionDidChange(notification as NSNotificationMBS)	516
* 6.36.117 selectionIndexesForProposedSelection(proposedSelectionIndexes as NSIndexSetMBS) as NSIndexSetMBS	516
* 6.36.118 SelectionIsChanging(notification as NSNotificationMBS)	517
* 6.36.119 selectionShouldChangeInTableView as boolean	517
* 6.36.120 shouldEditTableColumn(tableColumn as NSTableColumnMBS, row as Int64) as boolean	517
* 6.36.121 shouldReorderColumn(columnIndex as Int64, newColumnIndex as Int64) as boolean	518
* 6.36.122 shouldSelectRow(row as Int64) as boolean	518
* 6.36.123 shouldSelectTableColumn(tableColumn as NSTableColumnMBS) as boolean	518
* 6.36.124 shouldShowCellExpansion(tableColumn as NSTableColumnMBS, row as Int64) as Boolean	519
* 6.36.125 shouldTrackCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, row as Int64) as Boolean	519

- * 6.36.126 shouldTypeSelectForEvent(e as NSEventMBS, searchString as string) as Boolean 520
- * 6.36.127 sizeToFitWidthOfColumn(column as Int64) as Double 520
- * 6.36.128 textShouldBeginEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as boolean 521
- * 6.36.129 textShouldEndEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as boolean 521
- * 6.36.130 toolTipForCell(cell as NSCellMBS, r as NSRectMBS, tableColumn as NSTableColumnMBS, row as Int64, mouseLocation as NSPointMBS) as string 521
- * 6.36.131 typeSelectString(tableColumn as NSTableColumnMBS, row as Int64) as string 522
- * 6.36.132 view(tableColumn as NSTableColumnMBS, row as Integer) as NSViewMBS 522
- * 6.36.133 willDisplayCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, row as Int64) 522
- * 6.36.135 NSTableRowActionEdgeLeading = 0 523
- * 6.36.136 NSTableRowActionEdgeTrailing = 1 523
- * 6.36.137 NSTableViewAnimationEffectFade = 1 523
- * 6.36.138 NSTableViewAnimationEffectGap = 2 523
- * 6.36.139 NSTableViewAnimationEffectNone = 0 523
- * 6.36.140 NSTableViewAnimationSlideDown = & h20 524
- * 6.36.141 NSTableViewAnimationSlideLeft = & h30 524
- * 6.36.142 NSTableViewAnimationSlideRight = & h40 524
- * 6.36.143 NSTableViewAnimationSlideUp = & h10 524
- * 6.36.144 NSTableViewDashedHorizontalGridLineMask=8 524
- * 6.36.145 NSTableViewDraggingDestinationFeedbackStyleGap=2 524
- * 6.36.146 NSTableViewDraggingDestinationFeedbackStyleNone=-1 525
- * 6.36.147 NSTableViewDraggingDestinationFeedbackStyleRegular=0 525
- * 6.36.148 NSTableViewDraggingDestinationFeedbackStyleSourceList=1 525
- * 6.36.149 NSTableViewDropAbove=1 525
- * 6.36.150 NSTableViewDropOn=0 526
- * 6.36.151 NSTableViewFirstColumnOnlyAutoresizingStyle=5 526
- * 6.36.152 NSTableViewGridNone=0 526
- * 6.36.153 NSTableViewLastColumnOnlyAutoresizingStyle=4 526
- * 6.36.154 NSTableViewNoColumnAutoresizing=0 527
- * 6.36.155 NSTableViewReverseSequentialColumnAutoresizingStyle=3 527
- * 6.36.156 NSTableViewRowSizeStyleCustom = 0 527
- * 6.36.157 NSTableViewRowSizeStyleDefault = -1 527
- * 6.36.158 NSTableViewRowSizeStyleLarge = 3 528
- * 6.36.159 NSTableViewRowSizeStyleMedium = 2 528
- * 6.36.160 NSTableViewRowSizeStyleSmall = 1 528
- * 6.36.161 NSTableViewSelectionHighlightStyleNone=-1 529
- * 6.36.162 NSTableViewSelectionHighlightStyleRegular=0 529
- * 6.36.163 NSTableViewSelectionHighlightStyleSourceList=1 529

* 6.36.164 NSTableViewSequentialColumnAutoresizingStyle=2	529
* 6.36.165 NSTableViewSolidHorizontalGridLineMask=2	530
* 6.36.166 NSTableViewSolidVerticalGridLineMask=1	530
* 6.36.167 NSTableViewUniformColumnAutoresizingStyle=1	530
– 6.37.1 class NSTableViewRowActionMBS	531
* 6.37.3 available as boolean	531
* 6.37.4 Constructor(Style as Integer, Title as String)	531
* 6.37.6 BackgroundColor as NSColorMBS	532
* 6.37.7 Handle as Integer	532
* 6.37.8 Image as NSImageMBS	532
* 6.37.9 Style as Integer	532
* 6.37.10 Title as String	533
* 6.37.12 Action(row as Integer)	533
* 6.37.14 NSTableViewRowActionStyleDestructive = 1	533
* 6.37.15 NSTableViewRowActionStyleRegular = 0	533
– 6.38.1 control NSTokenFieldControlMBS	534
* 6.38.3 View as NSTokenFieldMBS	534
* 6.38.5 BoundsChanged	534
* 6.38.6 completionsForSubstring(substring as string, tokenIndex as Integer, byref selectedIndex as Integer) as Variant()	534
* 6.38.7 displayStringForRepresentedObject(representedObject as Variant) as string	535
* 6.38.8 editingStringForRepresentedObject(representedObject as Variant) as string	535
* 6.38.9 EnableMenuItems	535
* 6.38.10 FrameChanged	535
* 6.38.11 GotFocus	535
* 6.38.12 hasMenuForRepresentedObject(representedObject as Variant) as boolean	536
* 6.38.13 LostFocus	536
* 6.38.14 MenuItemAction(HitItem as MenuItem) As Boolean	536
* 6.38.15 menuForRepresentedObject(representedObject as Variant) as NSMenuMBS	536
* 6.38.16MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean	536
* 6.38.17 MouseDrag(x as Integer, y as Integer)	537
* 6.38.18 MouseUp(x as Integer, y as Integer)	537
* 6.38.19 readFromPasteboard(pboard as NSPasteboardMBS) as Variant()	537
* 6.38.20 representedObjectForEditingString(editingString as string) as Variant	538
* 6.38.21 ScaleFactorChanged(NewFactor as Double)	538
* 6.38.22 shouldAddObjects(tokens() as Variant, index as Integer) as Variant()	538
* 6.38.23 styleForRepresentedObject(representedObject as Variant) as Integer	538
* 6.38.24 TextDidBeginEditing(fieldEditor as NSTextMBS, notification as NSNotificationMBS)	539
* 6.38.25 TextDidChange(fieldEditor as NSTextMBS, notification as NSNotificationMBS)	539
* 6.38.26 TextDidEndEditing(fieldEditor as NSTextMBS, notification as NSNotificationMBS)	540

- * 6.38.27 `textShouldBeginEditing(fieldEditor as NSTextMBS)` as boolean 540
- * 6.38.28 `textShouldEndEditing(fieldEditor as NSTextMBS)` as boolean 540
- * 6.38.29 `tokenFieldAction` 541
- * 6.38.30 `tokenFieldTextShouldBeginEditing(fieldEditor as NSTextMBS)` as boolean 541
- * 6.38.31 `tokenFieldTextShouldEndEditing(fieldEditor as NSTextMBS)` as boolean 541
- * 6.38.32 `writeRepresentedObjects(objects() as Variant, pboard as NSPasteboardMBS)` as boolean 541

- 5 Cocoa

151

– 5.4.1 class NSTokenFieldMBS	163
* 5.4.3 Constructor	163
* 5.4.4 Constructor(Handle as Integer)	164
* 5.4.5 Constructor(left as Double, top as Double, width as Double, height as Double)	164
* 5.4.6 defaultCompletionDelay as Double	164
* 5.4.7 defaultTokenizingCharacterSet as NSCharacterSetMBS	165
* 5.4.8 objects as Variant()	165
* 5.4.9 setObjects(objects() as Variant)	165
* 5.4.11 completionDelay as Double	165
* 5.4.12 tokenizingCharacterSet as NSCharacterSetMBS	165
* 5.4.13 tokenStyle as Integer	165
* 5.4.15 completionsForSubstring(substring as string, tokenIndex as Integer, byref selectedIndex as Integer) as Variant()	166
* 5.4.16 displayStringForRepresentedObject(representedObject as Variant) as string	166
* 5.4.17 editingStringForRepresentedObject(representedObject as Variant) as string	166
* 5.4.18 hasMenuForRepresentedObject(representedObject as Variant) as boolean	167
* 5.4.19 menuForRepresentedObject(representedObject as Variant) as NSMenuMBS	167
* 5.4.20 readFromPasteboard(pboard as NSPasteboardMBS) as Variant()	167
* 5.4.21 representedObjectForEditingString(editingString as string) as Variant	167
* 5.4.22 shouldAddObjects(tokens() as Variant, index as Integer) as Variant()	168
* 5.4.23 styleForRepresentedObject(representedObject as Variant) as Integer	168
* 5.4.24 tokenFieldAction	169
* 5.4.25 tokenFieldTextShouldBeginEditing(fieldEditor as NSTextMBS) as boolean	169
* 5.4.26 tokenFieldTextShouldEndEditing(fieldEditor as NSTextMBS) as boolean	169
* 5.4.27 writeRepresentedObjects(objects() as Variant, pboard as NSPasteboardMBS) as boolean	169
* 5.4.29 NSDefaultTokenStyle = 0	169
* 5.4.30 NSPlainTextTokenStyle = 1	170
* 5.4.31 NSRoundedTokenStyle = 2	170
– 5.5.1 class NSToolbarItemGroupMBS	171
* 5.5.3 Constructor(itemIdentifier as string)	171
* 5.5.4 SetSubItems(items() as NSToolbarItemMBS)	171
* 5.5.5 subitems as NSToolbarItemMBS()	171
– 5.6.1 class NSToolbarItemMBS	172
* 5.6.3 Constructor(itemIdentifier as string)	172
* 5.6.4 NSToolbarCustomizeToolbarItemIdentifier as string	172
* 5.6.5 NSToolbarFlexibleSpaceItemIdentifier as string	172
* 5.6.6 NSToolbarPrintItemIdentifier as string	173
* 5.6.7 NSToolbarSeparatorItemIdentifier as string	173
* 5.6.8 NSToolbarShowColorsItemIdentifier as string	173

* 5.6.9 NSToolbarShowFontsItemIdentifier as string	173
* 5.6.10 NSToolbarSpaceItemIdentifier as string	173
* 5.6.11 validate	173
* 5.6.13 allowsDuplicatesInToolbar as boolean	174
* 5.6.14 autovalidates as boolean	174
* 5.6.15 ClassName as String	174
* 5.6.16 ClassPath as String	174
* 5.6.17 Enabled as boolean	175
* 5.6.18 Handle as Integer	175
* 5.6.19 image as NSImageMBS	175
* 5.6.20 itemIdentifier as string	175
* 5.6.21 label as string	175
* 5.6.22 MaxSize as NSSizeMBS	176
* 5.6.23 menuFormRepresentation as NSMenuItemMBS	176
* 5.6.24 MinSize as NSSizeMBS	176
* 5.6.25 paletteLabel as string	176
* 5.6.26 tag as Integer	176
* 5.6.27 toolbar as NSToolbarMBS	177
* 5.6.28 toolTip as string	177
* 5.6.29 view as NSViewMBS	177
* 5.6.30 visibilityPriority as Integer	177
* 5.6.32 NSToolbarItemVisibilityPriorityHigh = 1000	178
* 5.6.33 NSToolbarItemVisibilityPriorityLow = -1000	178
* 5.6.34 NSToolbarItemVisibilityPriorityStandard = 0	178
* 5.6.35 NSToolbarItemVisibilityPriorityUser = 2000	178
– 5.7.1 class NSToolbarMBS	180
* 5.7.3 Constructor(Identifier as string)	180
* 5.7.4 insertItemWithItemIdentifier(identifier as string, atIndex as Integer)	180
* 5.7.5 items as NSToolbarItemMBS()	180
* 5.7.6 NSToolbarDidRemoveItemNotification as string	180
* 5.7.7 NSToolbarWillAddItemNotification as string	181
* 5.7.8 removeItemAtIndex(index as Integer)	181
* 5.7.9 runCustomizationPalette	181
* 5.7.10 validateVisibleItems	181
* 5.7.11 visibleItems as NSToolbarItemMBS()	182
* 5.7.13 allowsUserCustomization as boolean	182
* 5.7.14 autosavesConfiguration as boolean	182
* 5.7.15 configurationDictionary as dictionary	183
* 5.7.16 configurationDictionaryData as Memoryblock	183
* 5.7.17 customizationPaletteIsRunning as boolean	183
* 5.7.18 displayMode as Integer	183

	101
* 5.7.19 fullScreenAccessoryView as NSViewMBS	184
* 5.7.20 fullScreenAccessoryViewMaxHeight as Double	184
* 5.7.21 fullScreenAccessoryViewMinHeight as Double	184
* 5.7.22 Handle as Integer	184
* 5.7.23 identifier as string	184
* 5.7.24 selectedItemIdentifier as string	185
* 5.7.25 showsBaselineSeparator as boolean	185
* 5.7.26 sizeMode as Integer	185
* 5.7.27 toolbarView as NSViewMBS	185
* 5.7.28 visible as boolean	186
* 5.7.30 NSToolbarDisplayModeDefault = 0	186
* 5.7.31 NSToolbarDisplayModeIconAndLabel = 1	186
* 5.7.32 NSToolbarDisplayModeIconOnly = 2	186
* 5.7.33 NSToolbarDisplayModeLabelOnly = 3	186
* 5.7.34 NSToolbarSizeModeDefault = 0	187
* 5.7.35 NSToolbarSizeModeRegular = 1	187
* 5.7.36 NSToolbarSizeModeSmall = 2	187

• 6 Cocoa Controls	189
– 6.39.1 control NSViewControlMBS	542
* 6.39.3 View as NSViewMBS	542
* 6.39.5 acceptsFirstMouse(e as NSEventMBS) as boolean	542
* 6.39.6 acceptsFirstResponder as boolean	542
* 6.39.7 becomeFirstResponder as boolean	543
* 6.39.8 beginGestureWithEvent(e as NSEventMBS) as boolean	543
* 6.39.9 canBecomeKeyView as boolean	543
* 6.39.10 Close	543
* 6.39.11 concludeDragOperation(sender as NSDraggingInfoMBS)	543
* 6.39.12 draggingEnded(sender as NSDraggingInfoMBS)	544
* 6.39.13 draggingEntered(sender as NSDraggingInfoMBS) as Integer	544
* 6.39.14 draggingExited(sender as NSDraggingInfoMBS)	545
* 6.39.15 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)	545
* 6.39.16 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	545
* 6.39.17 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer	546
* 6.39.18 draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)	546
* 6.39.19 draggingSourceOperationMaskForLocal(flag as boolean) as Integer	546
* 6.39.20 draggingUpdated(sender as NSDraggingInfoMBS) as Integer	547
* 6.39.21 drawFocusRingMask(g as NSGraphicsMBS) as boolean	548
* 6.39.22 DrawRect(g as NSGraphicsMBS, left as Double, top as Double, width as Double, height as Double)	548
* 6.39.23 EnableMenuItems	548
* 6.39.24 endGestureWithEvent(e as NSEventMBS) as boolean	548
* 6.39.25 focusRingMaskBounds as NSRectMBS	549
* 6.39.26 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean	549
* 6.39.27 isOpaque as boolean	549
* 6.39.28 keyDown(e as NSEventMBS) as boolean	550
* 6.39.29 keyUp(e as NSEventMBS) as boolean	550
* 6.39.30 magnifyWithEvent(e as NSEventMBS) as boolean	550
* 6.39.31 MenuAction(HitItem as MenuItem) As Boolean	550
* 6.39.32 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS) as NSMenuMBS	551
* 6.39.33 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	551
* 6.39.34 mouseDownCanMoveWindow as boolean	551
* 6.39.35 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	551
* 6.39.36 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean	552

	103
* 6.39.37 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean	552
* 6.39.38 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean	552
* 6.39.39 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	552
* 6.39.40 Open	552
* 6.39.41 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	552
* 6.39.42 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	553
* 6.39.43 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	553
* 6.39.44 performDragOperation(sender as NSDraggingInfoMBS) as boolean	553
* 6.39.45 prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean	554
* 6.39.46 pressureChange(e as NSEventMBS) as boolean	554
* 6.39.47 resignFirstResponder as boolean	554
* 6.39.48 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean	554
* 6.39.49 rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean	555
* 6.39.50 rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean	555
* 6.39.51 rotateWithEvent(e as NSEventMBS) as boolean	555
* 6.39.52 scaleFactorChanged(NewFactor as Double)	555
* 6.39.53 scrollWheel(e as NSEventMBS) as boolean	555
* 6.39.54 swipeWithEvent(e as NSEventMBS) as boolean	556
* 6.39.55 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)	556
* 6.39.56 viewDidMoveToWindow	556
* 6.39.57 wantsPeriodicDraggingUpdates as boolean	557

• 13 PDFKit	1095
– 13.2.1 class PDFActionGoToMBS	1112
* 13.2.3 Constructor(destination as PDFDestinationMBS)	1112
* 13.2.5 destination as PDFDestinationMBS	1112
– 13.3.1 class PDFActionMBS	1113
* 13.3.3 Constructor	1113
* 13.3.4 copy as PDFActionMBS	1113
* 13.3.5 type as string	1114
* 13.3.7 Handle as Integer	1114
– 13.4.1 class PDFActionNamedMBS	1115
* 13.4.3 Constructor(name as Integer)	1115
* 13.4.5 name as Integer	1115
* 13.4.7 kPDFActionNamedFind = 8	1115
* 13.4.8 kPDFActionNamedFirstPage = 3	1116
* 13.4.9 kPDFActionNamedGoBack = 5	1116
* 13.4.10 kPDFActionNamedGoForward = 6	1116
* 13.4.11 kPDFActionNamedGoToPage = 7	1116
* 13.4.12 kPDFActionNamedLastPage = 4	1116
* 13.4.13 kPDFActionNamedNextPage = 1	1117
* 13.4.14 kPDFActionNamedNone = 0	1117
* 13.4.15 kPDFActionNamedPreviousPage = 2	1117
* 13.4.16 kPDFActionNamedPrint = 9	1117
* 13.4.17 kPDFActionNamedZoomIn = 10	1117
* 13.4.18 kPDFActionNamedZoomOut = 11	1118
– 13.5.1 class PDFActionRemoteGoToMBS	1119
* 13.5.3 Constructor(PageIndex as Integer, atPoint as NSPointMBS, file as folderitem)	1119
* 13.5.4 Constructor(PageIndex as Integer, atPoint as NSPointMBS, url as string)	1119
* 13.5.6 pageIndex as Integer	1120
* 13.5.7 point as NSPointMBS	1120
* 13.5.8 URL as string	1120
– 13.6.1 class PDFActionResetFormMBS	1121
* 13.6.3 Constructor	1121
* 13.6.4 fields as string()	1121
* 13.6.5 setFields(fields() as string)	1121
* 13.6.7 fieldsIncludedAreCleared as boolean	1122
– 13.7.1 class PDFActionURLMBS	1123
* 13.7.3 Constructor(url as string)	1123
* 13.7.5 URL as string	1123
– 13.8.1 class PDFAnnotationButtonWidgetMBS	1124

* 13.8.3	Constructor(left as single, top as single, width as single, height as single)	1124
* 13.8.5	allowsToggleToOff as boolean	1124
* 13.8.6	backgroundColor as NSColorMBS	1124
* 13.8.7	caption as string	1124
* 13.8.8	controlType as Integer	1125
* 13.8.9	fieldName as string	1125
* 13.8.10	font as NSFontMBS	1125
* 13.8.11	fontColor as NSColorMBS	1126
* 13.8.12	Highlighted as boolean	1126
* 13.8.13	onStateValue as string	1126
* 13.8.14	state as Integer	1126
* 13.8.16	drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1127
* 13.8.18	kPDFWidgetCheckBoxControl = 2	1127
* 13.8.19	kPDFWidgetPushButtonControl = 0	1127
* 13.8.20	kPDFWidgetRadioButtonControl = 1	1127
* 13.8.21	kPDFWidgetUnknownControl = -1	1127
* 13.8.22	NSOffState = 0	1127
* 13.8.23	NSOnState = 1	1128
– 13.9.1	class PDFAnnotationChoiceWidgetMBS	1129
* 13.9.3	choices as string()	1129
* 13.9.4	Constructor(left as single, top as single, width as single, height as single)	1129
* 13.9.5	setChoices(choices() as string)	1129
* 13.9.7	backgroundColor as NSColorMBS	1130
* 13.9.8	fieldName as string	1130
* 13.9.9	font as NSFontMBS	1130
* 13.9.10	fontColor as NSColorMBS	1130
* 13.9.11	isListChoice as boolean	1131
* 13.9.12	stringValue as string	1131
* 13.9.14	drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1131
– 13.10.1	class PDFAnnotationCircleMBS	1132
* 13.10.3	Constructor(left as single, top as single, width as single, height as single)	1132
* 13.10.5	interiorColor as NSColorMBS	1133
* 13.10.7	drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1133
– 13.11.1	class PDFAnnotationFreeTextMBS	1134
* 13.11.3	Constructor(left as single, top as single, width as single, height as single)	1134
* 13.11.5	alignment as Integer	1134
* 13.11.6	font as NSFontMBS	1135
* 13.11.7	fontColor as NSColorMBS	1135
* 13.11.9	drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1135
* 13.11.11	NSCenterTextAlignment=2	1136
* 13.11.12	NSJustifiedTextAlignment=3	1136

* 13.11.13 NSLeftTextAlignment=0	1136
* 13.11.14 NSNaturalTextAlignment=4	1136
* 13.11.15 NSRightTextAlignment=1	1136
– 13.12.1 class PDFAnnotationInkMBS	1137
* 13.12.3 addBezierPath(path as NSBezierPathMBS)	1137
* 13.12.4 Constructor(left as single, top as single, width as single, height as single)	1137
* 13.12.5 paths as NSBezierPathMBS()	1137
* 13.12.6 removeBezierPath(path as NSBezierPathMBS)	1138
* 13.12.8 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1138
– 13.13.1 class PDFAnnotationLineMBS	1139
* 13.13.3 Constructor(left as single, top as single, width as single, height as single)	1139
* 13.13.5 endLineStyle as Integer	1139
* 13.13.6 endPoint as NSPointMBS	1140
* 13.13.7 interiorColor as NSColorMBS	1140
* 13.13.8 startLineStyle as Integer	1141
* 13.13.9 startPoint as NSPointMBS	1141
* 13.13.11 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1142
* 13.13.13 kPDFLineStyleCircle=2	1142
* 13.13.14 kPDFLineStyleClosedArrow=5	1142
* 13.13.15 kPDFLineStyleDiamond=3	1143
* 13.13.16 kPDFLineStyleNone=0	1143
* 13.13.17 kPDFLineStyleOpenArrow=4	1143
* 13.13.18 kPDFLineStyleSquare=1	1144
– 13.14.1 class PDFAnnotationLinkMBS	1145
* 13.14.3 Constructor(left as single, top as single, width as single, height as single)	1145
* 13.14.4 setHighlighted(value as boolean)	1146
* 13.14.6 destination as PDFDestinationMBS	1146
* 13.14.7 URL as string	1146
* 13.14.9 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1146
– 13.15.1 class PDFAnnotationMarkupMBS	1147
* 13.15.3 Constructor(left as single, top as single, width as single, height as single)	1147
* 13.15.4 quadrilateralPoints as NSPointMBS()	1147
* 13.15.5 setQuadrilateralPoints(points() as NSPointMBS)	1148
* 13.15.7 markupType as Integer	1148
* 13.15.9 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1149
* 13.15.11 kPDFMarkupTypeHighlight=0	1149
* 13.15.12 kPDFMarkupTypeStrikeOut=1	1149
* 13.15.13 kPDFMarkupTypeUnderline=2	1150
– 13.16.1 class PDFAnnotationMBS	1151
* 13.16.3 Constructor	1151

* 13.16.4 copy as PDFAnnotationMBS	1151
* 13.16.5 Destructor	1151
* 13.16.6 drawWithBox(box as Integer)	1152
* 13.16.7 removeAllAppearanceStreams	1152
* 13.16.9 border as PDFBorderMBS	1152
* 13.16.10 bounds as NSRectMBS	1153
* 13.16.11 colorValue as NSColorMBS	1153
* 13.16.12 contents as string	1154
* 13.16.13 Handle as Integer	1154
* 13.16.14 hasAppearanceStream as boolean	1155
* 13.16.15 modificationDate as date	1155
* 13.16.16 mouseUpAction as PDFActionMBS	1155
* 13.16.17 page as PDFPageMBS	1155
* 13.16.18 popup as Variant	1155
* 13.16.19 shouldDisplay as boolean	1156
* 13.16.20 shouldPrint as boolean	1156
* 13.16.21 toolTip as string	1156
* 13.16.22 type as string	1156
* 13.16.23 userName as string	1157
– 13.17.1 class PDFAnnotationPopupMBS	1158
* 13.17.3 Constructor(left as single, top as single, width as single, height as single)	1158
* 13.17.5 isOpen as boolean	1158
* 13.17.7 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1158
– 13.18.1 class PDFAnnotationSquareMBS	1159
* 13.18.3 Constructor(left as single, top as single, width as single, height as single)	1159
* 13.18.5 interiorColor as NSColorMBS	1160
* 13.18.7 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1160
– 13.19.1 class PDFAnnotationStampMBS	1161
* 13.19.3 Constructor(left as single, top as single, width as single, height as single)	1161
* 13.19.5 name as string	1161
* 13.19.7 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1162
– 13.20.1 class PDFAnnotationTextMBS	1163
* 13.20.3 Constructor(left as single, top as single, width as single, height as single)	1163
* 13.20.5 iconType as Integer	1163
* 13.20.7 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1163
* 13.20.9 kPDFTextAnnotationIconComment=0	1164
* 13.20.10 kPDFTextAnnotationIconHelp=3	1164
* 13.20.11 kPDFTextAnnotationIconInsert=6	1164
* 13.20.12 kPDFTextAnnotationIconKey=1	1164
* 13.20.13 kPDFTextAnnotationIconNewParagraph=4	1164
* 13.20.14 kPDFTextAnnotationIconNote=2	1164

* 13.20.15 kPDFTextAnnotationIconParagraph=5	1164
– 13.21.1 class PDFAnnotationTextWidgetMBS	1165
* 13.21.3 Constructor(left as single, top as single, width as single, height as single)	1165
* 13.21.5 alignment as Integer	1165
* 13.21.6 attributedStringValue as NSAttributedStringMBS	1165
* 13.21.7 backgroundColor as NSColorMBS	1165
* 13.21.8 fieldName as string	1166
* 13.21.9 font as NSFontMBS	1166
* 13.21.10 fontColor as NSColorMBS	1166
* 13.21.11 maximumLength as Integer	1166
* 13.21.12 rotation as Integer	1167
* 13.21.13 stringValue as string	1167
* 13.21.15 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean	1167
* 13.21.17 NSCenterTextAlignment=2	1167
* 13.21.18 NSJustifiedTextAlignment=3	1168
* 13.21.19 NSLeftTextAlignment=0	1168
* 13.21.20 NSNaturalTextAlignment=4	1168
* 13.21.21 NSRightTextAlignment=1	1168
– 13.22.1 class PDFBorderMBS	1169
* 13.22.3 Constructor	1169
* 13.22.4 copy as PDFBorderMBS	1169
* 13.22.5 dashPattern as Double()	1169
* 13.22.6 setDashPattern(values() as Double)	1169
* 13.22.8 horizontalCornerRadius as single	1170
* 13.22.9 lineWidth as single	1170
* 13.22.10 style as Integer	1170
* 13.22.11 verticalCornerRadius as single	1171
* 13.22.13 kPDFBorderStyleBeveled = 2	1171
* 13.22.14 kPDFBorderStyleDashed = 1	1172
* 13.22.15 kPDFBorderStyleInset = 3	1172
* 13.22.16 kPDFBorderStyleSolid = 0	1172
* 13.22.17 kPDFBorderStyleUnderline = 4	1173
– 13.23.1 class PDFDestinationMBS	1174
* 13.23.3 compare(dest as PDFDestinationMBS) as Integer	1174
* 13.23.4 Constructor(page as PDFPageMBS, point as NSPointMBS)	1174
* 13.23.5 copy as PDFDestinationMBS	1175
* 13.23.6 kPDFDestinationUnspecifiedValue as single	1175
* 13.23.7 page as PDFPageMBS	1175
* 13.23.8 point as NSPointMBS	1175
* 13.23.10 Zoom as Double	1176
– 13.24.1 class PDFDocumentDelegateMBS	1177

* 13.24.3 Close	1177
* 13.24.4 didMatchString(selection as PDFSelectionMBS)	1177
* 13.24.5 documentDidBeginDocumentFind	1177
* 13.24.6 documentDidBeginPageFind(PageIndex as Integer)	1177
* 13.24.7 documentDidEndDocumentFind	1177
* 13.24.8 documentDidEndPageFind(PageIndex as Integer)	1178
* 13.24.9 documentDidFindMatch(selection as PDFSelectionMBS)	1178
* 13.24.10 documentDidUnlock	1178
* 13.24.11 Open	1178
– 13.25.1 class PDFDocumentMBS	1179
* 13.25.3 appendPage(page as PDFPageMBS)	1179
* 13.25.4 beginFindString(text as string, options as Integer)	1179
* 13.25.5 cancelFindString	1179
* 13.25.6 Constructor	1179
* 13.25.7 Constructor(data as memoryblock)	1180
* 13.25.8 Constructor(file as folderitem)	1180
* 13.25.9 copy as PDFDocumentMBS	1181
* 13.25.10 dataRepresentation(QuartzFilter as Variant = nil) as memoryblock	1181
* 13.25.11 documentRef as Integer	1182
* 13.25.12 exchangePageAtIndexWithPageAtIndex(indexA as Integer, indexB as Integer)	1182
* 13.25.13 findString(text as string, options as Integer) as PDFSelectionMBS()	1182
* 13.25.14 findStringFromSelection(text as string, selection as PDFSelectionMBS, options as Integer) as PDFSelectionMBS	1183
* 13.25.15 indexForPage(page as PDFPageMBS) as Integer	1184
* 13.25.16 insertPage(page as PDFPageMBS, index as Integer)	1184
* 13.25.17 Keywords as string()	1185
* 13.25.18 outlineItemForSelection(selection as PDFSelectionMBS) as PDFOutlineMBS	1185
* 13.25.19 pageAtIndex(index as Integer) as PDFPageMBS	1185
* 13.25.20 PrintOperation(PrintInfo as Variant, AutoRotate as boolean = true, scalingMode as Integer = 0) as Variant	1186
* 13.25.21 removePageAtIndex(index as Integer)	1186
* 13.25.22 selectionForEntireDocument as PDFSelectionMBS	1186
* 13.25.23 selectionFromPage(StartPage as PDFPageMBS, StartCharacterIndex as Integer, EndPage as PDFPageMBS, EndCharacterIndex as Integer) as PDFSelectionMBS	1187
* 13.25.24 selectionFromPage(StartPage as PDFPageMBS, StartPointX as single, StartPointY as single, EndPage as PDFPageMBS, EndPointX as single, EndPointY as single) as PDFSelectionMBS	1187
* 13.25.25 SetDelegate(d as PDFDocumentDelegateMBS)	1187
* 13.25.26 SetKeywords(keywords() as string)	1187
* 13.25.27 unlockWithPassword(password as string) as boolean	1187
* 13.25.28 write(file as folderitem, QuartzFilter as Variant = nil) as boolean	1188
* 13.25.30 allowsCopying as boolean	1189

* 13.25.31 allowsPrinting as boolean	1189
* 13.25.32 Author as string	1189
* 13.25.33 CreationDate as Date	1190
* 13.25.34 Creator as string	1190
* 13.25.35 documentURL as string	1190
* 13.25.36 Handle as Integer	1191
* 13.25.37 isEncrypted as boolean	1191
* 13.25.38 isFinding as boolean	1191
* 13.25.39 isLocked as boolean	1191
* 13.25.40 majorVersion as Integer	1192
* 13.25.41 minorVersion as Integer	1192
* 13.25.42 ModificationDate as Date	1193
* 13.25.43 outlineRoot as PDFOutlineMBS	1193
* 13.25.44 pageCount as Integer	1193
* 13.25.45 permissionsStatus as Integer	1193
* 13.25.46 Producer as string	1194
* 13.25.47 stringValue as string	1194
* 13.25.48 Subject as string	1195
* 13.25.49 Title as string	1195
* 13.25.50 documentAttributes as Dictionary	1196
* 13.25.52 kPDFDocumentPermissionsNone=0	1196
* 13.25.53 kPDFDocumentPermissionsOwner=2	1196
* 13.25.54 kPDFDocumentPermissionsUser=1	1197
* 13.25.55 kPDFPrintPageScaleDownToFit=2	1197
* 13.25.56 kPDFPrintPageScaleNone=0	1197
* 13.25.57 kPDFPrintPageScaleToFit=1	1197
* 13.25.58 NSBackwardsSearch=4	1198
* 13.25.59 NSCaseInsensitiveSearch=1	1198
* 13.25.60 NSLiteralSearch=2	1198
– 13.26.1 class PDFOutlineMBS	1199
* 13.26.3 childAtIndex(index as Integer) as PDFOutlineMBS	1199
* 13.26.4 Constructor	1199
* 13.26.5 document as PDFDocumentMBS	1199
* 13.26.6 index as Integer	1200
* 13.26.7 insertChild(child as PDFOutlineMBS, index as Integer)	1200
* 13.26.8 numberOfChildren as Integer	1200
* 13.26.9 parent as PDFOutlineMBS	1200
* 13.26.10 removeFromParent	1201
* 13.26.12 action as PDFActionMBS	1201
* 13.26.13 destination as PDFDestinationMBS	1201
* 13.26.14 isOpen as boolean	1201

	111
* 13.26.15 label as string	1202
– 13.27.1 class PDFPageMBS	1203
* 13.27.3 addAnnotation(annotation as PDFAnnotationMBS)	1204
* 13.27.4 annotationAtPoint(x as single, y as single) as PDFAnnotationMBS	1204
* 13.27.5 annotations as PDFAnnotationMBS()	1204
* 13.27.6 CalcTransformForBox(box as Integer) as Variant	1205
* 13.27.7 CGPDFPageHandle as Integer	1205
* 13.27.8 characterBoundsAtIndex(index as Integer) as NSRectMBS	1205
* 13.27.9 characterIndexAtPoint(x as single, y as single) as Integer	1205
* 13.27.10 Constructor	1205
* 13.27.11 Constructor(image as NSImageMBS)	1206
* 13.27.12 copy as PDFPageMBS	1206
* 13.27.13 Destructor	1207
* 13.27.14 Draw(g as NSGraphicsMBS, box as Integer = 0)	1207
* 13.27.15 drawWithBox(box as Integer)	1207
* 13.27.16 removeAnnotation(annotation as PDFAnnotationMBS)	1207
* 13.27.17 Render(dpi as Double = 72.0, box as Integer = 0, background as NSColorMBS = nil) as NSImageMBS	1207
* 13.27.18 selectionForLineAtPoint(left as single, top as single) as PDFSelectionMBS	1208
* 13.27.19 selectionForRange(position as Integer, length as Integer) as PDFSelectionMBS	1208
* 13.27.20 selectionForRect(left as single, top as single, width as single, height as single) as PDFSelectionMBS	1209
* 13.27.21 selectionForWordAtPoint(left as single, top as single) as PDFSelectionMBS	1209
* 13.27.22 selectionFromPointToPoint(startleft as single, starttop as single, endleft as single, endtop as single) as PDFSelectionMBS	1209
* 13.27.23 transformContextForBox(box as Integer)	1209
* 13.27.25 attributedString as NSAttributedStringMBS	1209
* 13.27.26 dataRepresentation as memoryblock	1210
* 13.27.27 displaysAnnotations as boolean	1210
* 13.27.28 document as PDFDocumentMBS	1210
* 13.27.29 label as string	1210
* 13.27.30 numberOfCharacters as Integer	1210
* 13.27.31 rotation as Integer	1211
* 13.27.32 stringValue as string	1211
* 13.27.33 boundsForBox(box as Integer) as NSRectMBS	1211
* 13.27.35 drawRect(box as Integer, g as NSGraphicsMBS)	1212
* 13.27.37 kPDFDisplayBoxArtBox=4	1213
* 13.27.38 kPDFDisplayBoxBleedBox=2	1213
* 13.27.39 kPDFDisplayBoxCropBox=1	1213
* 13.27.40 kPDFDisplayBoxMediaBox=0	1213
* 13.27.41 kPDFDisplayBoxTrimBox=3	1213
– 13.28.1 class PDFSelectionMBS	1214

* 13.28.3	addSelection(selection as PDFSelectionMBS)	1214
* 13.28.4	addSelections(selection() as PDFSelectionMBS)	1214
* 13.28.5	attributedString as NSAttributedStringMBS	1214
* 13.28.6	boundsForPage(page as PDFPageMBS) as NSRectMBS	1215
* 13.28.7	Constructor(doc as PDFDocumentMBS)	1215
* 13.28.8	copy as PDFSelectionMBS	1215
* 13.28.9	drawForPage(page as PDFPageMBS, active as boolean)	1215
* 13.28.10	drawForPage(page as PDFPageMBS, box as Integer, active as boolean)	1215
* 13.28.11	extendSelectionAtEnd(chars as Integer)	1216
* 13.28.12	extendSelectionAtStart(chars as Integer)	1216
* 13.28.13	numberOfTextRangesOnPage(page as PDFPageMBS) as UInt32	1216
* 13.28.14	pages as PDFPageMBS()	1217
* 13.28.15	rangeAtIndex(page as PDFPageMBS, index as Integer) as NSRangeMBS	1217
* 13.28.16	selectionsByLine as PDFSelectionMBS()	1217
* 13.28.17	stringValue as string	1217
* 13.28.19	Handle as Integer	1218
* 13.28.20	colorValue as NSColorMBS	1218
– 13.29.1	control PDFThumbnailViewControlMBS	1219
* 13.29.3	View as PDFThumbnailViewMBS	1219
* 13.29.5	BoundsChanged	1219
* 13.29.6	EnableMenuItems	1219
* 13.29.7	FrameChanged	1219
* 13.29.8	GotFocus	1220
* 13.29.9	LostFocus	1220
* 13.29.10	MenuItemAction(HitItem as MenuItem) As Boolean	1220
* 13.29.11	MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean	1220
* 13.29.12	MouseDown(x as Integer, y as Integer)	1221
* 13.29.13	MouseDown(x as Integer, y as Integer)	1221
* 13.29.14	ScaleFactorChanged(NewFactor as Double)	1221
– 13.30.1	class PDFThumbnailViewMBS	1222
* 13.30.3	Constructor	1222
* 13.30.4	Constructor(Handle as Integer)	1222
* 13.30.5	Constructor(left as Double, top as Double, width as Double, height as Double)	1223
* 13.30.6	selectedPages as PDFPageMBS()	1223
* 13.30.8	allowsDragging as boolean	1223
* 13.30.9	allowsMultipleSelection as boolean	1224
* 13.30.10	backgroundColor as NSColorMBS	1224
* 13.30.11	labelFont as NSFontMBS	1224
* 13.30.12	maximumNumberOfColumns as Integer	1224
* 13.30.13	PDFView as PDFViewMBS	1225
* 13.30.14	thumbnailSize as NSSizeMBS	1225

– 13.31.1 control PDFViewControlMBS	1226
* 13.31.3 View as PDFViewMBS	1226
* 13.31.5 AfterDrawPage(graphics as NSGraphicsMBS, page as PDFPageMBS)	1226
* 13.31.6 AfterDrawPagePost(graphics as NSGraphicsMBS, page as PDFPageMBS)	1226
* 13.31.7 AfterDrawRect(graphics as NSGraphicsMBS, x as Double, y as Double, w as Double, h as Double)	1227
* 13.31.8 BeforeDrawPage(graphics as NSGraphicsMBS, page as PDFPageMBS) as boolean	1227
* 13.31.9 BeforeDrawPagePost(graphics as NSGraphicsMBS, page as PDFPageMBS) as boolean	1227
* 13.31.10 BeforeDrawRect(graphics as NSGraphicsMBS, x as Double, y as Double, w as Double, h as Double) as boolean	1227
* 13.31.11 BoundsChanged	1227
* 13.31.12 EnableMenuItems	1228
* 13.31.13 FrameChanged	1228
* 13.31.14 GotFocus	1228
* 13.31.15 LostFocus	1228
* 13.31.16 MenuAction(HitItem as MenuItem) As Boolean	1228
* 13.31.17 MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean	1228
* 13.31.18 MouseDrag(x as Integer, y as Integer)	1229
* 13.31.19 MouseUp(x as Integer, y as Integer)	1229
* 13.31.20 ScaleFactorChanged(NewFactor as Double)	1229
– 13.32.1 class PDFViewMBS	1230
* 13.32.3 annotationsChangedOnPage(page as PDFPageMBS)	1230
* 13.32.4 areaOfInterestForMouse(e as NSEventMBS) as Integer	1230
* 13.32.5 canGoBack as Boolean	1231
* 13.32.6 canGoForward as Boolean	1231
* 13.32.7 canGoToFirstPage as Boolean	1231
* 13.32.8 canGoToLastPage as Boolean	1231
* 13.32.9 canGoToNextPage as Boolean	1231
* 13.32.10 canGoToPreviousPage as Boolean	1231
* 13.32.11 canZoomIn as Boolean	1232
* 13.32.12 canZoomOut as Boolean	1232
* 13.32.13 clearSelection	1232
* 13.32.14 Constructor	1232
* 13.32.15 Constructor(Handle as Integer)	1232
* 13.32.16 Constructor(left as Double, top as Double, width as Double, height as Double)	1233
* 13.32.17 convertPointFromPage(point as NSPointMBS, page as PDFPageMBS) as NSPointMBS	1233
* 13.32.18 convertPointToPage(point as NSPointMBS, page as PDFPageMBS) as NSPointMBS	1233
* 13.32.19 convertRectFromPage(rect as NSRectMBS, page as PDFPageMBS) as NSRectMBS	1234

* 13.32.20 convertRectToPage(rect as NSRectMBS, page as PDFPageMBS) as NSRectMBS	1234
* 13.32.21 copy	1234
* 13.32.22 currentDestination as PDFDestinationMBS	1234
* 13.32.23 currentPage as PDFPageMBS	1234
* 13.32.24 documentView as NSViewMBS	1235
* 13.32.25 drawPage(page as PDFPageMBS)	1235
* 13.32.26 drawPagePost(page as PDFPageMBS)	1235
* 13.32.27 goBack	1235
* 13.32.28 goForward	1236
* 13.32.29 goToDestination(page as PDFDestinationMBS)	1236
* 13.32.30 goToFirstPage	1236
* 13.32.31 goToLastPage	1236
* 13.32.32 goToNextPage	1236
* 13.32.33 goToPage(page as PDFPageMBS)	1236
* 13.32.34 goToPreviousPage	1237
* 13.32.35 goToRect(rect as NSRectMBS, page as PDFPageMBS)	1237
* 13.32.36 goToSelection(page as PDFSelectionMBS)	1237
* 13.32.37 layoutDocumentView	1237
* 13.32.38 pageForPoint(point as NSPointMBS, nearest as boolean) as PDFPageMBS	1238
* 13.32.39 PDFViewAnnotationHitNotification as string	1238
* 13.32.40 PDFViewAnnotationWillHitNotification as string	1238
* 13.32.41 PDFViewChangedHistoryNotification as string	1238
* 13.32.42 PDFViewCopyPermissionNotification as string	1239
* 13.32.43 PDFViewDisplayBoxChangedNotification as string	1239
* 13.32.44 PDFViewDisplayModeChangedNotification as string	1239
* 13.32.45 PDFViewDocumentChangedNotification as string	1239
* 13.32.46 PDFViewPageChangedNotification as string	1239
* 13.32.47 PDFViewPrintPermissionNotification as string	1240
* 13.32.48 PDFViewScaleChangedNotification as string	1240
* 13.32.49 PDFViewSelectionChangedNotification as string	1240
* 13.32.50 performAction(action as PDFActionMBS)	1240
* 13.32.51 rowSizeForPage(page as PDFPageMBS) as NSSizeMBS	1240
* 13.32.52 scrollSelectionToVisible	1240
* 13.32.53 selectAll	1241
* 13.32.54 setCurrentSelection(selection as PDFSelectionMBS, animate as boolean)	1241
* 13.32.55 setCursorForAreaOfInterest(area as Integer)	1241
* 13.32.56 visiblePages as PDFPageMBS()	1241
* 13.32.57 zoomIn	1241
* 13.32.58 zoomOut	1242
* 13.32.60 allowsDragging as Boolean	1242
* 13.32.61 autoScales as Boolean	1242

* 13.32.62 backgroundColor as NSColorMBS	1242
* 13.32.63 currentSelection as PDFSelectionMBS	1242
* 13.32.64 displayBox as Integer	1243
* 13.32.65 displayMode as Integer	1243
* 13.32.66 displaysAsBook as Boolean	1243
* 13.32.67 displaysPageBreaks as Boolean	1244
* 13.32.68 document as PDFDocumentMBS	1244
* 13.32.69 enableDataDetectors as Boolean	1244
* 13.32.70 greekingThreshold as Double	1244
* 13.32.71 interpolationQuality as Integer	1244
* 13.32.72 scaleFactor as Double	1245
* 13.32.73 shouldAntiAlias as Boolean	1245
* 13.32.75 kPDFAnnotationArea=4	1245
* 13.32.76 kPDFControlArea=16	1245
* 13.32.77 kPDFDisplaySinglePage=0	1245
* 13.32.78 kPDFDisplaySinglePageContinuous=1	1246
* 13.32.79 kPDFDisplayTwoUp=2	1246
* 13.32.80 kPDFDisplayTwoUpContinuous=3	1246
* 13.32.81 kPDFIconArea=64	1246
* 13.32.82 kPDFInterpolationQualityHigh = 2	1246
* 13.32.83 kPDFInterpolationQualityLow = 1	1246
* 13.32.84 kPDFInterpolationQualityNone = 0	1247
* 13.32.85 kPDFLinkArea=8	1247
* 13.32.86 kPDFNoArea=0	1247
* 13.32.87 kPDFPageArea=1	1247
* 13.32.88 kPDFPopupArea=128	1247
* 13.32.89 kPDFTextArea=2	1247
* 13.32.90 kPDFTextFieldArea=32	1247

• 6 Cocoa Controls	189
– 12.1.1 class Popupmenu	1093
* 12.1.3 NSButtonMBS as NSButtonMBS	1093
* 12.1.4 NSPopUpButtonMBS as NSPopUpButtonMBS	1094
– 6.40.1 class ProgressBar	558
* 6.40.3 NSProgressIndicatorMBS as NSProgressIndicatorMBS	558
– 6.41.1 class ProgressWheel	559
* 6.41.3 NSProgressIndicatorMBS as NSProgressIndicatorMBS	559
– 6.42.1 class PushButton	560
* 6.42.3 NSButtonMBS as NSButtonMBS	560

• 14 Quartz Composer	1249
– 14.1.1 class QCCompositionMBS	1249
* 14.1.3 compositionWithData(data as MemoryBlock) as QCCompositionMBS	1250
* 14.1.4 compositionWithData(data as string) as QCCompositionMBS	1250
* 14.1.5 compositionWithFile(file as folderitem) as QCCompositionMBS	1251
* 14.1.6 compositionWithFile(path as string) as QCCompositionMBS	1251
* 14.1.7 Constructor	1251
* 14.1.8 copy as QCCompositionMBS	1252
* 14.1.9 getAttributes as dictionary	1252
* 14.1.10 inputKeys as string()	1252
* 14.1.11 outputKeys as string()	1252
* 14.1.12 protocols as string()	1252
* 14.1.13 QCCompositionAttributeBuiltInKey as string	1252
* 14.1.14 QCCompositionAttributeCategoryKey as string	1253
* 14.1.15 QCCompositionAttributeCopyrightKey as string	1253
* 14.1.16 QCCompositionAttributeDescriptionKey as string	1253
* 14.1.17 QCCompositionAttributeHasConsumersKey as string	1254
* 14.1.18 QCCompositionAttributeIsTimeDependentKey as string	1254
* 14.1.19 QCCompositionAttributeNameKey as string	1254
* 14.1.20 QCCompositionCategoryDistortion as string	1255
* 14.1.21 QCCompositionCategoryStylize as string	1255
* 14.1.22 QCCompositionCategoryUtility as string	1255
* 14.1.23 QCCompositionInputAudioPeakKey as string	1255
* 14.1.24 QCCompositionInputAudioSpectrumKey as string	1255
* 14.1.25 QCCompositionInputDestinationImageKey as string	1255
* 14.1.26 QCCompositionInputImageKey as string	1256
* 14.1.27 QCCompositionInputPaceKey as string	1256
* 14.1.28 QCCompositionInputPreviewModeKey as string	1256
* 14.1.29 QCCompositionInputPrimaryColorKey as string	1256
* 14.1.30 QCCompositionInputRSSArticleDurationKey as string	1256
* 14.1.31 QCCompositionInputRSSFeedURLKey as string	1257
* 14.1.32 QCCompositionInputScreenImageKey as string	1257
* 14.1.33 QCCompositionInputSecondaryColorKey as string	1257
* 14.1.34 QCCompositionInputSourceImageKey as string	1257
* 14.1.35 QCCompositionInputTrackInfoKey as string	1257
* 14.1.36 QCCompositionInputTrackPositionKey as string	1257
* 14.1.37 QCCompositionInputTrackSignalKey as string	1258
* 14.1.38 QCCompositionInputXKey as string	1258
* 14.1.39 QCCompositionInputYKey as string	1258
* 14.1.40 QCCompositionOutputImageKey as string	1258
* 14.1.41 QCCompositionOutputWebPageURLKey as string	1258

* 14.1.42	QCCompositionProtocolGraphicAnimation as string	1258
* 14.1.43	QCCompositionProtocolGraphicTransition as string	1259
* 14.1.44	QCCompositionProtocolImageFilter as string	1259
* 14.1.45	QCCompositionProtocolMusicVisualizer as string	1259
* 14.1.46	QCCompositionProtocolRSSVisualizer as string	1260
* 14.1.47	QCCompositionProtocolScreenSaver as string	1260
* 14.1.49	Description as String	1260
* 14.1.50	Handle as Integer	1261
* 14.1.51	identifier as String	1261
* 14.1.52	Name as String	1261
– 14.2.1	class QCCompositionRepositoryMBS	1262
* 14.2.3	allCompositions as QCCompositionMBS()	1262
* 14.2.4	Compositions(protocols() as String = nil, attributes as Dictionary = nil) as QCCompositionMBS()	1262
* 14.2.5	compositionWithIdentifier(identifier as string) as QCCompositionMBS	1263
* 14.2.6	Constructor	1263
* 14.2.7	loadPlugIn(file as folderitem) as Boolean	1264
* 14.2.8	loadPlugIn(path as string) as Boolean	1264
* 14.2.9	QCCompositionRepositoryDidUpdateNotification as string	1264
* 14.2.10	sharedCompositionRepository as QCCompositionRepositoryMBS	1264
* 14.2.12	Handle as Integer	1265
– 14.3.1	control QCViewControlMBS	1266
* 14.3.3	View as QCViewMBS	1266
* 14.3.5	BoundsChanged	1266
* 14.3.6	DidStartRendering	1266
* 14.3.7	DidStopRendering	1266
* 14.3.8	EnableMenuItems	1267
* 14.3.9	FrameChanged	1267
* 14.3.10	GotFocus	1267
* 14.3.11	LostFocus	1267
* 14.3.12	MenuItemAction(HitItem as MenuItem) As Boolean	1267
* 14.3.13	MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean	1267
* 14.3.14	MouseDown(x as Integer, y as Integer)	1268
* 14.3.15	MouseDown(x as Integer, y as Integer)	1268
* 14.3.16	ScaleFactorChanged(NewFactor as Double)	1268
– 14.4.1	class QCViewMBS	1269
* 14.4.3	Constructor	1269
* 14.4.4	Constructor(Handle as Integer)	1269
* 14.4.5	Constructor(left as Double, top as Double, width as Double, height as Double)	1270
* 14.4.6	erase	1270
* 14.4.7	getAttributes as dictionary	1270

* 14.4.8 inputKeys as string()	1271
* 14.4.9 loadComposition(composition as QCCompositionMBS) as boolean	1271
* 14.4.10 loadCompositionFromData(data as MemoryBlock) as boolean	1271
* 14.4.11 loadCompositionFromData(data as string) as boolean	1271
* 14.4.12 loadCompositionFromFile(file as folderitem) as boolean	1272
* 14.4.13 loadCompositionFromFile(filepath as string) as boolean	1272
* 14.4.14 outputKeys as string()	1272
* 14.4.15 pauseRendering	1273
* 14.4.16 resumeRendering	1273
* 14.4.17 setValueForInputKey(value as Variant, key as string) as boolean	1273
* 14.4.18 startRendering as boolean	1273
* 14.4.19 stopRendering	1274
* 14.4.20 unloadComposition	1274
* 14.4.21 valueForInputKey(key as string) as Variant	1274
* 14.4.22 valueForOutputKey(key as string) as Variant	1274
* 14.4.24 autostartsRendering as boolean	1275
* 14.4.25 eraseColor as NSColorMBS	1275
* 14.4.26 eventForwardingMask as Integer	1275
* 14.4.27 isPausedRendering as boolean	1275
* 14.4.28 isRendering as boolean	1276
* 14.4.29 loadedComposition as QCCompositionMBS	1276
* 14.4.30 maxRenderingFrameRate as Double	1276
* 14.4.31 snapshotImage as NSImageMBS	1277

• 9 CoreGraphics	591
– 9.1.1 class QuartzFilterManagerMBS	591
* 9.1.3 filterPanel as NSPanelMBS	591
* 9.1.4 filters as QuartzFilterMBS()	592
* 9.1.5 filtersInDomains(domains() as string) as QuartzFilterMBS()	592
* 9.1.6 filterView as QuartzFilterViewMBS	592
* 9.1.7 selectedFilter as QuartzFilterMBS	592
* 9.1.8 selectFilter(filter as QuartzFilterMBS) as boolean	593
* 9.1.10 Handle as Integer	593
* 9.1.12 didAddFilter(filter as QuartzFilterMBS)	593
* 9.1.13 didModifyFilter(filter as QuartzFilterMBS)	593
* 9.1.14 didRemoveFilter(filter as QuartzFilterMBS)	593
* 9.1.15 didSelectFilter(filter as QuartzFilterMBS)	593
* 9.1.17 kQuartzFilterApplicationDomain=”kQuartzFilterApplicationDomain”	594
* 9.1.18 kQuartzFilterPDFWorkflowDomain=”kQuartzFilterPDFWorkflowDomain”	594
* 9.1.19 kQuartzFilterPrintingDomain=”kQuartzFilterPrintingDomain”	594
– 9.2.1 class QuartzFilterMBS	595
* 9.2.3 applyToContext(CGContextHandle as Integer) as boolean	596
* 9.2.4 Constructor	596
* 9.2.5 localizedName as string	596
* 9.2.6 quartzFilterWithFile(file as folderitem) as QuartzFilterMBS	597
* 9.2.7 quartzFilterWithURL(url as string) as QuartzFilterMBS	597
* 9.2.8 removeFromContext(CGContextHandle as Integer)	597
* 9.2.9 url as string	597
* 9.2.11 Handle as Integer	598
– 9.3.1 class QuartzFilterViewMBS	599
* 9.3.3 Constructor	599
* 9.3.4 Constructor(Handle as Integer)	599
* 9.3.5 Constructor(left as Double, top as Double, width as Double, height as Double)	600
* 9.3.6 sizeToFit	600

	121
• 6 Cocoa Controls	189
– 8.4.1 class Radiobutton	590
* 8.4.3 NSButtonMBS as NSButtonMBS	590
– 6.43.1 class ScrollBar	561
* 6.43.3 NSScrollerMBS as NSScrollerMBS	561
– 6.44.1 class Separator	562
* 6.44.3 NSBoxMBS as NSBoxMBS	562
– 6.45.1 class Slider	563
* 6.45.3 NSSliderMBS as NSSliderMBS	563
– 6.46.1 class TextArea	564
* 6.46.3 NSScrollViewMBS as NSScrollViewMBS	564
– 6.47.1 class UpDownArrows	566
* 6.47.3 NSStepperMBS as NSStepperMBS	566

• 11 HTMLViewer Mac	731
– 11.100.1 class WebArchiveMBS	955
* 11.100.3 Constructor(data as Memoryblock)	955
* 11.100.4 Constructor(mainResource as WebResourceMBS)	956
* 11.100.5 Constructor(mainResource as WebResourceMBS, subresources() as WebResourceMBS)	956
* 11.100.6 Constructor(mainResource as WebResourceMBS, subresources() as WebResourceMBS, subframeArchives() as WebArchiveMBS)	956
* 11.100.7 data as Memoryblock	957
* 11.100.8 mainResource as WebResourceMBS	957
* 11.100.9 subframeArchives as WebArchiveMBS()	957
* 11.100.10 subresources as WebResourceMBS()	957
* 11.100.12 Handle as Integer	957
– 11.101.1 class WebBackForwardListMBS	958
* 11.101.3 addItem(item as WebHistoryItemMBS)	958
* 11.101.4 backItem as WebHistoryItemMBS	958
* 11.101.5 backListCount as Integer	958
* 11.101.6 backListWithLimit(limit as Integer) as WebHistoryItemMBS()	959
* 11.101.7 Constructor	959
* 11.101.8 containsItem(item as WebHistoryItemMBS) as boolean	959
* 11.101.9 currentItem as WebHistoryItemMBS	959
* 11.101.10 forwardItem as WebHistoryItemMBS	959
* 11.101.11 forwardListCount as Integer	959
* 11.101.12 forwardListWithLimit(limit as Integer) as WebHistoryItemMBS()	960
* 11.101.13 goBack	960
* 11.101.14 goForward	960
* 11.101.15 goToItem(item as WebHistoryItemMBS)	960
* 11.101.16 itemAtIndex(index as Integer) as WebHistoryItemMBS	960
* 11.101.18 Handle as Integer	961
* 11.101.19 capacity as Integer	961
* 11.101.20 PageCacheSize as Integer	961
– 11.102.1 class WebDataSourceMBS	962
* 11.102.3 addSubresource(Subresource as WebResourceMBS)	962
* 11.102.4 Constructor(request as NSURLRequestMBS)	962
* 11.102.5 data as MemoryBlock	962
* 11.102.6 initialRequest as NSURLRequestMBS	963
* 11.102.7 isLoading as boolean	963
* 11.102.8 mainResource as WebResourceMBS	963
* 11.102.9 pageTitle as string	963
* 11.102.10 representation as WebDocumentRepresentationMBS	963
* 11.102.11 request as NSURLRequestMBS	964

	123
* 11.102.12 response as NSURLResponseMBS	964
* 11.102.13 subresourceForURL(url as string) as WebResourceMBS	964
* 11.102.14 subresources as WebResourceMBS()	964
* 11.102.15 textEncodingName as string	964
* 11.102.16 unreachableURL as String	964
* 11.102.17 webArchive as WebArchiveMBS	965
* 11.102.18 webFrame as WebFrameMBS	965
* 11.102.20 Handle as Integer	965
– 11.103.1 class WebDocumentRepresentationMBS	966
* 11.103.3 canProvideDocumentSource as boolean	966
* 11.103.4 Constructor	966
* 11.103.5 documentSource as string	966
* 11.103.6 title as string	966
* 11.103.8 Handle as Integer	967
– 11.104.1 class WebDocumentViewMBS	968
* 11.104.3 attributedString as NSAttributedStringMBS	968
* 11.104.4 dataSourceUpdated(dataSource as WebDataSourceMBS)	969
* 11.104.5 deselectAll	969
* 11.104.6 Image as NSImageMBS	969
* 11.104.7 layout	970
* 11.104.8 print	970
* 11.104.9 SearchFor(text as string, Forward as boolean, CaseSensitive as boolean, Wrap as Boolean) as boolean	970
* 11.104.10 SearchFunctionsAvailable as boolean	970
* 11.104.11 selectAll	971
* 11.104.12 selectedAttributedString as NSAttributedStringMBS	971
* 11.104.13 SelectedString as String	971
* 11.104.14 setDataSource(dataSource as WebDataSourceMBS)	971
* 11.104.15 setNeedsLayout(flag as boolean)	971
* 11.104.16 stringValue as String	972
* 11.104.17 supportsTextEncoding as boolean	972
* 11.104.18 TextFunctionsAvailable as boolean	972
– 11.105.1 class WebDownloadDelegateMBS	973
* 11.105.3 canAuthenticateAgainstProtectionSpace(download as NSURLDownloadMBS, protectionSpace as NSURLProtectionSpaceMBS) as boolean	974
* 11.105.4 Close	974
* 11.105.5 decideDestinationWithSuggestedFilename(download as NSURLDownloadMBS, filename as string)	974
* 11.105.6 DidBegin(download as NSURLDownloadMBS)	975
* 11.105.7 didCancelAuthenticationChallenge(download as NSURLDownloadMBS, challenge as NSURLAuthenticationChallengeMBS)	975

- * 11.105.8 didCreateDestination(download as NSURLDownloadMBS, path as string, file as folderitem) 975
- * 11.105.9 didFailWithError(download as NSURLDownloadMBS, error as NSErrorMBS) 976
- * 11.105.10 DidFinish(download as NSURLDownloadMBS) 976
- * 11.105.11 didReceiveAuthenticationChallenge(download as NSURLDownloadMBS, challenge as NSURLAuthenticationChallengeMBS) 976
- * 11.105.12 didReceiveDataOfLength(download as NSURLDownloadMBS, length as UInt64) 977
- * 11.105.13 didReceiveResponse(download as NSURLDownloadMBS, response as NSURLResponseMBS) 978
- * 11.105.14 Open 978
- * 11.105.15 shouldDecodeSourceDataOfMIMEType(download as NSURLDownloadMBS, encodingType as string) as boolean 978
- * 11.105.16 ShouldUseCredentialStorage(download as NSURLDownloadMBS) as boolean 979
- * 11.105.17 willResumeWithResponse(download as NSURLDownloadMBS, response as NSURLResponseMBS, startingByte as Int64) 979
- * 11.105.18 willSendRequest(download as NSURLDownloadMBS, request as NSURLRequestMBS, redirectResponse as NSURLResponseMBS) as NSURLRequestMBS 979
- * 11.105.19 WindowForAuthenticationSheet(download as NSURLDownloadMBS) as NSWindowMBS 980
- 11.106.1 class WebFrameLoadDelegateMBS 981
 - * 11.106.3 Close 981
 - * 11.106.4 didCancelClientRedirectForFrame(WebView as WebViewMBS, frame as WebFrameMBS) as boolean 981
 - * 11.106.5 didChangeLocationWithinPageForFrame(WebView as WebViewMBS, frame as WebFrameMBS) as boolean 982
 - * 11.106.6 didCommitLoadForFrame(WebView as WebViewMBS, frame as WebFrameMBS) as boolean 982
 - * 11.106.7 didFailLoadWithError(WebView as WebViewMBS, ErrorString as string, frame as WebFrameMBS) as boolean 982
 - * 11.106.8 didFailProvisionalLoadWithError(WebView as WebViewMBS, ErrorString as string, frame as WebFrameMBS) as boolean 983
 - * 11.106.9 didFinishLoadForFrame(WebView as WebViewMBS, frame as WebFrameMBS) as boolean 983
 - * 11.106.10 didReceiveIcon(WebView as WebViewMBS, image as NSImageMBS, frame as WebFrameMBS) as boolean 984
 - * 11.106.11 didReceiveServerRedirectForProvisionalLoadForFrame(WebView as WebViewMBS, frame as WebFrameMBS) as boolean 984
 - * 11.106.12 didReceiveTitle(WebView as WebViewMBS, title as string, frame as WebFrameMBS) as boolean 984
 - * 11.106.13 didStartProvisionalLoadForFrame(WebView as WebViewMBS, frame as WebFrameMBS) as boolean 985
 - * 11.106.14 Open 985

* 11.106.15 willCloseFrame(WebView as WebViewMBS, frame as WebFrameMBS) as boolean	985
* 11.106.16 willPerformClientRedirectToURL(WebView as WebViewMBS, URL as String, delay as Double, fireDate as Date, frame as WebFrameMBS) as boolean	986
* 11.106.17 windowScriptObjectAvailable(WebView as WebViewMBS, windowScriptObject as WebScriptObjectMBS) as boolean	986
– 11.107.1 class WebFrameMBS	987
* 11.107.3 childFrames as WebFrameMBS()	987
* 11.107.4 Constructor	987
* 11.107.5 dataSource as WebDataSourceMBS	987
* 11.107.6 DOMDocument as Variant	988
* 11.107.7 findFrameNamed(name as string) as WebFrameMBS	988
* 11.107.8 frameElement as Variant	988
* 11.107.9 frameView as WebFrameViewMBS	988
* 11.107.10 loadArchive(archive as WebArchiveMBS)	989
* 11.107.11 LoadHTMLString(data as memoryblock, mime as string, encoding as string, url as string)	989
* 11.107.12 LoadHTMLString(text as string, url as string)	989
* 11.107.13 LoadURL(url as string)	989
* 11.107.14 LoadURL(url as string, CachePolicy as Integer, TimeOut as Double)	989
* 11.107.15 name as String	990
* 11.107.16 parentFrame as WebFrameMBS	990
* 11.107.17 provisionalDataSource as WebDataSourceMBS	990
* 11.107.18 reload	991
* 11.107.19 reloadFromOrigin	991
* 11.107.20 stopLoading	991
* 11.107.21 webView as WebViewMBS	991
* 11.107.23 Handle as Integer	991
– 11.108.1 class WebFrameViewMBS	992
* 11.108.3 Constructor	992
* 11.108.4 Constructor(Handle as Integer)	992
* 11.108.5 Constructor(left as Double, top as Double, width as Double, height as Double)	993
* 11.108.6 documentView as WebDocumentViewMBS	993
* 11.108.7 webFrame as WebFrameMBS	993
* 11.108.9 allowsScrolling as boolean	994
– 11.109.1 class WebHistoryItemMBS	995
* 11.109.3 Constructor(URLstring as String, title as string, lastVisited as date)	995
* 11.109.4 Constructor(URLstring as String, title as string, lastVisited as Double)	995
* 11.109.5 icon as NSImageMBS	996
* 11.109.6 lastVisited as date	996
* 11.109.7 lastVisitedTimeInterval as Double	996

* 11.109.8 originalURLString as String	996
* 11.109.9 title as String	996
* 11.109.10 URLString as String	997
* 11.109.12 Handle as Integer	997
* 11.109.13 alternateTitle as String	997
– 11.110.1 class WebHistoryMBS	998
* 11.110.3 addItem(item as WebHistoryItemMBS)	998
* 11.110.4 addItems(items() as WebHistoryItemMBS)	998
* 11.110.5 Constructor	998
* 11.110.6 itemForURL(url as string) as WebHistoryItemMBS	998
* 11.110.7 loadFromURL(file as folderitem, byref description as string) as boolean	999
* 11.110.8 loadFromURL(url as string, byref description as string) as boolean	999
* 11.110.9 optionalSharedHistory as WebHistoryMBS	999
* 11.110.10 orderedItemsLastVisitedOnDay(day as date) as WebHistoryItemMBS()	999
* 11.110.11 orderedLastVisitedDays as date()	1000
* 11.110.12 removeAllItems	1000
* 11.110.13 removeItem(item as WebHistoryItemMBS)	1000
* 11.110.14 removeItems(items() as WebHistoryItemMBS)	1000
* 11.110.15 saveToURL(file as folderitem, byref description as string) as boolean	1000
* 11.110.16 saveToURL(url as string, byref description as string) as boolean	1000
* 11.110.18 Handle as Integer	1001
* 11.110.19 historyAgeInDaysLimit as Integer	1001
* 11.110.20 historyItemLimit as Integer	1001
– 11.111.1 class WebOpenPanelResultListenerMBS	1002
* 11.111.3 cancel	1002
* 11.111.4 chooseFilename(file as folderitem)	1002
* 11.111.5 chooseFilename(filename as string)	1002
* 11.111.6 chooseFileNames(fileNames() as string)	1002
* 11.111.7 chooseFileNames(files() as folderitem)	1003
* 11.111.8 Constructor	1003
* 11.111.10 allowMultipleFiles as Boolean	1003
* 11.111.11 Handle as Integer	1003
– 11.112.1 class WebPolicyDecisionListenerMBS	1004
* 11.112.3 Constructor	1004
* 11.112.4 download	1004
* 11.112.5 ignore	1004
* 11.112.6 use	1005
* 11.112.8 Handle as Integer	1005
– 11.113.1 class WebPolicyDelegateMBS	1006
* 11.113.3 Close	1006

- * 11.113.4 decidePolicyForMimeType(type as string,request as NSURLRequestMBS, frame as WebFrameMBS, decisionListener as WebPolicyDecisionListenerMBS) as boolean 1007
- * 11.113.5 decidePolicyForNavigationAction(request as NSURLRequestMBS, frame as WebFrameMBS, decisionListener as WebPolicyDecisionListenerMBS, NavigationType as Integer, ModifierFlags as Integer, OriginalURL as string) as boolean 1007
- * 11.113.6 decidePolicyForNewWindowAction(request as NSURLRequestMBS, framename as string, decisionListener as WebPolicyDecisionListenerMBS, NavigationType as Integer, ModifierFlags as Integer, OriginalURL as string) as boolean 1008
- * 11.113.7 Open 1008
- * 11.113.8 unableToImplementPolicyWithError(errorString as string, frame as WebFrameMBS) as boolean 1009
- 11.114.1 class WebPreferencesMBS 1010
 - * 11.114.3 Constructor(identifier as String) 1010
 - * 11.114.4 standardPreferences as WebPreferencesMBS 1010
 - * 11.114.6 allowsAnimatedImageLooping as boolean 1011
 - * 11.114.7 allowsAnimatedImages as boolean 1011
 - * 11.114.8 arePlugInsEnabled as boolean 1011
 - * 11.114.9 autosaves as boolean 1012
 - * 11.114.10 cacheModel as Integer 1012
 - * 11.114.11 cursiveFontFamily as String 1013
 - * 11.114.12 databasesEnabled as Boolean 1013
 - * 11.114.13 defaultFixedFontSize as Integer 1013
 - * 11.114.14 defaultFontSize as Integer 1014
 - * 11.114.15 defaultTextEncodingName as String 1014
 - * 11.114.16 fantasyFontFamily as String 1014
 - * 11.114.17 fixedFontFamily as String 1014
 - * 11.114.18 Handle as Integer 1015
 - * 11.114.19 identifier as String 1015
 - * 11.114.20 isJavaEnabled as boolean 1015
 - * 11.114.21 isJavaScriptEnabled as boolean 1016
 - * 11.114.22 javaScriptCanOpenWindowsAutomatically as boolean 1016
 - * 11.114.23 loadsImagesAutomatically as boolean 1016
 - * 11.114.24 localStorageDatabasePath as String 1016
 - * 11.114.25 localStorageEnabled as Boolean 1017
 - * 11.114.26 minimumFontSize as Integer 1017
 - * 11.114.27 minimumLogicalFontSize as Integer 1018
 - * 11.114.28 privateBrowsingEnabled as boolean 1018
 - * 11.114.29 sansSerifFontFamily as String 1018
 - * 11.114.30 serifFontFamily as String 1018
 - * 11.114.31 shouldPrintBackgrounds as boolean 1019
 - * 11.114.32 standardFontFamily as String 1019
 - * 11.114.33 suppressesIncrementalRendering as boolean 1019

* 11.114.34 tabsToLinks as boolean	1020
* 11.114.35 textAreasAreResizable as Boolean	1020
* 11.114.36 userStyleSheetEnabled as boolean	1020
* 11.114.37 userStyleSheetLocation as string	1021
* 11.114.38 usesPageCache as boolean	1021
* 11.114.40 WebCacheModelDocumentBrowser=1	1021
* 11.114.41 WebCacheModelDocumentViewer=0	1022
* 11.114.42 WebCacheModelPrimaryWebBrowser=2	1022
– 11.115.1 class WebPrintMBS	1023
* 11.115.3 Constructor(view as htmlviewer)	1023
* 11.115.4 Constructor(WebViewHandle as Integer)	1023
* 11.115.5 GetPageFormat as string	1023
* 11.115.6 PageSetup as boolean	1023
* 11.115.7 Print as boolean	1024
* 11.115.8 PrintDialog as boolean	1024
* 11.115.9 PrintingEnd	1024
* 11.115.10 PrintingPage(index as UInt32) as Memoryblock	1025
* 11.115.11 PrintingStart(width as Double, height as Double) as Integer	1025
* 11.115.12 SetPageFormat(data as string) as boolean	1026
* 11.115.14 DialogOpen as Boolean	1026
* 11.115.15 HTMLViewer as HTMLViewer	1026
* 11.115.16 PageFormatHandle as Integer	1026
* 11.115.17 PDFFile as Folderitem	1027
* 11.115.18 PrintSessionHandle as Integer	1027
* 11.115.19 PrintSettingsHandle as Integer	1027
* 11.115.20 SheetTarget as Window	1027
* 11.115.22 PageSetupDialogDone(accepted as boolean)	1027
* 11.115.23 PrintDialogDone(accepted as boolean)	1028
– 11.116.1 class WebResourceLoadDelegateMBS	1029
* 11.116.3 Close	1029
* 11.116.4 didCancelAuthenticationChallenge(id as Variant, challenge as NSURLAuthenticationChallengeMBS, dataSource as WebDataSourceMBS)	1029
* 11.116.5 didFailLoadingWithError(id as Variant, errorString as string, dataSource as WebDataSourceMBS)	1030
* 11.116.6 didFinishLoadingFromDataSource(id as Variant, dataSource as WebDataSourceMBS)	1030
* 11.116.7 didReceiveAuthenticationChallenge(id as Variant, challenge as NSURLAuthenticationChallengeMBS, dataSource as WebDataSourceMBS)	1030
* 11.116.8 didReceiveContentLength(id as Variant, length as Integer, dataSource as WebDataSourceMBS)	1030
* 11.116.9 didReceiveResponse(id as Variant, response as NSURLResponseMBS, dataSource as WebDataSourceMBS)	1031

* 11.116.10 identifierForInitialRequest(request as NSURLRequestMBS, dataSource as WebDataSourceMBS) as Variant	1031
* 11.116.11 Open	1031
* 11.116.12 plugInFailedWithError(errorString as string, dataSource as WebDataSourceMBS)	1032
* 11.116.13 willSendRequest(id as Variant, request as NSURLRequestMBS, redirectResponse as NSURLResponseMBS, dataSource as WebDataSourceMBS) as NSURLRequestMBS	1032
– 11.117.1 class WebResourceMBS	1033
* 11.117.3 Constructor(data as MemoryBlock, url as string, mimeType as string, TextEncodingName as string="", frameName as string="")	1033
* 11.117.4 data as MemoryBlock	1034
* 11.117.5 frameName as String	1034
* 11.117.6 MIMETYPE as String	1034
* 11.117.7 textEncodingName as String	1035
* 11.117.8 URL as String	1035
* 11.117.10 Handle as Integer	1035
– 11.118.1 class WebScriptCallbackMBS	1036
* 11.118.3 ArgumentValue(index as Integer) as Variant	1036
* 11.118.4 Constructor	1036
* 11.118.6 ArgumentCount as Integer	1036
* 11.118.7 Handle as Integer	1037
* 11.118.9 Callback(Name as string) as Variant	1037
* 11.118.10 Close	1037
– 11.119.1 class WebScriptObjectMBS	1038
* 11.119.3 Constructor	1038
* 11.119.4 evaluateWebScript(script as String) as Variant	1038
* 11.119.5 getValue(name as String) as Variant	1039
* 11.119.6 removeValue(name as String)	1039
* 11.119.7 setValue(name as String, value as Variant)	1039
* 11.119.8 setWebScriptCallback(name as String, value as WebScriptCallbackMBS)	1039
* 11.119.9 setWebScriptValueAtIndex(index as Integer, value as Variant)	1040
* 11.119.10 stringRepresentation as String	1040
* 11.119.11 webScriptValueAtIndex(index as Integer) as Variant	1040
* 11.119.13 Handle as Integer	1041
– 11.120.1 class WebUIDelegateMBS	1042
* 11.120.3 Constructor	1042
* 11.120.5 DisableContextMenu as Boolean	1042
* 11.120.6 DisableNewWindow as Boolean	1043
* 11.120.8 AreToolbarsVisible as boolean	1043
* 11.120.9 Close	1043
* 11.120.10 CreateWithRequest(Request as NSURLRequestMBS) as object	1043

* 11.120.11 dragDestinationActionMaskForDraggingInfo(draggingInfo as NSDraggingInfoMBS) as Integer	1044
* 11.120.12 dragSourceActionMaskForPoint(x as Double, y as Double) as Integer	1044
* 11.120.13 GetContentRect(byref left as Double, byref top as Double, byref width as Double, byref height as Double) as boolean	1045
* 11.120.14 GetFrame(byref left as Double, byref top as Double, byref width as Double, byref height as Double) as boolean	1045
* 11.120.15 GetStatusText as String	1045
* 11.120.16 IsResizable as boolean	1045
* 11.120.17 IsStatusBarVisible as boolean	1046
* 11.120.18 MouseDidMoveOverElement(elementInformation as Dictionary, modifierFlags as Integer) as boolean	1046
* 11.120.19 Open	1046
* 11.120.20 RunJavaScriptAlertPanelWithMessage(message as String)	1047
* 11.120.21 RunJavaScriptConfirmPanelWithMessage(message as String) as boolean	1047
* 11.120.22 RunJavaScriptTextInputPanelWithPrompt(prompt as String, defaultText as String) as String	1047
* 11.120.23 runOpenPanelForFileButtonWithResultListener(listener as WebOpenPanelResultListenerMBS, allowMultipleFiles as boolean) as boolean	1047
* 11.120.24 SetContentRect(left as Double, top as Double, width as Double, height as Double) as boolean	1048
* 11.120.25 SetFrame(left as Double, top as Double, width as Double, height as Double) as boolean	1048
* 11.120.26 SetResizable(resizable as boolean) as boolean	1048
* 11.120.27 SetStatusBarVisible(visible as boolean) as boolean	1049
* 11.120.28 SetStatusText(text as String) as boolean	1049
* 11.120.29 SetToolbarsVisible(visible as boolean) as boolean	1049
* 11.120.30 willPerformDragDestinationAction(WebDragDestinationAction as Integer, draggingInfo as NSDraggingInfoMBS)	1049
* 11.120.31 willPerformDragSourceAction(WebDragDestinationAction as Integer, X as Double, Y as Double, pasteboard as NSPasteboardMBS)	1050
* 11.120.32 WindowClose as boolean	1050
* 11.120.33 WindowFocus as boolean	1050
* 11.120.34 WindowShow as boolean	1050
* 11.120.35 WindowUnfocus as boolean	1051
* 11.120.37 WebDragDestinationActionAny = -1	1051
* 11.120.38 WebDragDestinationActionDHTML = 1	1051
* 11.120.39 WebDragDestinationActionEdit = 2	1051
* 11.120.40 WebDragDestinationActionLoad = 4	1051
* 11.120.41 WebDragDestinationActionNone = 0	1052
- 11.121.1 class WebViewMBS	1053
* 11.121.3 alignCenter	1053
* 11.121.4 alignJustified	1053

* 11.121.5 alignLeft	1053
* 11.121.6 alignRight	1054
* 11.121.7 applyStyle(style as Variant)	1054
* 11.121.8 backForwardList as WebBackForwardListMBS	1054
* 11.121.9 canGoBack as boolean	1055
* 11.121.10 canGoForward as boolean	1055
* 11.121.11 canMakeTextLarger as boolean	1055
* 11.121.12 canMakeTextSmaller as boolean	1055
* 11.121.13 canResetPageZoom as boolean	1055
* 11.121.14 CanShowMIMEType(mime as string) as boolean	1055
* 11.121.15 CanShowMIMETypeAsHTML(mime as string) as boolean	1056
* 11.121.16 canZoomPageIn as boolean	1056
* 11.121.17 canZoomPageOut as boolean	1056
* 11.121.18 capitalizeWord	1056
* 11.121.19 centerSelectionInVisibleArea	1056
* 11.121.20 changeAttributes	1057
* 11.121.21 changeCaseOfLetter	1057
* 11.121.22 changeColor	1057
* 11.121.23 changeDocumentBackgroundColor	1057
* 11.121.24 changeFont	1057
* 11.121.25 checkSpelling	1058
* 11.121.26 ClearFocus	1058
* 11.121.27 complete	1058
* 11.121.28 Constructor	1058
* 11.121.29 Constructor(Handle as Integer)	1059
* 11.121.30 Constructor(left as Double, top as Double, width as Double, height as Double)	1059
* 11.121.31 Constructor(x as Double, y as Double, w as Double, h as Double, FrameName as string, GroupName as string)	1060
* 11.121.32 copy	1061
* 11.121.33 copyFont	1061
* 11.121.34 cut	1061
* 11.121.35 delete	1062
* 11.121.36 deleteBackward	1062
* 11.121.37 deleteBackwardByDecomposingPreviousCharacter	1062
* 11.121.38 deleteForward	1062
* 11.121.39 deleteSelection	1062
* 11.121.40 deleteToBeginningOfLine	1063
* 11.121.41 deleteToBeginningOfParagraph	1063
* 11.121.42 deleteToEndOfLine	1063
* 11.121.43 deleteToEndOfParagraph	1063
* 11.121.44 deleteWordBackward	1063
* 11.121.45 deleteWordForward	1063

* 11.121.46 EstimatedProgress as Double	1064
* 11.121.47 EvaluateJavaScript(code as string) as string	1064
* 11.121.48 GoBack	1065
* 11.121.49 GoForward	1065
* 11.121.50 goToBackForwardItem(item as WebHistoryItemMBS) as boolean	1065
* 11.121.51 HTMLText as string	1065
* 11.121.52 indent	1066
* 11.121.53 insertBacktab	1066
* 11.121.54 insertNewline	1066
* 11.121.55 insertParagraphSeparator	1066
* 11.121.56 insertTab	1066
* 11.121.57 LoadHTMLString(data as memoryblock, mime as string, encoding as string, url as string)	1066
* 11.121.58 LoadHTMLString(text as string, url as string)	1067
* 11.121.59 LoadRequest(request as NSURLRequestMBS)	1067
* 11.121.60 LoadURL(url as string)	1067
* 11.121.61 LoadURL(url as string, CachePolicy as Integer, TimeOut as Double)	1068
* 11.121.62 lowercaseWord	1069
* 11.121.63 mainFrame as WebFrameMBS	1069
* 11.121.64 makeTextLarger	1069
* 11.121.65 makeTextSmaller	1069
* 11.121.66 mediaVolume as single	1069
* 11.121.67 moveBackward	1069
* 11.121.68 moveBackwardAndModifySelection	1070
* 11.121.69 moveDown	1070
* 11.121.70 moveDownAndModifySelection	1070
* 11.121.71 moveForward	1070
* 11.121.72 moveForwardAndModifySelection	1070
* 11.121.73 moveLeft	1071
* 11.121.74 moveLeftAndModifySelection	1071
* 11.121.75 moveRight	1071
* 11.121.76 moveRightAndModifySelection	1071
* 11.121.77 moveToBeginningOfDocument	1072
* 11.121.78 moveToBeginningOfDocumentAndModifySelection	1072
* 11.121.79 moveToBeginningOfLine	1072
* 11.121.80 moveToBeginningOfLineAndModifySelection	1072
* 11.121.81 moveToBeginningOfParagraph	1072
* 11.121.82 moveToBeginningOfParagraphAndModifySelection	1073
* 11.121.83 moveToBeginningOfSentence	1073
* 11.121.84 moveToBeginningOfSentenceAndModifySelection	1073
* 11.121.85 moveToEndOfDocument	1073
* 11.121.86 moveToEndOfDocumentAndModifySelection	1073

* 11.121.87	moveToEndOfLine	1073
* 11.121.88	moveToEndOfLineAndModifySelection	1073
* 11.121.89	moveToEndOfParagraph	1074
* 11.121.90	moveToEndOfParagraphAndModifySelection	1074
* 11.121.91	moveToEndOfSentence	1074
* 11.121.92	moveToEndOfSentenceAndModifySelection	1074
* 11.121.93	moveUp	1074
* 11.121.94	moveUpAndModifySelection	1074
* 11.121.95	moveWordBackward	1075
* 11.121.96	moveWordBackwardAndModifySelection	1075
* 11.121.97	moveWordForward	1075
* 11.121.98	moveWordForwardAndModifySelection	1075
* 11.121.99	moveWordLeft	1076
* 11.121.100	moveWordLeftAndModifySelection	1076
* 11.121.101	moveWordRight	1076
* 11.121.102	moveWordRightAndModifySelection	1077
* 11.121.103	NSScrollView as NSScrollViewMBS	1078
* 11.121.104	pageDown	1078
* 11.121.105	pageSizeMultiplier as single	1078
* 11.121.106	pageUp	1078
* 11.121.107	paste	1078
* 11.121.108	pasteAsPlainText	1078
* 11.121.109	pasteAsRichText	1079
* 11.121.110	pasteFont	1079
* 11.121.111	performFindPanelAction	1079
* 11.121.112	PrintToPDFFile(PDFFile as folderitem, LeftMargin as Double = 50.0, TopMargin as Double = 50.0, RightMargin as Double = 50.0, BottomMargin as Double = 50.0) as boolean	1079
* 11.121.113	Reload	1080
* 11.121.114	reloadFromOrigin	1080
* 11.121.115	RenderDocumentToEPS as Memoryblock	1080
* 11.121.116	RenderDocumentToPDF as Memoryblock	1081
* 11.121.117	RenderWebsiteImage as NSImageMBS	1081
* 11.121.118	replaceSelectionWithMarkupString(html as string)	1082
* 11.121.119	replaceSelectionWithText(text as string)	1082
* 11.121.120	resetPageZoom	1082
* 11.121.121	scrollLineDown	1082
* 11.121.122	scrollLineUp	1083
* 11.121.123	scrollPageDown	1083
* 11.121.124	scrollPageUp	1083
* 11.121.125	SearchFor(text as string, Forward as boolean, CaseSensitive as boolean, Wrap as Boolean) as boolean	1083

* 11.121.126 selectAll	1083
* 11.121.127 selectLine	1084
* 11.121.128 selectParagraph	1084
* 11.121.129 selectSentence	1084
* 11.121.130 selectWord	1084
* 11.121.131 setMaintainsBackForwardList(value as boolean)	1084
* 11.121.132 setMediaVolume(value as single)	1084
* 11.121.133 setPageSizeMultiplier(value as single)	1085
* 11.121.134 showGuessPanel	1085
* 11.121.135 startSpeaking	1085
* 11.121.136 StopLoading	1085
* 11.121.137 stopSpeaking	1086
* 11.121.138 SupportsTextEncoding as boolean	1086
* 11.121.139 uppercaseWord	1086
* 11.121.140 userAgentForURL(url as string) as String	1086
* 11.121.141 zoomPageIn	1086
* 11.121.142 zoomPageOut	1087
* 11.121.144 ApplicationNameForUserAgent as String	1087
* 11.121.145 ContinuousSpellCheckingEnabled as boolean	1087
* 11.121.146 CustomTextEncodingName as String	1088
* 11.121.147 CustomUserAgent as String	1088
* 11.121.148 dashboardBehavior(behavior as Integer) as boolean	1088
* 11.121.149 DrawsBackground as Boolean	1089
* 11.121.150 Editable as boolean	1089
* 11.121.151 GroupName as string	1089
* 11.121.152 mediaStyle as String	1090
* 11.121.153 preferences as WebPreferencesMBS	1090
* 11.121.154 PreferencesIdentifier as string	1090
* 11.121.155 ScrollHeight as single	1090
* 11.121.156 ScrollLeft as single	1091
* 11.121.157 ScrollTop as single	1091
* 11.121.158 ScrollWidth as single	1091
* 11.121.159 ShouldUpdateWhileOffscreen as boolean	1091
* 11.121.160 smartInsertDeleteEnabled as boolean	1092
* 11.121.161 TextSizeMultiplier as single	1092
* 11.121.162 typingStyle as Variant	1092
– ?? Globals	??
* 11.99.1 InstallWebDownloadDelegate(extends w as WebViewMBS, theDelegate as WebDownloadDelegateMBS)	954
* 11.99.2 InstallWebFrameLoadDelegate(extends w as WebViewMBS, theDelegate as WebFrameLoadDelegateMBS)	954

- * 11.99.3 InstallWebPolicyDelegate(extends w as WebViewMBS, theDelegate as WebPolicyDelegateMBS) 954
- * 11.99.4 InstallWebResourceLoadDelegate(extends w as WebViewMBS, theDelegate as WebResourceLoadDelegateMBS) 954
- * 11.99.5 InstallWebUIDelegate(extends w as WebViewMBS, theDelegate as WebUIDelegateMBS) 955

- **5 Cocoa** 151
 - 16.1.1 class Window 1281
 - * 16.1.3 NSToolbarMBS as NSToolbarMBS 1281

Chapter 2

List of all classes

• Bevelbutton	587
• Checkbox	588
• ComboBox	189
• CustomNSScrollerMBS	190
• CustomNSSearchFieldMBS	205
• CustomNSTextFieldMBS	220
• CustomNSTextViewMBS	235
• CustomNSTokenFieldMBS	250
• CustomNSToolbarItemMBS	151
• CustomNSToolbarMBS	153
• CustomNSViewMBS	265
• CustomPDFViewMBS	1095
• DisclosureTriangle	281
• DOMAbstractViewMBS	731
• DOMAttrMBS	732
• DOMCDATASectionMBS	734
• DOMCharacterDataMBS	735
• DOMCommentMBS	737
• DOMCounterMBS	738

• DOMCSSCharsetRuleMBS	739
• DOMCSSFontFaceRuleMBS	740
• DOMCSSImportRuleMBS	741
• DOMCSSMediaRuleMBS	742
• DOMCSSPageRuleMBS	743
• DOMCSSPrimitiveValueMBS	744
• DOMCSSRuleListMBS	749
• DOMCSSRuleMBS	750
• DOMCSSStyleDeclarationMBS	752
• DOMCSSStyleRuleMBS	775
• DOMCSSStyleSheetMBS	776
• DOMCSSUnknownRuleMBS	777
• DOMCSSValueListMBS	778
• DOMCSSValueMBS	779
• DOMDocumentFragmentMBS	781
• DOMDocumentMBS	782
• DOMDocumentTypeMBS	786
• DOMElementMBS	788
• DOMEntityMBS	791
• DOMEntityReferenceMBS	792
• DOMHTMLAnchorElementMBS	793
• DOMHTMLAppletElementMBS	796
• DOMHTMLAreaElementMBS	799
• DOMHTMLBaseElementMBS	801
• DOMHTMLBaseFontElementMBS	802
• DOMHTMLBodyElementMBS	803
• DOMHTMLBRElementMBS	805
• DOMHTMLButtonElementMBS	806
• DOMHTMLCollectionMBS	808

	139
• DOMHTMLDirectoryElementMBS	809
• DOMHTMLDivElementMBS	810
• DOMHTMLDListElementMBS	811
• DOMHTMLDocumentMBS	812
• DOMHTMLElementMBS	816
• DOMHTMLEmbedElementMBS	819
• DOMHTMLFieldSetElementMBS	821
• DOMHTMLFontElementMBS	822
• DOMHTMLFormElementMBS	823
• DOMHTMLFrameElementMBS	826
• DOMHTMLFrameSetElementMBS	828
• DOMHTMLHeadElementMBS	829
• DOMHTMLHeadingElementMBS	830
• DOMHTMLHRElementMBS	831
• DOMHTMLHtmlElementMBS	833
• DOMHTMLIFrameElementMBS	834
• DOMHTMLImageElementMBS	837
• DOMHTMLInputElementMBS	840
• DOMHTMLIsIndexElementMBS	844
• DOMHTMLLabelElementMBS	845
• DOMHTMLLegendElementMBS	846
• DOMHTMLLIElementMBS	847
• DOMHTMLLinkElementMBS	848
• DOMHTMLMapElementMBS	850
• DOMHTMLMenuElementMBS	851
• DOMHTMLMetaElementMBS	852
• DOMHTMLModElementMBS	854
• DOMHTMLObjectElementMBS	855
• DOMHTMLOLListElementMBS	859

• DOMHTMLOptGroupElementMBS	860
• DOMHTMLOptionElementMBS	861
• DOMHTMLOptionsCollectionMBS	863
• DOMHTMLParagraphElementMBS	864
• DOMHTMLParamElementMBS	865
• DOMHTMLPreElementMBS	867
• DOMHTMLQuoteElementMBS	868
• DOMHTMLScriptElementMBS	869
• DOMHTMLSelectElementMBS	871
• DOMHTMLStyleElementMBS	874
• DOMHTMLTableCaptionElementMBS	875
• DOMHTMLTableCellElementMBS	876
• DOMHTMLTableColElementMBS	879
• DOMHTMLTableElementMBS	881
• DOMHTMLTableRowElementMBS	886
• DOMHTMLTableSectionElementMBS	888
• DOMHTMLTextAreaElementMBS	890
• DOMHTMLTitleElementMBS	893
• DOMHTMLULListElementMBS	894
• DOMImplementationMBS	895
• DOMMediaListMBS	896
• DOMNamedNodeMapMBS	898
• DOMNodeListMBS	900
• DOMNodeMBS	901
• DOMNotationMBS	907
• DOMObjectMBS	908
• DOMProcessingInstructionMBS	909
• DOMRangeMBS	910
• DOMRectMBS	915

	141
• DOMRGBColorMBS	916
• DOMStyleSheetListMBS	917
• DOMStyleSheetMBS	918
• DOMTextMBS	920
• DRBurnMBS	601
• DRBurnProgressPanelMBS	619
• DRBurnSetupPanelMBS	626
• DRCDTextBlockMBS	630
• DRDeviceMBS	631
• DREraseMBS	661
• DREraseProgressPanelMBS	664
• DREraseSetupPanelMBS	667
• DRFileMBS	668
• DRFolderMBS	676
• DRFSObjectMBS	679
• DRMSFMBS	693
• DRSetupPanelMBS	697
• DRTrackMBS	701
• Groupbox	282
• HTMLViewer	921
• ImageWell	283
• KeyValueCodingMBS	284
• Listbox	589
• NSBoxMBS	288
• NSButtonMBS	301
• NSClipViewMBS	315
• NSComboBoxMBS	322
• NSDatePickerMBS	332
• NSHTTPCookieMBS	567

• NSHTTPCookieStorageMBS	581
• NSImageViewMBS	339
• NSLevelIndicatorMBS	158
• NSOutlineViewItemMBS	374
• NSOutlineViewMBS	378
• NSPopUpButtonMBS	395
• NSProgressIndicatorMBS	405
• NSScrollerMBS	412
• NSScrollViewMBS	425
• NSSliderMBS	437
• NSStatusBarButtonMBS	1279
• NSStepperMBS	445
• NSTableColumnMBS	448
• NSTableDataSourceMBS	476
• NSTableHeaderCellMBS	478
• NSTableHeaderViewMBS	479
• NSTableRowViewMBS	482
• NSTableViewMBS	485
• NSTableViewRowActionMBS	531
• NSTokenFieldMBS	163
• NSToolbarItemGroupMBS	171
• NSToolbarItemMBS	172
• NSToolbarMBS	180
• PDFActionGoToMBS	1112
• PDFActionMBS	1113
• PDFActionNamedMBS	1115
• PDFActionRemoteGoToMBS	1119
• PDFActionResetFormMBS	1121
• PDFActionURLMBS	1123

	143
• PDFAnnotationButtonWidgetMBS	1124
• PDFAnnotationChoiceWidgetMBS	1129
• PDFAnnotationCircleMBS	1132
• PDFAnnotationFreeTextMBS	1134
• PDFAnnotationInkMBS	1137
• PDFAnnotationLineMBS	1139
• PDFAnnotationLinkMBS	1145
• PDFAnnotationMarkupMBS	1147
• PDFAnnotationMBS	1151
• PDFAnnotationPopupMBS	1158
• PDFAnnotationSquareMBS	1159
• PDFAnnotationStampMBS	1161
• PDFAnnotationTextMBS	1163
• PDFAnnotationTextWidgetMBS	1165
• PDFBorderMBS	1169
• PDFDestinationMBS	1174
• PDFDocumentDelegateMBS	1177
• PDFDocumentMBS	1179
• PDFOutlineMBS	1199
• PDFPageMBS	1203
• PDFSelectionMBS	1214
• PDFThumbnailViewMBS	1222
• PDFViewMBS	1230
• Popupmenu	1093
• ProgressBar	558
• ProgressWheel	559
• PushButton	560
• QCCompositionMBS	1249
• QCCompositionRepositoryMBS	1262

• QCViewMBS	1269
• QuartzFilterManagerMBS	591
• QuartzFilterMBS	595
• QuartzFilterViewMBS	599
• Radiobutton	590
• ScrollBar	561
• Separator	562
• Slider	563
• TextArea	564
• UpDownArrows	566
• WebArchiveMBS	955
• WebBackForwardListMBS	958
• WebDataSourceMBS	962
• WebDocumentRepresentationMBS	966
• WebDocumentViewMBS	968
• WebDownloadDelegateMBS	973
• WebFrameLoadDelegateMBS	981
• WebFrameMBS	987
• WebFrameViewMBS	992
• WebHistoryItemMBS	995
• WebHistoryMBS	998
• WebOpenPanelResultListenerMBS	1002
• WebPolicyDecisionListenerMBS	1004
• WebPolicyDelegateMBS	1006
• WebPreferencesMBS	1010
• WebPrintMBS	1023
• WebResourceLoadDelegateMBS	1029
• WebResourceMBS	1033
• WebScriptCallbackMBS	1036

	145
• WebScriptObjectMBS	1038
• WebUIDelegateMBS	1042
• WebViewMBS	1053
• Window	1281

Chapter 3

List of all controls

• NSButtonControlMBS	297
• NSDatePickerControlMBS	329
• NSOutlineControlMBS	346
• NSPopUpButtonControlMBS	392
• NSTableControlMBS	453
• NSTokenFieldControlMBS	534
• NSViewControlMBS	542
• PDFThumbnailViewControlMBS	1219
• PDFViewControlMBS	1226
• QCViewControlMBS	1266

Chapter 4

List of all global methods

- 11.99.1 InstallWebDownloadDelegate(extends w as WebViewMBS, theDelegate as WebDownloadDelegateMBS) 954
- 11.99.2 InstallWebFrameLoadDelegate(extends w as WebViewMBS, theDelegate as WebFrameLoadDelegateMBS) 954
- 11.99.3 InstallWebPolicyDelegate(extends w as WebViewMBS, theDelegate as WebPolicyDelegateMBS) 954
- 11.99.4 InstallWebResourceLoadDelegate(extends w as WebViewMBS, theDelegate as WebResourceLoadDelegateMBS) 954
- 11.99.5 InstallWebUIDelegate(extends w as WebViewMBS, theDelegate as WebUIDelegateMBS) 955

Chapter 5

Cocoa

5.1 class CustomNSToolbarItemMBS

5.1.1 class CustomNSToolbarItemMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a custom toolbar item.

Notes:

Use this class if you need to fill events.
Subclass of the NSToolbarItemMBS class.

5.1.2 Methods

5.1.3 Constructor(itemIdentifier as string)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

Notes:

itemIdentifier: The identifier for the receiver. itemIdentifier is never seen by users and should not be localized.

The identifier is used by the toolbar and its delegate to identify the kind of the toolbar item.

5.1.4 Destructor

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

5.1.5 Events

5.1.6 Action

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The action event called when user clicks toolbar item.

5.1.7 allowsDuplicatesInToolbar as boolean

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the receiver can be represented in the toolbar at more than one position.

Notes:

You use this event to override the default behavior in a subclass.

By default, if an item with the same identifier is already in the toolbar, dragging it in again will effectively move it to the new position.

If you leave this event empty (no code), you get the default behavior.

5.1.8 validate as boolean

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Validates a toolbar item.

Notes:

If this event is implemented and returns false, NSToolbar will disable theItem; returning true causes theItem to be enabled.

NSToolbar only calls this method for image items.
validateis called very frequently, so it must be efficient.

If you don't have code in this event, the plugin will simply return enabled value.
This methods may not be called if you set Autovalidates to true.

5.2 class CustomNSToolbarMBS

5.2.1 class CustomNSToolbarMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The toolbar class for the case you need to use the events.

Notes: Subclass of the NSToolbarMBS class.

5.2.2 Methods

5.2.3 Constructor(Identifier as string)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard toolbar item identifiers.

5.2.4 Destructor

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

5.2.5 Events

5.2.6 allowsSizeMode(mode as Integer, SuperAllows as boolean) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to allow the given size mode.

Example:

```
Function allowsSizeMode(mode as Integer, SuperAllows as boolean) As boolean
```

```
# if DebugBuild then
```

```
System.DebugLog CurrentMethodName+" "+str(SuperAllows)
```

```
# endif
```

```
if mode = NSToolbarMBS.NSToolbarSizeModeSmall then
```

```
Return false
```

```
else
```

```
Return SuperAllows
```

```
end if
```

```
End Function
```

Notes:

If you have nothing in the event, the default behavior is to allow all. You can return false for a mode to disable it. e.g. `NSToolbarSizeModeSmall` `SuperAllows` parameter tells you if mode is enabled by default.

5.2.7 `itemForItemIdentifier(identifier as string, willBeInsertedIntoToolbar as boolean)` as `NSToolbarItemMBS`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to request a new toolbar item; returns a toolbar item of the identified kind for the specified toolbar.

Notes:

`itemIdentifier`: The identifier for the requested item.

`willBeInsertedIntoToolbar`: True if the item will be immediately inserted into the toolbar. If flag is false the toolbar item is being requested for display in the toolbar customization sheet and should always be enabled or provide some other canonical representation. If you ignore this parameter the same toolbar item will be used in the toolbar and in the customization sheet.

Return Value

The toolbar item for the specified toolbar and identifier. Return nil to indicate that the identified kind of toolbar item is not supported. When an item is requested again, you may return the same `NSToolbarItem` object returned earlier or a different instance.

Implement this method to create new toolbar item instances. This method is called lazily on behalf of a toolbar instance, which must be the sole owner of the toolbar item. A toolbar may ask again for a kind of toolbar item already supplied to it, in which case this method may return the same toolbar item it returned before or a different one. If your delegate services multiple toolbars, each attached to a different window, it is best to return a different item for each toolbaran `NSToolbarItem` object can only be in one toolbar at a time.

If the item is a custom view item, the `NSView` object must be fully formed when the item is returned. Do not assume that the returned item is going to be added as an active item in the toolbar, as it could be that it will be used only in the customization palette. (The customization palette makes a copy of the returned item.)

This event must be implemented if the associated toolbar is created programmatically.

5.2.8 `toolbarAllowedItemIdentifiers` as `string()`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to discover the allowed item identifiers for a toolbar.

Notes:

An array of toolbar item identifiers for toolbar, specifying the contents and the order of the items in the configuration palette.

Every allowed item must be explicitly listed, even the standard ones. The identifiers returned should include all of those returned by `toolbarDefaultItemIdentifiers`:

This event must be implemented if the associated toolbar is created programmatically.

5.2.9 `toolbarDefaultItemIdentifiers` as `string()`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to discover the default item identifiers for a toolbar.

Notes:

Return an array of toolbar item identifiers for toolbar, specifying the contents and the order of the items in the default toolbar configuration.

During initialization of toolbar, this method is called only if a toolbar configuration for the identifier of toolbar is not found in the user preferences. This method is called during initialization of the toolbar customization palette.

This event must be implemented if the associated toolbar is created programmatically.

5.2.10 `toolbarDidRemoveItem(item as NSToolbarItemMBS, notification as NSNotificationMBS)`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent just after an item has been removed from a toolbar.

Notes: This method allows you to remove information related to the item that may have been cached.

5.2.11 `toolbarItemAction(item as NSToolbarItemMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The action event called when user clicks toolbar item.

Notes: Only for instances of `CustomNSToolbarItemMBS`, the plugin can forward the `allowsDuplicatesInToolbar` event to the `CustomNSToolbarMBS`, so you can handle it in a central place for all toolbar items.

5.2.12 `toolbarItemAllowsDuplicatesInToolbar(item as NSToolbarItemMBS) as boolean`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the receiver can be represented in the toolbar at more than one position.

Notes:

You use this event to override the default behavior in a subclass.

By default, if an item with the same identifier is already in the toolbar, dragging it in again will effectively move it to the new position.

If you leave this event empty (no code), you get the default behavior.

Only for instances of `CustomNSToolbarItemMBS`, the plugin can forward the `allowsDuplicatesInToolbar` event to the `CustomNSToolbarMBS`, so you can handle it in a central place for all toolbar items.

5.2.13 `toolbarItemValidate(item as NSToolbarItemMBS) as boolean`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Validates a toolbar item.

Notes:

If this event is implemented and returns false, `NSToolbar` will disable theItem; returning true causes theItem to be enabled.

`NSToolbar` only calls this method for image items.
validateis called very frequently, so it must be efficient.

If you don't have code in this event, the plugin will simply return enabled value.
This methods may not be called if you set `Autovalidates` to true.

Only for instances of `CustomNSToolbarItemMBS`, the plugin can forward the `allowsDuplicatesInToolbar` event to the `CustomNSToolbarMBS`, so you can handle it in a central place for all toolbar items.

5.2.14 `toolbarSelectableItemIdentifiers as string()`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to discover the selectable item identifiers for a toolbar.

Notes:

Return an array of item identifiers that should indicate selection in the specified toolbar.

Toolbars that need to indicate item selection should return an array containing the identifiers of the selectable toolbar items.

If implemented, toolbar will display the currently selected item with a visual highlight. Clicking on an item whose identifier is selectable will automatically update the toolbar's selected item identifier, when possible. Clicking an item whose identifier is not selectable will not update the toolbar's selected item identifier.

5.2.15 toolbarWillAddItem(item as NSToolbarItemMBS, notification as NSNotificationMBS)

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent just before a new item is added to a toolbar.

Notes: If you need to cache a reference to a toolbar item or need to set up some initial state before a toolbar item is added, this is where to do it.

5.3 class NSLevelIndicatorMBS

5.3.1 class NSLevelIndicatorMBS

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** NSLevelIndicatorMBS is a subclass of NSControlMBS that displays a value on a linear scale.

Notes:

Level indicators provide a visual representation of a level or amount of something, using discrete values. While similar to NSSlider, it provides a more customized visual feedback to the user. Level indicators do not have a "knob" indicating the current setting or allowing the user to adjust settings. The supported indicator styles include:

- A capacity style level indicator. The continuous mode for this style is often used to indicate conditions such as how much data is on hard disk. The discrete mode is similar to audio level indicators in audio playback applications. You can specify both a warning value and a critical value that provides additional visual feedback to the user.
- A ranking style level indicator. This is similar to the star ranking displays provided in iTunes and iPhoto. You can also specify your own ranking image.
- A relevancy style level indicator. This style is used to display the relevancy of a search result, for example in Mail.

NSLevelIndicator uses an NSLevelIndicatorCell to implement much of the control's functionality. NSLevelIndicator provides cover methods for most of NSLevelIndicatorCell's methods, which invoke the corresponding cell method.

Subclass of the NSControlMBS class.

5.3.2 Methods

5.3.3 Constructor

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new level indicator with size 100/100 and position 0/0

Example:

```
dim t as new NSLevelIndicatorMBS
```

Notes: On success the handle property is not zero.

See also:

- 5.3.4 Constructor(Handle as Integer) 159
- 5.3.5 Constructor(left as Double, top as Double, width as Double, height as Double) 159

5.3.4 Constructor(Handle as Integer)

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSLevelIndicator handle.

Example:

```
dim t as new NSLevelIndicatorMBS(0, 0, 100, 100)
dim v as new NSLevelIndicatorMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSLevelIndicator and the plugin retains this handle.

See also:

- 5.3.3 Constructor 158
- 5.3.5 Constructor(left as Double, top as Double, width as Double, height as Double) 159

5.3.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new level indicator with the given size and position.

Example:

```
dim x as new NSLevelIndicatorMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.

See also:

- 5.3.3 Constructor 158
- 5.3.4 Constructor(Handle as Integer) 159

5.3.6 rectOfTickMarkAtIndex(index as Integer) as NSRectMBS

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the bounding rectangle of the tick mark identified by index (the minimum-value tick mark is at index 0).

Notes: If no tick mark is associated with index, the method raises a NSExceptionMBS.

5.3.7 tickMarkValueAtIndex(index as Integer) as Double

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's value represented by the tick mark at index (the minimum-value tick mark has an index of 0).

5.3.8 Properties

5.3.9 criticalValue as Double

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The critical value.
Notes: (Read and Write computed property)

5.3.10 levelIndicatorStyle as Integer

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Set style of the indicator.
Notes: (Read and Write computed property)

5.3.11 maxValue as Double

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum value the level indicator can represent.
Notes: (Read and Write computed property)

5.3.12 minValue as Double

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The minimum value.
Notes: (Read and Write computed property)

5.3.13 numberOfMajorTickMarks as Integer

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of major tick marks displayed.
Notes:

The count must be less than or equal to the number of tick marks returned by numberOfTickMarks. For example, if the number of tick marks is 11 and you specify 3 major tick marks, the resulting level indicator

will display 3 major tickmarks alternating with 8 minor tick marks.
(Read and Write computed property)

5.3.14 numberOfTickMarks as Integer

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of tick marks displayed by the receiver (which include those assigned to the minimum and maximum values) to count.

Notes:

By default, this value is 0, and no tick marks appear. The number of tick marks assigned to a slider, along with the slider's minimum and maximum values, determines the values associated with the tick marks.
(Read and Write computed property)

5.3.15 tickMarkPosition as Integer

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Where tick marks appear relative to the indicator.

Notes:

This method has no effect if no tick marks have been assigned (that is, numberOfTickMarks returns 0).
(Read and Write computed property)

5.3.16 warningValue as Double

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The warning value.
Notes: (Read and Write computed property)

5.3.17 Constants

5.3.18 NSContinuousCapacityLevelIndicatorStyle = 1

Plugin Version: 12.2. **Function:** One of the style constants.

Notes: A style that is often used to indicate conditions such as how much data is on a hard disk.

5.3.19 NSDiscreteCapacityLevelIndicatorStyle = 2

Plugin Version: 12.2. **Function:** One of the style constants.

Notes: A style similar to audio level indicators in iTunes.

5.3.20 NSRatingLevelIndicatorStyle = 3

Plugin Version: 12.2. **Function:** One of the style constants.

Notes: A style similar to the star ranking displays provided in iTunes and iPhoto.

5.3.21 NSRelevancyLevelIndicatorStyle = 0

Plugin Version: 12.2. **Function:** One of the style constants.

Notes: A style similar to the rank column displayed when searching in Mail.app.

5.3.22 NSTickMarkAbove = 1

Plugin Version: 12.2. **Function:** One of the tick mark constants.

Notes: Tick marks above (for horizontal sliders).

5.3.23 NSTickMarkBelow = 0

Plugin Version: 12.2. **Function:** One of the tick mark constants.

Notes: Tick marks below (for horizontal sliders); the default for horizontal sliders.

5.3.24 NSTickMarkLeft = 0

Plugin Version: 12.2. **Function:** One of the tick mark constants.

Notes: Tick marks to the left (for vertical sliders); the default. for vertical sliders

5.3.25 NSTickMarkRight = 1

Plugin Version: 12.2. **Function:** One of the tick mark constants.

Notes: Tick marks to the right (for vertical sliders).

5.4 class NSTokenFieldMBS

5.4.1 class NSTokenFieldMBS

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** NSTokenField is a subclass of NSTextField that provides tokenized editing similar to the address field in the Mail application.

Notes:

NSTokenField uses an NSTokenFieldCell to implement much of the control's functionality. NSTokenField provides cover methods for most methods of NSTokenFieldCell, which invoke the corresponding cell method.

In MBS Plugin the objects must be strings or numbers. With plugin version 12.5, you can also use normal Real Studio objects.

In OS X v10.4, NSTokenField trims whitespace around tokens but it does not trim whitespace in OS X versions 10.5.0 and 10.5.1. In OS X v10.5.2, you get whitespace-trimming behavior by either linking against the v10.4 binary or linking against the v10.5 binary and not implementing the `representedObjectForEditingString` event. If you do not want the whitespace-trimming behavior, link against the v10.5 binary and implement this method, returning the editing string if you have no represented object.

Please note: Due to the way the plugin is implemented the `Action`, `textShouldEndEditing` and `textShouldBeginEditing` events do nothing, so please use `tokenFieldAction`, `tokenFieldTextShouldEndEditing` and `tokenFieldTextShouldBeginEditing`.

Subclass of the NSTextFieldMBS class.

5.4.2 Methods

5.4.3 Constructor

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new control with size 100/100 and position 0/0

Example:

```
dim t as new NSTokenFieldMBS
```

Notes: On success the `handle` property is not zero.

See also:

- 5.4.4 Constructor(Handle as Integer) 164
- 5.4.5 Constructor(left as Double, top as Double, width as Double, height as Double) 164

5.4.4 Constructor(Handle as Integer)

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSControl handle.

Example:

```
dim t as new NSTextFieldMBS(0, 0, 100, 100)
dim v as new NSTextFieldMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSControl and the plugin retains this handle.

See also:

- 5.4.3 Constructor 163
- 5.4.5 Constructor(left as Double, top as Double, width as Double, height as Double) 164

5.4.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new control with the given size and position.

Example:

```
dim x as new NSTextFieldMBS(0, 0, 100, 20)
```

Notes: On success the handle property is not zero.

See also:

- 5.4.3 Constructor 163
- 5.4.4 Constructor(Handle as Integer) 164

5.4.6 defaultCompletionDelay as Double

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the default completion delay.

Notes: The default completion delay is 0.

5.4.7 defaultTokenizingCharacterSet as NSCharacterSetMBS

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the default tokenizing character set.

Notes: The default tokenizing character set is ”,”.

5.4.8 objects as Variant()

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Queries list of represented objects.

5.4.9 setObject(objects()) as Variant()

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets current objects.

5.4.10 Properties

5.4.11 completionDelay as Double

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The completion delay.

Notes: (Read and Write computed property)

5.4.12 tokenizingCharacterSet as NSCharacterSetMBS

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The tokenizing character set.

Notes: (Read and Write computed property)

5.4.13 tokenStyle as Integer

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The token style.

Notes: (Read and Write computed property)

5.4.14 Events

5.4.15 completionsForSubstring(substring as string, tokenIndex as Integer, byref selectedIndex as Integer) as Variant()

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to provide an array of appropriate completions for the contents of the receiver.

Notes:

substring: The partial string that is to be completed.

tokenIndex: The index of the token being edited.

selectedIndex: Optionally, you can return by-reference an index into the returned array that specifies which of the completions should be initially selected. If none are to be selected, return by reference -1.

Returns an array of strings that are possible completions.

If the delegate does not implement this method, no completions are provided.

5.4.16 displayStringForRepresentedObject(representedObject as Variant) as string

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to provide a string to be displayed as a proxy for the given represented object.

Notes:

representedObject: A represented object of the token field.

Returns the string to be used as a proxy for representedObject. If you return nil or do not implement this method, then representedObject is displayed as the string.

5.4.17 editingStringForRepresentedObject(representedObject as Variant) as string

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to provide a string to be edited as a proxy for a represented object.

Notes:

representedObject: A represented object of the token field.

Returns a string that's an editable proxy of the represented object, or nil if the token should not be editable.

5.4.18 hasMenuForRepresentedObject(representedObject as Variant) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to specify whether the given represented object provides a menu.

Notes:

representedObject: A represented object of the token field.

Returns true if the represented object has a menu, false otherwise.
By default tokens in a token field have no menus.

5.4.19 menuForRepresentedObject(representedObject as Variant) as NSMenuMBS

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to provide a menu for the specified represented object.

Notes:

representedObject: A represented object of the token field.

Returns the menu associated with the represented object.
By default tokens in a token field do not return menus.

5.4.20 readFromPasteboard(pboard as NSPasteboardMBS) as Variant()

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to return an array of objects representing the data read from the specified pasteboard.

Notes:

pboard: The pasteboard from which to read the represented objects.

Returns an array of represented objects created from the pasteboard data.

5.4.21 representedObjectForEditingString(editingString as string) as Variant

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to provide a represented object for the given editing string.

Notes:

editingString: The edited string representation of a represented object.

Returns a represented object that is displayed rather than the editing string.

Note: In OS X v10.4, NSTextField trims whitespace around tokens but it does not trim whitespace in OS X versions 10.5.0 and 10.5.1. In OS X v10.5.2, you get whitespace-trimming behavior by either linking against the v10.4 binary or linking against the v10.5 binary and not implementing the this method. If you do not want the whitespace-trimming behavior, link against the v10.5 binary and implement this method, returning the editing string if you have no represented object.

5.4.22 `shouldAddObjects(tokens() as Variant, index as Integer) as Variant()`

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows to validate the tokens to be added to the receiver at a particular location.

Notes:

tokens: An array of tokens to be inserted in the receiver at index.

index: The index of the receiver in which the array of tokens to be validated (tokens) will be inserted.

Returns an array of validated tokens.

The event can return the array unchanged or return a modified array of tokens. To reject the add completely, return an empty array. Returning nil causes an error.

5.4.23 `styleForRepresentedObject(representedObject as Variant) as Integer`

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to return the token style for editing the specified represented object.

Notes:

representedObject: A represented object of the token field.

Returns the style that should be used to display the representedObject. Possible values are shown in NSTokenStyle Values.

If the event implements this method and returns an NSTokenStyle that differs from the style set by setTokenStyle:, the value the event returns is preferred.

If you don't implement this method, the token field's tokenStyle is used.

5.4.24 tokenFieldAction

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control's action was triggered.

Notes: For a button if it was pressed.

5.4.25 tokenFieldTextShouldBeginEditing(fieldEditor as NSTextMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether text editing should be allowed.

Notes: Return true to allow text editing.

5.4.26 tokenFieldTextShouldEndEditing(fieldEditor as NSTextMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether ending text editing should be allowed.

Notes: Return true to allow text editing.

5.4.27 writeRepresentedObjects(objects() as Variant, pboard as NSPasteboardMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent so the delegate can write represented objects to the pasteboard corresponding to a given array of display strings.

Notes:

objects: An array of represented objects associated with the token field.

pboard: The pasteboard to which to write the represented objects.

Return true if you writes the represented objects to the pasteboard, false otherwise. If false, the token field writes the display strings to the NSStringPboardType pasteboard.

5.4.28 Constants

5.4.29 NSDefaultTokenStyle = 0

Plugin Version: 12.5. **Function:** One of the token styles.

Notes:

Style best used for keyword type tokens.

Available in OS X v10.4 and later.

5.4.30 `NSPlainTextTokenStyle = 1`

Plugin Version: 12.5. **Function:** One of the token styles.

Notes:

Style to use for data you want represented as plain-text and without any token background.
Available in OS X v10.4 and later.

5.4.31 `NSRoundedTokenStyle = 2`

Plugin Version: 12.5. **Function:** One of the token styles.

Notes:

Style best used for address type tokens.
Available in OS X v10.4 and later.

5.5 class NSToolbarItemGroupMBS

5.5.1 class NSToolbarItemGroupMBS

Plugin Version: 15.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** NSToolbarItemGroup is a subclass of NSToolbarItem which contains subitems.

Notes:

The views and labels of the subitems are used, but the parent's attributes take precedence. Subclass of the NSToolbarItemMBS class.

5.5.2 Methods

5.5.3 Constructor(itemIdentifier as string)

Plugin Version: 15.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

Notes:

itemIdentifier: The identifier for the receiver. itemIdentifier is never seen by users and should not be localized.

The identifier is used by the toolbar and its delegate to identify the kind of the toolbar item.

5.5.4 SetSubItems(items() as NSToolbarItemMBS)

Plugin Version: 15.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the subitems for the receiver.

Notes:

subitems: An array of instances of NSToolbarItem objects that form the subitems for the receiver.

You should call this method to set the subitems before returning the item to the toolbar. NSToolbarItemGroup objects cannot contain other NSToolbarItemGroup objects as subitems.

5.5.5 subitems as NSToolbarItemMBS()

Plugin Version: 15.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the subitems for the receiver.

Notes: By default, an NSToolbarItemGroup instance has an empty array of subitems.

5.6 class NSToolbarItemMBS

5.6.1 class NSToolbarItemMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for Cocoa toolbar items.

Notes: Each item in an NSToolbar is an instance of NSToolbarItem.

5.6.2 Methods

5.6.3 Constructor(itemIdentifier as string)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

Notes:

itemIdentifier: The identifier for the receiver. itemIdentifier is never seen by users and should not be localized.

The identifier is used by the toolbar and its delegate to identify the kind of the toolbar item.

5.6.4 NSToolbarCustomizeToolbarItemIdentifier as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard toolbar item identifiers.

Notes:

The Customize item. Shows the customization palette.

Deprecated. In OS X v10.7 and later the customization icon has been removed from the toolbar and customization palettes. This constant is ignored.

5.6.5 NSToolbarFlexibleSpaceItemIdentifier as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard toolbar item identifiers.

Notes: The Flexible Space item.

5.6.6 NSToolbarPrintItemIdentifier as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard toolbar item identifiers.

Notes: The Print item. Sends printDocument to firstResponder, but you can change this in toolbarWillAddItem if you need to do so.

5.6.7 NSToolbarSeparatorItemIdentifier as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard toolbar item identifiers.

Notes: The Separator item.

5.6.8 NSToolbarShowColorsItemIdentifier as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard toolbar item identifiers.

Notes: The Colors item. Shows the color panel.

5.6.9 NSToolbarShowFontsItemIdentifier as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard toolbar item identifiers.

Notes: The Fonts item. Shows the font panel.

5.6.10 NSToolbarSpaceItemIdentifier as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard toolbar item identifiers.

Notes: The Space item.

5.6.11 validate

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** This method is called by the receiver's toolbar during validation.

Notes: You may invoke this method directly if you have disabled automatic validation for an item typically you do this for performance reasons if your validation code is slow.

5.6.12 Properties

5.6.13 `allowsDuplicatesInToolbar` as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the receiver can be represented in the toolbar at more than one position.

Notes:

Returns true to allow dragging the receiver into the toolbar at more than one position, otherwise false.

You use this method by overriding it in a subclass to always return true; typically, you wouldn't call it. By default, if an item with the same identifier is already in the toolbar, dragging it in again will effectively move it to the new position.

(Read only property)

5.6.14 `autovalidates` as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether this item auto validates.

Notes:

By default NSToolbar automatically invokes the receiver's validate method on a regular basis. If your validate method is time consuming, you can disable auto validation on a per toolbar item basis.

(Read and Write property)

5.6.15 `ClassName` as String

Plugin Version: 15.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name of this NSWindow class.

Notes: (Read only property)

5.6.16 `ClassPath` as String

Plugin Version: 15.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The path of this NSView class.

Notes:

Useful for debugging to know what super classes the window has.

(Read only property)

5.6.17 Enabled as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value that indicates whether the receiver is enabled.

Notes:

For a view item, this method calls isEnabled/setEnabled on the view if it responds and returns the result. (Read and Write property)

5.6.18 Handle as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal reference to the NSToolBarItem object.

Notes: (Read and Write property)

5.6.19 image as NSImageMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The image for this toolbar item.

Notes:

For a custom view item (one whose view has already been set), this method calls setImage on the view if it responds. If image contains multiple representations, NSToolBarItem chooses the most appropriately sized representation when displaying.

(Read and Write property)

5.6.20 itemIdentifier as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's identifier.

Notes:

Returns the receiver's identifier, which was provided in the initializer.

(Read only property)

5.6.21 label as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The label, which normally appears in the toolbar and in the overflow menu.

Notes:

The length of the label should be appropriate and not too long. The label may be empty.
(Read and Write property)

5.6.22 `MaxSize` as `NSSizeMBS`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum size.
Notes: (Read and Write property)

5.6.23 `menuFormRepresentation` as `NSMenuItemMBS`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The menu form representation.

Notes:

By default, this method returns nil, even though there is a default menu form representation.
(Read and Write property)

5.6.24 `MinSize` as `NSSizeMBS`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The minimum size.
Notes: (Read and Write property)

5.6.25 `paletteLabel` as `string`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The label that appears when the receiver is in the customization palette.

Notes:

An item must have a palette label if the customization palette is to be used, and for most items it is reasonable to set `paletteLabel` to be the same value as `label`. One reason for `paletteLabel` to be different from `label` would be if it's more descriptive; another might be if there is no `label`.

(Read and Write property)

5.6.26 `tag` as `Integer`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The tag value.
Notes:

You can use the tag for your own custom purpose.
(Read and Write property)

5.6.27 toolbar as NSToolbarMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the toolbar that is using the receiver.

Notes: (Read only property)

5.6.28 toolTip as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The tooltip to be used when the receiver is displayed in the toolbar.

Notes: (Read and Write property)

5.6.29 view as NSViewMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The custom view for this item.

Notes:

view: The view for the receiver. The view and all of its contents must conform to the NSCodering protocol if the toolbar supports customization.

Note that many of the set/get methods are implemented by calls forwarded to view, if it responds to it.
(Read and Write property)

5.6.30 visibilityPriority as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The visibility priority.

Notes: (Read and Write property)

5.6.31 Constants

5.6.32 NSToolbarItemVisibilityPriorityHigh = 1000

Plugin Version: 11.3. **Function:** One of the visibility priority constants.

Notes:

When a toolbar does not have enough space to fit all its items, it must push some items into the overflow menu. These values allow you to suggest a priority for a toolbar item.

Items with this priority are less inclined to be pushed to the overflow menu.

5.6.33 NSToolbarItemVisibilityPriorityLow = -1000

Plugin Version: 11.3. **Function:** One of the visibility priority constants.

Notes:

When a toolbar does not have enough space to fit all its items, it must push some items into the overflow menu. These values allow you to suggest a priority for a toolbar item.

Items with this priority will be the first items to be pushed to the overflow menu.

5.6.34 NSToolbarItemVisibilityPriorityStandard = 0

Plugin Version: 11.3. **Function:** One of the visibility priority constants.

Notes:

When a toolbar does not have enough space to fit all its items, it must push some items into the overflow menu. These values allow you to suggest a priority for a toolbar item.

The default visibility priority.

5.6.35 NSToolbarItemVisibilityPriorityUser = 2000

Plugin Version: 11.3. **Function:** One of the visibility priority constants.

Notes:

When a toolbar does not have enough space to fit all its items, it must push some items into the overflow menu. These values allow you to suggest a priority for a toolbar item.

Items with this priority are the last to be pushed to the overflow menu. Only the user should set items to this priority.

5.7 class NSToolbarMBS

5.7.1 class NSToolbarMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** NSToolbar and NSToolbarItem provide the mechanism for a titled window to display a toolbar just below its title bar.

5.7.2 Methods

5.7.3 Constructor(Identifier as string)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.
Notes:

Initializes a newly allocated toolbar with the specified identifier.
identifier is never seen by users and should not be localized.

5.7.4 insertItemWithItemIdentifier(identifier as string, atIndex as Integer)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Inserts the specified item at the specified index.

Notes:

Identifier: The identifier of the item to insert.
index: The index at which to insert the item.

If the toolbar needs a new instance, it will get it from itemForItemIdentifier. Typically, you should not call this method; you should let the user reconfigure the toolbar.

5.7.5 items as NSToolbarItemMBS()

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's current items, in order.

5.7.6 NSToolbarDidRemoveItemNotification as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification identifiers.

Notes: Posted after an item is removed from a toolbar. The notification item is the NSToolbar object

that had an item removed from it. The userInfo dictionary contains the following information: item: The NSToolBarItem object that was removed.

5.7.7 NSToolbarWillAddItemNotification as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification identifiers.

Notes: Posted before a new item is added to the toolbar. The notification item is the NSToolbar object having an item added to it. The userInfo dictionary contains the following information: item: The NSToolBarItem object being added.

5.7.8 removeItemAtIndex(index as Integer)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes the specified item.

Notes:

Typically, you should not call this method; you should let the user reconfigure the toolbar.

Index is zero based.

5.7.9 runCustomizationPalette

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Runs the receiver's customization palette.

5.7.10 validateVisibleItems

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Called on window updates to validate the visible items.

Notes:

You typically use this method by overriding it in a subclass. The default implementation of this method iterates through the list of visible items, sending each a validate message. Override it and call super if you want to know when this method is called.

In Mac OS X v 10.6 and later toolbars no longer automatically validate for some events, including: NSLeft-MouseDragged, NSRightMouseDragged, NSOtherMouseDragged, NSMouseEntered, NSMouseExited, NSScrollWheel, NSCursorUpdate, NSKeyDown. In addition, validation for NSKeyUp and NSFlagsChanged

events is deferred with the timer restarting for every new deferrable event. So a sequence of key events will not trigger any validation at all, until either a pause of .85 seconds, or an event other than `NSKeyUp` or `NSFlagsChanged` is processed. This change was made as an optimization.

To trigger validation for a single toolbar manually, send the toolbar a `validateVisibleItems` message. To trigger validation for all toolbars, invoke `NSApplication`'s `setWindowsNeedUpdate` passing `true`.

5.7.11 `visibleItems` as `NSToolBarItemMBS()`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's currently visible items.

Notes: Items in the overflow menu are not considered visible.

5.7.12 Properties

5.7.13 `allowsUserCustomization` as `boolean`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value that indicates whether users are allowed to modify the toolbar.

Notes:

True if users are allowed to modify the toolbar, false otherwise. The default is false.

If the value is false, then the Customize Toolbar menu item is disabled and other modification is disabled. This attribute does not affect the user's ability to show or hide the toolbar.

(Read and Write property)

5.7.14 `autosavesConfiguration` as `boolean`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value that indicates whether the receiver autosaves its configuration.

Notes:

True if the receiver autosaves its configuration, otherwise false. The default is false.

When autosaving is enabled, the receiver will automatically write the toolbar settings to user defaults if the toolbar configuration changes. The toolbar's configuration is identified in user defaults by the toolbar identifier. If there are multiple toolbars active with the same identifier, they all share the same configuration. (Read and Write property)

5.7.15 configurationDictionary as dictionary

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's configuration as a dictionary.

Notes:

Set/get a dictionary containing configuration information for the toolbar.

Contains displayMode, isVisible, and a list of the item identifiers currently in the toolbar. Do not depend on any details of the normal contents of a configuration dictionary. (Read and Write property)

5.7.16 configurationDictionaryData as Memoryblock

Plugin Version: 14.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's configuration as a memoryblock.

Notes:

Set/get a memoryblock containing configuration information for the toolbar.

Contains displayMode, isVisible, and a list of the item identifiers currently in the toolbar. Do not depend on any details of the normal contents of a configuration dictionary.

you can read/write the data to preferences. (Read and Write property)

5.7.17 customizationPaletteIsRunning as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the receiver's customization palette is running (in use).

Notes:

True if the receiver's customization palette is running, otherwise false. (Read only property)

5.7.18 displayMode as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's display mode.

Notes: (Read and Write property)

5.7.19 `fullScreenAccessoryView` as `NSViewMBS`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The fullscreen mode accessory view.

Notes:

Requires Mac OS X 10.7.
(Read and Write property)

5.7.20 `fullScreenAccessoryViewMaxHeight` as `Double`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The fullscreen mode accessory view's maximum height.

Notes:

Requires Mac OS X 10.7.
(Read and Write property)

5.7.21 `fullScreenAccessoryViewMinHeight` as `Double`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The fullscreen mode accessory view's minimum height.

Notes:

Requires Mac OS X 10.7.
(Read and Write property)

5.7.22 `Handle` as `Integer`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal reference for this object.

Notes: (Read and Write property)

5.7.23 `identifier` as `string`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's identifier.

Notes:

Returns the receiver's identifier, a string used by the class to identify the kind of toolbar.

Within the application all toolbars with the same identifier are synchronized to maintain the same state, including for example, the display mode and item order. The identifier is used as the autosave name for toolbars that save their configuration.

(Read only property)

5.7.24 selectedItemIdentifier as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The selected item to the specified toolbar item.

Notes:

Typically, a toolbar will manage the selection of items automatically. This method can be used to select identifiers of custom view items, or to force a selection change. See `toolbarSelectableItemIdentifiers` for more details. If `itemIdentifier` is not recognized by the receiver, the current selected item identifier does not change.

(Read and Write property)

5.7.25 showsBaselineSeparator as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value that indicates whether the toolbar shows the separator between the toolbar and the main window contents.

Notes:

True if the toolbar shows the separator between the toolbar and the main window contents, otherwise false. The default is true.

(Read and Write property)

5.7.26 sizeMode as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The size mode.

Notes:

If there is no icon of the given size for a toolbar item, the toolbar item creates one by scaling an icon of another size.

(Read and Write property)

5.7.27 toolbarView as NSViewMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal `NSView` used for displaying the toolbar.

Notes:

Useful to query values like the bounds of the toolbar.
Returns nil on 64 bit targets.
(Read only property)

5.7.28 visible as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver is visible or hidden.

Notes:

True to indicate the receiver should be made visible, false to indicate it should be hidden.
(Read and Write property)

5.7.29 Constants

5.7.30 NSToolbarDisplayModeDefault = 0

Plugin Version: 11.3. **Function:** One of the constants for displayMode property.
Notes: The default display mode.

5.7.31 NSToolbarDisplayModeIconAndLabel = 1

Plugin Version: 11.3. **Function:** One of the constants for displayMode property.
Notes: The toolbar will display icons and labels.

5.7.32 NSToolbarDisplayModeIconOnly = 2

Plugin Version: 11.3. **Function:** One of the constants for displayMode property.
Notes: The toolbar will display only icons.

5.7.33 NSToolbarDisplayModeLabelOnly = 3

Plugin Version: 11.3. **Function:** One of the constants for displayMode property.
Notes: The toolbar will display only labels.

5.7.34 NSToolbarSizeModeDefault = 0

Plugin Version: 11.3. **Function:** One of the constants for the sizeMode property.

Notes: The toolbar uses the system-defined default size, which is NSToolbarSizeModeRegular.

5.7.35 NSToolbarSizeModeRegular = 1

Plugin Version: 11.3. **Function:** One of the constants for the sizeMode property.

Notes: The toolbar uses regular-sized controls and 32 by 32 pixel icons.

5.7.36 NSToolbarSizeModeSmall = 2

Plugin Version: 11.3. **Function:** One of the constants for the sizeMode property.

Notes: The toolbar uses small-sized controls and 24 by 24 pixel icons.

Chapter 6

Cocoa Controls

6.1 class ComboBox

6.1.1 class ComboBox

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in ComboBox class in REALbasic.

6.1.2 Methods

6.1.3 NSComboBoxMBS as NSComboBoxMBS

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSComboBoxMBS object for the given control.

Notes: This way you can manipulate Cocoa controls directly.

6.2 class CustomNSScrollerMBS

6.2.1 class CustomNSScrollerMBS

Plugin Version: 12.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a custom scroller.

Notes: Subclass of the NSScrollerMBS class.

6.2.2 Methods

6.2.3 Constructor

Plugin Version: 12.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new custom NSScroller object.

See also:

- 6.2.4 Constructor(Handle as Integer) 190
- 6.2.5 Constructor(left as Double, top as Double, width as Double, height as Double) 190

6.2.4 Constructor(Handle as Integer)

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

See also:

- 6.2.3 Constructor 190
- 6.2.5 Constructor(left as Double, top as Double, width as Double, height as Double) 190

6.2.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 12.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new custom NSScroller object.

See also:

- 6.2.3 Constructor 190
- 6.2.4 Constructor(Handle as Integer) 190

6.2.6 Destructor

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

6.2.7 Events

6.2.8 acceptsFirstMouse(e as NSEventMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return true if the receiver should be sent a mouseDown event for an initial mouse-down event, false if not.

Notes:

The receiver can either return a value unconditionally or use the location of event e to determine whether or not it wants the event. The default implementation ignores the event and returns false.

Implement this event in a subclass to allow instances to respond to click-through. This allows the user to click on a view in an inactive window, activating the view with one click, instead of clicking first to make the window active and then clicking the view. Most view objects refuse a click-through attempt, so the event simply activates the window. Many control objects, however, such as instances of NSButton and NSSlider, do accept them, so the user can immediately manipulate the control without having to release the mouse button.

6.2.9 acceptsFirstResponder as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to accept first responder.

Notes: Return true if your control can have the focus and false if not.

6.2.10 becomeFirstResponder as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the object gets focus.

Notes: Return true to accept.

6.2.11 beginGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a touch gesture.

Notes:

e: An event object representing the gesture beginning.
The event will be sent to the view under the touch in the key window.
Available in Mac OS X v10.6 and later.
Return true if you handled this event.

6.2.12 `canBecomeKeyView` as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the receiver can become key view.

Notes: Returns true if the receiver can become key view, false otherwise.

6.2.13 `Close`

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom view is destroyed.

6.2.14 `concludeDragOperation(sender as NSDraggingInfoMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging operation is complete, signaling the receiver to perform any necessary clean-up.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

For this method to be invoked, the previous `performDragOperation` must have returned true.

The destination implements this method to perform any tidying up that it needs to do, such as updating its visual representation now that it has incorporated the dragged data. This message is the last message sent from sender to the destination during a dragging session.

If the sender object's `animatesToDestination` property was set to true in `prepareForDragOperation`, then the drag image is still visible. At this point you should draw the final visual representation in the view. When this method returns, the drag image is removed from the screen. If your final visual representation matches the visual representation in the drag, this is a seamless transition.

6.2.15 draggingEnded(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to be notified when a drag operation ends in some other destination.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

This method might be used by a destination doing auto-expansion in order to collapse any auto-expands.

6.2.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image enters destination bounds or frame; delegate returns dragging operation to perform.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

Invoked when a dragged image enters the destination but only if the destination has registered for the pasteboard data type involved in the drag operation. Specifically, this method is invoked when the mouse pointer enters the destination's bounds rectangle (if it is a view object) or its frame rectangle (if it is a window object).

This method must return a value that indicates which dragging operation the destination will perform when the image is released. In deciding which dragging operation to return, the method should evaluate the overlap between both the dragging operations allowed by the source (obtained from sender with the draggingSourceOperationMask method) and the dragging operations and pasteboard data types the destination itself supports.

If none of the operations is appropriate, this method should return NSDragOperationNone (this is the default response if the method is not implemented by the destination). A destination will still receive draggingUpdated and draggingExited even if NSDragOperationNone is returned by this method.

6.2.17 draggingExited(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image exits the destination's bounds rectangle (in the case of a view object) or its frame rectangle (in the case of a window object).

Notes: sender: The object sending the message; use it to get details about the dragging operation.

6.2.18 `draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging session has completed.

Notes:

session: The dragging session.

screenPoint: The point where the drag ended, in screen coordinates.

operation: The drag operation. See constants for drag operation types.

Available in OS X v10.7 and later.

6.2.19 `draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag moves on the screen.

Notes:

session: The dragging session.

screenPoint: The point where the drag moved to, in screen coordinates.

Available in OS X v10.7 and later.

6.2.20 `draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Declares the types of operations the source allows to be performed. (required)

Notes:

session: The dragging session.

context: The dragging context. See `NSDraggingContext` constants for the supported values.

Return the appropriate dragging operation as defined in constants.

In the future Apple may provide more specific "within" values in the future. To account for this, for unrec-

ognized localities, return the operation mask for the most specific context that you are concerned with.

6.2.21 `draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag will begin.

Notes:

session: The dragging session.

screenPoint: The point where the drag will begin, in screen coordinates.

Available in OS X v10.7 and later.

6.2.22 `draggingSourceOperationMaskForLocal(flag as boolean) as Integer`

Plugin Version: 13.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns an integer bit mask indicating the types of dragging operations the source object will allow to be performed on the dragged image's data.

Notes:

(Deprecated in OS X v10.7. This method is informally deprecated. It is only called if the source does not implement the NSDraggingSource protocol methods. This method will be formally deprecated in a future OS release.)

isLocal: True indicates that the candidate destination object (the window or view over which the dragged image is currently poised) is in the same application as the source, while a false value indicates that the destination object is in a different application.

A mask, created by combining the dragging operations listed in the NSDragOperation section of NSDraggingInfo protocol reference using the C bitwise OR operator. If the source does not permit any dragging operations, it should return NSDragOperationNone.

If not implemented, the default value is NSDragOperationCopy | NSDragOperationLink | NSDragOperationGeneric | NSDragOperationPrivate.

Available in OS X v10.0 and later. Deprecated in OS X v10.7.

6.2.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked periodically as the image is held within the destination area, allowing modification of the dragging operation or mouse-pointer position.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

For this to be invoked, the destination must have registered for the pasteboard data type involved in the drag operation. The messages continue until the image is either released or dragged out of the window or view.

This method provides the destination with an opportunity to modify the dragging operation depending on the position of the mouse pointer inside of the destination view or window object. For example, you may have several graphics or areas of text contained within the same view and wish to tailor the dragging operation, or to ignore the drag event completely, depending upon which object is underneath the mouse pointer at the time when the user releases the dragged image and the performDragOperation method is invoked.

You typically examine the contents of the pasteboard in the draggingEntered method, where this examination is performed only once, rather than in the draggingUpdated method, which is invoked multiple times.

Only one destination at a time receives a sequence of draggingUpdated messages. If the mouse pointer is within the bounds of two overlapping views that are both valid destinations, the uppermost view receives these messages until the image is either released or dragged out.

6.2.24 drawArrow(g as NSGraphicsMBS, Arrow as Integer, highlight as boolean)

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when arrow need to be drawn.

Notes:

Draw the scroll button indicated by arrow, which is either NSScrollerIncrementArrow (the down or right scroll button) or NSScrollerDecrementArrow (up or left).

If flag is true, the button is drawn highlighted; otherwise it's drawn normally. You should never need to invoke this method directly, but may wish to override it to customize the appearance of scroll buttons.

6.2.25 drawKnob(g as NSGraphicsMBS)

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Draw the knob.

6.2.26 drawKnobSlotInRect(g as NSGraphicsMBS, slotRect as NSRectMBS, highlight as boolean)

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Draw the knob slow in the rectangle.

6.2.27 drawParts(g as NSGraphicsMBS)

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when parts need to be drawn.

6.2.28 endGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has ended a touch gesture.

Notes:

e: An event object representing the gesture end.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.2.29 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the modifier keys will be ignored for this dragging session.

Notes:

session: The dragging session.

Return true if the modifier keys will be ignored, false otherwise.

Available in OS X v10.7 and later.

6.2.30 isOpaque as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether this view is opaque.

6.2.31 keyDown(e as NSEventMBS) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes: Return true if you handled this event.

6.2.32 keyUp(e as NSEventMBS) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes: Return true if you handled this event.

6.2.33 magnifyWithEvent(e as NSEventMBS) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a pinch gesture.

Notes:

e: An event object representing the magnify gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.2.34 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS) as NSMenuMBS

Plugin Version: 12.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return a context-sensitive pop-up menu for a given mouse-down event.

Notes:

theEvent: An object representing a mouse-down event.

defaultMenu: The menu as constructed by super class.

The receiver can use information in the mouse event, such as its location over a particular element of the receiver, to determine what kind of menu to return. For example, a text object might display a text-editing

menu when the cursor lies over text and a menu for changing graphics attributes when the cursor lies over an embedded image.

The default implementation returns the default menu.

6.2.35 `mouseDown(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.2.36 `mouseDownCanMoveWindow` as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called so you can decide what happens with mouse down.

Notes:

Return true if you do not need to handle a mouse down and it can pass through to superviews; False if you need to handle the mouse down.

This allows iApp-type applications to determine the region by which a window can be moved. By default, this method returns false if the view is opaque; otherwise, it returns true. Subclasses can override this method to return a different value.

6.2.37 `mouseDragged(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.2.38 `mouseEntered(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.2.39 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.2.40 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.2.41 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.2.42 Open

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom NSView is created.

6.2.43 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.

Third mouse button.

6.2.44 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.2.45 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.2.46 performDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked after the released image has been removed from the screen, signaling the receiver to import the pasteboard data.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return if the destination accepts the data, it returns true; otherwise it returns false. The default is to return false.

For this method to be invoked, the previous `prepareForDragOperation` message must have returned true. The destination should implement this method to do the real work of importing the pasteboard data represented by the image.

If the sender object's `animatesToDestination` was set to true in `prepareForDragOperation`, then setup any animation to arrange space for the drag items to animate to. Also at this time, enumerate through the dragging items to set their destination frames and destination images.

6.2.47 prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the image is released, allowing the receiver to agree to or refuse drag operation.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Returns true if the receiver agrees to perform the drag operation and false if not.

This method is invoked only if the most recent `draggingEntered` or `draggingUpdated` message returned an

acceptable drag-operation value.

If you want the drag items to animate from their current location on screen to their final location in your view, set the sender object's `animatesToDestination` property to true in your implementation of this method.

6.2.48 `pressureChange(e as NSEventMBS)` as boolean

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Informs the current object that a pressure change occurred on a system that supports pressure sensitivity.

Notes:

This method is invoked automatically in response to user actions. `event` is the event that initiated the change in pressure.

Available in OS X v10.10.3 and later.

6.2.49 `resignFirstResponder` as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Focus is going away.

Notes: Return true to accept.

6.2.50 `rightMouseDown(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.2.51 `rightMouseDragged(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.2.52 `rightMouseUp(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.2.53 rotateWithEvent(e as NSEventMBS) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a rotation gesture.

Notes:

e: An event object representing the rotate gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.2.54 scrollWheel(e as NSEventMBS) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the subclass that the mouse's scroll wheel has moved.

Notes:

e: An object encapsulating information about the wheel-scrolling event.

The default implementation simply passes this message to the next responder.

Return true to not pass the event.

6.2.55 swipeWithEvent(e as NSEventMBS) as boolean

Plugin Version: 12.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a swipe gesture.

Notes:

e: An event object representing the swipe gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.2.56 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging images should be changed.

Notes:

sender: The object sending the message; use this object to get details about the dragging operation.

While a destination may change the dragging images at any time, it is recommended to wait until this

method is called before updating the dragging images.

This allows the system to delay changing the dragging images until it is likely that the user will drop on this destination. Otherwise, the dragging images will change too often during the drag which would be distracting to the user.

6.2.57 `viewDidMoveToWindow`

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that it has been added to a new view hierarchy.

Notes:

The default implementation does nothing; subclasses can implement this event to perform whatever actions are necessary.

`window` may return `nil` when this method is invoked, indicating that the receiver does not currently reside in any window. This occurs when the receiver has just been removed from its superview or when the receiver has just been added to a superview that does not itself have a window. Overrides of this method may choose to ignore such cases if they are not of interest.

6.2.58 `wantsPeriodicDraggingUpdates` as `boolean`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the destination object whether it wants to receive periodic `draggingUpdated` messages.

Notes:

Return `true` if the destination wants to receive periodic `draggingUpdated` messages, `false` otherwise.

If the destination returns `false`, these messages are sent only when the mouse moves or a modifier flag changes. Otherwise the destination gets the default behavior, where it receives periodic `draggingUpdated` messages even if nothing changes.

6.3 class CustomNSSearchFieldMBS

6.3.1 class CustomNSSearchFieldMBS

Plugin Version: 12.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a custom searchfield.

Notes:

Some events will not fire as Searchfield eats them itself.
Subclass of the NSSearchFieldMBS class.

6.3.2 Methods

6.3.3 Constructor

Plugin Version: 12.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The dummy constructor doing nothing.

See also:

- 6.3.4 Constructor(Handle as Integer) 205
- 6.3.5 Constructor(left as Double, top as Double, width as Double, height as Double) 205

6.3.4 Constructor(Handle as Integer)

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

See also:

- 6.3.3 Constructor 205
- 6.3.5 Constructor(left as Double, top as Double, width as Double, height as Double) 205

6.3.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 12.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new custom NSView object.

See also:

- 6.3.3 Constructor 205
- 6.3.4 Constructor(Handle as Integer) 205

6.3.6 Destructor

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

6.3.7 Events

6.3.8 `acceptsFirstMouse(e as NSEventMBS)` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return true if the receiver should be sent a `mouseDown` event for an initial mouse-down event, false if not.

Notes:

The receiver can either return a value unconditionally or use the location of event `e` to determine whether or not it wants the event. The default implementation ignores the event and returns false.

Implement this event in a subclass to allow instances to respond to click-through. This allows the user to click on a view in an inactive window, activating the view with one click, instead of clicking first to make the window active and then clicking the view. Most view objects refuse a click-through attempt, so the event simply activates the window. Many control objects, however, such as instances of `NSButton` and `NSSlider`, do accept them, so the user can immediately manipulate the control without having to release the mouse button.

6.3.9 `acceptsFirstResponder` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to accept first responder.

Notes: Return true if your control can have the focus and false if not.

6.3.10 `becomeFirstResponder` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the object gets focus.

Notes: Return true to accept.

6.3.11 `beginGestureWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a touch gesture.

Notes:

e: An event object representing the gesture beginning.
The event will be sent to the view under the touch in the key window.
Available in Mac OS X v10.6 and later.
Return true if you handled this event.

6.3.12 canBecomeKeyView as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the receiver can become key view.

Notes: Returns true if the receiver can become key view, false otherwise.

6.3.13 Close

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom view is destroyed.

6.3.14 concludeDragOperation(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging operation is complete, signaling the receiver to perform any necessary clean-up.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

For this method to be invoked, the previous performDragOperation must have returned true.

The destination implements this method to perform any tidying up that it needs to do, such as updating its visual representation now that it has incorporated the dragged data. This message is the last message sent from sender to the destination during a dragging session.

If the sender object's animatesToDestination property was set to true in prepareForDragOperation, then the drag image is still visible. At this point you should draw the final visual representation in the view. When this method returns, the drag image is removed from the screen. If your final visual representation matches the visual representation in the drag, this is a seamless transition.

6.3.15 draggingEnded(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to be notified when a drag operation ends in some other destination.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

This method might be used by a destination doing auto-expansion in order to collapse any auto-expands.

6.3.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image enters destination bounds or frame; delegate returns dragging operation to perform.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

Invoked when a dragged image enters the destination but only if the destination has registered for the pasteboard data type involved in the drag operation. Specifically, this method is invoked when the mouse pointer enters the destination's bounds rectangle (if it is a view object) or its frame rectangle (if it is a window object).

This method must return a value that indicates which dragging operation the destination will perform when the image is released. In deciding which dragging operation to return, the method should evaluate the overlap between both the dragging operations allowed by the source (obtained from sender with the draggingSourceOperationMask method) and the dragging operations and pasteboard data types the destination itself supports.

If none of the operations is appropriate, this method should return NSDragOperationNone (this is the default response if the method is not implemented by the destination). A destination will still receive draggingUpdated and draggingExited even if NSDragOperationNone is returned by this method.

6.3.17 draggingExited(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image exits the destination's bounds rectangle (in the case of a view object) or its frame rectangle (in the case of a window object).

Notes: sender: The object sending the message; use it to get details about the dragging operation.

6.3.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging session has completed.

Notes:

session: The dragging session.

screenPoint: The point where the drag ended, in screen coordinates.

operation: The drag operation. See constants for drag operation types.

Available in OS X v10.7 and later.

6.3.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag moves on the screen.

Notes:

session: The dragging session.

screenPoint: The point where the drag moved to, in screen coordinates.

Available in OS X v10.7 and later.

6.3.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Declares the types of operations the source allows to be performed. (required)

Notes:

session: The dragging session.

context: The dragging context. See NSDraggingContext constants for the supported values.

Return the appropriate dragging operation as defined in constants.

In the future Apple may provide more specific "within" values in the future. To account for this, for unrec-

ognized localities, return the operation mask for the most specific context that you are concerned with.

6.3.21 `draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag will begin.

Notes:

session: The dragging session.

screenPoint: The point where the drag will begin, in screen coordinates.

Available in OS X v10.7 and later.

6.3.22 `draggingSourceOperationMaskForLocal(flag as boolean) as Integer`

Plugin Version: 13.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns an integer bit mask indicating the types of dragging operations the source object will allow to be performed on the dragged image's data.

Notes:

(Deprecated in OS X v10.7. This method is informally deprecated. It is only called if the source does not implement the `NSDraggingSource` protocol methods. This method will be formally deprecated in a future OS release.)

isLocal: True indicates that the candidate destination object (the window or view over which the dragged image is currently poised) is in the same application as the source, while a false value indicates that the destination object is in a different application.

A mask, created by combining the dragging operations listed in the `NSDragOperation` section of `NSDraggingInfo` protocol reference using the C bitwise OR operator. If the source does not permit any dragging operations, it should return `NSDragOperationNone`.

If not implemented, the default value is `NSDragOperationCopy | NSDragOperationLink | NSDragOperationGeneric | NSDragOperationPrivate`.

Available in OS X v10.0 and later. Deprecated in OS X v10.7.

6.3.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked periodically as the image is held within the destination area, allowing modification of the dragging operation or mouse-pointer position.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDraggingOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

For this to be invoked, the destination must have registered for the pasteboard data type involved in the drag operation. The messages continue until the image is either released or dragged out of the window or view.

This method provides the destination with an opportunity to modify the dragging operation depending on the position of the mouse pointer inside of the destination view or window object. For example, you may have several graphics or areas of text contained within the same view and wish to tailor the dragging operation, or to ignore the drag event completely, depending upon which object is underneath the mouse pointer at the time when the user releases the dragged image and the performDragOperation method is invoked.

You typically examine the contents of the pasteboard in the draggingEntered method, where this examination is performed only once, rather than in the draggingUpdated method, which is invoked multiple times.

Only one destination at a time receives a sequence of draggingUpdated messages. If the mouse pointer is within the bounds of two overlapping views that are both valid destinations, the uppermost view receives these messages until the image is either released or dragged out.

6.3.24 endGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has ended a touch gesture.

Notes:

e: An event object representing the gesture end.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.3.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSession-MBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the modifier keys will be ignored for this dragging session.

Notes:

session: The dragging session.

Return true if the modifier keys will be ignored, false otherwise.
Available in OS X v10.7 and later.

6.3.26 isOpaque as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether this view is opaque.

6.3.27 keyDown(e as NSEventMBS) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes:

Return true if you handled this event.

Please return true in becomeFirstResponder and acceptsFirstResponder, so your nsview can become first responder and receive key events.

6.3.28 keyUp(e as NSEventMBS) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes:

Return true if you handled this event.

Please return true in becomeFirstResponder and acceptsFirstResponder, so your nsview can become first responder and receive key events.

6.3.29 `magnifyWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a pinch gesture.

Notes:

e: An event object representing the magnify gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.3.30 `menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS)` as NSMenuMBS

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return a context-sensitive pop-up menu for a given mouse-down event.

Notes:

theEvent: An object representing a mouse-down event.

defaultMenu: The menu as constructed by super class.

The receiver can use information in the mouse event, such as its location over a particular element of the receiver, to determine what kind of menu to return. For example, a text object might display a text-editing menu when the cursor lies over text and a menu for changing graphics attributes when the cursor lies over an embedded image.

The default implementation returns the default menu.

6.3.31 `mouseDown(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.3.32 `mouseDownCanMoveWindow` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called so you can decide what happens with mouse down.

Notes:

Return true if you do not need to handle a mouse down and it can pass through to superviews; False if you

need to handle the mouse down.

This allows iApp-type applications to determine the region by which a window can be moved. By default, this method returns false if the view is opaque; otherwise, it returns true. Subclasses can override this method to return a different value.

6.3.33 `mouseDragged(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.3.34 `mouseEntered(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.3.35 `mouseExited(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.3.36 `mouseMoved(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.3.37 `mouseUp(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.3.38 Open

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom NSSearchField is created.

6.3.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.3.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.3.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.3.42 performDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked after the released image has been removed from the screen, signaling the receiver to import the pasteboard data.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return if the destination accepts the data, it returns true; otherwise it returns false. The default is to return false.

For this method to be invoked, the previous `prepareForDragOperation` message must have returned true. The destination should implement this method to do the real work of importing the pasteboard data represented by the image.

If the sender object's `animatesToDestination` was set to true in `prepareForDragOperation`, then setup any animation to arrange space for the drag items to animate to. Also at this time, enumerate through the dragging items to set their destination frames and destination images.

6.3.43 `prepareForDragOperation(sender as NSDraggingInfoMBS)` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the image is released, allowing the receiver to agree to or refuse drag operation.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Returns true if the receiver agrees to perform the drag operation and false if not.

This method is invoked only if the most recent `draggingEntered` or `draggingUpdated` message returned an acceptable drag-operation value.

If you want the drag items to animate from their current location on screen to their final location in your view, set the sender object's `animatesToDestination` property to true in your implementation of this method.

6.3.44 `pressureChange(e as NSEventMBS)` as boolean

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Informs the current object that a pressure change occurred on a system that supports pressure sensitivity.

Notes:

This method is invoked automatically in response to user actions. `event` is the event that initiated the change in pressure.

Available in OS X v10.10.3 and later.

6.3.45 `resignFirstResponder` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Focus is going away.

Notes: Return true to accept.

6.3.46 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.3.47 rightMouseDownDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.3.48 rightMouseDownUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.3.49 rotateWithEvent(e as NSEventMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a rotation gesture.

Notes:

e: An event object representing the rotate gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.3.50 scrollWheel(e as NSEventMBS) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the subclass that the mouse's scroll wheel has moved.

Notes:

e: An object encapsulating information about the wheel-scrolling event.

The default implementation simply passes this message to the next responder.

Return true to not pass the event.

6.3.51 `swipeWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a swipe gesture.

Notes:

`e`: An event object representing the swipe gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.3.52 `updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging images should be changed.

Notes:

`sender`: The object sending the message; use this object to get details about the dragging operation.

While a destination may change the dragging images at any time, it is recommended to wait until this method is called before updating the dragging images.

This allows the system to delay changing the dragging images until it is likely that the user will drop on this destination. Otherwise, the dragging images will change too often during the drag which would be distracting to the user.

6.3.53 `viewDidMoveToWindow`

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that it has been added to a new view hierarchy.

Notes:

The default implementation does nothing; subclasses can implement this event to perform whatever actions are necessary.

`window` may return nil when this method is invoked, indicating that the receiver does not currently reside in any window. This occurs when the receiver has just been removed from its superview or when the receiver has just been added to a superview that does not itself have a window. Overrides of this method may choose to ignore such cases if they are not of interest.

6.3.54 wantsPeriodicDraggingUpdates as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the destination object whether it wants to receive periodic draggingUpdated messages.

Notes:

Return true if the destination wants to receive periodic draggingUpdated messages, false otherwise.

If the destination returns false, these messages are sent only when the mouse moves or a modifier flag changes. Otherwise the destination gets the default behavior, where it receives periodic dragging-updated messages even if nothing changes.

6.4 class CustomNSTextFieldMBS

6.4.1 class CustomNSTextFieldMBS

Plugin Version: 12.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a custom text field.

Notes:

Some events will not fire as text field eats them itself.
Subclass of the NSTextFieldMBS class.

6.4.2 Methods

6.4.3 Constructor

Plugin Version: 12.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The dummy constructor doing nothing.

See also:

- 6.4.4 Constructor(Handle as Integer) 220
- 6.4.5 Constructor(left as Double, top as Double, width as Double, height as Double) 220

6.4.4 Constructor(Handle as Integer)

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

See also:

- 6.4.3 Constructor 220
- 6.4.5 Constructor(left as Double, top as Double, width as Double, height as Double) 220

6.4.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 12.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new custom NSView object.

See also:

- 6.4.3 Constructor 220
- 6.4.4 Constructor(Handle as Integer) 220

6.4.6 Destructor

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

6.4.7 Events

6.4.8 acceptsFirstMouse(e as NSEventMBS) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return true if the receiver should be sent a mouseDown event for an initial mouse-down event, false if not.

Notes:

The receiver can either return a value unconditionally or use the location of event e to determine whether or not it wants the event. The default implementation ignores the event and returns false.

Implement this event in a subclass to allow instances to respond to click-through. This allows the user to click on a view in an inactive window, activating the view with one click, instead of clicking first to make the window active and then clicking the view. Most view objects refuse a click-through attempt, so the event simply activates the window. Many control objects, however, such as instances of NSButton and NSSlider, do accept them, so the user can immediately manipulate the control without having to release the mouse button.

6.4.9 acceptsFirstResponder as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to accept first responder.

Notes: Return true if your control can have the focus and false if not.

6.4.10 becomeFirstResponder as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the object gets focus.

Notes: Return true to accept.

6.4.11 beginGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a touch gesture.

Notes:

e: An event object representing the gesture beginning.
The event will be sent to the view under the touch in the key window.
Available in Mac OS X v10.6 and later.
Return true if you handled this event.

6.4.12 `canBecomeKeyView` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the receiver can become key view.

Notes: Returns true if the receiver can become key view, false otherwise.

6.4.13 `Close`

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom view is destroyed.

6.4.14 `concludeDragOperation(sender as NSDraggingInfoMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging operation is complete, signaling the receiver to perform any necessary clean-up.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

For this method to be invoked, the previous `performDragOperation` must have returned true.

The destination implements this method to perform any tidying up that it needs to do, such as updating its visual representation now that it has incorporated the dragged data. This message is the last message sent from sender to the destination during a dragging session.

If the sender object's `animatesToDestination` property was set to true in `prepareForDragOperation`, then the drag image is still visible. At this point you should draw the final visual representation in the view. When this method returns, the drag image is removed from the screen. If your final visual representation matches the visual representation in the drag, this is a seamless transition.

6.4.15 draggingEnded(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to be notified when a drag operation ends in some other destination.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

This method might be used by a destination doing auto-expansion in order to collapse any auto-expands.

6.4.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image enters destination bounds or frame; delegate returns dragging operation to perform.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

Invoked when a dragged image enters the destination but only if the destination has registered for the pasteboard data type involved in the drag operation. Specifically, this method is invoked when the mouse pointer enters the destination's bounds rectangle (if it is a view object) or its frame rectangle (if it is a window object).

This method must return a value that indicates which dragging operation the destination will perform when the image is released. In deciding which dragging operation to return, the method should evaluate the overlap between both the dragging operations allowed by the source (obtained from sender with the draggingSourceOperationMask method) and the dragging operations and pasteboard data types the destination itself supports.

If none of the operations is appropriate, this method should return NSDragOperationNone (this is the default response if the method is not implemented by the destination). A destination will still receive draggingUpdated and draggingExited even if NSDragOperationNone is returned by this method.

6.4.17 draggingExited(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image exits the destination's bounds rectangle (in the case of a view object) or its frame rectangle (in the case of a window object).

Notes: sender: The object sending the message; use it to get details about the dragging operation.

6.4.18 `draggingSessionEndedAtPoint`(session as `NSDraggingSessionMBS`, screenPoint as `NSPointMBS`, operation as `Integer`)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging session has completed.

Notes:

session: The dragging session.

screenPoint: The point where the drag ended, in screen coordinates.

operation: The drag operation. See constants for drag operation types.

Available in OS X v10.7 and later.

6.4.19 `draggingSessionMovedToPoint`(session as `NSDraggingSessionMBS`, screenPoint as `NSPointMBS`)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag moves on the screen.

Notes:

session: The dragging session.

screenPoint: The point where the drag moved to, in screen coordinates.

Available in OS X v10.7 and later.

6.4.20 `draggingSessionSourceOperationMaskForDraggingContext`(session as `NSDraggingSessionMBS`, context as `Integer`) as `Integer`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Declares the types of operations the source allows to be performed. (required)

Notes:

session: The dragging session.

context: The dragging context. See `NSDraggingContext` constants for the supported values.

Return the appropriate dragging operation as defined in constants.

In the future Apple may provide more specific "within" values in the future. To account for this, for unrec-

ognized localities, return the operation mask for the most specific context that you are concerned with.

6.4.21 `draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag will begin.

Notes:

session: The dragging session.

screenPoint: The point where the drag will begin, in screen coordinates.

Available in OS X v10.7 and later.

6.4.22 `draggingSourceOperationMaskForLocal(flag as boolean) as Integer`

Plugin Version: 13.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns an integer bit mask indicating the types of dragging operations the source object will allow to be performed on the dragged image's data.

Notes:

(Deprecated in OS X v10.7. This method is informally deprecated. It is only called if the source does not implement the NSDraggingSource protocol methods. This method will be formally deprecated in a future OS release.)

isLocal: True indicates that the candidate destination object (the window or view over which the dragged image is currently poised) is in the same application as the source, while a false value indicates that the destination object is in a different application.

A mask, created by combining the dragging operations listed in the NSDragOperation section of NSDraggingInfo protocol reference using the C bitwise OR operator. If the source does not permit any dragging operations, it should return NSDragOperationNone.

If not implemented, the default value is NSDragOperationCopy | NSDragOperationLink | NSDragOperationGeneric | NSDragOperationPrivate.

Available in OS X v10.0 and later. Deprecated in OS X v10.7.

6.4.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked periodically as the image is held within the destination area, allowing modification of the dragging operation or mouse-pointer position.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

For this to be invoked, the destination must have registered for the pasteboard data type involved in the drag operation. The messages continue until the image is either released or dragged out of the window or view.

This method provides the destination with an opportunity to modify the dragging operation depending on the position of the mouse pointer inside of the destination view or window object. For example, you may have several graphics or areas of text contained within the same view and wish to tailor the dragging operation, or to ignore the drag event completely, depending upon which object is underneath the mouse pointer at the time when the user releases the dragged image and the performDragOperation method is invoked.

You typically examine the contents of the pasteboard in the draggingEntered method, where this examination is performed only once, rather than in the draggingUpdated method, which is invoked multiple times.

Only one destination at a time receives a sequence of draggingUpdated messages. If the mouse pointer is within the bounds of two overlapping views that are both valid destinations, the uppermost view receives these messages until the image is either released or dragged out.

6.4.24 endGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has ended a touch gesture.

Notes:

e: An event object representing the gesture end.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.4.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the modifier keys will be ignored for this dragging session.

Notes:

session: The dragging session.

Return true if the modifier keys will be ignored, false otherwise.
Available in OS X v10.7 and later.

6.4.26 isOpaque as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether this view is opaque.

6.4.27 keyDown(e as NSEventMBS) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes:

Return true if you handled this event.

Please return true in becomeFirstResponder and acceptsFirstResponder, so your nsview can become first responder and receive key events.

6.4.28 keyUp(e as NSEventMBS) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes:

Return true if you handled this event.

Please return true in becomeFirstResponder and acceptsFirstResponder, so your nsview can become first responder and receive key events.

6.4.29 `magnifyWithEvent(e as NSEventMBS)` as `boolean`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a pinch gesture.

Notes:

`e`: An event object representing the magnify gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.4.30 `menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS)` as `NSMenuMBS`

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return a context-sensitive pop-up menu for a given mouse-down event.

Notes:

`theEvent`: An object representing a mouse-down event.

`defaultMenu`: The menu as constructed by super class.

The receiver can use information in the mouse event, such as its location over a particular element of the receiver, to determine what kind of menu to return. For example, a text object might display a text-editing menu when the cursor lies over text and a menu for changing graphics attributes when the cursor lies over an embedded image.

The default implementation returns the default menu.

6.4.31 `mouseDown(e as NSEventMBS, x as Double, y as Double)` as `boolean`

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.4.32 `mouseDownCanMoveWindow` as `boolean`

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called so you can decide what happens with mouse down.

Notes:

Return true if you do not need to handle a mouse down and it can pass through to superviews; False if you

need to handle the mouse down.

This allows iApp-type applications to determine the region by which a window can be moved. By default, this method returns false if the view is opaque; otherwise, it returns true. Subclasses can override this method to return a different value.

6.4.33 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.4.34 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.4.35 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.4.36 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.4.37 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.4.38 Open

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom NSSearchField is created.

6.4.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.4.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.4.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.4.42 performDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked after the released image has been removed from the screen, signaling the receiver to import the pasteboard data.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return if the destination accepts the data, it returns true; otherwise it returns false. The default is to return false.

For this method to be invoked, the previous `prepareForDragOperation` message must have returned true. The destination should implement this method to do the real work of importing the pasteboard data represented by the image.

If the sender object's `animatesToDestination` was set to true in `prepareForDragOperation`, then setup any animation to arrange space for the drag items to animate to. Also at this time, enumerate through the dragging items to set their destination frames and destination images.

6.4.43 `prepareForDragOperation(sender as NSDraggingInfoMBS)` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the image is released, allowing the receiver to agree to or refuse drag operation.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Returns true if the receiver agrees to perform the drag operation and false if not.

This method is invoked only if the most recent `draggingEntered` or `draggingUpdated` message returned an acceptable drag-operation value.

If you want the drag items to animate from their current location on screen to their final location in your view, set the sender object's `animatesToDestination` property to true in your implementation of this method.

6.4.44 `pressureChange(e as NSEventMBS)` as boolean

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Informs the current object that a pressure change occurred on a system that supports pressure sensitivity.

Notes:

This method is invoked automatically in response to user actions. `event` is the event that initiated the change in pressure.

Available in OS X v10.10.3 and later.

6.4.45 `resignFirstResponder` as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Focus is going away.

Notes: Return true to accept.

6.4.46 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.4.47 rightMouseDownDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.4.48 rightMouseDownUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.4.49 rotateWithEvent(e as NSEventMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a rotation gesture.

Notes:

e: An event object representing the rotate gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.4.50 scrollWheel(e as NSEventMBS) as boolean

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the subclass that the mouse's scroll wheel has moved.

Notes:

e: An object encapsulating information about the wheel-scrolling event.

The default implementation simply passes this message to the next responder.

Return true to not pass the event.

6.4.51 swipeWithEvent(e as NSEventMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a swipe gesture.

Notes:

e: An event object representing the swipe gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.4.52 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging images should be changed.

Notes:

sender: The object sending the message; use this object to get details about the dragging operation.

While a destination may change the dragging images at any time, it is recommended to wait until this method is called before updating the dragging images.

This allows the system to delay changing the dragging images until it is likely that the user will drop on this destination. Otherwise, the dragging images will change too often during the drag which would be distracting to the user.

6.4.53 viewDidMoveToWindow

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that it has been added to a new view hierarchy.

Notes:

The default implementation does nothing; subclasses can implement this event to perform whatever actions are necessary.

window may return nil when this method is invoked, indicating that the receiver does not currently reside in any window. This occurs when the receiver has just been removed from its superview or when the receiver has just been added to a superview that does not itself have a window. Overrides of this method may choose to ignore such cases if they are not of interest.

6.4.54 `wantsPeriodicDraggingUpdates` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the destination object whether it wants to receive periodic draggingUpdated messages.

Notes:

Return true if the destination wants to receive periodic draggingUpdated messages, false otherwise.

If the destination returns false, these messages are sent only when the mouse moves or a modifier flag changes. Otherwise the destination gets the default behavior, where it receives periodic dragging-updated messages even if nothing changes.

6.5 class CustomNSTextViewMBS

6.5.1 class CustomNSTextViewMBS

Plugin Version: 17.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a custom text view.

Notes:

Some events will not fire as text view eats them itself.
Subclass of the NSTextViewMBS class.

6.5.2 Methods

6.5.3 Constructor

Plugin Version: 17.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The dummy constructor doing nothing.

See also:

- 6.5.4 Constructor(Handle as Integer) 235
- 6.5.5 Constructor(left as Double, top as Double, width as Double, height as Double) 235

6.5.4 Constructor(Handle as Integer)

Plugin Version: 17.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

See also:

- 6.5.3 Constructor 235
- 6.5.5 Constructor(left as Double, top as Double, width as Double, height as Double) 235

6.5.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 17.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new custom NSView object.

See also:

- 6.5.3 Constructor 235
- 6.5.4 Constructor(Handle as Integer) 235

6.5.6 Destructor

Plugin Version: 17.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

6.5.7 Events

6.5.8 `acceptsFirstMouse(e as NSEventMBS)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return true if the receiver should be sent a `mouseDown` event for an initial mouse-down event, false if not.

Notes:

The receiver can either return a value unconditionally or use the location of event `e` to determine whether or not it wants the event. The default implementation ignores the event and returns false.

Implement this event in a subclass to allow instances to respond to click-through. This allows the user to click on a view in an inactive window, activating the view with one click, instead of clicking first to make the window active and then clicking the view. Most view objects refuse a click-through attempt, so the event simply activates the window. Many control objects, however, such as instances of `NSButton` and `NSSlider`, do accept them, so the user can immediately manipulate the control without having to release the mouse button.

6.5.9 `acceptsFirstResponder` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to accept first responder.

Notes: Return true if your control can have the focus and false if not.

6.5.10 `becomeFirstResponder` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the object gets focus.

Notes: Return true to accept.

6.5.11 `beginGestureWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a touch gesture.

Notes:

e: An event object representing the gesture beginning.
The event will be sent to the view under the touch in the key window.
Available in Mac OS X v10.6 and later.
Return true if you handled this event.

6.5.12 canBecomeKeyView as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the receiver can become key view.

Notes: Returns true if the receiver can become key view, false otherwise.

6.5.13 Close

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom view is destroyed.

6.5.14 concludeDragOperation(sender as NSDraggingInfoMBS)

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging operation is complete, signaling the receiver to perform any necessary clean-up.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

For this method to be invoked, the previous performDragOperation must have returned true.

The destination implements this method to perform any tidying up that it needs to do, such as updating its visual representation now that it has incorporated the dragged data. This message is the last message sent from sender to the destination during a dragging session.

If the sender object's animatesToDestination property was set to true in prepareForDragOperation, then the drag image is still visible. At this point you should draw the final visual representation in the view. When this method returns, the drag image is removed from the screen. If your final visual representation matches the visual representation in the drag, this is a seamless transition.

6.5.15 draggingEnded(sender as NSDraggingInfoMBS)

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to be notified when a drag operation ends in some other destination.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

This method might be used by a destination doing auto-expansion in order to collapse any auto-expands.

6.5.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image enters destination bounds or frame; delegate returns dragging operation to perform.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

Invoked when a dragged image enters the destination but only if the destination has registered for the pasteboard data type involved in the drag operation. Specifically, this method is invoked when the mouse pointer enters the destination's bounds rectangle (if it is a view object) or its frame rectangle (if it is a window object).

This method must return a value that indicates which dragging operation the destination will perform when the image is released. In deciding which dragging operation to return, the method should evaluate the overlap between both the dragging operations allowed by the source (obtained from sender with the draggingSourceOperationMask method) and the dragging operations and pasteboard data types the destination itself supports.

If none of the operations is appropriate, this method should return NSDragOperationNone (this is the default response if the method is not implemented by the destination). A destination will still receive draggingUpdated and draggingExited even if NSDragOperationNone is returned by this method.

6.5.17 draggingExited(sender as NSDraggingInfoMBS)

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image exits the destination's bounds rectangle (in the case of a view object) or its frame rectangle (in the case of a window object).

Notes: sender: The object sending the message; use it to get details about the dragging operation.

6.5.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging session has completed.

Notes:

session: The dragging session.

screenPoint: The point where the drag ended, in screen coordinates.

operation: The drag operation. See constants for drag operation types.

Available in OS X v10.7 and later.

6.5.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag moves on the screen.

Notes:

session: The dragging session.

screenPoint: The point where the drag moved to, in screen coordinates.

Available in OS X v10.7 and later.

6.5.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Declares the types of operations the source allows to be performed. (required)

Notes:

session: The dragging session.

context: The dragging context. See NSDraggingContext constants for the supported values.

Return the appropriate dragging operation as defined in constants.

In the future Apple may provide more specific "within" values in the future. To account for this, for unrec-

ognized localities, return the operation mask for the most specific context that you are concerned with.

6.5.21 `draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)`

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag will begin.

Notes:

session: The dragging session.

screenPoint: The point where the drag will begin, in screen coordinates.

Available in OS X v10.7 and later.

6.5.22 `draggingSourceOperationMaskForLocal(flag as boolean) as Integer`

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns an integer bit mask indicating the types of dragging operations the source object will allow to be performed on the dragged image's data.

Notes:

(Deprecated in OS X v10.7. This method is informally deprecated. It is only called if the source does not implement the `NSDraggingSource` protocol methods. This method will be formally deprecated in a future OS release.)

isLocal: True indicates that the candidate destination object (the window or view over which the dragged image is currently poised) is in the same application as the source, while a false value indicates that the destination object is in a different application.

A mask, created by combining the dragging operations listed in the `NSDragOperation` section of `NSDraggingInfo` protocol reference using the C bitwise OR operator. If the source does not permit any dragging operations, it should return `NSDragOperationNone`.

If not implemented, the default value is `NSDragOperationCopy | NSDragOperationLink | NSDragOperationGeneric | NSDragOperationPrivate`.

Available in OS X v10.0 and later. Deprecated in OS X v10.7.

6.5.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked periodically as the image is held within the destination area, allowing modification of the dragging operation or mouse-pointer position.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDraggingOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

For this to be invoked, the destination must have registered for the pasteboard data type involved in the drag operation. The messages continue until the image is either released or dragged out of the window or view.

This method provides the destination with an opportunity to modify the dragging operation depending on the position of the mouse pointer inside of the destination view or window object. For example, you may have several graphics or areas of text contained within the same view and wish to tailor the dragging operation, or to ignore the drag event completely, depending upon which object is underneath the mouse pointer at the time when the user releases the dragged image and the performDragOperation method is invoked.

You typically examine the contents of the pasteboard in the draggingEntered method, where this examination is performed only once, rather than in the draggingUpdated method, which is invoked multiple times.

Only one destination at a time receives a sequence of draggingUpdated messages. If the mouse pointer is within the bounds of two overlapping views that are both valid destinations, the uppermost view receives these messages until the image is either released or dragged out.

6.5.24 endGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has ended a touch gesture.

Notes:

e: An event object representing the gesture end.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.5.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSession-MBS) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the modifier keys will be ignored for this dragging session.

Notes:

session: The dragging session.

Return true if the modifier keys will be ignored, false otherwise.
Available in OS X v10.7 and later.

6.5.26 isOpaque as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether this view is opaque.

6.5.27 keyDown(e as NSEventMBS) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes:

Return true if you handled this event.

Please return true in becomeFirstResponder and acceptsFirstResponder, so your nsview can become first responder and receive key events.

6.5.28 keyUp(e as NSEventMBS) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes:

Return true if you handled this event.

Please return true in becomeFirstResponder and acceptsFirstResponder, so your nsview can become first responder and receive key events.

6.5.29 `magnifyWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a pinch gesture.

Notes:

e: An event object representing the magnify gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.5.30 `menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS)` as NSMenuMBS

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return a context-sensitive pop-up menu for a given mouse-down event.

Notes:

theEvent: An object representing a mouse-down event.

defaultMenu: The menu as constructed by super class.

The receiver can use information in the mouse event, such as its location over a particular element of the receiver, to determine what kind of menu to return. For example, a text object might display a text-editing menu when the cursor lies over text and a menu for changing graphics attributes when the cursor lies over an embedded image.

The default implementation returns the default menu.

6.5.31 `mouseDown(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.5.32 `mouseDownCanMoveWindow` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called so you can decide what happens with mouse down.

Notes:

Return true if you do not need to handle a mouse down and it can pass through to superviews; False if you

need to handle the mouse down.

This allows iApp-type applications to determine the region by which a window can be moved. By default, this method returns false if the view is opaque; otherwise, it returns true. Subclasses can override this method to return a different value.

6.5.33 `mouseDragged(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.5.34 `mouseEntered(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.5.35 `mouseExited(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.5.36 `mouseMoved(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.5.37 `mouseUp(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.5.38 Open

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom NSSearchField is created.

6.5.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.5.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.5.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.5.42 performDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked after the released image has been removed from the screen, signaling the receiver to import the pasteboard data.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return if the destination accepts the data, it returns true; otherwise it returns false. The default is to return false.

For this method to be invoked, the previous `prepareForDragOperation` message must have returned true. The destination should implement this method to do the real work of importing the pasteboard data represented by the image.

If the sender object's `animatesToDestination` was set to true in `prepareForDragOperation`, then setup any animation to arrange space for the drag items to animate to. Also at this time, enumerate through the dragging items to set their destination frames and destination images.

6.5.43 `prepareForDragOperation(sender as NSDraggingInfoMBS)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the image is released, allowing the receiver to agree to or refuse drag operation.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Returns true if the receiver agrees to perform the drag operation and false if not.

This method is invoked only if the most recent `draggingEntered` or `draggingUpdated` message returned an acceptable drag-operation value.

If you want the drag items to animate from their current location on screen to their final location in your view, set the sender object's `animatesToDestination` property to true in your implementation of this method.

6.5.44 `pressureChange(e as NSEventMBS)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Informs the current object that a pressure change occurred on a system that supports pressure sensitivity.

Notes:

This method is invoked automatically in response to user actions. `event` is the event that initiated the change in pressure.

Available in OS X v10.10.3 and later.

6.5.45 `resignFirstResponder` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Focus is going away.

Notes: Return true to accept.

6.5.46 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.5.47 rightMouseDownDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.5.48 rightMouseDownUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.5.49 rotateWithEvent(e as NSEventMBS) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a rotation gesture.

Notes:

e: An event object representing the rotate gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.5.50 scrollWheel(e as NSEventMBS) as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the subclass that the mouse's scroll wheel has moved.

Notes:

e: An object encapsulating information about the wheel-scrolling event.

The default implementation simply passes this message to the next responder.

Return true to not pass the event.

6.5.51 `swipeWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a swipe gesture.

Notes:

`e`: An event object representing the swipe gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.5.52 `updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)`

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging images should be changed.

Notes:

`sender`: The object sending the message; use this object to get details about the dragging operation.

While a destination may change the dragging images at any time, it is recommended to wait until this method is called before updating the dragging images.

This allows the system to delay changing the dragging images until it is likely that the user will drop on this destination. Otherwise, the dragging images will change too often during the drag which would be distracting to the user.

6.5.53 `viewDidMoveToWindow`

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that it has been added to a new view hierarchy.

Notes:

The default implementation does nothing; subclasses can implement this event to perform whatever actions are necessary.

`window` may return nil when this method is invoked, indicating that the receiver does not currently reside in any window. This occurs when the receiver has just been removed from its superview or when the receiver has just been added to a superview that does not itself have a window. Overrides of this method may choose to ignore such cases if they are not of interest.

6.5.54 wantsPeriodicDraggingUpdates as boolean

Plugin Version: 17.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the destination object whether it wants to receive periodic draggingUpdated messages.

Notes:

Return true if the destination wants to receive periodic draggingUpdated messages, false otherwise.

If the destination returns false, these messages are sent only when the mouse moves or a modifier flag changes. Otherwise the destination gets the default behavior, where it receives periodic dragging-updated messages even if nothing changes.

6.6 class CustomNSTextFieldMBS

6.6.1 class CustomNSTextFieldMBS

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a custom NSTextField.

Notes: Subclass of the NSTextFieldMBS class.

6.6.2 Methods

6.6.3 Constructor

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The dummy constructor doing nothing.

See also:

- 6.6.4 Constructor(Handle as Integer) 250
- 6.6.5 Constructor(left as Double, top as Double, width as Double, height as Double) 250

6.6.4 Constructor(Handle as Integer)

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

See also:

- 6.6.3 Constructor 250
- 6.6.5 Constructor(left as Double, top as Double, width as Double, height as Double) 250

6.6.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new custom NSTextField object.

See also:

- 6.6.3 Constructor 250
- 6.6.4 Constructor(Handle as Integer) 250

6.6.6 Destructor

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

6.6.7 Events

6.6.8 acceptsFirstMouse(e as NSEventMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return true if the receiver should be sent a mouseDown event for an initial mouse-down event, false if not.

Notes:

The receiver can either return a value unconditionally or use the location of event e to determine whether or not it wants the event. The default implementation ignores the event and returns false.

Implement this event in a subclass to allow instances to respond to click-through. This allows the user to click on a view in an inactive window, activating the view with one click, instead of clicking first to make the window active and then clicking the view. Most view objects refuse a click-through attempt, so the event simply activates the window. Many control objects, however, such as instances of NSButton and NSSlider, do accept them, so the user can immediately manipulate the control without having to release the mouse button.

6.6.9 acceptsFirstResponder as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to accept first responder.

Notes: Return true if your control can have the focus and false if not.

6.6.10 becomeFirstResponder as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the object gets focus.

Notes: Return true to accept.

6.6.11 beginGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a touch gesture.

Notes:

e: An event object representing the gesture beginning.
The event will be sent to the view under the touch in the key window.
Available in Mac OS X v10.6 and later.
Return true if you handled this event.

6.6.12 `canBecomeKeyView` as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the receiver can become key view.

Notes: Returns true if the receiver can become key view, false otherwise.

6.6.13 `Close`

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom view is destroyed.

6.6.14 `concludeDragOperation(sender as NSDraggingInfoMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging operation is complete, signaling the receiver to perform any necessary clean-up.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

For this method to be invoked, the previous `performDragOperation` must have returned true.

The destination implements this method to perform any tidying up that it needs to do, such as updating its visual representation now that it has incorporated the dragged data. This message is the last message sent from sender to the destination during a dragging session.

If the sender object's `animatesToDestination` property was set to true in `prepareForDragOperation`, then the drag image is still visible. At this point you should draw the final visual representation in the view. When this method returns, the drag image is removed from the screen. If your final visual representation matches the visual representation in the drag, this is a seamless transition.

6.6.15 draggingEnded(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to be notified when a drag operation ends in some other destination.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

This method might be used by a destination doing auto-expansion in order to collapse any auto-expands.

6.6.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image enters destination bounds or frame; delegate returns dragging operation to perform.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

Invoked when a dragged image enters the destination but only if the destination has registered for the pasteboard data type involved in the drag operation. Specifically, this method is invoked when the mouse pointer enters the destination's bounds rectangle (if it is a view object) or its frame rectangle (if it is a window object).

This method must return a value that indicates which dragging operation the destination will perform when the image is released. In deciding which dragging operation to return, the method should evaluate the overlap between both the dragging operations allowed by the source (obtained from sender with the draggingSourceOperationMask method) and the dragging operations and pasteboard data types the destination itself supports.

If none of the operations is appropriate, this method should return NSDragOperationNone (this is the default response if the method is not implemented by the destination). A destination will still receive draggingUpdated and draggingExited even if NSDragOperationNone is returned by this method.

6.6.17 draggingExited(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image exits the destination's bounds rectangle (in the case of a view object) or its frame rectangle (in the case of a window object).

Notes: sender: The object sending the message; use it to get details about the dragging operation.

6.6.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging session has completed.

Notes:

session: The dragging session.

screenPoint: The point where the drag ended, in screen coordinates.

operation: The drag operation. See constants for drag operation types.

Available in OS X v10.7 and later.

6.6.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag moves on the screen.

Notes:

session: The dragging session.

screenPoint: The point where the drag moved to, in screen coordinates.

Available in OS X v10.7 and later.

6.6.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Declares the types of operations the source allows to be performed. (required)

Notes:

session: The dragging session.

context: The dragging context. See NSDraggingContext constants for the supported values.

Return the appropriate dragging operation as defined in constants.

In the future Apple may provide more specific "within" values in the future. To account for this, for unrec-

ognized localities, return the operation mask for the most specific context that you are concerned with.

6.6.21 `draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag will begin.

Notes:

session: The dragging session.

screenPoint: The point where the drag will begin, in screen coordinates.

Available in OS X v10.7 and later.

6.6.22 `draggingSourceOperationMaskForLocal(flag as boolean) as Integer`

Plugin Version: 13.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns an integer bit mask indicating the types of dragging operations the source object will allow to be performed on the dragged image's data.

Notes:

(Deprecated in OS X v10.7. This method is informally deprecated. It is only called if the source does not implement the NSDraggingSource protocol methods. This method will be formally deprecated in a future OS release.)

isLocal: True indicates that the candidate destination object (the window or view over which the dragged image is currently poised) is in the same application as the source, while a false value indicates that the destination object is in a different application.

A mask, created by combining the dragging operations listed in the NSDragOperation section of NSDraggingInfo protocol reference using the C bitwise OR operator. If the source does not permit any dragging operations, it should return NSDragOperationNone.

If not implemented, the default value is NSDragOperationCopy | NSDragOperationLink | NSDragOperationGeneric | NSDragOperationPrivate.

Available in OS X v10.0 and later. Deprecated in OS X v10.7.

6.6.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked periodically as the image is held within the destination area, allowing modification of the dragging operation or mouse-pointer position.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

For this to be invoked, the destination must have registered for the pasteboard data type involved in the drag operation. The messages continue until the image is either released or dragged out of the window or view.

This method provides the destination with an opportunity to modify the dragging operation depending on the position of the mouse pointer inside of the destination view or window object. For example, you may have several graphics or areas of text contained within the same view and wish to tailor the dragging operation, or to ignore the drag event completely, depending upon which object is underneath the mouse pointer at the time when the user releases the dragged image and the performDragOperation method is invoked.

You typically examine the contents of the pasteboard in the draggingEntered method, where this examination is performed only once, rather than in the draggingUpdated method, which is invoked multiple times.

Only one destination at a time receives a sequence of draggingUpdated messages. If the mouse pointer is within the bounds of two overlapping views that are both valid destinations, the uppermost view receives these messages until the image is either released or dragged out.

6.6.24 endGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has ended a touch gesture.

Notes:

e: An event object representing the gesture end.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.6.25 ignoreModifierKeysForDraggingSession(session as NSDraggingSession-MBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the modifier keys will be ignored for this dragging session.

Notes:

session: The dragging session.

Return true if the modifier keys will be ignored, false otherwise.
Available in OS X v10.7 and later.

6.6.26 isOpaque as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether this view is opaque.

6.6.27 keyDown(e as NSEventMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes:

Return true if you handled this event.

Please return true in becomeFirstResponder and acceptsFirstResponder, so your nsview can become first responder and receive key events.

6.6.28 keyUp(e as NSEventMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes:

Return true if you handled this event.

Please return true in becomeFirstResponder and acceptsFirstResponder, so your nsview can become first responder and receive key events.

6.6.29 `magnifyWithEvent(e as NSEventMBS)` as `boolean`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a pinch gesture.

Notes:

`e`: An event object representing the magnify gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.6.30 `menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS)` as `NSMenuMBS`

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return a context-sensitive pop-up menu for a given mouse-down event.

Notes:

`theEvent`: An object representing a mouse-down event.

`defaultMenu`: The menu as constructed by super class.

The receiver can use information in the mouse event, such as its location over a particular element of the receiver, to determine what kind of menu to return. For example, a text object might display a text-editing menu when the cursor lies over text and a menu for changing graphics attributes when the cursor lies over an embedded image.

The default implementation returns the default menu.

6.6.31 `mouseDown(e as NSEventMBS, x as Double, y as Double)` as `boolean`

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.6.32 `mouseDownCanMoveWindow` as `boolean`

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called so you can decide what happens with mouse down.

Notes:

Return true if you do not need to handle a mouse down and it can pass through to superviews; False if you

need to handle the mouse down.

This allows iApp-type applications to determine the region by which a window can be moved. By default, this method returns false if the view is opaque; otherwise, it returns true. Subclasses can override this method to return a different value.

6.6.33 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.6.34 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.6.35 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.6.36 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.6.37 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.6.38 Open

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom `NSView` is created.

6.6.39 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.6.40 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.6.41 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.6.42 performDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked after the released image has been removed from the screen, signaling the receiver to import the pasteboard data.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return if the destination accepts the data, it returns true; otherwise it returns false. The default is to return false.

For this method to be invoked, the previous `prepareForDragOperation` message must have returned true. The destination should implement this method to do the real work of importing the pasteboard data represented by the image.

If the sender object's `animatesToDestination` was set to true in `prepareForDragOperation`, then setup any animation to arrange space for the drag items to animate to. Also at this time, enumerate through the dragging items to set their destination frames and destination images.

6.6.43 `prepareForDragOperation(sender as NSDraggingInfoMBS)` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the image is released, allowing the receiver to agree to or refuse drag operation.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Returns true if the receiver agrees to perform the drag operation and false if not.

This method is invoked only if the most recent `draggingEntered` or `draggingUpdated` message returned an acceptable drag-operation value.

If you want the drag items to animate from their current location on screen to their final location in your view, set the sender object's `animatesToDestination` property to true in your implementation of this method.

6.6.44 `pressureChange(e as NSEventMBS)` as boolean

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Informs the current object that a pressure change occurred on a system that supports pressure sensitivity.

Notes:

This method is invoked automatically in response to user actions. `event` is the event that initiated the change in pressure.

Available in OS X v10.10.3 and later.

6.6.45 `resignFirstResponder` as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Focus is going away.

Notes: Return true to accept.

6.6.46 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.6.47 rightMouseDownDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.6.48 rightMouseDownUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.6.49 rotateWithEvent(e as NSEventMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a rotation gesture.

Notes:

e: An event object representing the rotate gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.6.50 scrollWheel(e as NSEventMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the subclass that the mouse's scroll wheel has moved.

Notes:

e: An object encapsulating information about the wheel-scrolling event.

The default implementation simply passes this message to the next responder.

Return true to not pass the event.

6.6.51 swipeWithEvent(e as NSEventMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a swipe gesture.

Notes:

e: An event object representing the swipe gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.6.52 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging images should be changed.

Notes:

sender: The object sending the message; use this object to get details about the dragging operation.

While a destination may change the dragging images at any time, it is recommended to wait until this method is called before updating the dragging images.

This allows the system to delay changing the dragging images until it is likely that the user will drop on this destination. Otherwise, the dragging images will change too often during the drag which would be distracting to the user.

6.6.53 viewDidMoveToWindow

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that it has been added to a new view hierarchy.

Notes:

The default implementation does nothing; subclasses can implement this event to perform whatever actions are necessary.

window may return nil when this method is invoked, indicating that the receiver does not currently reside in any window. This occurs when the receiver has just been removed from its superview or when the receiver has just been added to a superview that does not itself have a window. Overrides of this method may choose to ignore such cases if they are not of interest.

6.6.54 `wantsPeriodicDraggingUpdates` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the destination object whether it wants to receive periodic draggingUpdated messages.

Notes:

Return true if the destination wants to receive periodic draggingUpdated messages, false otherwise.

If the destination returns false, these messages are sent only when the mouse moves or a modifier flag changes. Otherwise the destination gets the default behavior, where it receives periodic dragging-updated messages even if nothing changes.

6.7 class CustomNSViewMBS

6.7.1 class CustomNSViewMBS

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a custom NSView.

Notes: Subclass of the NSViewMBS class.

6.7.2 Methods

6.7.3 Constructor

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The dummy constructor doing nothing.

See also:

- 6.7.4 Constructor(Handle as Integer) 265
- 6.7.5 Constructor(left as Double, top as Double, width as Double, height as Double) 265

6.7.4 Constructor(Handle as Integer)

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given CustomNSView handle.

Notes: The handle is casted to a CustomNSView and the plugin retains this handle.

See also:

- 6.7.3 Constructor 265
- 6.7.5 Constructor(left as Double, top as Double, width as Double, height as Double) 265

6.7.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new custom NSView object.

See also:

- 6.7.3 Constructor 265
- 6.7.4 Constructor(Handle as Integer) 265

6.7.6 Destructor

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

6.7.7 Events

6.7.8 `acceptsFirstMouse(e as NSEventMBS)` as boolean

Plugin Version: 11.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return true if the receiver should be sent a `mouseDown` event for an initial mouse-down event, false if not.

Notes:

The receiver can either return a value unconditionally or use the location of event `e` to determine whether or not it wants the event. The default implementation ignores the event and returns false.

Implement this event in a subclass to allow instances to respond to click-through. This allows the user to click on a view in an inactive window, activating the view with one click, instead of clicking first to make the window active and then clicking the view. Most view objects refuse a click-through attempt, so the event simply activates the window. Many control objects, however, such as instances of `NSButton` and `NSSlider`, do accept them, so the user can immediately manipulate the control without having to release the mouse button.

6.7.9 `acceptsFirstResponder` as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to accept first responder.

Notes: Return true if your control can have the focus and false if not.

6.7.10 `becomeFirstResponder` as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the object gets focus.

Notes: Return true to accept.

6.7.11 `beginGestureWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a touch gesture.

Notes:

e: An event object representing the gesture beginning.
The event will be sent to the view under the touch in the key window.
Available in Mac OS X v10.6 and later.
Return true if you handled this event.

6.7.12 canBecomeKeyView as boolean

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the receiver can become key view.

Notes: Returns true if the receiver can become key view, false otherwise.

6.7.13 Close

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom view is destroyed.

6.7.14 concludeDragOperation(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging operation is complete, signaling the receiver to perform any necessary clean-up.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

For this method to be invoked, the previous performDragOperation must have returned true.

The destination implements this method to perform any tidying up that it needs to do, such as updating its visual representation now that it has incorporated the dragged data. This message is the last message sent from sender to the destination during a dragging session.

If the sender object's animatesToDestination property was set to true in prepareForDragOperation, then the drag image is still visible. At this point you should draw the final visual representation in the view. When this method returns, the drag image is removed from the screen. If your final visual representation matches the visual representation in the drag, this is a seamless transition.

6.7.15 draggingEnded(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to be notified when a drag operation ends in some other destination.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

This method might be used by a destination doing auto-expansion in order to collapse any auto-expands.

6.7.16 draggingEntered(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image enters destination bounds or frame; delegate returns dragging operation to perform.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

Invoked when a dragged image enters the destination but only if the destination has registered for the pasteboard data type involved in the drag operation. Specifically, this method is invoked when the mouse pointer enters the destination's bounds rectangle (if it is a view object) or its frame rectangle (if it is a window object).

This method must return a value that indicates which dragging operation the destination will perform when the image is released. In deciding which dragging operation to return, the method should evaluate the overlap between both the dragging operations allowed by the source (obtained from sender with the draggingSourceOperationMask method) and the dragging operations and pasteboard data types the destination itself supports.

If none of the operations is appropriate, this method should return NSDragOperationNone (this is the default response if the method is not implemented by the destination). A destination will still receive draggingUpdated and draggingExited even if NSDragOperationNone is returned by this method.

6.7.17 draggingExited(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image exits the destination's bounds rectangle (in the case of a view object) or its frame rectangle (in the case of a window object).

Notes: sender: The object sending the message; use it to get details about the dragging operation.

6.7.18 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging session has completed.

Notes:

session: The dragging session.

screenPoint: The point where the drag ended, in screen coordinates.

operation: The drag operation. See constants for drag operation types.

Available in OS X v10.7 and later.

6.7.19 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag moves on the screen.

Notes:

session: The dragging session.

screenPoint: The point where the drag moved to, in screen coordinates.

Available in OS X v10.7 and later.

6.7.20 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Declares the types of operations the source allows to be performed. (required)

Notes:

session: The dragging session.

context: The dragging context. See NSDraggingContext constants for the supported values.

Return the appropriate dragging operation as defined in constants.

In the future Apple may provide more specific "within" values in the future. To account for this, for unrec-

ognized localities, return the operation mask for the most specific context that you are concerned with.

6.7.21 `draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag will begin.

Notes:

session: The dragging session.

screenPoint: The point where the drag will begin, in screen coordinates.

Available in OS X v10.7 and later.

6.7.22 `draggingSourceOperationMaskForLocal(flag as boolean) as Integer`

Plugin Version: 13.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns an integer bit mask indicating the types of dragging operations the source object will allow to be performed on the dragged image's data.

Notes:

(Deprecated in OS X v10.7. This method is informally deprecated. It is only called if the source does not implement the `NSDraggingSource` protocol methods. This method will be formally deprecated in a future OS release.)

isLocal: True indicates that the candidate destination object (the window or view over which the dragged image is currently poised) is in the same application as the source, while a false value indicates that the destination object is in a different application.

A mask, created by combining the dragging operations listed in the `NSDragOperation` section of `NSDraggingInfo` protocol reference using the C bitwise OR operator. If the source does not permit any dragging operations, it should return `NSDragOperationNone`.

If not implemented, the default value is `NSDragOperationCopy | NSDragOperationLink | NSDragOperationGeneric | NSDragOperationPrivate`.

Available in OS X v10.0 and later. Deprecated in OS X v10.7.

6.7.23 draggingUpdated(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked periodically as the image is held within the destination area, allowing modification of the dragging operation or mouse-pointer position.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

For this to be invoked, the destination must have registered for the pasteboard data type involved in the drag operation. The messages continue until the image is either released or dragged out of the window or view.

This method provides the destination with an opportunity to modify the dragging operation depending on the position of the mouse pointer inside of the destination view or window object. For example, you may have several graphics or areas of text contained within the same view and wish to tailor the dragging operation, or to ignore the drag event completely, depending upon which object is underneath the mouse pointer at the time when the user releases the dragged image and the performDragOperation method is invoked.

You typically examine the contents of the pasteboard in the draggingEntered method, where this examination is performed only once, rather than in the draggingUpdated method, which is invoked multiple times.

Only one destination at a time receives a sequence of draggingUpdated messages. If the mouse pointer is within the bounds of two overlapping views that are both valid destinations, the uppermost view receives these messages until the image is either released or dragged out.

6.7.24 drawFocusRingMask(g as NSGraphicsMBS) as boolean

Plugin Version: 12.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Draw the focus ring mask for the view.

Notes:

If false is returned, the default method from NSView class runs.

This method provides the shape of the focus ring mask by drawing the focus ring mask. An implementation of this method should draw in the view's interior (bounds) coordinate space, that the focus ring style has been set (it will be set it to NSFocusRingOnly to capture the focus ring itself), and that the fill and stroke colors have been set to an arbitrary fully opaque color.

Subclasses that find the default behavior insufficient should only draw the focus ring shape.

The `NSView` default implementation of this method simply fills `self.bounds`.
Available in Mac OS X v10.7 and later.

Please use `NSGraphicsMBS` class for drawing.

6.7.25 `DrawRect(g as NSGraphicsMBS, left as Double, top as Double, width as Double, height as Double)`

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The paint event with the rectangle which needs to be redrawn.

6.7.26 `endGestureWithEvent(e as NSEventMBS) as boolean`

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has ended a touch gesture.

Notes:

`e`: An event object representing the gesture end.
Available in Mac OS X v10.6 and later.
Return true if you handled this event.

6.7.27 `focusRingMaskBounds as NSRectMBS`

Plugin Version: 12.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the focus ring mask bounds.

Notes:

Return nil to run default `NSView` method.

Return a rectangle containing the mask in the view's interior (bounds) coordinate space.

The mask bounds allows the focus ring's overall size and position to be determined before it is drawn. Subclasses must override this method if they require the display of a focus ring. The `NSView` default implementation of this method simply returns `NSRectMBS.Zero`.

Note: The information provided by `focusRingMaskBounds` will enable Accessibility to identify selected subelements for zoom tracking, so it is important that this method provide a reasonably tight bounding box

and that `noteFocusRingMaskChanged` is invoked as described.

6.7.28 `ignoreModifierKeysForDraggingSession(session as NSDraggingSession-MBS)` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the modifier keys will be ignored for this dragging session.

Notes:

`session`: The dragging session.

Return true if the modifier keys will be ignored, false otherwise.
Available in OS X v10.7 and later.

6.7.29 `isFlipped` as Boolean

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event to return a boolean value indicating whether the view uses a flipped coordinate system.

Notes:

The default value of this property is false, which results in a non-flipped coordinate system. In a non-flipped coordinate system, the origin is in the lower-left corner of the view and positive y-values extend upward. In a flipped coordinate system, the origin is in the upper-left corner of the view and y-values extend downward. X-values always extend to the right.

If you want your view to use a flipped coordinate system, override this property and return true.

6.7.30 `isOpaque` as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether this view is opaque.

6.7.31 `keyDown(e as NSEventMBS)` as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.
Notes:

Return true if you handled this event.

Please return true in `becomeFirstResponder` and `acceptsFirstResponder`, so your `nview` can become first

responder and receive key events.

6.7.32 `keyUp(e as NSEventMBS)` as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.
Notes:

Return true if you handled this event.

Please return true in `becomeFirstResponder` and `acceptsFirstResponder`, so your `nview` can become first responder and receive key events.

6.7.33 `magnifyWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a pinch gesture.

Notes:

`e`: An event object representing the magnify gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.7.34 `menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS)` as NSMenuMBS

Plugin Version: 12.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return a context-sensitive pop-up menu for a given mouse-down event.

Notes:

`theEvent`: An object representing a mouse-down event.

`defaultMenu`: The menu as constructed by super class.

The receiver can use information in the mouse event, such as its location over a particular element of the receiver, to determine what kind of menu to return. For example, a text object might display a text-editing menu when the cursor lies over text and a menu for changing graphics attributes when the cursor lies over an embedded image.

The default implementation returns the default menu.

6.7.35 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.7.36 mouseDownCanMoveWindow as boolean

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called so you can decide what happens with mouse down.

Notes:

Return true if you do not need to handle a mouse down and it can pass through to superviews; False if you need to handle the mouse down.

This allows iApp-type applications to determine the region by which a window can be moved. By default, this method returns false if the view is opaque; otherwise, it returns true. Subclasses can override this method to return a different value.

6.7.37 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.7.38 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.7.39 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.7.40 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.7.41 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.7.42 Open

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom NSView is created.

6.7.43 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.

Third mouse button.

6.7.44 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.

Third mouse button.

6.7.45 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.

Third mouse button.

6.7.46 performDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked after the released image has been removed from the screen, signaling the receiver to import the pasteboard data.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return if the destination accepts the data, it returns true; otherwise it returns false. The default is to return false.

For this method to be invoked, the previous `prepareForDragOperation` message must have returned true. The destination should implement this method to do the real work of importing the pasteboard data represented by the image.

If the sender object's `animatesToDestination` was set to true in `prepareForDragOperation`, then setup any animation to arrange space for the drag items to animate to. Also at this time, enumerate through the dragging items to set their destination frames and destination images.

6.7.47 prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the image is released, allowing the receiver to agree to or refuse drag operation.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Returns true if the receiver agrees to perform the drag operation and false if not.

This method is invoked only if the most recent `draggingEntered` or `draggingUpdated` message returned an acceptable drag-operation value.

If you want the drag items to animate from their current location on screen to their final location in your view, set the sender object's `animatesToDestination` property to true in your implementation of this method.

6.7.48 `pressureChange(e as NSEventMBS)` as boolean

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Informs the current object that a pressure change occurred on a system that supports pressure sensitivity.

Notes:

This method is invoked automatically in response to user actions. `event` is the event that initiated the change in pressure.

Available in OS X v10.10.3 and later.

6.7.49 `resignFirstResponder` as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Focus is going away.

Notes: Return true to accept.

6.7.50 `rightMouseDown(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.7.51 `rightMouseDragged(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.7.52 `rightMouseUp(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.7.53 `rotateWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a rotation gesture.

Notes:

e: An event object representing the rotate gesture.
The event will be sent to the view under the touch in the key window.
Available in Mac OS X v10.6 and later.
Return true if you handled this event.

6.7.54 scrollWheel(e as NSEventMBS) as boolean

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the subclass that the mouse's scroll wheel has moved.

Notes:

e: An object encapsulating information about the wheel-scrolling event.

The default implementation simply passes this message to the next responder.
Return true to not pass the event.

6.7.55 swipeWithEvent(e as NSEventMBS) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a swipe gesture.

Notes:

e: An event object representing the swipe gesture.
The event will be sent to the view under the touch in the key window.
Available in Mac OS X v10.6 and later.
Return true if you handled this event.

6.7.56 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging images should be changed.

Notes:

sender: The object sending the message; use this object to get details about the dragging operation.

While a destination may change the dragging images at any time, it is recommended to wait until this method is called before updating the dragging images.

This allows the system to delay changing the dragging images until it is likely that the user will drop on this destination. Otherwise, the dragging images will change too often during the drag which would be

distracting to the user.

6.7.57 `viewDidMoveToWindow`

Plugin Version: 11.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that it has been added to a new view hierarchy.

Notes:

The default implementation does nothing; subclasses can implement this event to perform whatever actions are necessary.

Window may return nil when this method is invoked, indicating that the receiver does not currently reside in any window. This occurs when the receiver has just been removed from its superview or when the receiver has just been added to a superview that does not itself have a window. Overrides of this method may choose to ignore such cases if they are not of interest.

6.7.58 `wantsPeriodicDraggingUpdates` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the destination object whether it wants to receive periodic draggingUpdated messages.

Notes:

Return true if the destination wants to receive periodic draggingUpdated messages, false otherwise.

If the destination returns false, these messages are sent only when the mouse moves or a modifier flag changes. Otherwise the destination gets the default behavior, where it receives periodic dragging-updated messages even if nothing changes.

6.8 class DisclosureTriangle

6.8.1 class DisclosureTriangle

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in DisclosureTriangle class in REALbasic.

6.8.2 Methods

6.8.3 NSButtonMBS as NSButtonMBS

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSButtonMBS object for the given control.

Example:

```
MsgBox DisclosureTriangle1.NSButtonMBS.className
```

Notes: This way you can manipulate Cocoa controls directly.

6.9 class Groupbox

6.9.1 class Groupbox

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in Groupbox class in REALbasic.

6.9.2 Methods

6.9.3 NSBoxMBS as NSBoxMBS

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSBoxMBS object for the given control.

Notes: This way you can manipulate Cocoa controls directly.

6.10 class ImageWell

6.10.1 class ImageWell

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in ImageWell class in REALbasic.

6.10.2 Methods

6.10.3 NSImageViewMBS as NSImageViewMBS

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSImageViewMBS object for the given control.

Notes: This way you can manipulate Cocoa controls directly.

6.11 class KeyValueCollectionMBS

6.11.1 class KeyValueCollectionMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for key value coding and using NSSortDescriptor class.

Notes: Events are only raised if called on main thread to avoid threading trouble.

6.11.2 Methods

6.11.3 Constructor

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

6.11.4 sortedArrayUsingDescriptor(values() as KeyValueCollectionMBS, sortDescriptor as NSSortDescriptorMBS) as KeyValueCollectionMBS()

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a copy of the receiving array sorted as specified by a given a sort descriptor.

Notes:

sortDescriptor: The NSSortDescriptor objects.

Returns a copy of the receiving array sorted as specified by sortDescriptor.

6.11.5 sortedArrayUsingDescriptors(values() as KeyValueCollectionMBS, sortDescriptors() as NSSortDescriptorMBS) as KeyValueCollectionMBS()

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a copy of the receiving array sorted as specified by a given array of sort descriptors.

Notes:

sortDescriptors: An array of NSSortDescriptor objects.

Returns a copy of the receiving array sorted as specified by sortDescriptors.

The first descriptor specifies the primary key path to be used in sorting the receiving arrays contents. Any subsequent descriptors are used to further refine sorting of objects with duplicate values. See NSSortDescriptor for additional information.

6.11.6 Properties

6.11.7 Description as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The description text property.

Notes: (Read only property)

See also:

- 6.11.12 Description as String

286

6.11.8 Handle as Integer

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal object handle.

Notes: (Read and Write property)

6.11.9 Tag as Variant

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The tag value.

Notes:

Store anything you need, e.g. a dictionary.

(Read and Write property)

6.11.10 valueForKey(key as String) as Variant

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Get/set the value for the property identified by a given key.

Notes:

key: The name of one of the receiver's properties.

(Read and Write computed property)

See also:

- 6.11.15 valueForKey(key as string) as Variant

287

6.11.11 Events

6.11.12 Description as String

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event when system queries description for object.

See also:

- 6.11.7 Description as String

285

6.11.13 setValueForKey(key as string, value as Variant)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sets the property of the receiver specified by a given key to a given value.

Notes:

value: The value for the property identified by key.

key: The name of one of the receiver's properties.

If key identifies a to-one relationship, relate the object specified by value to the receiver, unrelating the previously related object if there was one. Given a collection object and a key that identifies a to-many relationship, relate the objects contained in the collection to the receiver, unrelating previously related objects if there were any.

The search pattern that setValueForKey uses is described in Accessor Search Patterns in Key-Value Coding Programming Guide.

In a reference-counted environment, if the instance variable is accessed directly, value is retained.

6.11.14 setValueForUndefinedKey(key as string, value as Variant)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked by setValueForKey when it finds no property for a given key.

Notes:

value: The value for the key identified by key.

key: A string that is not equal to the name of any of the receiver's properties.

Subclasses can override this method to handle the request in some other way. The default implementation raises an NSUndefinedKeyException.

6.11.15 valueForKey(key as string) as Variant

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Return the value for the property identified by a given key.

Notes:

key: The name of one of the receiver's properties.

Returns the value for the property identified by key.

If event is not implemented, the search pattern that valueForKey uses to find the correct value to return is described in Accessor Search Patterns in Key-Value Coding Programming Guide.

See also:

- 6.11.10 valueForKey(key as String) as Variant

285

6.11.16 valueForKeyUndefinedKey(key as string) as Variant

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked by valueForKey when it finds no property corresponding to a given key.

Notes:

key: A string that is not equal to the name of any of the receiver's properties.

Subclasses can override this method to return an alternate value for undefined keys. The default implementation raises an NSUndefinedKeyException.

6.12 class NSBoxMBS

6.12.1 class NSBoxMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The NSBox class implements simple views that can title themselves and draw a border around their content.

Notes:

These objects are known as boxes. You can use box to group, visually, some number of other views.

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard.
Subclass of the NSViewMBS class.

6.12.2 Methods

6.12.3 borderRect as NSRectMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the rectangle in which the receiver's border is drawn.

Notes: The rectangle in which the border of the NSBox is drawn.

6.12.4 Constructor

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new box view with size 100/100 and position 0/0

Example:

```
dim x as new NSBoxMBS
```

Notes: On success the handle property is not zero.
See also:

- 6.12.5 Constructor(Handle as Integer) 288
- 6.12.6 Constructor(left as Double, top as Double, width as Double, height as Double) 289

6.12.5 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSView handle.

Example:


```
dim t as new NSBoxMBS(0, 0, 100, 100)
dim v as new NSBoxMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSBox and the plugin retains this handle.
See also:

- 6.12.4 Constructor 288
- 6.12.6 Constructor(left as Double, top as Double, width as Double, height as Double) 289

6.12.6 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new control with the given size and position.

Example:

```
dim left,top,width,height as Integer
// define rectangle
dim x as new NSBoxMBS(left, top, width, height)
```

Notes: On success the handle property is not zero.
See also:

- 6.12.4 Constructor 288
- 6.12.5 Constructor(Handle as Integer) 288

6.12.7 setFrameFromContentFrame(contentFrame as NSRectMBS)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Places the receiver so its content view lies on the specified frame.

Notes: contentFrame: The rectangle specifying the frame of the box's content view, reckoned in the coordinate system of the box's superview. The box is marked for redisplay.

6.12.8 setTitleWithMnemonic(stringWithAmpersand as string)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the title of the receiver with a character denoted as an access key.

Notes:

Mnemonics are not supported in Mac OS X.

By default, a box's title is "Title." The content view is not automatically resized, and the box is not marked for redisplay.

6.12.9 sizeToFit

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Resizes and moves the receiver's content view so it just encloses its subviews.

Example:

```
dim n as new NSProgressIndicatorMBS
n.sizeToFit
```

```
MsgBox n.frame.String
```

Notes:

The receiver is then moved and resized to wrap around the content view. The receiver's width is constrained so its title will be fully displayed.

You should invoke this method after:

- Adding a subview (to the content view)
- Altering the size or location of such a subview
- Setting the margins around the content view

The mechanism by which the content view is moved and resized depends on whether the object responds to its own `sizeToFit` message: If it does respond, then that message is sent, and the content view is expected to be so modified. If the content view doesn't respond, the box moves and resizes the content view itself.

6.12.10 titleCell as NSCellMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the cell used to display the receiver's title.

6.12.11 titleRect as NSRectMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the rectangle in which the receiver's title is drawn.

Notes: The rectangle in which the title is drawn.

6.12.12 Properties

6.12.13 borderColor as NSColorMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the color of the receiver's border when the receiver is a custom box with a simple line border.

Notes:

The receiver's border color. It must be a custom box that is, it has a type of `NSBoxCustom` and it must have a border style of `NSLineBorder`.

Available in Mac OS X v10.5 and later.
(Read and Write computed property)

6.12.14 borderType as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The border type to aType, which must be a valid border type.

Notes:

A constant describing the type of border. Border types are defined in `NSView.h`. Currently, the following border types are defined: `NSNoBorder`, `NSLineBorder`, `NSBezelBorder`, `NSGrooveBorder`.

If the size of the new border is different from that of the old border, the content view is resized to absorb the difference, and the box is marked for redisplay.

(Read and Write computed property)

6.12.15 borderWidth as Double

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The border width.

Notes:

Functional only when the receiver's box type (`boxType`) is `NSBoxCustom` and its border type (`borderType`) is `NSLineBorder`.

Available in Mac OS X v10.5 and later.
(Read and Write computed property)

6.12.16 `boxType` as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The box type.
Notes:

Use the `NSBox*` constants.
(Read and Write computed property)

6.12.17 `contentView` as `NSViewMBS`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's content view.
Notes:

On settings the `NSView` object is resized to fit within the box's current content area and the box is marked for redisplay.
(Read and Write computed property)

6.12.18 `contentViewMargins` as `NSSizeMBS`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The horizontal and vertical distance between the border of the receiver and its content view.
Notes:

Value: The width and height of the offset between the box's border and content view. The horizontal value is applied (reckoned in the box's coordinate system) fully and equally to the left and right sides of the box. The vertical value is similarly applied to the top and bottom.

Unlike changing a box's other attributes, such as its title position or border type, changing the offsets doesn't automatically resize the content view. In general, you should send a `sizeToFit` message to the box after changing the size of its offsets. This message causes the content view to remain unchanged while the box is sized to fit around it.
(Read and Write computed property)

6.12.19 cornerRadius as Double

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The corner radius for the box.

Notes:

Functional only when the receiver's box type (boxType) is NSBoxCustom and its border type (borderType) is NSLineBorder.

(Read and Write computed property)

6.12.20 fillColor as NSColorMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The color of the receiver's background when the receiver is a custom box with a simple line border.

Notes:

The receiver's fill color. It must be a custom box that is, it has a type of NSBoxCustom and it must have a border style of NSLineBorder.

Available in Mac OS X v10.5 and later.

(Read and Write computed property)

6.12.21 title as string

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The title for the box.

Notes:

By default, a box's title is "Title."

(Read and Write computed property)

6.12.22 titleFont as NSFontMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The font object used to draw the receiver's title.

Notes:

By default, the title is drawn using the small system font (obtained using (smallSystemFontSize as the parameter of systemFontOfSize:, both NSFont class methods). If the size of the new font is different from that of the old font, the content view is resized to absorb the difference.

(Read and Write computed property)

6.12.23 `titlePosition` as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The position of the box's title.

Notes:

If the new title position changes the size of the box's border area, the content view is resized to absorb the difference, and the box is marked as needing redisplay.

Use this constants: `NSNoTitle`, `NSAboveTop`, `NSAtTop`, `NSBelowTop`, `NSAboveBottom`, `NSAtBottom` and `NSBelowBottom`.

(Read and Write computed property)

6.12.24 `Transparent` as Boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver is transparent.

Notes:

True makes the receiver transparent.

False makes the receiver opaque.

(Read and Write computed property)

6.12.25 Constants

6.12.26 `NSAboveBottom` = 4

Plugin Version: 10.0. **Function:** One of the constants for the title position.

Notes: Title positioned above the box's bottom border.

6.12.27 `NSAboveTop` = 1

Plugin Version: 10.0. **Function:** One of the constants for the title position.

Notes: Title positioned above the box's top border.

6.12.28 `NSAtBottom` = 5

Plugin Version: 10.0. **Function:** One of the constants for the title position.

Notes: Title positioned within the box's bottom border.

6.12.29 NSAtTop = 2

Plugin Version: 10.0. **Function:** One of the constants for the title position.
Notes: Title positioned within the box's top border.

6.12.30 NSBelowBottom = 6

Plugin Version: 10.0. **Function:** One of the constants for the title position.
Notes: Title positioned below the box's bottom border.

6.12.31 NSBelowTop = 3

Plugin Version: 10.0. **Function:** One of the constants for the title position.
Notes: Title positioned below the box's top border.

6.12.32 NSBoxCustom = 4

Plugin Version: 10.0. **Function:** One of the constants and data type identifies box types, which, in conjunction with a box's border type, define the appearance of the box.
Notes: Specifies that the appearance of the box is determined entirely by the by box-configuration methods, without automatically applying Apple human interface guidelines.

6.12.33 NSBoxOldStyle = 3

Plugin Version: 10.0. **Function:** One of the constants and data type identifies box types, which, in conjunction with a box's border type, define the appearance of the box.
Notes: Specifies that the box is a Mac OS X v10.2style box.

6.12.34 NSBoxPrimary = 0

Plugin Version: 10.0. **Function:** One of the constants and data type identifies box types, which, in conjunction with a box's border type, define the appearance of the box.
Notes: Specifies the primary box appearance. This is the default box type.

6.12.35 `NSBoxSecondary = 1`

Plugin Version: 10.0. **Function:** One of the constants and data type identifies box types, which, in conjunction with a box's border type, define the appearance of the box.

Notes: Specifies the secondary box appearance.

6.12.36 `NSBoxSeparator = 2`

Plugin Version: 10.0. **Function:** One of the constants and data type identifies box types, which, in conjunction with a box's border type, define the appearance of the box.

Notes: Specifies the secondary box appearance.

6.12.37 `NSNoTitle = 0`

Plugin Version: 10.0. **Function:** One of the constants for the title position.

Notes: The box has no title.

6.13 control NSButtonControlMBS

6.13.1 control NSButtonControlMBS

Plugin Version: 13.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The Xojo control for a NSButton.

Notes:

This control embeds a special NSButton subclass.

Designed for Xojo 2013r1 and newer. May work on Real Studio 2012, but not perfectly.

Please use view property to access the underlying object and set properties.

6.13.2 Properties

6.13.3 AlternateTitle as String

Plugin Version: 13.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The title that the button displays when it's in its alternate state.

Notes: (Read and Write property)

6.13.4 BezelStyle as Integer

Plugin Version: 13.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The appearance of the border, if the view has one.

Notes:

Use this constants:

NSRoundedBezelStyle	= 1
NSRegularSquareBezelStyle	= 2
NSThickSquareBezelStyle	= 3
NSThickerSquareBezelStyle	= 4
NSDisclosureBezelStyle	= 5
NSShadowlessSquareBezelStyle	= 6
NSCircularBezelStyle	= 7
NSTexturedSquareBezelStyle	= 8
NSHelpButtonBezelStyle	= 9
NSSmallSquareBezelStyle	= 10
NSTexturedRoundedBezelStyle	= 11
NSRoundRectBezelStyle	= 12
NSRecessedBezelStyle	= 13
NSRoundedDisclosureBezelStyle	= 14

(Read and Write property)

6.13.5 ButtonType as Integer

Plugin Version: 13.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The button type.
Notes:

See also NSButtonMBS.ButtonType and the constants there like NSPushOnPushOffButton.
(Read and Write property)

6.13.6 Title as String

Plugin Version: 13.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The title displayed on the button when it's in its normal state.

Notes: (Read and Write property)

6.13.7 View as NSButtonMBS

Plugin Version: 13.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The view used in the control.

Notes:

Use this object to set more options on the control.
(Read only property)

6.13.8 Events

6.13.9 Action

Plugin Version: 13.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The action event.

6.13.10 BoundsChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the bounds, but not the frame, changed.

6.13.11 EnableMenuItems

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** The event where you can enable menu items.

6.13.12 FrameChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the frame changed.

6.13.13 GotFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control itself got focus.

Notes: This only fires if the control itself got focus and not a sub control.

6.13.14 LostFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control lost focus.

Notes: This only fires if the control itself lost focus and not a sub control.

6.13.15 MenuAction(HitItem as MenuItem) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a menuitem is choosen.

Notes: This allows the control to react on its relevant menu items. Please return true if you handled it or false to give others a chance.

6.13.16 MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was pressed inside the controls region at the location passed in to x, y.

Notes:

The coordinates x and y are local to the control, i.e. they represent the position of the mouse click relative to the upper-left corner of the Control.

Return True if you are going to handle the MouseDown. In such a case:

- The Action event, if any, will not execute and the state of the object will not change.
- You will receive the MouseDrag and MouseUp events.

If you return False, the system handles the MouseDown so the above event handlers do not get called.

6.13.17 MouseDrag(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event fires continuously after the mouse button was pressed inside the Control.

Notes:

Mouse location is local to the control passed in to x, y.

As this event is fired continuously (hundreds of time per second), it is your responsibility to determine if the mouse has really moved.

6.13.18 MouseUp(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was released.

Notes: Use the x and y parameters to determine if the mouse button was released within the control's boundaries.

6.13.19 ScaleFactorChanged(NewFactor as Double)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backing store scale factor has changed.

Notes: Please invalidate any cached bitmaps or other relevant state.

6.14 class NSButtonMBS

6.14.1 class NSButtonMBS

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The Cocoa class for a button control.

Notes: Subclass of the NSControlMBS class.

6.14.2 Methods

6.14.3 Constructor

Plugin Version: 8.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new button with size 100/100 and position 0/0

Example:

```
dim t as new NSButtonMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.14.4 Constructor(Handle as Integer) 301
- 6.14.5 Constructor(left as Double, top as Double, width as Double, height as Double) 302
- 6.14.6 Constructor(Title as String, Image as NSImageMBS = nil, Type as Integer = 0) 302

6.14.4 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSButton handle.

Example:

```
dim t as new NSButtonMBS(0, 0, 100, 100)
```

```
dim v as new NSButtonMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSButton and the plugin retains this handle.

See also:

- 6.14.3 Constructor 301

- 6.14.5 Constructor(left as Double, top as Double, width as Double, height as Double) 302
- 6.14.6 Constructor(Title as String, Image as NSImageMBS = nil, Type as Integer = 0) 302

6.14.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new button with the given size and position.

Example:

```
dim x as new NSButtonMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.

See also:

- 6.14.3 Constructor 301
- 6.14.4 Constructor(Handle as Integer) 301
- 6.14.6 Constructor(Title as String, Image as NSImageMBS = nil, Type as Integer = 0) 302

6.14.6 Constructor(Title as String, Image as NSImageMBS = nil, Type as Integer = 0)

Plugin Version: 16.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new button with default settings.

Notes:

For macOS 10.12, we use the convenience functions from Apple.

For older systems, we use our own code.

Title is the title to use. Can be empty.

Image is the image to use. Can be nil.

Type is the type, e.g. NSMomentaryLightButton.

See also:

- 6.14.3 Constructor 301
- 6.14.4 Constructor(Handle as Integer) 301
- 6.14.5 Constructor(left as Double, top as Double, width as Double, height as Double) 302

6.14.7 setButtonType(buttonType as Integer)

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets how the button highlights while pressed and how it shows its state.

Notes:

Use these constants:

NSMomentaryLightButton	= 0
NSPushOnPushOffButton	= 1
NSToggleButton	= 2
NSSwitchButton	= 3
NSRadioButton	= 4
NSMomentaryChangeButton	= 5
NSOnOffButton	= 6
NSMomentaryPushInButton	= 7

6.14.8 setNextState

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the view to its next state.

Notes: If the button has three states, it cycles through them in this order: on, off, mixed, on, and so forth. If the button has two states, it toggles between them.

6.14.9 Properties**6.14.10 allowsMixedState as boolean**

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the button allows a mixed state.

Notes: (Read and Write property)

6.14.11 alternateImage as NSImageMBS

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The image that appears on the button when it's in its alternate state.

Notes:

The image displayed by the button when it's in its alternate state, or nil if there is no alternate image. Note that some button types don't display an alternate image. Buttons don't display images by default.

(Read and Write property)

6.14.12 `alternateTitle` as string

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The title that the button displays when it's in its alternate state.

Notes: (Read and Write property)

6.14.13 `attributedAlternateTitle` as `NSAttributedStringMBS`

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The title that appears on the button when it's in its alternate state to the given attributed string.

Notes: (Read and Write property)

6.14.14 `attributedTitle` as `NSAttributedStringMBS`

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The title that the button displays in its normal state as an attributed string.

Notes: (Read and Write property)

6.14.15 `backgroundColor` as `NSColorMBS`

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The background color.

Notes:

The background color is used only when drawing borderless buttons.
(Read and Write property)

6.14.16 `bezelColor` as `NSColorMBS`

Plugin Version: 16.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The color of the button's bezel, in appearances that support it.

Notes: (Read and Write property)

6.14.17 `bezelStyle` as Integer

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The appearance of the border, if the view has one.

Notes:

Use this constants:

NSRoundedBezelStyle	= 1
NSRegularSquareBezelStyle	= 2
NSThickSquareBezelStyle	= 3
NSThickerSquareBezelStyle	= 4
NSDisclosureBezelStyle	= 5
NSShadowlessSquareBezelStyle	= 6
NSCircularBezelStyle	= 7
NSTexturedSquareBezelStyle	= 8
NSHelpButtonBezelStyle	= 9
NSSmallSquareBezelStyle	= 10
NSTexturedRoundedBezelStyle	= 11
NSRoundRectBezelStyle	= 12
NSRecessedBezelStyle	= 13
NSRoundedDisclosureBezelStyle	= 14

(Read and Write property)

6.14.18 image as NSImageMBS

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The view's image.

Notes:

A button's image is displayed when the button is in its normal state, or all the time for a button that doesn't change its contents when highlighting or displaying its alternate state.

(Read and Write property)

6.14.19 imageDimsWhenDisabled as Boolean

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receivers image appears "dim" when the button cell is disabled.

Notes:

True to indicate that the button's image should dim when the button is disabled.

By default, all button types except NSSwitchButton and NSRadioButton do dim when disabled. When NSSwitchButtons and NSRadioButtons are disabled, only the associated text dims. The default setting for this condition is reasserted whenever you set ButtonType, so be sure to specify the button cells type before you set ImageDimsWhenDisabled.

(Read and Write property)

6.14.20 imageHugsTitle as Boolean

Plugin Version: 16.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether image hugs title.

Notes:

Available in macOS 10.12 and newer.
(Read and Write property)

6.14.21 imagePosition as Integer

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The position of the button's image relative to its title.

Notes:

Value can be:

NSNoImage	0	The cell doesn't display an image.
NSImageOnly	1	The cell displays an image, but not a title.
NSImageLeft	2	The image is to the left of the title.
NSImageRight	3	The image is to the right of the title.
NSImageBelow	4	The image is below the title.
NSImageAbove	5	The image is above the title.
NSImageOverlaps	6	The image overlaps the title.

(Read and Write property)

6.14.22 imageScaling as Integer

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The scale factor for the receiver's image.

Notes:

These constants specify a cell's image scaling behavior.

NSImageScaleProportionallyDown	0	If it is too large for the destination, scale the image down while preserving the aspect ratio.
NSImageScaleAxesIndependently	1	Scale each dimension to exactly fit destination. This setting does not preserve the aspect ratio of the image.
NSImageScaleNone	2	Do not scale the image.
NSImageScaleProportionallyUpOrDown	3	Scale the image to its maximum possible dimensions while both staying within the destination area and preserving its aspect ratio.

Available in OS X v10.5 and later.
(Read and Write property)

6.14.23 isBordered as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the button has a border.

Notes: (Read and Write property)

6.14.24 isTransparent as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the button is transparent.

Notes: (Read and Write property)

6.14.25 keyEquivalent as string

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The key-equivalent character of the view.

Notes: (Read and Write property)

6.14.26 keyEquivalentModifierMask as Integer

Plugin Version: 8.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** the controls's keyboard equivalent modifier mask.

Example:

```
const NSShiftKeyMask=131.072
const NSControlKeyMask=262144
const NSAlternateKeyMask=524288
const NSCommandKeyMask=1048576
```

```
dim d as NSButtonMBS // your button
d.KeyEquivalent="A"
d.KeyEquivalentModifierMask=NSShiftKeyMask+NSCommandKeyMask+NSAlternateKeyMask // command-
option-shift
```

Notes:

Constants for the mask:

`NSAlphaShiftKeyMask = 65536`

Set if Caps Lock key is pressed.

Available in Mac OS X v10.0 and later.

`NSShiftKeyMask = 131072`

Set if Shift key is pressed.

Available in Mac OS X v10.0 and later.

`NSControlKeyMask = 262144`

Set if Control key is pressed.

Available in Mac OS X v10.0 and later.

`NSAlternateKeyMask = 524288`

Set if Option or Alternate key is pressed.

Available in Mac OS X v10.0 and later.

`NSCommandKeyMask = 1048576`

Set if Command key is pressed.

Available in Mac OS X v10.0 and later.

`NSNumericPadKeyMask = 2097152`

Set if any key in the numeric keypad is pressed. The numeric keypad is generally on the right side of the keyboard. This is also set if any of the arrow keys are pressed (`NSUpArrowFunctionKey`, `NSDownArrowFunctionKey`, `NSLeftArrowFunctionKey`, and `NSRightArrowFunctionKey`).

Available in Mac OS X v10.0 and later.

`NSHelpKeyMask = 4194304`

Set if the Help key is pressed.

Available in Mac OS X v10.0 and later.

`NSFunctionKeyMask = 8388608`

Set if any function key is pressed. The function keys include the F keys at the top of most keyboards (F1, F2, and so on) and the navigation keys in the center of most keyboards (Help, Forward Delete, Home, End, Page Up, Page Down, and the arrow keys).

Available in Mac OS X v10.0 and later.

`NSDeviceIndependentModifierFlagsMask = 16777216`

Used to retrieve only the device-independent modifier flags, allowing applications to mask off the device-dependent modifier flags, including event coalescing information.

Available in Mac OS X v10.4.

(Read and Write property)

6.14.27 maxAcceleratorLevel as Integer

Plugin Version: 15.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Configures the maximum allowed level for an NSMultiLevelAcceleratorButton, allowed values range from [1,5] .

Notes:

Defaults to 2.

Available on Mac OS X 10.10.3.

(Read and Write property)

6.14.28 showsBorderOnlyWhileMouseInside as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the view's border is displayed only when the cursor is over the button.

Notes:

If isBordered returns false, the border is never displayed, regardless of what this method returns.

(Read and Write property)

6.14.29 sound as Variant

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The sound played when the user presses the button.

Notes:

The sound that should be played when the user presses the button. The sound is played during a mouse-down event, such as NSLeftMouseDown.

Value is NSSoundMBS object.

(Read and Write property)

6.14.30 SpringLoaded as Boolean

Plugin Version: 15.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sends action on deep-press or extended hover while dragging.

Notes:

Defaults to false.

Available on Mac OS X 10.10.3.

(Read and Write property)

6.14.31 state as Integer

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The state of the button.

Notes:

This can be `NSOnState` (1), `NSOffState` (0), `NSMixedState` (-1).
(Read and Write property)

6.14.32 title as string

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The title displayed on the button when it's in its normal state.

Notes: (Read and Write property)

6.14.33 Constants

6.14.34 NSCircularBezelStyle=7

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes:

A round button with room for a small icon or a single character.

This style has both regular and small variants, but the large variant is available only in gray at this time.

6.14.35 NSDisclosureBezelStyle=5

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes:

A bezel style for use with a disclosure triangle.

To create the disclosure triangle, set the button bezel style to `NSDisclosureBezelStyle` and the button type to `NSOnOffButton`.

6.14.36 NSHelpButtonBezelStyle=9

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A round button with a question mark providing the standard help button look.

6.14.37 NSInlineBezelStyle=15

Plugin Version: 14.3. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: Inline Style.

6.14.38 NSMomentaryChangeButton=5

Plugin Version: 7.8. **Function:** One of the button types that can be specified using `ButtonType`.

Notes:

While the button is held down, the alternate image and alternate title are displayed.

The normal image and title are displayed when the button isn't pressed. This option is called "Momentary Change" in Interface Builder's Button Inspector.

6.14.39 NSMomentaryLightButton=0

Plugin Version: 7.8. **Function:** One of the button types that can be specified using `ButtonType`.

Notes:

While the button is held down it's shown as "lit," and also "pushed in" to the screen if the button is bordered.

This type of button is best for simply triggering actions, as it doesn't show its state; it always displays its normal image or title. This option is called "Momentary Light" in Interface Builder's Button Inspector.

6.14.40 NSMomentaryPushInButton=7

Plugin Version: 7.8. **Function:** One of the button types that can be specified using `ButtonType`.

Notes:

While the button is held down it's shown as "lit."

This type of button is best for simply triggering actions, as it doesn't show its state; it always displays its normal image or title. This option is called "Momentary Push In" in Interface Builder's Button Inspector.

6.14.41 NSOnOffButton=6

Plugin Version: 7.8. **Function:** One of the button types that can be specified using `ButtonType`.

Notes: The first click highlights the button; a second click returns it to the normal (unhighlighted) state.

6.14.42 NSPushOnPushOffButton=1

Plugin Version: 7.8. **Function:** One of the button types that can be specified using `ButtonType`.

Notes: The first click both highlights and causes the button to be "pushed in" if the button is bordered; a second click returns it to its normal state.

6.14.43 NSRadioButton=4

Plugin Version: 7.8. **Function:** One of the button types that can be specified using `ButtonType`.

Notes: This style is similar to `NSSwitchButton`, but it used to constrain a selection to a single element from several.

6.14.44 NSRecessedBezelStyle=13

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A bezel style that matches the recessed buttons in Mail, Finder and Safari.

6.14.45 NSRegularSquareBezelStyle=2

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A rectangular button with a 2 point border, designed for icons.

6.14.46 NSRoundedBezelStyle=1

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A rounded rectangle button, designed for text.

6.14.47 NSRoundedDisclosureBezelStyle=14

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A bezel style that matches the disclosure style used in the standard Save panel.

6.14.48 NSRoundRectBezelStyle=12

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A bezel style that matches the search buttons in Finder and Mail.

6.14.49 NSShadowlessSquareBezelStyle=6

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes:

Similar to `NSRegularSquareBezelStyle`, but has no shadow so you can abut the cells without overlapping shadows.

This style would be used in a tool palette, for example.

6.14.50 NSSmallSquareBezelStyle=10

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A simple square bezel style. Buttons using this style can be scaled to any size.

6.14.51 NSSwitchButton=3

Plugin Version: 7.8. **Function:** One of the button types that can be specified using `ButtonType`.

Notes: This style is a variant of `NSToggleButton` that has no border and is used to represent a checkbox.

6.14.52 NSTexturedRoundedBezelStyle=11

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A textured (metal) bezel style similar in appearance to the Finder's action (gear) button.

6.14.53 NSTexturedSquareBezelStyle=8

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A bezel style appropriate for use with textured (metal) windows.

6.14.54 NSThickerSquareBezelStyle=4

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A rectangular button with a 4 point border, designed for icons.

6.14.55 NSThickSquareBezelStyle=3

Plugin Version: 7.8. **Function:** One of the button styles that can be specified using `bezelStyle`.

Notes: A rectangular button with a 3 point border, designed for icons.

6.14.56 NSToggleButton=2

Plugin Version: 7.8. **Function:** One of the button types that can be specified using `ButtonType`.

Notes: After the first click, the button displays its alternate image or title; a second click returns the button to its normal state.

6.15 class NSClipViewMBS

6.15.1 class NSClipViewMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSClipView contains and scrolls the document view displayed by an NSScrollView.

Notes:

You normally don't need to program with NSClipViews, as NSScrollView handles most of the details of their operation.

An NSClipView holds the document view of an NSScrollView, clipping the document view to its frame, handling the details of scrolling in an efficient manner, and updating the NSScrollView when the document view's size or position changes. You don't normally use the NSClipView class directly; it's provided primarily as the scrolling machinery for the NSScrollView class. However, you might use the NSClipView class to implement a class similar to NSScrollView.

Interaction With NSScrollView

When using an NSClipView within an NSScrollView (the usual configuration), you should issue messages that control background drawing state to the NSScrollView, rather than messaging the NSClipView directly. This recommendation applies to the following methods:

- backgroundColor
- drawsBackground

The NSClipView methods are intended for when the NSClipView is used independently of a containing NSScrollView. In the usual case, NSScrollView should be allowed to manage the background-drawing properties of its associated NSClipView.

There is only one background-drawing state per NSScrollView/NSClipView pair. The two objects do not maintain independent and distinct drawsBackground and backgroundColor properties; rather, NSScrollView's accessors for these properties largely defer to the associated NSClipView and allow the NSClipView to maintain the state. In Mac OS X v10.2 and earlier system versions, NSScrollView maintained a cache of the last state it set for its NSClipView. If the NSClipView was sent a setDrawsBackground: message directly, the cache might not reflect the state accurately. This caching of state has been removed in Mac OS X v10.3.

It is also important to note that sending a setDrawsBackground message with a parameter of false to an NSScrollView has the added effect of sending the NSClipView a setCopiesOnScroll message with a parameter of false. The side effect of sending the setDrawsBackground message directly to the NSClipView is the appearance of "trails" (vestiges of previous drawing) in the document view as it is scrolled.

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard.

Subclass of the `NSViewMBS` class.

6.15.2 Methods

6.15.3 `autoscroll(theEvent as NSEventMBS)` as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Scrolls the receiver proportionally to theEvent's distance outside of it.

Notes:

theEvent's location should be expressed in the window's base coordinate system (which it normally is), not the receiving `NSClipView`'s. Returns true if any scrolling is performed; otherwise returns false.

Never invoke this method directly; instead, the `NSClipView`'s document view should repeatedly send itself `autoscroll:` messages when the cursor is dragged outside the `NSClipView`'s frame during a modal event loop initiated by a mouse-down event. The `NSView` class implements `autoscroll` to forward the message to the receiver's superview; thus the message is ultimately forwarded to the `NSClipView`.

6.15.4 `constrainScrollPoint(newOrigin as NSPointMBS)` as NSPointMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a scroll point adjusted from `proposedNewOrigin`, if necessary, to guarantee the receiver will still lie within its document view.

Notes: For example, if `proposedNewOrigin`'s y coordinate lies to the left of the document view's origin, then the y coordinate returned is set to that of the document view's origin.

6.15.5 Constructor

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new clipview with the given size and position.

Example:

```
dim x as new NSClipViewMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.

See also:

- 6.15.6 `Constructor(Handle as Integer)` 317
- 6.15.7 `Constructor(left as Double, top as Double, width as Double, height as Double)` 317

6.15.6 Constructor(Handle as Integer)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSClipView handle.

Example:

```
dim t as new NSClipViewMBS(0, 0, 100, 100)
dim v as new NSClipViewMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSClipView and the plugin retains this handle.

See also:

- 6.15.5 Constructor 316
- 6.15.7 Constructor(left as Double, top as Double, width as Double, height as Double) 317

6.15.7 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new NSClipView with the given size and position.

Example:

```
dim x as new NSClipViewMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.

See also:

- 6.15.5 Constructor 316
- 6.15.6 Constructor(Handle as Integer) 317

6.15.8 documentRect as NSRectMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the rectangle defining the document view's frame, adjusted to the size of the receiver if the document view is smaller.

Notes:

In other words, this rectangle is always at least as large as the receiver itself.

The document rectangle is used in conjunction with an `NSClipView`'s bounds rectangle to determine values for the indicators of relative position and size between the `NSClipView` and its document view. For example, `NSScrollView` uses these rectangles to set the size and position of the knobs in its scrollers. When the document view is much larger than the `NSClipView`, the knob is small; when the document view is near the same size, the knob is large; and when the document view is the same size or smaller, there is no knob.

6.15.9 `documentVisibleRect` as `NSRectMBS`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the exposed rectangle of the receiver's document view, in the document view's own coordinate system.

Notes: Note that this rectangle doesn't reflect the effects of any clipping that may occur above the `NSClipView` itself. To get the portion of the document view that's guaranteed to be visible, send it a `visibleRect` message.

6.15.10 `reflectScrolledClipView`(`clipView` as `NSClipViewMBS`)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adjusts the receiver's scrollers to reflect the size and positioning of its content view.

6.15.11 `scrollClipView`(`clipview` as `NSClipViewMBS`, `toPoint` as `NSPointMBS`)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the super-view of a clip view that the clip view needs to reset the origin of its bounds rectangle.

6.15.12 `scrollToPoint`(`newOrigin` as `NSPointMBS`)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Changes the origin of the receiver's bounds rectangle to `newOrigin`.

6.15.13 `viewBoundsChanged`(`notification` as `NSNotificationMBS`)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Handles an `NSViewBoundsDidChangeNotification`, passed in the `aNotification` argument, by updating a containing `NSScrollView` based on the new bounds.

6.15.14 viewFrameChanged(notification as NSNotificationMBS)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Handles an NSViewFrameDidChangeNotification, passed in the aNotification argument, by updating a containing NSScrollView based on the new frame.

6.15.15 Properties

6.15.16 backgroundColor as NSColorMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The color of the receiver's background.

Notes: (Read and Write computed property)

6.15.17 copiesOnScroll as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver copies rendered images while scrolling.

Notes:

If true, the receiver copies the existing rendered image to its new location while scrolling and only draws exposed portions of its document view. If false, the receiver always forces its document view to draw itself on scrolling.

(Read and Write computed property)

6.15.18 documentCursor as NSCursorMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The cursor object used over the receiver.

Notes: (Read and Write computed property)

6.15.19 documentView as NSViewMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The document view.

Notes:
Gets or sets the receiver's document view. On set removes any previous document view, and sets the origin of the receiver's bounds rectangle to the origin of the new view's frame rectangle.

If the receiver is contained in an `NSScrollView`, you should set the `NSScrollView` `DocumentView` instead, so it can perform whatever updating it needs.

In the process of setting the document view, this method registers the receiver for the notifications `NSViewFrameDidChangeNotification` and `NSViewBoundsDidChangeNotification`, adjusts the key view loop to include the new document view, and updates a parent `NSScrollView`'s display if needed using `reflectScrolledClipView`. (Read and Write computed property)

6.15.20 `drawsBackground` as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver draws its background color.

Notes:

If your `NSClipView` is enclosed in an `NSScrollView`, you should set the `DrawsBackground` on the `NSScrollView`.

(Read and Write computed property)

6.15.21 Constants

6.15.22 `NSClipViewFindBarPositionAboveContent = 1`

Plugin Version: 11.3. **Function:** One of the constants to define the position of the find bar in relation to the scroll view.

Notes:

The find bar is displayed above the scroll view content.
Available in Mac OS X v10.7 and later.

6.15.23 `NSClipViewFindBarPositionAboveHorizontalRuler = 0`

Plugin Version: 11.3. **Function:** One of the constants to define the position of the find bar in relation to the scroll view.

Notes:

The find bar is displayed above the horizontal ruler, if visible.
Available in Mac OS X v10.7 and later.

6.15.24 NSClipViewFindBarPositionBelowContent = 2

Plugin Version: 11.3. **Function:** One of the constants to define the position of the find bar in relation to the scroll view.

Notes:

The find bar is displayed below the scroll view content.
Available in Mac OS X v10.7 and later.

6.15.25 NSScrollElasticityAllowed = 2

Plugin Version: 11.3. **Function:** One of the constants to determine the elasticity behavior for an axis of the scrollview.

Notes:

Allow content to be scrolled past its bounds on this axis in an elastic fashion.
Available in Mac OS X v10.7 and later.

6.15.26 NSScrollElasticityAutomatic = 0

Plugin Version: 11.3. **Function:** One of the constants to determine the elasticity behavior for an axis of the scrollview.

Notes:

Automatically determine whether to allow elasticity on this axis.
Available in Mac OS X v10.7 and later.

6.15.27 NSScrollElasticityNone = 1

Plugin Version: 11.3. **Function:** One of the constants to determine the elasticity behavior for an axis of the scrollview.

Notes:

Disallow scrolling beyond document bounds on this axis.
Available in Mac OS X v10.7 and later.

6.16 class NSComboBoxMBS

6.16.1 class NSComboBoxMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The ComboBox control from Cocoa.

Notes:

An NSComboBox is a kind of NSControl that allows you to either enter text directly (as you would with an NSTextField) or click the attached arrow at the right of the combo box and select from a displayed ("pop-up") list of items.

Subclass of the NSTextFieldMBS class.

6.16.2 Methods

6.16.3 addItemWithObjectValue(value as Variant)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds an object to the end of the receiver's internal item list.

Notes:

anObject: The object to add to the internal item list.

This method logs a warning if usesDataSource returns true.

6.16.4 Constructor

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new button with size 100/100 and position 0/0

Example:

```
dim t as new NSComboBoxMBS(0, 0, 100, 20)
```

Notes: On success the handle property is not zero.

See also:

- 6.16.5 Constructor(Handle as Integer) 323
- 6.16.6 Constructor(left as Double, top as Double, width as Double, height as Double) 323

6.16.5 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSComboBox handle.

Example:

```
dim t as new NSComboBoxMBS(0, 0, 100, 100)
dim v as new NSComboBoxMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSComboBox and the plugin retains this handle.

See also:

- 6.16.4 Constructor 322
- 6.16.6 Constructor(left as Double, top as Double, width as Double, height as Double) 323

6.16.6 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new combo box with the given size and position.

Example:

```
dim left,top,width,height as Integer
// define rectangle
dim x as new NSComboBoxMBS(left, top, width, height)
```

Notes: On success the handle property is not zero.

See also:

- 6.16.4 Constructor 322
- 6.16.5 Constructor(Handle as Integer) 323

6.16.7 deselectItemAtIndex(index as Integer)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Deselects the pop-up list item at the specified index if it's selected.

Notes:

index: The index of the item to deselect.

If the selection does in fact change, this method posts an `NSComboBoxSelectionDidChangeNotification` to the default notification center.

6.16.8 `indexOfItemWithObjectValue(value as Variant)` as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Searches the receiver's internal item list for the specified object and returns the lowest matching index.

Notes:

`anObject`: The object for which to return the index.

Returns the lowest index in the internal item list whose corresponding value is equal to that of the specified object. Objects are considered equal if they have the same id or if `isEqual` returns true.

If none of the objects in the receiver's internal item list are equal to `anObject`, `indexOfItemWithObjectValue` returns `NSNotFound` (-1).

This method logs a warning if `usesDataSource` returns true.

6.16.9 `indexOfSelectedItem` as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the last item selected from the pop-up list.

Notes:

Returns the index of the last item selected from the receiver's pop-up list or -1 if no item is selected.

Note that nothing is initially selected in a newly initialized combo box.

6.16.10 `noteNumberOfItemsChanged`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the number of items in its data source has changed.

Notes:

This method allows the receiver to update the scrollers in its displayed pop-up list without actually reloading data into the receiver. It is particularly useful for a data source that continually receives data in the background over a period of time, in which case the `NSComboBox` can remain responsive to the user while the data is received.

See the `NSComboBoxDataSource` informal protocol specification for information on the messages an `NSComboBox` sends to its data source.

6.16.11 `numberOfItems` as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the total number of items in the pop-up list.

6.16.12 `reloadData`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Marks the receiver as needing redisplay, so that it will reload the data for visible pop-up items and draw the new values.

6.16.13 `removeAllItems`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes all items from the receiver's internal item list.

Notes: This method logs a warning if `usesDataSource` returns true.

6.16.14 `removeItemAtIndex(index as Integer)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes the object at the specified location from the receiver's internal item list.

Notes:

`index`: The index of the object to remove. All items beyond `index` are moved up one slot to fill the gap.

The removed object receives a release message. This method raises an `NSRangeException` if `index` is beyond the end of the list and logs a warning if `usesDataSource` returns true.

6.16.15 `removeItemWithObjectValue(value as Variant)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes all occurrences of the given object from the receiver's internal item list.

Notes:

`anObject`: The object to remove from the internal item list. Objects are considered equal if they have the same id or if `isEqual`: returns true.

This method logs a warning if `usesDataSource` returns true.

6.16.16 `scrollItemAtIndexToTop(index as Integer)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Scrolls the receiver's pop-up list vertically so that the item at the specified index is as close to the top as possible.

Notes:

`index`: The index of the item to scroll to the top.

The pop-up list need not be displayed at the time this method is invoked.

6.16.17 `scrollItemAtIndexToVisible(index as Integer)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Scrolls the receiver's pop-up list vertically so that the item at the specified index is visible.

Notes:

`index`: The index of the item to make visible.

The pop-up list need not be displayed at the time this method is invoked.

6.16.18 `selectItemAtIndex(index as Integer)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects the pop-up list row at the given index.

Notes:

`index`: The index of the item to select in the pop-up list.

Posts an `NSComboBoxSelectionDidChangeNotification` to the default notification center if the selection does in fact change. Note that this method does not alter the contents of the combo box's text fieldsee `Setting the Combo Box's Value` for more information.

6.16.19 `selectItemWithObjectValue(value as Variant)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects the first pop-up list item that corresponds to the given object.

Notes:

anObject: The object to select in the pop-up list. Objects are considered equal if they have the same id or if isEqual: returns true.

This method logs a warning if usesDataSource returns true. Posts an NSComboBoxSelectionDidChangeNotification to the default notification center if the selection does in fact change. Note that this method doesn't alter the contents of the combo box's text fieldsee Setting the Combo Box's Value for more information.

6.16.20 Properties

6.16.21 completes as boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the receiver tries to complete what the user types in the text field.

Notes:

Returns true if the receiver tries to complete what the user types in the text field; otherwise false. (Read and Write computed property)

6.16.22 hasVerticalScroller as boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the receiver will display a vertical scroller.

Notes:

Returns true if the receiver will display a vertical scroller; otherwise false.

Note that the scroller will be displayed even if the pop-up list contains fewer items than will fit in the area specified for display.

(Read and Write computed property)

6.16.23 intercellSpacing as NSSizeMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the horizontal and vertical spacing between cells in the receiver's pop-up list.

Notes:

Returns the space between cells in the pop-up list. The default spacing is (3.0, 2.0). (Read and Write computed property)

6.16.24 `isButtonBordered` as boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the combo box button is set to display a border.

Notes:

True if the button has a border; otherwise false.

Available in Mac OS X v10.3 and later

(Read and Write computed property)

6.16.25 `itemHeight` as Double

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the height of each item in the receiver's pop-up list.

Notes:

The default item height is 16.0.

(Read and Write computed property)

6.16.26 `numberOfVisibleItems` as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the maximum number of items visible in the pop-up list.

Notes:

The maximum number of items visible at any one time in the pop-up list.

(Read and Write computed property)

6.16.27 `usesDataSource` as boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the receiver uses an external data source to populate its pop-up list.

Notes:

True if the receiver uses an external data source to populate the receiver's pop-up list, false if it uses an internal item list.

(Read and Write computed property)

6.17 control NSDatePickerControlMBS

6.17.1 control NSDatePickerControlMBS

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control to put a Mac OS X date picker on a Xojo window.

Notes:

This control embeds a special NSDatePicker subclass.

Designed for Xojo 2013r1 and newer. May work on Real Studio 2012, but not perfectly.

Please use view property to access the underlying object and set properties.

6.17.2 Properties

6.17.3 View as NSDatePickerMBS

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The reference to the underlying NSDatePicker.

Notes: (Read only property)

6.17.4 Events

6.17.5 Action

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called when user clicks on a date/time and changes something.

6.17.6 BoundsChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the bounds, but not the frame, changed.

6.17.7 EnableMenuItems

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** The event where you can enable menu items.

6.17.8 FrameChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the frame changed.

6.17.9 GotFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control itself got focus.

Notes: This only fires if the control itself got focus and not a sub control.

6.17.10 LostFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control lost focus.

Notes: This only fires if the control itself lost focus and not a sub control.

6.17.11 MenuAction(HitItem as MenuItem) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a menuitem is chosen.

Notes: This allows the control to react on its relevant menu items. Please return true if you handled it or false to give others a chance.

6.17.12 MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was pressed inside the controls region at the location passed in to x, y.

Notes:

The coordinates x and y are local to the control, i.e. they represent the position of the mouse click relative to the upper-left corner of the Control.

Return True if you are going to handle the MouseDown. In such a case:

- The Action event, if any, will not execute and the state of the object will not change.
- You will receive the MouseDrag and MouseUp events.

If you return False, the system handles the MouseDown so the above event handlers do not get called.

6.17.13 MouseDrag(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event fires continuously after the mouse button was pressed inside the Control.

Notes:

Mouse location is local to the control passed in to x, y.

As this event is fired continuously (hundreds of time per second), it is your responsibility to determine if the mouse has really moved.

6.17.14 MouseUp(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was released.

Notes: Use the x and y parameters to determine if the mouse button was released within the control's boundaries.

6.17.15 ScaleFactorChanged(NewFactor as Double)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backing store scale factor has changed.

Notes: Please invalidate any cached bitmaps or other relevant state.

6.18 class NSDatePickerMBS

6.18.1 class NSDatePickerMBS

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The plugin class for a Cocoa date picker.

Notes:

NSDatePicker is a subclass of NSControl that provides a user interface for displaying and editing an NSDate object.

Subclass of the NSControlMBS class.

6.18.2 Methods

6.18.3 Constructor

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new date picker with size 100/100 and position 0/0

Example:

```
dim t as new NSDatePickerMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.18.4 Constructor(Handle as Integer) 332
- 6.18.5 Constructor(left as Double, top as Double, width as Double, height as Double) 333

6.18.4 Constructor(Handle as Integer)

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSDatePicker handle.

Example:

```
dim t as new NSDatePickerMBS(0, 0, 100, 100)
```

```
dim v as new NSDatePickerMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSDatePicker and the plugin retains this handle.

See also:

6.18. CLASS NSDATEPICKERMBS	333
• 6.18.3 Constructor	332
• 6.18.5 Constructor(left as Double, top as Double, width as Double, height as Double)	333

6.18.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new date picker with the given size and position.

Example:

```
dim x as new NSDatePickerMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.
See also:

• 6.18.3 Constructor	332
• 6.18.4 Constructor(Handle as Integer)	332

6.18.6 Properties

6.18.7 backgroundColor as NSColorMBS

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The background color.

Notes:

See also drawsBackground property.
(Read and Write computed property)

6.18.8 Bezeled as Boolean

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver has a bezeled border.

Notes:

True if the receiver has a bezeled border, false otherwise.
(Read and Write computed property)

6.18.9 Bordered as Boolean

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver has a plain border.

Notes:

True if the receiver has a plain border, false otherwise.
(Read and Write computed property)

6.18.10 calendar as NSCalendarMBS

Plugin Version: 13.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The calendar.

Notes: (Read and Write computed property)

6.18.11 datePickerElements as Integer

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A bitmask that indicates which visual elements of the date picker are currently shown, and which won't be usable because they are hidden.

Notes: (Read and Write computed property)

6.18.12 datePickerMode as Integer

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The date picker mode.

Notes: (Read and Write computed property)

6.18.13 datePickerStyle as Integer

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The date picker style.

Notes: (Read and Write computed property)

6.18.14 dateValue as date

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The current date value.

Notes: (Read and Write computed property)

6.18.15 `drawsBackground` as Boolean

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver draws the background.

Notes:

True if the receiver draws the background, false otherwise.
(Read and Write computed property)

6.18.16 `locale` as NSLocaleMBS

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The locale.

Notes: (Read and Write computed property)

6.18.17 `maxDate` as date

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum date.

Notes:

nil indicates no maximum date.
(Read and Write computed property)

6.18.18 `minDate` as date

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The minimum date.

Notes:

nil indicates no minimum date.
(Read and Write computed property)

6.18.19 `textColor` as NSColorMBS

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The text color.

Notes: (Read and Write computed property)

6.18.20 `timeInterval` as `Double`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The time interval that represents the date range.

Notes:

The time interval that represents the receiver's date range. The date range begins at the date returned by `dateValue`. This method returns 0 when the receiver is not in the `NSRangeDateMode` mode.
(Read and Write computed property)

6.18.21 `timeZone` as `NSTimeZoneMBS`

Plugin Version: 13.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The time zone.

Notes: (Read and Write computed property)

6.18.22 Constants

6.18.23 `NSClockAndCalendarDatePickerStyle = 1`

Plugin Version: 12.2. **Function:** A constants for a date picker style.

Notes: Provide a visual clock and calendar style interface.

6.18.24 `NSEraDatePickerElementFlag = & h100`

Plugin Version: 12.2. **Function:** One of the constants which allows you to specify the date and time elements.

Notes:

Display and allow editing of the era of the date, if applicable.

This flag has been declared for possible future use, and does not yet have any effect.

6.18.25 `NSHourMinuteDatePickerElementFlag = & hC`

Plugin Version: 12.2. **Function:** One of the constants which allows you to specify the date and time elements.

Notes: Display and allow editing of the hour and minute elements of the date.

6.18.26 NSHourMinuteSecondDatePickerElementFlag = & hE

Plugin Version: 12.2. **Function:** One of the constants which allows you to specify the date and time elements.

Notes: Display and allow editing of the hour, minute and second elements of the date.

6.18.27 NSRangeDateMode = 1

Plugin Version: 12.2. **Function:** One of the constants to define whether the control provides a single date, or a range of dates.

Notes: Allow selection of a range of dates. (First implemented in Mac OS X v 10.5.)

6.18.28 NSSingleDateMode = 0

Plugin Version: 12.2. **Function:** One of the constants to define whether the control provides a single date, or a range of dates.

Notes: Allow selection of a single date.

6.18.29 NSTextFieldAndStepperDatePickerStyle = 0

Plugin Version: 12.2. **Function:** A constants for a date picker style.

Notes: Provide a text field and stepper style interface.

6.18.30 NSTextFieldDatePickerStyle = 2

Plugin Version: 12.2. **Function:** A constants for a date picker style.

Notes: Provide a text field interface.

6.18.31 NSTimeZoneDatePickerElementFlag = & h10

Plugin Version: 12.2. **Function:** One of the constants which allows you to specify the date and time elements.

Notes:

Display and allow editing of the time zone.

This flag has been declared for possible future use, and does not yet have any effect.

6.18.32 `NSYearMonthDatePickerElementFlag = & hC0`

Plugin Version: 12.2. **Function:** One of the constants which allows you to specify the date and time elements.

Notes: Display and allow editing of the year and month elements of the date.

6.18.33 `NSYearMonthDayDatePickerElementFlag = & hE0`

Plugin Version: 12.2. **Function:** One of the constants which allows you to specify the date and time elements.

Notes: Display and allow editing of the year, month and day elements of the date.

6.19 class NSImageViewMBS

6.19.1 class NSImageViewMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSImageView object displays a single image from an NSImage object in a frame and can optionally allow a user to drag an image to it.

Example:

```
ImageWell1.NSImageViewMBS.alphaValue = 0.5
```

Notes:

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard. Subclass of the NSControlMBS class.

6.19.2 Methods

6.19.3 Constructor

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new imageview with size 100/100 and position 0/0

Example:

```
dim t as new NSImageViewMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.19.4 Constructor(Handle as Integer) 339
- 6.19.5 Constructor(left as Double, top as Double, width as Double, height as Double) 340

6.19.4 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSImageView handle.

Example:

```
dim t as new NSImageViewMBS(0, 0, 100, 100)
dim v as new NSImageViewMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a `NSImageView` and the plugin retains this handle.
See also:

- 6.19.3 Constructor 339
- 6.19.5 Constructor(left as Double, top as Double, width as Double, height as Double) 340

6.19.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new image view with the given size and position.

Example:

```
dim x as new NSImageViewMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.
See also:

- 6.19.3 Constructor 339
- 6.19.4 Constructor(Handle as Integer) 339

6.19.6 Properties

6.19.7 allowsCutCopyPaste as Boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver allows the user to cut, copy and paste the image contents.

Notes:

True if the user can cut, copy, and paste the image contents; otherwise, false to prevent the use of pasteboard operations.

(Read and Write computed property)

6.19.8 animates as Boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the receiver automatically plays animated images.

Notes:

True if the receiver automatically plays animated images; otherwise, false. The default value is true for `UIImageView` objects you create programmatically. For `UIImageView` objects loaded from a nib file, the control takes the value set in Interface Builder.

The timing and looping characteristics of the animation are taken from the image data. If this method returns false, the receiver displays the first frame of the animation only.
(Read and Write computed property)

6.19.9 image as `NSImageMBS`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the `NSImage` object displayed by the receiver.

Notes: (Read and Write computed property)

6.19.10 imageAlignment as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The alignment of the receiver's image relative to its frame.

Notes:

For a list of possible values, see `NSImageAlign*` constants. The default value is `NSImageAlignCenter`.
(Read and Write computed property)

6.19.11 imageFrameStyle as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The style of the frame that borders the image.

Example:

```
ImageWell1 UIImageViewMBS.imageFrameStyle = UIImageViewMBS.NSImageFramePhoto
```

Notes:

Value is one of the frame style constants. For a list of frame styles, see `NSImageFrame*` constants.
(Read and Write computed property)

6.19.12 imageScaling as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The scaling mode used to fit the receiver's image into the frame.

Example:

```
ImageWell1.NSImageViewMBS.imageScaling = NSImageViewMBS.NSScaleNone
```

Notes:

Value is one of the image scaling constants. For a list of possible values, see NSScale* constants. (Read and Write computed property)

6.19.13 isEditable as Boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the user can drag a new image into the frame.

Notes:

True if the user can drag an image into the receiver's frame; otherwise, false. (Read and Write computed property)

6.19.14 Constants

6.19.15 NSImageAlignBottom = 5

Plugin Version: 10.0. **Function:** One of the constants to specify the location of the image in the frame using the imageAlignment property.

Notes: Align the image with the bottom edge of the cell.

6.19.16 NSImageAlignBottomLeft = 6

Plugin Version: 10.0. **Function:** One of the constants to specify the location of the image in the frame using the imageAlignment property.

Notes: Align the image with the bottom and left edges of the cell.

6.19.17 NSImageAlignBottomRight = 7

Plugin Version: 10.0. **Function:** One of the constants to specify the location of the image in the frame using the `imageAlignment` property.

Notes: Align the image with the bottom and right edges of the cell.

6.19.18 NSImageAlignCenter = 0

Plugin Version: 10.0. **Function:** One of the constants to specify the location of the image in the frame using the `imageAlignment` property.

Notes: Center the image in the cell.

6.19.19 NSImageAlignLeft = 4

Plugin Version: 10.0. **Function:** One of the constants to specify the location of the image in the frame using the `imageAlignment` property.

Notes: Align the image with the left edge of the cell.

6.19.20 NSImageAlignRight = 8

Plugin Version: 10.0. **Function:** One of the constants to specify the location of the image in the frame using the `imageAlignment` property.

Notes: Position the image along the right edge of the cell.

6.19.21 NSImageAlignTop = 1

Plugin Version: 10.0. **Function:** One of the constants to specify the location of the image in the frame using the `imageAlignment` property.

Notes: Position the image along the top edge of the cell.

6.19.22 NSImageAlignTopLeft = 2

Plugin Version: 10.0. **Function:** One of the constants to specify the location of the image in the frame using the `imageAlignment` property.

Notes: Align the image with the top and left edges of the cell.

6.19.23 `NSImageAlignTopRight = 3`

Plugin Version: 10.0. **Function:** One of the constants to specify the location of the image in the frame using the `imageAlignment` property.

Notes: Align the image with the top and right edges of the cell.

6.19.24 `NSImageFrameButton = 4`

Plugin Version: 10.0. **Function:** One of the frame constants for the `imageFrameStyle` property.

Notes: A convex bezel that makes the image stand out in relief, like a button

6.19.25 `NSImageFrameGrayBezel = 2`

Plugin Version: 10.0. **Function:** One of the frame constants for the `imageFrameStyle` property.

Notes: A gray, concave bezel that makes the image look sunken

6.19.26 `NSImageFrameGroove = 3`

Plugin Version: 10.0. **Function:** One of the frame constants for the `imageFrameStyle` property.

Example:

```
ImageWell1.NSImageViewMBS.imageFrameStyle = NSImageViewMBS.NSImageFrameGroove
```

Notes: A thin groove that looks etched around the image

6.19.27 `NSImageFrameNone = 0`

Plugin Version: 10.0. **Function:** One of the frame constants for the `imageFrameStyle` property.

Notes: An invisible frame

6.19.28 `NSImageFramePhoto = 1`

Plugin Version: 10.0. **Function:** One of the frame constants for the `imageFrameStyle` property.

Notes: A thin black outline and a dropped shadow

6.19.29 NSScaleNone = 2

Plugin Version: 10.0. **Function:** One of the scale constants.

6.19.30 NSScaleProportionally = 0

Plugin Version: 10.0. **Function:** One of the scale constants.

6.19.31 NSScaleToFit = 1

Plugin Version: 10.0. **Function:** One of the scale constants.

6.20 control NSOutlineControlMBS

6.20.1 control NSOutlineControlMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control for a NSOutlineView.

Notes: Please use NSOutlineControlMBS for hierarchical lists and NSTableControlMBS for normal lists.

6.20.2 Properties

6.20.3 AcceptTabs as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the control should accept tab keys.

Notes:

If true, the plugin will not forward the tab keydown/keyup events to Xojo, because Xojo would do switch to next control.

(Read and Write property)

6.20.4 allowsColumnReordering as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view allows the user to rearrange columns by dragging their headers.

Notes:

The default value of this property is true, which allows the user to rearrange the table views columns. You can rearrange columns programmatically regardless of this setting.

(Read and Write property)

6.20.5 allowsColumnResizing as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view allows the user to resize columns by dragging between their headers.

Notes:

The default of this property is true, which allows the user to resize the table views columns. You can resize columns programmatically regardless of this setting.

(Read and Write property)

6.20.6 allowsColumnSelection as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view allows the user to select columns by clicking their headers.

Notes:

The default is false, which prevents the user from selecting columns (if you create the table view in Interface Builder, the default value is true). You can select columns programmatically regardless of this setting. (Read and Write property)

6.20.7 allowsEmptySelection as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view allows the user to select zero columns or rows.

Notes:

The default is true, which allows the user to select zero columns or rows. (Read and Write property)

6.20.8 allowsMultipleSelection as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view allows the user to select more than one column or row at a time.

Notes:

The default is false, which allows the user to select only one column or row at a time. You can select multiple columns or rows programmatically regardless of this setting. (Read and Write property)

6.20.9 autohidesScrollers as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean that indicates whether the scroll view automatically hides its scroll bars when they are not needed.

Notes:

The horizontal and vertical scroll bars are hidden independently of each other. When the value of this property is YES and the content of the scroll view doesn't extend beyond the size of the clip view on a given axis, the scroller on that axis is removed to leave more room for the content. (Read and Write property)

6.20.10 `hasHorizontalScroller` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean that indicates whether the scroll view has a horizontal scroller.

Notes:

When the value of this property is true, the scroll view allocates and displays a horizontal scroller as needed. The default value of this property is false.

(Read and Write property)

6.20.11 `hasVerticalScroller` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean that indicates whether the scroll view has a vertical scroller.

Notes:

When the value of this property is true, the scroll view allocates and displays a vertical scroller as needed. The default value of this property is false.

(Read and Write property)

6.20.12 `ScrollView` as `NSScrollViewMBS`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The scroll view used in this control.

Notes: (Read only property)

6.20.13 `View` as `NSOutlineViewMBS`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The outline view used in this control.

Notes: (Read only property)

See also:

- 6.20.90 `view(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as NSViewMBS`

6.20.14 Events

6.20.15 `acceptDrop(info as NSDraggingInfoMBS, item as NSOutlineViewItemMBS, index as Integer) as Boolean`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether a drop operation was successful.

Notes:

info: An object that contains more information about this dragging operation.

item: The parent of the item over which the cursor was placed when the mouse button was released.

index: The index of the child of item over which the cursor was placed when the mouse button was released.

Return true if the drop operation was successful, otherwise false.

The data source should incorporate the data from the dragging pasteboard in the implementation of this method. You can get the data for the drop operation from info using the `draggingPasteboard` method. The return value indicates success or failure of the drag operation to the system.

6.20.16 BoundsChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the bounds, but not the frame, changed.

6.20.17 `childOfItem(index as Integer, item as NSOutlineViewItemMBS) as NSOutlineViewItemMBS`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the child item at the specified index of a given item.

Notes:

index: The index of the child item from item to return.

item: An item in the data source.

Return the child item at index of item. If item is nil, returns the appropriate child item of the root object.

Children of a given parent item are accessed sequentially. In order for the collapsed state of the outline view to remain consistent when it is reloaded you must always return the same object for a specified child and item.

Do not call `reloadData` from this method.

This event is called very frequently, so it must be efficient.

6.20.18 ColumnDidMove(notification as NSNotificationMBS, OldColumn as Integer, NewColumn as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked whenever the user moves a column in the outline view.

6.20.19 ColumnDidResize(notification as NSNotificationMBS, tableColumn as NSTableColumnMBS, OldWidth as Double)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked whenever the user resizes a column in the outline view.

6.20.20 concludeDragOperation(info as NSDraggingInfoMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging operation is complete, signaling the receiver to perform any necessary clean-up.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

For this method to be invoked, the previous performDragOperation must have returned true.

The destination implements this method to perform any tidying up that it needs to do, such as updating its visual representation now that it has incorporated the dragged data. This message is the last message sent from sender to the destination during a dragging session.

If the sender object's animatesToDestination property was set to true in prepareForDragOperation, then the drag image is still visible. At this point you should draw the final visual representation in the view. When this method returns, the drag image is removed from the screen. If your final visual representation matches the visual representation in the drag, this is a seamless transition.

6.20.21 dataCell(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as NSCellMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the cell to use in a given column for a given item.

Notes:

tableColumn: The table column for which the cell is required. This value may be nil.

item: The item for which the cell is required.

Return the cell to use in column tableColumn for item item, or nil. The cell must properly implement copyWithZone (since it may be copied by the outline view).

You can return a different data cell for any particular combination of table column and item, or a cell that will be used for the entire row (a full-width cell). If tableColumn is non-nil, you should return a cell. Typically, you should default to returning the result from [tableColumn dataCellForRow:row] .

When each row (identified by the item) is being drawn, this method is first called with a nil value for tableColumn. At this time, you can return a cell that is used to draw the entire row, acting like a group. If you do return a cell for the nil table column, your implementations of the other corresponding data source and delegate methods must be prepared to be invoked with a nil value for tableColumn. If do not return a cell for the nil table column, the method is called once for each column in the outline view, as usual.

6.20.22 didAddRowView(rowView as NSTableRowViewMBS, row as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implemented to know when a new row view is added to the table.

Notes:

rowView: The new row view.

row: The row to which the view was added.

This event is for NSView-based outline views. At this point, you can choose to add in extra views or modify any properties on rowView.

6.20.23 didClickTableColumn(tableColumn as NSTableColumnMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent at the time the mouse button subsequently goes up in outlineView and tableColumn has been clicked without having been dragged anywhere.

6.20.24 didDragTableColumn(tableColumn as NSTableColumnMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent at the time the mouse button goes up in outlineView and tableColumn has been dragged during the time the mouse button was down.

6.20.25 `didRemoveRowView(rowView as NSTableViewMBS, row as Integer)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implemented to know when a row view is removed from the table

Notes:

`rowView`: The row view that was removed.

`row`: The number of the row that was removed due to being moved offscreen, or -1 if the row was removed from the table so it is no longer valid.

The removed `rowView` may be reused by the table, so any additionally inserted views should be removed at this point.

6.20.26 `didTile`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The tableview did tile.

Notes: The internal tile function properly sizes the table view and its header view and marks it as needing display.

6.20.27 `DoubleClick`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse made a double click.

6.20.28 `draggingEnded(info as NSDraggingInfoMBS)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to be notified when a drag operation ends in some other destination.

Notes:

`sender`: The object sending the message; use it to get details about the dragging operation.

This method might be used by a destination doing auto-expansion in order to collapse any auto-expands.

6.20.29 `draggingExited(info as NSDraggingInfoMBS)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image enters destination bounds or frame; delegate returns dragging operation to perform.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

Invoked when a dragged image enters the destination but only if the destination has registered for the pasteboard data type involved in the drag operation. Specifically, this method is invoked when the mouse pointer enters the destination's bounds rectangle (if it is a view object) or its frame rectangle (if it is a window object).

This method must return a value that indicates which dragging operation the destination will perform when the image is released. In deciding which dragging operation to return, the method should evaluate the overlap between both the dragging operations allowed by the source (obtained from sender with the draggingSourceOperationMask method) and the dragging operations and pasteboard data types the destination itself supports.

If none of the operations is appropriate, this method should return NSDragOperationNone (this is the default response if the method is not implemented by the destination). A destination will still receive draggingUpdated and draggingExited even if NSDragOperationNone is returned by this method.

6.20.30 draggingSessionEnded(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this method to know when the given dragging session has ended.

Notes:

session: The dragging session that ended.

screenPoint: The point onscreen at which the drag ended.

operation: A mask specifying the types of drag operations permitted by the dragging source.

You can implement this optional delegate method to know when the dragging source operation ended at a specific location, such as the trash (by checking for an operation of NSDragOperationDelete).

6.20.31 draggingSessionWillBegin(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, draggedItems() as NSOutlineViewItemMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this method know when the given dragging session is about to begin and potentially modify the dragging session.

Notes:

session: The dragging session that is about to begin.

screenPoint: The point onscreen at which the drag is to begin.

draggedItems: A array of items to be dragged, excluding items for which `pasteboardWriterForItem` returns `nil`.

The `draggedItems` array directly matches the pasteboard writer array used to begin the dragging session with the `NSView` method `beginDraggingSessionWithItems`. Hence, the order is deterministic, and can be used in `acceptDrop` when enumerating the `NSDraggingInfo` protocol's pasteboard classes.

6.20.32 EnableMenuItems

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event where you can enable menu items.

6.20.33 FrameChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the frame changed.

6.20.34 GotFocus

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control itself got focus.

Notes: This only fires if the control itself got focus and not a sub control.

6.20.35 heightOfRowByItem(item as NSOutlineViewItemMBS) as Double

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the height in points of the row containing item.

Notes:

item: The row item.

Return the height of the row.

Values returned by this method should not include intercell spacing and must be greater than 0. Implement this event to support an outline view with varying row heights.

For large tables in particular, you should make sure that this method is efficient. NSOutlineView may cache the values this method returns, so if you would like to change a row's height make sure to invalidate the row height by calling `noteHeightOfRowsWithIndexesChanged`. NSOutlineView automatically invalidates its entire row height cache in `reloadData` and `noteNumberOfRowsChanged`.

If you call `viewAtColumn` or `rowViewAtRow` within your implementation of this method, an exception is thrown.

To avoid the possibility of a hang due to unexpected recursion, don't call geometry-calculating methods such as `bounds`, `rectOfColumn`, or any NSTableView method that calls `tile` within your implementation of this method.

6.20.36 `isGroupItem(item as NSOutlineViewItemMBS)` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean that indicates whether a given row should be drawn in the group row style.

Notes:

item: An item in the outline view.

Return true to indicate a particular row should have the "group row" style drawn for that row, otherwise false.

If the cell in that row is an instance of NSTextFieldCell and contains only a string value, the group row style attributes are automatically applied for that cell.

6.20.37 `isItemExpandable(item as NSOutlineViewItemMBS)` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the a given item is expandable.

Notes:

item: An item in the data source.

Returns true if item can be expanded to display its children, otherwise NO.

This method may be called quite often, so it must be efficient.

Do not call `reloadData` from this method.

6.20.38 `ItemDidCollapse(notification as NSNotificationMBS, item as NSOutlineViewItemMBS)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the did collapse notification is postedthat is, whenever the user collapses an item in the outline view.

6.20.39 `ItemDidExpand(notification as NSNotificationMBS, item as NSOutlineViewItemMBS)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when notification is postedthat is, whenever the user expands an item in the outline view.

6.20.40 `itemForPersistentObject(PersistentObject as Variant) as NSOutlineViewItemMBS`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked by `outlineView` to return the item for the archived object.

Notes:

`object`: An archived representation of an item in `outlineView`'s data source.

Return the unarchived item corresponding to `object`. If the item is an archived object, this method may return the object.

When the outline view is restoring the saved expanded items, this method is called for each expanded item, to translate the archived object to an outline view item.

You must implement this method if you are automatically saving expanded items (that is, if `autosaveExpandedItems` returns true).

6.20.41 `ItemWillCollapse(notification as NSNotificationMBS, item as NSOutlineViewItemMBS)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when notification is postedthat is, whenever the user is about to collapse an item in the outline view.

6.20.42 ItemWillExpand(notification as NSNotificationMBS, item as NSOutlineViewItemMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when notification is posted that is, whenever the user is about to expand an item in the outline view.

6.20.43 LeftMouseDown(e as NSEventMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has pressed the left mouse button.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.20.44 LeftMouseDragged(e as NSEventMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has moved the mouse with the left button pressed.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.20.45 LeftMouseUp(e as NSEventMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has released the left mouse button.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.20.46 LostFocus

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control lost focus.

Notes: This only fires if the control itself lost focus and not a sub control.

6.20.47 MenuAction(HitItem as MenuItem) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a menuitem is chosen.

Notes: This allows the control to react on its relevant menu items. Please return true if you handled it or false to give others a chance.

6.20.48 `MouseDown(x as Integer, y as Integer, Modifiers as Integer)` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was pressed inside the controls region at the location passed in to x, y.

Notes:

The coordinates x and y are local to the control, i.e. they represent the position of the mouse click relative to the upper-left corner of the Control.

Return True if you are going to handle the MouseDown. In such a case:

- The Action event, if any, will not execute and the state of the object will not change.
- You will receive the MouseDrag and MouseUp events.

If you return False, the system handles the MouseDown so the above event handlers do not get called.

6.20.49 `mouseDownInHeaderOfTableColumn(tableColumn as NSTableColumnMBS)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Event sent whenever the mouse button is clicked in outlineView while the cursor is in a column header tableColumn.

6.20.50 `MouseDrag(x as Integer, y as Integer)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event fires continuously after the mouse button was pressed inside the Control.

Notes:

Mouse location is local to the control passed in to x, y.

As this event is fired continuously (hundreds of time per second), it is your responsibility to determine if the mouse has really moved.

6.20.51 `MouseUp(x as Integer, y as Integer)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was released.

Notes: Use the x and y parameters to determine if the mouse button was released within the control's boundaries.

6.20.52 `namesOfPromisedFilesDroppedAtDestination(dropDestination as folderItem, DraggedItems() as NSOutlineViewItemMBS) as string()`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array of filenames for the created files that the receiver promises to create.

Notes:

dropDestination: The drop location where the files are created.

items: The items being dragged.

Returns an array of filenames (not full paths) for the created files that the receiver promises to create.

For more information on file promise dragging, see documentation on the NSDraggingSource protocol and `namesOfPromisedFilesDroppedAtDestination`.

6.20.53 `nextTypeSelectMatchFromItem(startItem as NSOutlineViewItemMBS, endItem as NSOutlineViewItemMBS, searchString as String) as NSOutlineViewItemMBS`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the first item that matches the searchString from within the range of startItem to endItem.

Notes:

startItem: The first item to search.

endItem: The item before which to stop searching. It is possible for endItem to be less than startItem if the search will wrap.

searchString: The string for which to search.

Returns the first item from within the range of startItem to endItem that matches the searchString, or nil if there is no match.

Implement this method if you want to control how type selection works. You should include startItem as a possible match, but do not include endItem.

It is not necessary to implement this event in order to support type select.

6.20.54 `numberOfChildrenOfItem(item as NSOutlineViewItemMBS) as Integer`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of child items encompassed by a given item.

Notes:

item: An item in the data source.

Returns the number of child items encompassed by item. If item is nil, this method should return the number of children for the top-level item.

The `numberOfChildrenOfItem` method is called very frequently, so it must be efficient.

Do not call `reloadData` from this method.

6.20.55 `objectValue(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as Variant`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked by `outlineView` to return the data object associated with the specified item.

Notes:

tableColumn: A column in `outlineView`.

item: An item in the data source in the specified `tableColumn` of the view.

Returns the item is located in the specified `tableColumn` of the view.

Do not call `reloadData` from this method.

6.20.56 `OtherMouseDown(e as NSEventMBS) as Boolean`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has pressed a mouse button other than the left or right one.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.20.57 OtherMouseDragged(e as NSEventMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has moved the mouse with a button other than the left or right button pressed.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.20.58 OtherMouseUp(e as NSEventMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has released a mouse button other than the left or right button.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.20.59 pasteboardWriterForItem(item as NSOutlineViewItemMBS) as NSPasteboardItemMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this method to enable the table to be an NSDraggingSource that supports dragging multiple items.

Notes:

item: The item for which to return a pasteboard writer.

Returns a NSPasteboardItem object.

If this method is implemented, then writeItems is not called.

6.20.60 persistentObjectForItem(item as NSOutlineViewItemMBS) as Variant

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked by outlineView to return an archived object for item.

Notes:

item: The item for which to return an archived object.

Returns an archived representation of item. If the item is an archived object, this method may return the item.

When the outline view is saving the expanded items, this method is called for each expanded item, to translate the outline view item to an archived object.

You must implement this method if you are automatically saving expanded items (that is, if `autosaveExpandedItems` returns true).

6.20.61 `RightMouseDown(e as NSEventMBS)` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the view that the user has pressed the right mouse button.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.20.62 `RightMouseDragged(e as NSEventMBS)` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has moved the mouse with the right button pressed .

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.20.63 `RightMouseUp(e as NSEventMBS)` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has released the right mouse button.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.20.64 `rowViewForItem(item as NSOutlineViewItemMBS)` as NSTableViewMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this method to return a custom `NSTableView` for a particular item.

Notes:

item: The item displayed by the returned table row view.

Return an instance or subclass of `NSTableView`. If nil is returned, a `NSTableView` instance is created and used.

This method, if implemented, is only invoked for `NSView`-based outline views.

6.20.65 ScaleFactorChanged(NewFactor as Double)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backing store scale factor has changed.

Notes: Please invalidate any cached bitmaps or other relevant state.

6.20.66 SelectionDidChange(notification as NSNotificationMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the selection did change notification is postedthat is, immediately after the outline views selection has changed.

6.20.67 selectionIndexesForProposedSelection(proposedSelectionIndexes as NSIndexSetMBS) as NSIndexSetMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the delegate to modify the proposed selection.

Notes:

proposedSelectionIndexes: An index set containing the indexes of the proposed selection.

Return an NSIndexSet instance containing the indexes of the new selection. Return proposedSelectionIndexes if the proposed selection is acceptable, or the value of the table views existing selection to avoid changing the selection.

This method may be called multiple times with one new index added to the existing selection to find out if a particular index can be selected when the user is extending the selection with the keyboard or mouse.

Implementation of this method is optional. If implemented, this method will be called instead of willDisplayOutlineCell.

If not implemented or returns nil, the plugin will return proposedSelectionIndexes.

6.20.68 SelectionIsChanging(notification as NSNotificationMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when notification is postedthat is, whenever the outline views selection changes.

6.20.69 `selectionShouldChangeInOutlineView` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the outline view should change its selection.

Notes:

Return true to permit `outlineView` to change its selection (typically a row being edited), false to deny permission.

For example, if the user is editing a cell and enters an improper value, the delegate can prevent the user from selecting or editing any other cells until a proper value has been entered into the original cell. You can implement this method for complex validation of edited rows based on the values of any of their cells.

6.20.70 `setObjectValue(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS, value as Variant)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Set the data object for a given item in a given column.

Notes:

object: The new value for the item.

tableColumn: A column in `outlineView`.

item: An item in the data source in the specified `tableColumn` of the view.

The item is located in the specified `tableColumn` of the view.

Do not call `reloadData` from this method.

6.20.71 `shouldCollapseAutoExpandedItemsForDeposited(deposited as Boolean, superResult as Boolean) as Boolean`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether auto-expanded items should return to their original collapsed state.

Notes:

deposited: If true, the drop terminated successfully; if false the drop failed.

Return true if auto-expanded items should return to their original collapsed state; otherwise false.

Implement this event to provide custom behavior. If the target of a drop is not auto-expanded (by hovering long enough) the drop target still gets expanded after a successful drop unless this method returns true. The default implementation returns false after a successful drop.

This method is called in a variety of situations. For example, it is called shortly after the `acceptDrop` method is called and also if the drag exits the outline view (exiting the view is treated the same as a failed drop). The return value of the `acceptDrop` method determines the incoming value of the deposited parameter.

6.20.72 `shouldCollapseItem(item as NSOutlineViewItemMBS) as Boolean`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the outline view should collapse a given item.

Notes:

item: The item that should collapse.

Return true to permit `outlineView` to collapse item, false to deny permission.

You can implement this method to disallow collapsing of specific items. For example, if the first row of your outline view should not be collapsed, your delegate method could contain this line of code:

```
return rowForItem(item ) <>0
```

6.20.73 `shouldEdit(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as Boolean`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the outline view should allow editing of a given item in a given table column.

Notes:

tableColumn: The table column.

item: The item.

Returns true to permit `outlineView` to edit the cell specified by `tableColumn` and `item`, false to deny permission.

If this method returns true, the cell may still not be editable for example, if you have set up a custom `NSTextFieldCell` as a data cell, it must return true for `isEditable` to allow editing.

You can implement this method to disallow editing of specific cells.

6.20.74 `shouldExpandItem(item as NSOutlineViewItemMBS) as Boolean`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the outline view should expand a given item.

Notes:

item: The item that should expand.

Returns true to permit `outlineView` to expand item, false to deny permission. You can implement this method to disallow expanding of specific items.

6.20.75 `shouldReorderColumn(columnIndex as Integer, newColumnIndex as Integer) as Boolean`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to the delegate to allow or prohibit the specified column to be dragged to a new location.

Notes:

columnIndex: The index of the column being dragged.

newColumnIndex: The proposed target index of the column.

Returns true if the column reordering should be allowed, otherwise false.

When a column is initially dragged by the user, the delegate is first called with a `newColumnIndex` value of -1. Returning false will disallow that column from being reordered at all. Returning true allows it to be reordered, and the delegate will be called again when the column reaches a new location.

The actual `NSTableColumn` instance can be retrieved from the `tableColumns` array. If this method is not implemented, all columns are considered reorderable.

6.20.76 `shouldSelectItem(item as NSOutlineViewItemMBS) as Boolean`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the outline view should select a given item.

Notes:

item: The item.

Return true to permit `outlineView` to select item, false to deny permission.

You implement this event to disallow selection of particular items.

For better performance and finer grain control over the selection, use dataCell.

6.20.77 shouldSelectTableColumn(tableColumn as NSTableColumnMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the outline view should select a given table column.

Notes:

tableColumn: The table column.

Return true to permit outlineView to select tableColumn, false to deny permission.

You can implement this method to disallow selection of specific columns.

6.20.78 shouldShowCellExpansion(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the delegate to control cell expansion for a specific column and item.

Notes:

tableColumn: A table column in the outline view.

item: An item in the outline view.

Returns true to allow an expansion tooltip to appear in the column tableColumn for item item, otherwise false.

Cell expansion can occur when the mouse hovers over the specified cell and the cell contents are unable to be fully displayed within the cell. If this method returns true, the full cell contents will be shown in a special floating tool tip view, otherwise the content is truncated.

6.20.79 shouldShowOutlineCellForItem(item as NSOutlineViewItemMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the specified item should display the outline cell (the disclosure triangle).

Notes:

item: An item in the outline view.

Returns true if the outline cell should be displayed, otherwise false.

Returning false causes `frameOfOutlineCellAtRow` to return `NSZeroRect`, hiding the cell. In addition, the row will not be collapsible by keyboard shortcuts. This method is called only for expandable rows.

6.20.80 `shouldTrackCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as Boolean`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether a given cell should be tracked.

Notes:

`cell`: The cell used to display item `item` in column `tableColumn`
`tableColumn`: A table column in the outline view.
`item`: An item in the outline view.

Returns true if the cell should be tracked for the item `item` in column `tableColumn`, otherwise false.

Normally, only selectable or selected cells can be tracked. If you implement this method, cells which are not selectable or selected can be tracked (and vice-versa). For example, this allows you to have a button cell in a table which does not change the selection, but can still be clicked on and tracked.

6.20.81 `shouldTypeSelectForEvent(e as NSEventMBS, searchString as String) as Boolean`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether type select should proceed for a given event and search string.

Notes:

`e`: The event that caused the message to be sent.
`searchString`: The string for which searching is to proceed. The search string is nil if no type select has begun.

Return true if type select should proceed, otherwise false.

Generally, this method will be called from `keyDown` and the event will be a key event.

6.20.82 sizeToFitWidthOfColumn(Column as Integer) as Double

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the delegate to provide custom sizing behavior when a columns resize divider is double clicked.

Notes:

column: The index of the column.

Returns the width of the specified column.

By default, NSOutlineView iterates every row in the table, accesses a cell via preparedCellAtColumn, and requests the cellSize to find the appropriate largest width to use.

For accurate results and performance, it is recommended that this method is implemented when using large tables. By default, large tables use a monte carlo simulation instead of iterating every row.

6.20.83 sortDescriptorsDidChange(oldDescriptors() as NSSortDescriptorMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked by an outline view to notify the data source that the descriptors changed and the data may need to be resorted.

Notes:

oldDescriptors: An array that contains the previous descriptors.

The data source typically sorts and reloads the data, and adjusts the selections accordingly. If you need to know the current sort descriptors and the data source does not itself manage them, you can get outlineView's current sort descriptors by sending it a sortDescriptors message.

6.20.84 textShouldBeginEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether text editing should be allowed.

Notes: Return true to allow.

6.20.85 textShouldEndEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether ending text editing should be allowed.

Notes: Return true to allow.

6.20.86 `toolTipForCell(cell as NSCellMBS, byref rect as NSRectMBS, tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS, mouseLocation as NSPointMBS) as String`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** When the cursor pauses over a given cell, the value returned from this method is displayed in a tooltip.

Notes:

cell: The cell for which to generate a tooltip.

rect: The proposed active area of the tooltip. To control the default active area, you can modify the rect parameter. By default, rect is computed as `cell.drawingRectForBounds(cellFrame)`.

tc: The table column that contains cell.

item: The item for which to display a tooltip.

mouseLocation: The current mouse location in view coordinates.

If you don't want a tooltip at that location, return nil or the empty string.

6.20.87 `typeSelectString(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as String`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the string that is used for type selection for a given column and item.

Notes:

tableColumn: A table column in the outline view.

item: An item in the outline view.

Return the string that is used for type selection. You may want to change what is searched for based on what is displayed, or simply return nil for that row and/or column to not be searched.

Implement this method if you want to control the string that is used for type selection. You may want to change what is searched for based on what is displayed, or simply return nil to specify that the given row and/or column should not be searched. By default, all cells with text in them are searched.

The default value when this delegate method is not implemented is:

`outlineView.preparedCellAtColumn(tableColumn, outlineView.rowForItem(item)).stringValue` and you can return this value from the event if you wish.

6.20.88 updateDraggingItemsForDrag(draggingInfo as NSDraggingInfoMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this method to enable the table to update dragging items as they are dragged over the view.

Notes: draggingInfo: The dragging info object.

6.20.89 validateDrop(info as NSDraggingInfoMBS, proposedItem as NSOutlineViewItemMBS, proposedChildIndex as Integer) as Integer

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Used by an outline view to determine a valid drop target.

Notes:

info: An object that contains more information about this dragging operation.

item: The proposed parent.

index: The proposed child location.

Returns a value that indicates which dragging operation the data source will perform.

Based on the mouse position, the outline view will suggest a proposed drop location. The data source may retarget a drop if desired by calling `setDropItem` and returning something other than `NSDragOperationNone`. You may choose to retarget for various reasons (for example, for better visual feedback when inserting into a sorted position).

Implementation of this method is optional.

6.20.90 view(tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS) as NSViewMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implemented to return the view used to display the specified item and column.

Notes:

tableColumn: The table column, or nil if the row is a group row.

item: The item displayed by the returned view.

Return the view to display the specified column and row. Returning nil is acceptable, in which case a view is not shown at that location.

This method is required if you wish to use `NSView` objects instead of `NSCell` objects for the cells within an outline view. Cells and views cannot be mixed within the same outline view.

It is recommended that the implementation of this method first call the `NSTableView` method `makeViewWithIdentifier` passing, respectively, the `tableColumn` parameters `identifier` and `self` as the owner to

attempt to reuse a view that is no longer visible. The frame of the view returned by this method is not important, and is automatically set by the outline view.

The view's properties should be properly set up before returning the result.

When using Cocoa bindings, this method is optional if at least one identifier has been associated with the table view at design time. If this method is not implemented, the outline view automatically calls `makeViewWithIdentifier` with the `tableColumn` parameter's identifier and the outline view's delegate as parameters, to attempt to reuse a previous view or automatically unarchive a prototype associated with the table view. The `autoresizingMask` of the returned view is automatically set to `NSViewHeightSizable` to resize properly on row height changes.

See also:

- 6.20.13 View as `NSOutlineViewMBS`

348

6.20.91 `willDisplayCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the delegate that the cell specified by the column and item will be displayed.

Notes:

cell: The cell.

tableColumn: The table column.

item: The item.

You can implement this method to modify cell to provide further setup for the cell in tableColumn and item. It is not safe to do drawing inside this method; you should only set up state for cell.

6.20.92 `willDisplayOutlineCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, item as NSOutlineViewItemMBS)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the delegate that an outline view is about to display a cell used to draw the expansion symbol.

Notes:

cell: The cell.

tableColumn: The table column.

item: The item.

Informs the event that outlineView is about to display a cell (an expandable cell (a cell that has the expansion symbol) for the column and item specified by tableColumn and item. The delegate can modify cell to alter its display attributes.

This method is not invoked when outlineView is about to display a non-expandable cell.

6.20.93 willTile

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The tableview will tile.

Notes: The internal tile function properly sizes the table view and its header view and marks it as needing display.

6.20.94 writeItems(items() as NSOutlineViewItemMBS, pasteboard as NSPasteboardMBS) as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether a drag operation is allowed.

Notes:

items: An array of the items participating in the drag.

pasteboard: The pasteboard to which to write the drag data.

Returns true if the drag operation is allowed, otherwise false.

Invoked by outlineView after it has been determined that a drag should begin, but before the drag has been started.

To refuse the drag, return false. To start a drag, return true and place the drag data onto the pboard (data, owner, and so on). The drag image and other drag-related information will be set up and provided by the outline view once this call returns with true.

6.21 class `NSOutlineViewItemMBS`

6.21.1 class `NSOutlineViewItemMBS`

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class to subclass for your items.

6.21.2 Methods

6.21.3 Constructor

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

6.21.4 `sortedArrayUsingDescriptor(values() as NSOutlineViewItemMBS, sortDescriptor as NSSortDescriptorMBS) as NSOutlineViewItemMBS()`

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a copy of the receiving array sorted as specified by a given a sort descriptor.

Notes:

`sortDescriptor`: The `NSSortDescriptor` objects.

Returns a copy of the receiving array sorted as specified by `sortDescriptor`.

6.21.5 `sortedArrayUsingDescriptors(values() as NSOutlineViewItemMBS, sortDescriptors() as NSSortDescriptorMBS) as NSOutlineViewItemMBS()`

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a copy of the receiving array sorted as specified by a given array of sort descriptors.

Notes:

`sortDescriptors`: An array of `NSSortDescriptor` objects.

Returns a copy of the receiving array sorted as specified by `sortDescriptors`.

The first descriptor specifies the primary key path to be used in sorting the receiving arrays contents. Any subsequent descriptors are used to further refine sorting of objects with duplicate values. See `NSSortDescriptor` for additional information.

6.21.6 Properties

6.21.7 Description as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The description text property.

Notes: (Read only property)

See also:

- 6.21.11 Description as String 375

6.21.8 Handle as Integer

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal object reference.

Notes: (Read and Write property)

6.21.9 valueForKey(key as String) as Variant

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Get/set the value for the property identified by a given key.

Notes:

key: The name of one of the receiver's properties.
(Read and Write computed property)

See also:

- 6.21.14 valueForKey(key as string) as Variant 376

6.21.10 Events

6.21.11 Description as String

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event when system queries description for object.

See also:

- 6.21.7 Description as String 375

6.21.12 setValueForKey(key as string, value as Variant)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sets the property of the receiver specified by a given key to a given value.

Notes:

value: The value for the property identified by key.

key: The name of one of the receiver's properties.

If key identifies a to-one relationship, relate the object specified by value to the receiver, unrelating the previously related object if there was one. Given a collection object and a key that identifies a to-many relationship, relate the objects contained in the collection to the receiver, unrelating previously related objects if there were any.

The search pattern that `setValueForKey` uses is described in Accessor Search Patterns in Key-Value Coding Programming Guide.

In a reference-counted environment, if the instance variable is accessed directly, value is retained.

6.21.13 setValueForUndefinedKey(key as string, value as Variant)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked by `setValueForKey` when it finds no property for a given key.

Notes:

value: The value for the key identified by key.

key: A string that is not equal to the name of any of the receiver's properties.

Subclasses can override this method to handle the request in some other way. The default implementation raises an `NSUndefinedKeyException`.

6.21.14 valueForKey(key as string) as Variant

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Return the value for the property identified by a given key.

Notes:

key: The name of one of the receiver's properties.

Returns the value for the property identified by key.

If event is not implemented, the search pattern that `valueForKey` uses to find the correct value to return is described in Accessor Search Patterns in Key-Value Coding Programming Guide.

See also:

- 6.21.9 `valueForKey(key as String) as Variant`

6.21.15 valueForKey(key as string) as Variant

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked by valueForKey when it finds no property corresponding to a given key.

Notes:

key: A string that is not equal to the name of any of the receiver's properties.

Subclasses can override this method to return an alternate value for undefined keys. The default implementation raises an NSUndefinedKeyException.

6.22 class NSOutlineViewMBS

6.22.1 class NSOutlineViewMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a hierarchical list.

Notes:

NSOutlineView is a subclass of NSTableView that uses a row-and-column format to display hierarchical data that can be expanded and collapsed, such as directories and files in a file system. A user can expand and collapse rows, edit values, and resize and rearrange columns.

Like a table view, an outline view does not store its own data, instead it retrieves data values as needed from a data source to which it has a weak reference.

MBS Plugin provides all events in NSOutlineControlMBS control.

An outline view has the following features:

- A user can expand and collapse rows.
- Each item in the outline view must be unique. In order for the collapsed state to remain consistent between reloads the item's pointer must remain the same and the item must maintain isEqual:sameness.
- The view gets data from a data source (see NSOutlineControlMBS).
- The view retrieves only the data that needs to be displayed.

Subclass of the NSTableViewMBS class.

6.22.2 Methods

6.22.3 child(index as Integer, ofItem as NSOutlineViewItemMBS) as NSOutlineViewItemMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the specified child of an item.

Notes:

index: The index of the child item in the parent.

item: The parent item whose child item you want to retrieve.

Returns the child item or nil if the item could not be found.

You can call this method on an outline view with either a static or dynamic data source. For an outline view whose contents are dynamic, this method may call out to the child event of the associated data source.

6.22.4 childIndexForItem(item as NSOutlineViewItemMBS) as Integer

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the child index of the specified item within its parent.

Notes: The performance of this method is O(1) at best and O(n) at worst.

6.22.5 collapseItem(item as NSOutlineViewItemMBS)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Collapses a given item.

Notes:

If item is not expanded or not expandable, does nothing

If collapsing takes place, posts item collapse notification.

See also:

- 6.22.6 collapseItem(item as NSOutlineViewItemMBS, collapseChildren as Boolean) 379

6.22.6 collapseItem(item as NSOutlineViewItemMBS, collapseChildren as Boolean)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Collapses a given item and, optionally, its children.

Notes:

item: An item in the receiver.

Starting in OS X version 10.5, passing 'nil' will collapse each item under the root in the outline view.

collapseChildren: If true, recursively collapses item and its children. If NO, collapses item only (identical to collapseItem:).

For example, this method is invoked with the collapseChildren parameter set to true when a user Option-clicks the disclosure triangle for an item in the outline view (to collapse the item and all its contained items). For each item collapsed, posts an item collapsed notification.

See also:

- 6.22.5 collapseItem(item as NSOutlineViewItemMBS) 379

6.22.7 Constructor

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new outline view with size 100/100 and position 0/0

Example:

```
dim t as new NSOutlineViewMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.22.8 Constructor(Handle as Integer) 380
- 6.22.9 Constructor(left as Double, top as Double, width as Double, height as Double) 380

6.22.8 Constructor(Handle as Integer)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSOutlineView handle.

Example:

```
dim t as new NSOutlineViewMBS(0, 0, 100, 100)
dim v as new NSOutlineViewMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSOutlineViewMBS and the plugin retains this handle.

See also:

- 6.22.7 Constructor 380
- 6.22.9 Constructor(left as Double, top as Double, width as Double, height as Double) 380

6.22.9 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new outline view with the given size and position.

Example:

```
dim x as new NSOutlineViewMBS(0, 0, 100, 100)
```

6.22. CLASS NSOUTLINEVIEWMBS 381

Notes: On success the handle property is not zero.

See also:

- 6.22.7 Constructor 380
- 6.22.8 Constructor(Handle as Integer) 380

6.22.10 expandItem(item as NSOutlineViewItemMBS)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Expands a given item.

Notes:

If item is not expandable or is already expanded, does nothing.

If expanding takes place, posts an item expanded notification.

See also:

- 6.22.11 expandItem(item as NSOutlineViewItemMBS, expandChildren as Boolean) 381

6.22.11 expandItem(item as NSOutlineViewItemMBS, expandChildren as Boolean)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Expands a specified item and, optionally, its children.

Notes:

item: An item in the receiver.

Starting in OS X version 10.5, passing 'nil' will expand each item under the root in the outline view.

expandChildren: If true, recursively expands item and its children. If false, expands item only (identical to expandItem).

For example, this method is invoked with the expandChildren parameter set to YES when a user Option-clicks the disclosure triangle for an item in the outline view (to expand the item and all its contained items).

For each item expanded, posts an item expanded notification.

See also:

- 6.22.10 expandItem(item as NSOutlineViewItemMBS) 381

6.22.12 frameOfOutlineCellAtRow(row as Integer) as NSRectMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the frame of the outline cell for a given row.

Notes:

row: The index of the row for which to return the frame.

Returns the frame of the outline cell for the row at index row, considering the current indentation and the value in the indentationMarkerFollowsCell property. If the row at index row is not an expandable row, returns NSZeroRect.

You can override this method in a subclass to return a custom frame for the outline button cell. If your override returns an empty rect, no outline cell is drawn for that row. You might do that, for example, so that the disclosure triangle will not be shown for a row that should never be expanded.

6.22.13 insertItemsAtIndexes(indexes as NSIndexSetMBS, Parent as NSOutlineViewItemMBS, animationOptions as Integer)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Inserts new items at the given indexes in the given parent with the specified optional animations.

Notes:

indexes: Indexes at which to insert items.

parent: The parent for the items, or nil if the parent is the root.

animationOptions: Animated slide effects used when inserting items.

This method parallels the insertRowsAtIndexes method of NSTableView and is used in a way similar to the insertObjects method of NSMutableArray. The method does nothing if parent is not expanded. The actual item values are determined by the data sources child event (which is called only after endUpdates to ensure data source integrity).

NSCell-based outline views must first call beginUpdates before calling this method.

You can call this method multiple times within the same beginUpdates/endUpdates block; new insertions move previously inserted new items, just like modifying an array. Inserting an index beyond what is available throws an exception.

6.22.14 insertRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Private method to block you from calling this method in NSTableViewMBS.

6.22.15 isExpandable(item as NSOutlineViewItemMBS) as Boolean

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether a given item is expandable.

Notes: True if item is expandablethat is, item can contain other items, otherwise false.

6.22.16 isItemExpanded(item as NSOutlineViewItemMBS) as Boolean

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether a given item is expanded.

Notes: True if item is expanded, otherwise false.

6.22.17 itemAtRow(row as Integer) as NSOutlineViewItemMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the item associated with a given row.

Notes:

row: The index of a row in the receiver.

Returns the item associated with row.

6.22.18 levelForItem(item as NSOutlineViewItemMBS) as Integer

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the indentation level for a given item.

Notes:

The indentation level for item. If item is nil (which is the root item), returns -1.

The levels are zero-basedthat is, the first level of displayed items is level 0.

6.22.19 levelForRow(row as Integer) as Integer

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the indentation level for a given row.

Notes:

The indentation level for row. For an invalid row, returns -1.

The levels are zero-basedthat is, the first level of displayed items is level 0.

6.22.20 `moveItemAtIndex(oldIndex as Integer, oldParent as NSOutlineViewItemMBS, newIndex as Integer, newParent as NSOutlineViewItemMBS)`

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Moves an item at a given index in the given parent to a new index in a new parent.

Notes:

`fromIndex`: Index of the item to be moved.

`oldParent`: The parent of the item to be moved.

`toIndex`: Index in the new parent to which the item is moved.

`newParent`: The parent of the item after it is moved.

This method parallels the `moveRowAtIndex` method of `NSTableView`. The `newParent` can be the same as `oldParent` to reorder an item within the same parent.

`NSCell`-based outline views must first call `beginUpdates` before calling this method.

You can call this method multiple times within the same `beginUpdates/endUpdates` block. Moving from an invalid index, or to an invalid index, throws an exception.

6.22.21 `moveRowAtIndex(oldIndex as Integer, newIndex as Integer)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Private method to block you from calling this method in `NSTableViewMBS`.

6.22.22 `NSOutlineViewColumnDidMoveNotification as String`

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Posted whenever a column is moved by user action in an `NSOutlineView` object.

Notes:

The notification object is the `NSOutlineView` object in which a column moved. The `userInfo` dictionary contains the following information:

`NSOldColumn`: An `NSNumber` object containing the integer value of the columns original index

`NSNewColumn`: An `NSNumber` object containing the integer value of the columns present index

6.22.23 NSOutlineViewColumnDidResizeNotification as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Posted whenever a column is resized in an NSOutlineView object.

Notes:

The notification object is the NSOutlineView object in which a column was resized. The userInfo dictionary contains the following information:

NSTableColumn: The column that was resized.

NSOldWidth: An NSNumber object containing the columns original width

6.22.24 NSOutlineViewDisclosureButtonKey as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** These key is used by the outline view to create disclosure buttons that collapse and expand items.

Notes: The normal triangle disclosure button.

6.22.25 NSOutlineViewItemDidCollapseNotification as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Posted whenever an item is collapsed in an NSOutlineView object.

Notes:

The notification object is the NSOutlineView object in which an item was collapsed. A collapsed items children lose their status as being selected. The userInfo dictionary contains the following information:

NSObject: The item that was collapsed (an id)

6.22.26 NSOutlineViewItemDidExpandNotification as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Posted whenever an item is expanded in an NSOutlineView object.

Notes:

The notification object is the NSOutlineView object in which an item was expanded. The userInfo dictionary contains the following information:

NSObject: The item that was expanded (an id)

6.22.27 `NSOutlineViewItemWillCollapseNotification` as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Posted before an item is collapsed (after the user clicks the arrow but before the item is collapsed).

Notes:

The notification object is the `NSOutlineView` object that contains the item about to be collapsed. A collapsed item's children will lose their status as being selected. The `userInfo` dictionary contains the following information:

`NSObject`: The item about to be collapsed (an id)

6.22.28 `NSOutlineViewItemWillExpandNotification` as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Posted before an item is expanded (after the user clicks the arrow but before the item is collapsed).

Notes:

The notification object is the outline view that contains an item about to be expanded. The `userInfo` dictionary contains the following information:

`NSObject`: The item that is to be expanded (an id)

6.22.29 `NSOutlineViewSelectionDidChangeNotification` as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Posted after the outline view's selection changes.

Notes: The notification object is the outline view whose selection changed. This notification does not contain a `userInfo` dictionary.

6.22.30 `NSOutlineViewSelectionIsChangingNotification` as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Posted as the outline view's selection changes (while the mouse button is still down).

Notes: The notification object is the outline view whose selection is changing. This notification does not contain a `userInfo` dictionary.

6.22.31 NSOutlineViewShowHideButtonKey as String

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** These key is used by the outline view to create disclosure buttons that collapse and expand items.

Notes: The Show/Hide button.

6.22.32 numberOfChildrenOfItem(item as NSOutlineViewItemMBS) as Integer

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of children for the specified parent item.

Notes:

item: The parent item.

Returns the number of children associated with the parent.

You can call this method on an outline view with either a static or dynamic data source. For an outline view whose contents are dynamic, this method may call out to the numberOfChildrenOfItem event of the associated data source.

6.22.33 parentForItem(item as NSOutlineViewItemMBS) as NSOutlineViewItemMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the parent for a given item.

Notes:

item: The item for which to return the parent.

Returns the parent for item, or nil if the parent is the root.

6.22.34 reloadItem(item as NSOutlineViewItemMBS)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Reloads and redisplay the data for the given item.

Notes:

Reloading the cell views associated with item occurs only in apps that link against macOS 10.12 and later. This method may cause the outline view to change its selection without calling the SelectionDidChange event.

See also:

- 6.22.35 reloadItem(item as NSOutlineViewItemMBS, reloadChildren as Boolean) 388

6.22.35 reloadItem(item as NSOutlineViewItemMBS, reloadChildren as Boolean)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Reloads a given item and, optionally, its children.

Notes:

item: An item in the receiver.

Starting in OS X version 10.5, passing 'nil' will reload everything under the root in the outline view.

reloadChildren: If true, recursively reloads item and its children. If false, reloads item only (identical to reloadItem).

It is not necessary, or efficient, to reload children if the item is not expanded.

See also:

- 6.22.34 reloadItem(item as NSOutlineViewItemMBS) 387

6.22.36 removeItemsAtIndexes(indexes as NSIndexSetMBS, Parent as NSOutlineViewItemMBS, animationOptions as Integer)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes items at the given indexes in the given parent with the specified optional animations.

Notes:

indexes: Indexes of the items to be removed.

parent: The parent of the items to be removed.

animationOptions: Animated slide effects used when removing items.

This method parallels the removeRowsAtIndexes method of NSTableView and is used in a way similar to the removeObjectAtIndexes method of NSMutableArray. The method does nothing if parent is not expanded. If any of the child items is expanded, then all of its child rows are also be removed.

NSCell-based outline views must first call beginUpdates before calling this method.

You can call this method multiple times within the same beginUpdates/endUpdates block; changes work just like modifying an array. Removing an item at an index beyond what is available throws an exception.

6.22.37 removeRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Private method to block you from calling this method in NSTableViewMBS.

6.22.38 rowForItem(item as NSOutlineViewItemMBS) as Integer

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the row associated with a given item.

Notes: The row associated with item, or -1 if item is nil or cannot be found.

6.22.39 setDropItem(item as NSOutlineViewItemMBS, dropChildIndex as Integer)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Used to retarget a proposed drop.

Notes:

item: The target item.

index: The drop index.

For example, to specify a drop on someOutlineItem, you specify item as someOutlineItem and index as NSOutlineViewDropOnItemIndex. To specify a drop between child 2 and 3 of someOutlineItem, you specify item as someOutlineItem and index as 3 (children are a zero-based index). To specify a drop on an un-expandable someOutlineItem, you specify item as someOutlineItem and index as NSOutlineViewDropOnItemIndex.

6.22.40 Properties**6.22.41 autoresizesOutlineColumn as Boolean**

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value that indicates whether the outline view resizes its outline column when the user expands or collapses items.

Notes:

The outline column contains the cells with the expansion symbols and is generally the first column. The default value of this property is true, which causes the outline column to be resized.

The outline column is resized based on how many indentation levels are exposed or hidden. For example, if expanding a row exposes a single indentation level, the outline column width is increased by one indentationPerLevel.

(Read and Write property)

6.22.42 `autosaveExpandedItems` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the expanded items are automatically saved across launches of the app.

Notes:

When the value of this property is true, the outline view saves the state of its expanded items and restores that state the next time the user launches the app. (If the outline view's `autosaveName` property is nil, or if you have not implemented the `itemForPersistentObject` and `persistentObjectForItem` events, this setting is ignored and outline information is not saved.) The configuration data is saved separately for each user and for each app. The default value of this property is NO.

You can have separate settings for the `autosaveExpandedItems` and `autosaveTableColumns` properties, so you could, for example, save expanded item information, but not table column positions.

(Read and Write property)

6.22.43 `indentationMarkerFollowsCell` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the indentation marker symbol displayed in the outline column should be indented along with the cell contents.

Notes:

When the value of this property is true, the indentation marker is indented along with the cell contents. When the value is false, the marker is always displayed left-justified in the column. The default value of this property is true.

(Read and Write property)

6.22.44 `indentationPerLevel` as Double

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The per-level indentation, measured in points.

Notes: (Read and Write property)

6.22.45 `outlinetableColumn` as `NSTableColumnMBS`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The table column in which hierarchical data is displayed.

Notes:

Each level of hierarchical data is indented by the amount specified by the `indentationPerLevel` property (the default is 16.0), and decorated with the indentation marker (disclosure triangle) on rows that are expandable. Outline table column data is archived with the rest of the outline views state information.

Attempts to set the value of this property to nil are silently ignored.

(Read and Write property)

6.22.46 `stronglyReferencesItems` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value that indicates whether the outline view retains and releases the objects returned from its data source.

Notes:

For Xojo applications we highly recommend to keep all items in arrays in Xojo, so they are not released by Xojo too early!

When the value of this property is true, the outline view retains and releases the objects returned to it from `dataSource`. When the value is NO, the outline view treats the objects as opaque items and assumes that the client has a retain on them. The default value is YES for applications linked on macOS 10.12 and later, and false for applications linked on earlier versions of macOS. If you require the legacy behavior and your app links in macOS 10.12 or later, the value of this property must be explicitly set to NO in code, because it is not encoded in the nib. In general, this is required if the items themselves create a retain cycle.

(Read and Write property)

6.22.47 `userInterfaceLayoutDirection` as Integer

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The user interface layout direction.

Notes:

When set to `NSUserInterfaceLayoutDirectionRightToLeft`, the outline view displays the disclosure triangle to the right of the cell instead of the left. The default value is `NSUserInterfaceLayoutDirectionLeftToRight`.

(Read and Write property)

6.22.48 Constants

6.22.49 `NSOutlineViewDropOnItemIndex = -1`

Plugin Version: 17.1. **Function:** May be used as a valid child index of a drop target item.

Notes: In this case, the drop will happen directly on the target item.

6.23 control NSPopUpButtonControlMBS

6.23.1 control NSPopUpButtonControlMBS

Plugin Version: 13.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The Xojo control for a NSPopUpButtonControl.

Notes:

This control embeds a special NSPopUpButtonControl subclass.
Designed for Xojo 2013r1 and newer. May work on Real Studio 2012, but not perfectly.

6.23.2 Properties

6.23.3 View as NSPopUpButtonMBS

Plugin Version: 13.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The view used in the control.

Notes:

Use this object to set more options on the control.
(Read only property)

6.23.4 Events

6.23.5 Action

Plugin Version: 13.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The action event.

6.23.6 BoundsChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the bounds, but not the frame, changed.

6.23.7 EnableMenuItems

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** The event where you can enable menu items.

6.23.8 FrameChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the frame changed.

6.23.9 GotFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control itself got focus.

Notes: This only fires if the control itself got focus and not a sub control.

6.23.10 LostFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control lost focus.

Notes: This only fires if the control itself lost focus and not a sub control.

6.23.11 MenuAction(HitItem as MenuItem) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a menuitem is chosen.

Notes: This allows the control to react on its relevant menu items. Please return true if you handled it or false to give others a chance.

6.23.12 MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was pressed inside the controls region at the location passed in to x, y.

Notes:

The coordinates x and y are local to the control, i.e. they represent the position of the mouse click relative to the upper-left corner of the Control.

Return True if you are going to handle the MouseDown. In such a case:

- The Action event, if any, will not execute and the state of the object will not change.
- You will receive the MouseDrag and MouseUp events.

If you return False, the system handles the MouseDown so the above event handlers do not get called.

6.23.13 `MouseDown(x as Integer, y as Integer)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event fires continuously after the mouse button was pressed inside the Control.

Notes:

Mouse location is local to the control passed in to `x`, `y`.

As this event is fired continuously (hundreds of time per second), it is your responsibility to determine if the mouse has really moved.

6.23.14 `MouseUp(x as Integer, y as Integer)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was released.

Notes: Use the `x` and `y` parameters to determine if the mouse button was released within the control's boundaries.

6.23.15 `ScaleFactorChanged(NewFactor as Double)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backing store scale factor has changed.

Notes: Please invalidate any cached bitmaps or other relevant state.

6.24 class NSPopUpButtonMBS

6.24.1 class NSPopUpButtonMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSPopUpButton object controls a pop-up menu or a pull-down menu from which a user can select an item.

Example:

```
// get cocoa view for the popupmenu
dim p as NSPopUpButtonMBS = PopupMenu1.NSPopUpButtonMBS

// find a menu entry
dim it as NSMenuItemMBS = p.itemAtIndex(0)

// get a picture
dim pic as Picture = LogoMBS(500)
dim img as new NSImageMBS(pic)
img.setSize 16,16

// and assign icon
it.image = img
```

Notes:

The NSPopUpButton class defines objects that implement the pop-up and pull-down menus of the graphical user interface.

An NSPopUpButton object uses an NSPopUpButtonCell object to implement its user interface.

Note that while a menu is tracking, adding, removing, or changing items on the menu is not reflected. Subclass of the NSButtonMBS class.

6.24.2 Methods

6.24.3 addItemWithTitles(titles() as string)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds multiple items to the end of the menu.

Notes:

temTitles: An array of strings containing the titles of the items you want to add. Each string in the array should be unique. If an item with the same title already exists in the menu, the existing item is removed and the new one is added.

If you want to move an item, it's better to invoke `removeItemWithTitle:` explicitly and then send this method. After adding the items, this method uses the `synchronizeTitleAndSelectedItem` method to make sure the item being displayed matches the currently selected item.

Since this method searches for duplicate items, it should not be used if you are adding items to an already populated menu with more than a few hundred items. Add items directly to the receiver's menu instead.

6.24.4 addItemWithTitle(title as string)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds an item with the specified title to the end of the menu.

Notes:

`title:` The title of the menu-item entry. If an item with the same title already exists in the menu, the existing item is removed and the new one is added.

If you want to move an item, it's better to invoke `removeItemWithTitle` explicitly and then send this method. After adding the item, this method calls the `synchronizeTitleAndSelectedItem` method to make sure the item being displayed matches the currently selected item.

Since this method searches for duplicate items, it should not be used if you are adding an item to an already populated menu with more than a few hundred items. Add items directly to the receiver's menu instead.

6.24.5 Constructor

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new button with size 100/100 and position 0/0

Example:

```
dim t as new NSPopUpButtonMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.24.6 Constructor(Handle as Integer) 397
- 6.24.7 Constructor(left as Double, top as Double, width as Double, height as Double) 397
- 6.24.8 Constructor(left as Double, top as Double, width as Double, height as Double, pullsDown as boolean) 397

6.24.6 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSPopUpButton handle.

Example:

```
dim t as new NSPopUpButtonMBS(0, 0, 100, 100)
dim v as new NSPopUpButtonMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSPopUpButton and the plugin retains this handle.

See also:

- 6.24.5 Constructor 396
- 6.24.7 Constructor(left as Double, top as Double, width as Double, height as Double) 397
- 6.24.8 Constructor(left as Double, top as Double, width as Double, height as Double, pullsDown as boolean) 397

6.24.7 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new popup button with the given size and position.

Example:

```
dim x as new NSPopUpButtonMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.

See also:

- 6.24.5 Constructor 396
- 6.24.6 Constructor(Handle as Integer) 397
- 6.24.8 Constructor(left as Double, top as Double, width as Double, height as Double, pullsDown as boolean) 397

6.24.8 Constructor(left as Double, top as Double, width as Double, height as Double, pullsDown as boolean)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an NSPopUpButton object initialized to the specified dimensions.

Notes:

left,top,width,height: The frame rectangle for the button, specified in the parent view's coordinate system.

pullsDown: true if you want the receiver to display a pull-down menu; otherwise, false if you want it to display a pop-up menu.

See also:

- 6.24.5 Constructor 396
- 6.24.6 Constructor(Handle as Integer) 397
- 6.24.7 Constructor(left as Double, top as Double, width as Double, height as Double) 397

6.24.9 indexOfItem(item as NSMenuItemMBS) as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the specified menu item.

Notes:

item: The menu item whose index you want.

Returns the index of the item or -1 if no such item was found.

This method invokes the method of the same name of its NSPopUpButtonCell object.

6.24.10 indexOfItemWithTag(tag as Integer) as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the menu item with the specified tag.

Notes:

tag: The tag of the menu item you want.

Returns the index of the item or -1 if no item with the specified tag was found.

This method invokes the method of the same name of its NSPopUpButtonCell object.

6.24.11 indexOfItemWithTitle(title as string) as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the item with the specified title.

Notes:

title: The title of the item you want.

Returns the index of the item or -1 if no item with the specified title was found.

6.24.12 indexOfSelectedItem as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the item last selected by the user.

Notes: The index of the selected item, or -1 if no item is selected.

6.24.13 insertItemWithTitle(title as string, atIndex as Integer)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Inserts an item at the specified position in the menu.

Notes:

title: The title of the new item. If an item with the same title already exists in the menu, the existing item is removed and the new one is added

index: The zero-based index at which to insert the item. Specifying 0 inserts the item at the top of the menu.

If you want to move an item, it's better to invoke `removeItemWithTitle:` explicitly and then send this method. After adding the item, this method uses the `synchronizeTitleAndSelectedItem` method to make sure the item displayed matches the currently selected item.

Since this method searches for duplicate items, it should not be used if you are adding an item to an already populated menu with more than a few hundred items. Add items directly to the receiver's menu instead.

6.24.14 itemAtIndex(index as Integer) as NSMenuItemMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the menu item at the specified index.

Notes:

index: The index of the item you want.

Returns the menu item, or nil if no item exists at the specified index.

6.24.15 `itemWithTitle(title as string)` as `NSMenuItemMBS`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the menu item with the specified title.

Notes:

title: The title of the menu item you want.

The menu item, or nil if no item with the specified title exists in the menu.

6.24.16 `lastItem` as `NSMenuItemMBS`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the last item in the menu.

6.24.17 `removeAllItems`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes all items in the receiver's item menu.

Notes: After removing the items, this method uses the `synchronizeTitleAndSelectedItem` method to refresh the menu.

6.24.18 `removeItemAtIndex(index as Integer)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes the item at the specified index.

Notes:

index: The zero-based index indicating which item to remove. Specifying 0 removes the item at the top of the menu.

After removing the item, this method uses the `synchronizeTitleAndSelectedItem` method to make sure the title displayed matches the currently selected item.

6.24.19 `removeItemWithTitle(title as string)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes the item with the specified title from the menu.

Notes:

title: The title of the item you want to remove. If no menu item exists with the specified title, this method triggers an assertion.

This method removes the first item it finds with the specified name. This method then uses `synchronizeTitleAndSelectedItem` to refresh the menu.

6.24.20 `selectItem(item as NSMenuItemMBS)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects the specified menu item.

Notes: item: The menu item to select, or nil if you want to deselect all menu items.

6.24.21 `selectItemAtIndex(index as Integer)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects the item in the menu at the specified index.

Notes: index: The index of the item you want to select, or -1 you want to deselect all menu items.

6.24.22 `selectItemWithTag(tag as Integer) as boolean`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects the menu item with the specified tag.

Notes:

tag: The tag of the item you want to select.

Returns true if the item was successfully selected; otherwise, false.

If no item with the specified tag is found, this method returns false and leaves the menu state unchanged.

You typically assign tags to menu items from Interface Builder, but you can also assign them programmatically using the `setTag:` method of `NSMenuItem`.

Available in Mac OS X v10.4 and later.

6.24.23 `selectItemWithTitle(title as string)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects the item with the specified title.

Notes: title: The title of the item to select. If you specify an empty string, or a string that does not match the title of a menu item, this method deselects the currently selected item.

6.24.24 `setTitle(title as string)`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the string displayed in the receiver when the user isn't pressing the mouse button.

Notes: If the receiver displays a pop-up menu, this method changes the current item to be the item with the specified title, adding a new item by that name if one does not already exist. If the receiver displays a pull-down list, this method sets its title to the specified string.

6.24.25 `synchronizeTitleAndSelectedItem`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Ensures that the item being displayed by the receiver agrees with the selected item.

Notes: If there's no selected item, this method selects the first item in the item menu and sets the receiver's item to match. For pull-down menus, this method makes sure that the first item is being displayed (the `NSPopUpButtonCell` object must be set to use the selected menu item, which happens by default).

6.24.26 `titleOfSelectedItem as string`

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the title of the item last selected by the user.

Notes: Returns the title of the selected menu item, or an empty string if no item is selected.

6.24.27 `Properties`

6.24.28 `arrowPosition as Integer`

Plugin Version: 14.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The position of the arrow displayed.

Notes:

If you specify `NSPopUpNoArrow`, the receiver displays no arrow. `NSPopUpArrowAtCenter` displays the arrow centered horizontally within the cell. `NSPopUpArrowAtBottom` displays the arrow at the edge of the cell. This method works with `setPreferredEdge:` to determine the exact location and orientation of the

arrow. For more information, see `setPreferredEdge`.

This method is ignored unless the receiver is a pull-down list with a beveled border.
(Read and Write property)

6.24.29 autoenablesItems as boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver automatically enables and disables its items every time a user event occurs.

Notes:

true if the receiver automatically enables and disables items; otherwise, false. The default value is true.
(Read and Write property)

6.24.30 menu as NSMenuItemMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the pop-up button's associated menu.

Notes: (Read and Write property)

6.24.31 numberOfItems as Integer

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of items in the menu.

Notes: (Read only property)

6.24.32 pullsDown as boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating the behavior of the control's menu.

Notes:

True if the menu behaves like a pull-down menu; otherwise, false if it behaves like a pop-up menu.
(Read and Write property)

6.24.33 selectedItem as NSMenuItemMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the menu item last selected by the user.

Notes:

Returns the menu item that is currently selected, or nil if no item is selected.

The last selected menu item is the one that was highlighted when the user released the mouse button. It is possible for a pull-down menu's selected item to be its first item.
(Read and Write computed property)

6.24.34 Constants

6.24.35 NSPopUpArrowAtBottom = 2

Plugin Version: 14.3. **Function:** One of the constants for the arrow positions.

Notes: Arrow is drawn at the edge of the button, pointing toward the preferredEdge.

6.24.36 NSPopUpArrowAtCenter = 1

Plugin Version: 14.3. **Function:** One of the constants for the arrow positions.

Notes: Arrow is centered vertically, pointing toward the preferredEdge.

6.24.37 NSPopUpNoArrow = 0

Plugin Version: 14.3. **Function:** One of the constants for the arrow positions.

Notes: Does not display any arrow in the receiver.

6.25 class NSProgressIndicatorMBS

6.25.1 class NSProgressIndicatorMBS

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The NSProgressIndicator class lets an application display a progress indicator to show that a lengthy task is under way.

Notes:

Some progress indicators are indeterminate and do nothing more than spin to show that the application is busy. Others are determinate and show the percentage of the task that has been completed.

This also eliminates the hung appearance is you move the window or open a menu. Unlike the RB progress controls that pause when you do these things, the Cocoa version continues to update.

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard. Subclass of the NSViewMBS class.

6.25.2 Methods

6.25.3 Constructor

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new progress indicator with size 100/100 and position 0/0

Example:

```
dim t as new NSProgressIndicatorMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.25.4 Constructor(Handle as Integer) 405
- 6.25.5 Constructor(left as Double, top as Double, width as Double, height as Double) 406

6.25.4 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSProgressIndicator handle.

Example:

```
dim t as new NSProgressIndicatorMBS(0, 0, 100, 100)
dim v as new NSProgressIndicatorMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSProgressIndicator and the plugin retains this handle.
See also:

- 6.25.3 Constructor 405
- 6.25.5 Constructor(left as Double, top as Double, width as Double, height as Double) 406

6.25.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new progress indicator with the given size and position.

Example:

```
dim x as new NSProgressIndicatorMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.
See also:

- 6.25.3 Constructor 405
- 6.25.4 Constructor(Handle as Integer) 405

6.25.6 incrementBy(delta as Double)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Advances the progress bar of a determinate progress indicator by the specified amount.

Notes: The amount by which to increment the progress bar. For example, if you want to advance a progress bar from 0.0 to 100.0 in 20 steps, you would invoke incrementBy 20 times with a delta value of 5.0.

6.25.7 sizeToFit

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** This action method resizes the receiver to an appropriate size depending on what style returns.

Notes: Use this after you set style to re-size the receiver.

6.25.8 startAnimation

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Starts the animation of an indeterminate progress indicator.

Notes: Does nothing for a determinate progress indicator.

6.25.9 stopAnimation

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Stops the animation of an indeterminate progress indicator.

Notes: Does nothing for a determinate progress indicator.

6.25.10 Properties

6.25.11 controlSize as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The size of the receiver.

Notes: (Read and Write computed property)

6.25.12 controlTint as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's control tint.

Notes: (Read and Write computed property)

6.25.13 doubleValue as Double

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A value that indicates the current extent of the progress bar of a determinate progress indicator.

Notes:

The value representing the current extent of a determinate progress bar. For example, a determinate progress indicator goes from 0.0 to 100.0 by default. If the progress bar has advanced halfway across the view, the value returned by doubleValue would be 50.0. An indeterminate progress indicator does not use this value. (Read and Write computed property)

6.25.14 isBezeled as boolean

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the receiver's frame has a bezel.

Notes:

True if the receiver's frame has a three-dimensional bezel; otherwise, false.
(Read and Write computed property)

6.25.15 isDisplayedWhenStopped as boolean

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the receiver shows itself even when it's not animating.

Notes:

True if the progress indicator shows itself even when it's not animating. By default, this returns true if style is `NSProgressIndicatorBarStyle` and false if style is `NSProgressIndicatorSpinningStyle`.
(Read and Write computed property)

6.25.16 isIndeterminate as boolean

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver is indeterminate.

Notes:

This method only has an effect if style returns `NSProgressIndicatorBarStyle`. If style returns `NSProgressIndicatorSpinningStyle`, the indicator is always indeterminate, regardless of what you pass to this method.
(Read and Write computed property)

6.25.17 maxValue as Double

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum value for the receiver.

Notes:

The maximum value of the progress indicator. An indeterminate progress indicator does not use this value.
(Read and Write computed property)

6.25.18 min**Value** as Double

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The minimum value for the receiver.

Notes:

An indeterminate progress indicator does not use this value.
(Read and Write computed property)

6.25.19 style as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The style of the progress indicator (bar or spinning).

Notes:

Either NSProgressIndicatorBarStyle or NSProgressIndicatorSpinningStyle.
(Read and Write computed property)

6.25.20 uses**ThreadedAnimation** as boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A hint as to whether the receiver should implement animation of the progress indicator in a separate thread.

Notes:

Value is true to indicate that animation of the progress indicator should occur in a separate thread; otherwise, false. This value is only a hint and may be ignored.

If the application becomes multithreaded as a result of an invocation of this method, the application's performance could become noticeably slower.

(Read and Write computed property)

6.25.21 Constants

6.25.22 NSBlueControl**Tint=1**

Plugin Version: 8.4. **Function:** One of the constants to specify a the control tint.

Notes: Aqua control tint

6.25.23 NSClearControlTint=7

Plugin Version: 8.4. **Function:** One of the constants to specify a the control tint.
Notes: Clear control tint

6.25.24 NSDefaultControlTint=0

Plugin Version: 8.4. **Function:** One of the constants to specify a the control tint.
Notes: The current default tint setting

6.25.25 NSGraphiteControlTint=6

Plugin Version: 8.4. **Function:** One of the constants to specify a the control tint.
Notes: Graphite control tint

6.25.26 NSMiniControlSize=2

Plugin Version: 8.4. **Function:** One of the values for the ControlSize property.
Notes: The control has a smaller size than NSSmallControlSize.

6.25.27 NSProgressIndicatorBarStyle=0

Plugin Version: 8.4. **Function:** One of the constants for the style property.
Notes: A rectangular indicator that can be determinate or indeterminate.

6.25.28 NSProgressIndicatorPreferredAquaThickness=12

Plugin Version: 8.4. **Function:** One of the constants to specify the height of a progress indicator.

6.25.29 NSProgressIndicatorPreferredLargeThickness=18

Plugin Version: 8.4. **Function:** One of the constants to specify the height of a progress indicator.

6.25.30 NSProgressIndicatorPreferredSmallThickness=10

Plugin Version: 8.4. **Function:** One of the constants to specify the height of a progress indicator.

6.25.31 NSProgressIndicatorPreferredThickness=14

Plugin Version: 8.4. **Function:** One of the constants to specify the height of a progress indicator.

6.25.32 NSProgressIndicatorSpinningStyle=1

Plugin Version: 8.4. **Function:** One of the constants for the style property.

Notes: A small square indicator that can be indeterminate only .

6.25.33 NSRegularControlSize=0

Plugin Version: 8.4. **Function:** One of the values for the ControlSize property.

Notes: The control is sized as regular.

6.25.34 NSSmallControlSize=1

Plugin Version: 8.4. **Function:** One of the values for the ControlSize property.

Notes: This constant is for controls that cannot be resized in one direction, such as push buttons, radio buttons, checkboxes, sliders, scroll bars, pop-up buttons, tabs, and progress indicators. You should use a small system font with a small control.

6.26 class NSScrollerMBS

6.26.1 class NSScrollerMBS

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSScroller object controls scrolling of a document view within an NSScrollView's clip view (or potentially another kind of container view).

Notes:

It typically displays a pair of buttons that the user can click to scroll by a small amount (called a line increment or decrement) and Alt-click to scroll by a large amount (called a page increment or decrement), plus a slot containing a knob that the user can drag directly to the desired location. The knob indicates both the position within the document view and, by varying in size within the slot, the amount visible relative to the size of the document view. You can configure whether an NSScroller object uses scroll buttons, but it always draws the knob when there's room for it.

Don't use an NSScroller when an NSSlider would be better. A slider represents a range of values for something in the application and lets the user choose a setting. A scroller represents the relative position of the visible portion of a view and lets the user choose which portion to view.

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard. Subclass of the NSControlMBS class.

6.26.2 Methods

6.26.3 checkSpaceForParts

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Checks to see if there is enough room in the receiver to display the knob and buttons.

Notes: usableParts returns the state calculated by this method. You should never need to invoke this method; it's invoked automatically whenever the NSScroller's size changes.

6.26.4 Constructor

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new scroller with size 100/100 and position 0/0

Example:

```
dim t as new NSScrollerMBS
```

Notes: On success the handle property is not zero.

6.26. CLASS NSSCROLLERMBS 413

See also:

- 6.26.5 Constructor(Handle as Integer) 413
- 6.26.6 Constructor(left as Double, top as Double, width as Double, height as Double) 413

6.26.5 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSScroller handle.

Example:

```
dim t as new NSScrollerMBS(0, 0, 100, 100)
dim v as new NSScrollerMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSScroller and the plugin retains this handle.

See also:

- 6.26.4 Constructor 412
- 6.26.6 Constructor(left as Double, top as Double, width as Double, height as Double) 413

6.26.6 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new scroller with the given size and position.

Example:

```
dim x as new NSScrollerMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.

See also:

- 6.26.4 Constructor 412
- 6.26.5 Constructor(Handle as Integer) 413

6.26.7 drawArrow(Arrow as Integer, highlight as boolean)

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Draws the scroll button indicated by arrow, which is either NSScrollerIncrementArrow (the down or right scroll button) or

NSScrollerDecrementArrow (up or left).

Notes:

If flag is true, the button is drawn highlighted; otherwise it's drawn normally. You should never need to invoke this method directly, but may wish to override it to customize the appearance of scroll buttons. Calling this method on CustomNSScrollerMBS objects does not trigger the drawArrow event.

6.26.8 drawKnob

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Draws the knob.

Notes:

You should never need to invoke this method directly, but may wish to override it to customize the appearance of the knob.

Calling this method on CustomNSScrollerMBS objects does not trigger the drawKnob event.

6.26.9 drawKnobSlotInRect(slotRect as NSRectMBS, highlight as boolean)

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Draws the knob slow in the rectangle.

Notes: Calling this method on CustomNSScrollerMBS objects does not trigger the drawKnobSlotInRect event.

6.26.10 drawParts

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Caches images for the scroll buttons and knob.

Notes:

It's invoked only once when the NSScroller is created. You may want to override this method if you alter the look of the NSScroller, but you should never invoke it directly.

Calling this method on CustomNSScrollerMBS objects does not trigger the drawParts event.

6.26.11 highlight(flag as boolean)

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Highlights or un-highlights the scroll button the user clicked.

Notes: The receiver invokes this method while tracking the mouse; you should not invoke it directly. If flag

is true, the appropriate part is drawn highlighted; otherwise it's drawn normally.

6.26.12 hitPart as Integer

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a part code indicating the manner in which the scrolling should be performed.

Notes: This method is typically invoked by an NSScrollView to determine how to scroll its document view when it receives an action message from the NSScroller.

6.26.13 isCompatibleWithOverlayScrollers as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the class is compatible with overlay scroller style and behavior.

Notes:

Returns true if the the class is compatible with overlay scroller style and behavior, otherwise false. The plugin implements this so you can query the value.

6.26.14 NSPreferredScrollerStyleDidChangeNotification as string

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A notification name. **Notes:**

Posted if the preferred scroller style changes.
Available in Mac OS X v10.7 and later.

6.26.15 preferredScrollerStyle as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the style of scrollers that applications should use wherever possible.

Notes:

The preferred scroller style is determined by the Appearance preference panel's "Show scroll bars" setting for the current user, and when the user's preference is set to "Automatically based on input device" by the set of built-in and connected pointing devices and the user's scroll capability preference settings for them. The preferred scroller style may therefore change over time, and applications should be prepared to adapt their user interfaces to the new scroller style if needed.

In most cases, updating to a new scroller style is automatic: When the preferred scroller style changes, AppKit notifies all NSScrollView instances, sending setScrollerStyle to each with the new style, which causes

each scroll view to automatically re-tile (update its layout) to adapt to the new scroller style. Some NSScrollView instances may refuse the new scroller style setting if they cannot accommodate it for compatibility reasons (the presence of accessory views or legacy scroller subclasses prevent use of overlay scrollers), but most instances will switch to the specified new preferred scroller style.

If you need to be notified of changes to the preferred scroller style, you can register to receive NSPreferredScrollerStyleDidChangeNotification notifications.

Available in Mac OS X v10.7 and later.

6.26.16 rectForPart(part as Integer) as NSRectMBS

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the rectangle occupied by aPart, which for this method is interpreted literally rather than as an indicator of scrolling direction.

Notes:

Note the interpretations of NSScrollerDecrementPage and NSScrollerIncrementPage. The actual part of an NSScroller that causes page-by-page scrolling varies, so as a convenience these part codes refer to useful parts different from the scroll buttons.

Returns NSRectMBS.Zero if the part requested isn't present on the receiver.

6.26.17 scrollerWidth as Double

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the width of "normal-sized" instances.

Notes: NSScrollView uses this value to lay out its components. Subclasses that use a different width should override this method.

6.26.18 scrollerWidthForControlSize(controlSize as Integer) as Double

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the width of the scroller based on controlSize.

6.26.19 setFloatValue(aFloat as Double, proportion as Double)

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the position of the knob to aFloat, which is a value from 0.0 (indicating the top or left end) to 1.0 (the bottom or right end).

Notes:

Also sets the proportion of the knob slot filled by the knob to knobProp, also a value from 0.0 (minimal size) to 1.0 (fills the slot).

Available in Mac OS X v10.0 and later.

Deprecated in Mac OS X v10.5.

6.26.20 testPart(p as NSPointMBS) as Integer

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the part that would be hit by a mouse-down event at p (expressed in the window's coordinate system).

Notes: Note the interpretations of NSScrollerDecrementPage and NSScrollerIncrementPage. The actual part of an NSScroller that causes page-by-page scrolling varies, so as a convenience these part codes refer to useful parts different from the scroll buttons.

6.26.21 trackKnob(theEvent as NSEventMBS)

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Tracks the knob and sends action messages to the receiver's target.

Notes: This method is invoked automatically when the receiver receives theEvent mouse-down event in the knob; you should not invoke it directly.

6.26.22 trackScrollButtons(theEvent as NSEventMBS)

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Tracks the scroll buttons and sends action messages to the receiver's target.

Notes: This method is invoked automatically when the receiver receives theEvent mouse-down event in a scroll button; you should not invoke this method directly.

6.26.23 usableParts as Integer

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a value indicating which parts of the receiver are displayed and usable.

6.26.24 Properties

6.26.25 `arrowsPosition` as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The location of the scroll buttons within the receiver.

Notes:

Can be `NSScrollerArrowsMaxEnd`, `NSScrollerArrowsMinEnd`, `NSScrollerArrowsDefaultSetting` or `NSScrollerArrowsNone`.

(Read and Write computed property)

6.26.26 `controlSize` as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The size of the receiver.

Notes:

Can be `NSRegularControlSize`, `NSMiniControlSize` or `NSSmallControlSize`.

(Read and Write computed property)

6.26.27 `controlTint` as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's control tint.

Notes:

Can be `NSGraphiteControlTint`, `NSBlueControlTint`, `NSClearControlTint` or `NSDefaultControlTint`.

(Read and Write computed property)

6.26.28 `knobProportion` as Double

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The portion of the knob slot the knob should fill, as a floating-point value from 0.0 (minimal size) to 1.0 (fills the slot).

Notes:

Can be set on Mac OS X 10.5 directly.

(Read and Write computed property)

6.26.29 knobStyle as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The knob style.
Notes:

The value of this property does not affect legacy scrollers. NSScrollerKnobStyleDefault is appropriate for a wide range of content, but in some cases choosing an alternative knob style may enhance visibility of the scroller knob atop some kinds of content.

Available in Mac OS X v10.7 and later.

use constants: NSScrollerKnobStyleDefault, NSScrollerKnobStyleDark or NSScrollerKnobStyleLight.
(Read and Write computed property)

6.26.30 scrollerStyle as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The scroller style.
Notes:

or a scroller that's managed by an NSScrollView object, the setter is automatically invoked by the scroll view with the appropriate setting, according to the user's Appearance preference settings and possibly what pointing device(s) are present (see preferredScrollerStyle).

Available in Mac OS X v10.7 and later.
(Read and Write computed property)

6.26.31 Constants

6.26.32 NSAllScrollerParts = 2

Plugin Version: 8.4. **Function:** One of the constants to specify which parts of the scroller are visible.
Notes: Scroller has at least a knob, possibly also scroll buttons.

6.26.33 NSBlueControlTint = 1

Plugin Version: 8.4. **Function:** One of the constants to specify a the control tint.
Notes: Aqua control tint

6.26.34 NSClearControlTint = 7

Plugin Version: 8.4. **Function:** One of the constants to specify a the control tint.

Notes: Clear control tint

6.26.35 NSDefaultControlTint = 0

Plugin Version: 8.4. **Function:** One of the constants to specify a the control tint.

Notes: The current default tint setting

6.26.36 NSGraphiteControlTint = 6

Plugin Version: 8.4. **Function:** One of the constants to specify a the control tint.

Notes: Graphite control tint

6.26.37 NSMiniControlSize = 2

Plugin Version: 8.4. **Function:** One of the values for the ControlSize property.

Notes: The control has a smaller size than NSSmallControlSize.

6.26.38 NSNoScrollerParts = 0

Plugin Version: 8.4. **Function:** One of the constants to specify which parts of the scroller are visible.

Notes: Scroller has neither a knob nor scroll buttons, only the knob slot.

6.26.39 NSOnlyScrollerArrows = 1

Plugin Version: 8.4. **Function:** One of the constants to specify which parts of the scroller are visible.

Notes: Scroller has only scroll buttons, no knob.

6.26.40 NSRegularControlSize = 0

Plugin Version: 8.4. **Function:** One of the values for the ControlSize property.

Notes: The control is sized as regular.

6.26.41 NSScrollerArrowsDefaultSetting = 0

Plugin Version: 8.4. **Function:** One of the constants to specify where the scroller's buttons appear with the `arrowsPosition` property.

Notes: Contains the information from the `AppleScrollBarVariant` default value.

6.26.42 NSScrollerArrowsMaxEnd = 0

Plugin Version: 8.4. **Function:** One of the constants to specify where the scroller's buttons appear with the `arrowsPosition` property.

Notes: Buttons at bottom or right. This constant has been deprecated.

6.26.43 NSScrollerArrowsMinEnd = 1

Plugin Version: 8.4. **Function:** One of the constants to specify where the scroller's buttons appear with the `arrowsPosition` property.

Notes: Buttons at top or left. This has been deprecated.

6.26.44 NSScrollerArrowsNone = 2

Plugin Version: 8.4. **Function:** One of the constants to specify where the scroller's buttons appear with the `arrowsPosition` property.

Notes: No buttons.

6.26.45 NSScrollerDecrementArrow = 1

Plugin Version: 9.6. **Function:** One of the constants describe the two scroller buttons and are used by `drawArrow`.

Notes: The down or right scroll button.

6.26.46 NSScrollerDecrementLine = 4

Plugin Version: 8.4. **Function:** One of the constants to specify the different parts of the scroller.

Notes: Up or left by a small amount.

6.26.47 NSScrollerDecrementPage = 1

Plugin Version: 8.4. **Function:** One of the constants to specify the different parts of the scroller.

Notes: Up or left by a large amount.

6.26.48 NSScrollerIncrementArrow = 0

Plugin Version: 9.6. **Function:** One of the constants describe the two scroller buttons and are used by `drawArrow`.

Notes: The up or left scroll button.

6.26.49 NSScrollerIncrementLine = 5

Plugin Version: 8.4. **Function:** One of the constants to specify the different parts of the scroller.

Notes: Down or right by a small amount.

6.26.50 NSScrollerIncrementPage = 3

Plugin Version: 8.4. **Function:** One of the constants to specify the different parts of the scroller.

Notes: Down or right by a large amount.

6.26.51 NSScrollerKnob = 2

Plugin Version: 8.4. **Function:** One of the constants to specify the different parts of the scroller.

Notes: Directly to the `NSScroller`'s value, as given by `floatValue`.

6.26.52 NSScrollerKnobSlot = 6

Plugin Version: 8.4. **Function:** One of the constants to specify the different parts of the scroller.

Notes: Directly to the `NSScroller`'s value, as given by `floatValue`.

6.26.53 NSScrollerKnobStyleDark = 1

Plugin Version: 11.3. **Function:** One of the knob style constants.

Notes:

Specifies a dark knob.

This style is particularly good against a light background.
Available in Mac OS X v10.7 and later.

6.26.54 NSScrollerKnobStyleDefault = 0

Plugin Version: 11.3. **Function:** One of the knob style constants.
Notes:

Specifies a dark knob with a light border.

This is the default style; it is good against any background.
Available in Mac OS X v10.7 and later.

6.26.55 NSScrollerKnobStyleLight = 2

Plugin Version: 11.3. **Function:** One of the knob style constants.
Notes:

Specifies a light knob.

This style is particularly good against a dark background.
Available in Mac OS X v10.7 and later.

6.26.56 NSScrollerNoPart = 0

Plugin Version: 8.4. **Function:** One of the constants to specify the different parts of the scroller.
Notes: Don't scroll at all.

6.26.57 NSScrollerStyleLegacy = 0

Plugin Version: 11.3. **Function:** One of the constants to specify the scroller style.
Notes:

Specifies legacy-style scrollers as prior to Mac OS X v10.7.
Available in Mac OS X v10.7 and later.

6.26.58 NSScrollerStyleOverlay = 1

Plugin Version: 11.3. **Function:** One of the constants to specify the scroller style.
Notes:

Specifies overlay-style scrollers in Mac OS X v10.7 and later.
Available in Mac OS X v10.7 and later.

6.26.59 NSSmallControlSize = 1

Plugin Version: 8.4. **Function:** One of the values for the ControlSize property.

Notes: This constant is for controls that cannot be resized in one direction, such as push buttons, radio buttons, checkboxes, sliders, scroll bars, pop-up buttons, tabs, and progress indicators. You should use a small system font with a small control.

6.27 class NSScrollViewMBS

6.27.1 class NSScrollViewMBS

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The Cocoa class for a view which has scrollbars.

Notes:

Embed another view inside it to add scrolling.

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard.
Subclass of the NSViewMBS class.

6.27.2 Methods

6.27.3 Constructor

Plugin Version: 8.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new scrollbar with size 100/100 and position 0/0

Example:

```
dim t as new NSScrollViewMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.27.4 Constructor(Handle as Integer) 425
- 6.27.5 Constructor(left as Double, top as Double, width as Double, height as Double) 426

6.27.4 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSScrollView handle.

Example:

```
dim t as new NSScrollViewMBS(0, 0, 100, 100)
dim v as new NSScrollViewMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSScrollView and the plugin retains this handle.

See also:

- 6.27.3 Constructor 425
- 6.27.5 Constructor(left as Double, top as Double, width as Double, height as Double) 426

6.27.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new scrollview with the given size and position.

Example:

```
dim x as new NSScrollViewMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.

See also:

- 6.27.3 Constructor 425
- 6.27.4 Constructor(Handle as Integer) 425

6.27.6 flashScrollers

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Flash the overlay scroll bars.

Notes:

This method is only to scroll views that use overlay scrollers.

This method can be invoked to cause the overlay scroller knobs to be momentarily shown. This may be desirable when changing a document view's size or swapping new content into the view, or to give the user a sense of the current position within the scrollable range at each step of an incremental search or similar operation.

Available in Mac OS X v10.7 and later.

6.27.7 reflectScrolledClipView(clipView as NSClipViewMBS)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adjusts the receiver's scrollers to reflect the size and positioning of its content view.

Notes:

ClipView: The clip view being adjusted to. If aClipView is any view object other than the receiver's content view, the method does nothing.

This method is invoked automatically during scrolling and when an NSClipView object's relationship to its document view changes; you should rarely need to invoke it yourself, but may wish to override it for custom updating or other behavior. If you override this method, be sure to call the superclass implementation. If you do not, other controls (such as the current scrollers) may not be updated properly.

Available in Mac OS X v10.0 and later.

6.27.8 tile

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Lays out the components of the receiver: the content view, the scrollers, and the ruler views.

Notes: You rarely need to invoke this method, but subclasses may override it to manage additional components.

6.27.9 Properties

6.27.10 autohidesScrollers as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** True when autohiding is set for scroll bars in the scrollview.

Notes: (Read and Write property)

6.27.11 backgroundColor as NSColorMBS

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The background color.

Notes: (Read and Write property)

6.27.12 borderType as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The border type.

Notes:

Specifies the appearance of the style of the scroll view's border. See NSBorderType for a list of possible values.

Use constants NSNoBorder = 0, NSLineBorder = 1, NSBezelBorder = 2 or NSGrooveBorder = 3.

(Read and Write property)

6.27.13 `contentSize` as `NSSizeMBS`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the size of the receiver's content view.

Notes: (Read only property)

6.27.14 `contentView` as `NSClipViewMBS`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The content view.

Notes:

If view has a document view, this method also sets the receiver's document view to be the document view of view. The original content view retains its document view.

(Read and Write property)

6.27.15 `documentCursor` as `NSCursorMBS`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The cursor used when the cursor is over the content view.

Notes: (Read and Write property)

6.27.16 `documentView` as `NSViewMBS`

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The view the receiver scrolls within its content view.

Notes: (Read and Write property)

6.27.17 `documentVisibleRect` as `NSRectMBS`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the portion of the document view, in its own coordinate system, visible through the receiver's content view.

Notes: (Read only property)

6.27.18 drawsBackground as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value that indicates whether the scrollview draws its background.

Notes: (Read and Write property)

6.27.19 hasHorizontalRuler as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** True if the receiver maintains a horizontal ruler view, false if it doesn't.

Notes: (Read and Write property)

6.27.20 hasHorizontalScroller as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver keeps a horizontal scroller

Notes: (Read and Write property)

6.27.21 hasVerticalRuler as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Determines whether the scrollview keeps a vertical ruler object.

Notes: (Read and Write property)

6.27.22 hasVerticalScroller as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** True if the scrollview displays a vertical scroller, false if it doesn't.

Notes: (Read and Write property)

6.27.23 horizontalLineScroll as Double

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The amount by which the receiver scrolls itself horizontally when scrolling line by line to aFloat, expressed in the content view's coordinate system.

Notes:

This amount is the amount used when the user clicks the scroll arrows on the horizontal scroll bar without holding down a modifier key. When displaying text in an `NSScrollView`, for example, you might set this amount to the height of a single line of text in the default font.

(Read and Write property)

6.27.24 `horizontalPageScroll` as Double

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The amount of the document view kept visible when scrolling horizontally page by page, expressed in the content view's coordinate system.

Notes:

This amount is used when the user clicks the scroll arrows on the horizontal scroll bar while holding down the Option key.

This amount expresses the context that remains when the receiver scrolls by one page, allowing the user to orient to the new display. It differs from the line scroll amount, which indicates how far the document view moves. The page scroll amount is the amount common to the content view before and after the document view is scrolled by one page.

(Read and Write property)

6.27.25 `horizontalScrollElasticity` as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The scroll view's horizontal elasticity mode.

Notes:

A scroll view can scroll its contents past its bounds to achieve an elastic effect.

When set to `NSScrollElasticityAutomatic`, scrolling the horizontal axis beyond its document bounds only occurs if the document width is greater than the view width or, the vertical scroller is hidden and the horizontal scroller is visible.

The default value is `NSScrollElasticityAutomatic`.

Available in Mac OS X v10.7 and later.

(Read and Write property)

6.27.26 horizontalScroller as NSScrollerMBS

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's horizontal scroller, regardless of whether the receiver is currently displaying it, or nil if the receiver has none. **Notes:** (Read and Write property)

6.27.27 lineScroll as Double

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The horizontal and vertical line scroll amounts to aFloat. **Notes:**

The line scroll is the amount by which the receiver scrolls itself when scrolling line by line, expressed in the content view's coordinate system. It's used when the user clicks the scroll arrows without holding down a modifier key. When displaying text in an NSScrollView, for example, you might set this value to the height of a single line of text in the default font.

As part of its implementation, this method sets VerticalLineScroll and HorizontalLineScroll. (Read and Write property)

6.27.28 pageScroll as Double

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The vertical page scroll amount: the amount of the document view kept visible when scrolling vertically page by page, expressed in the content view's coordinate system. **Notes:**

This amount is used when the user clicks the scroll arrows on the vertical scroll bar while holding down the Option key. As part of its implementation, this method calls verticalPageScroll.

This amount expresses the context that remains when the receiver scrolls by one page, allowing the user to orient to the new display. It differs from the line scroll amount, which indicates how far the document view moves. The page scroll amount is the amount common to the content view before and after the document view is scrolled by one page.

Note that a scroll view can have two different page scroll amounts: verticalPageScroll and horizontalPageScroll. Use this method only if you can be sure they're both the same. (Read and Write property)

6.27.29 rulersVisible as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether rulers should be visible.

Notes: (Read and Write property)

6.27.30 scrollerKnobStyle as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The knob style of scroll views that use the overlay scroller style.

Notes:

Applicable only to scroll views that use overlay scrollers.

Available in Mac OS X v10.7 and later.

(Read and Write property)

6.27.31 scrollerStyle as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The scroller style used by the scroll view.

Notes:

This setting is automatically set at runtime, based on the user's preference setting and, if relevant, the set of connected pointing devices and their configured scroll capabilities, as determined by the NSScroller method preferredScrollerStyle.

Setting an scroll view's scroller style sets the style of both the horizontal and vertical scrollers. If the scroll view subsequently creates or is assigned a new horizontal or vertical scroller, they will be assigned the same scroller style that was assigned to the scroll view..

Available in Mac OS X v10.7 and later.

(Read and Write property)

6.27.32 scrollsDynamically as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** True if the scrollview redraws its document view while tracking the knob, false if it redraws only when the scroller knob is released.

Notes:

NSScrollView scrolls dynamically by default.

(Read and Write property)

6.27.33 usesPredominantAxisScrolling as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the scroll view uses a predominant scrolling axis for content.

Notes:

Whether the scroll view supports a predominant scrolling direction. true if there is a predominant scrolling direction; otherwise false.

Some content is scrollable in both the horizontal and vertical axes, but is predominantly scrolled one axis at a time. Other content (such as a drawing canvas) should scroll freely in both axes.

Traditionally this is not an issue with scroll wheels since they can only scroll in one direction at a time. With scroll balls and touch surfaces, it becomes more difficult to determine the user's intention.

This property helps a scroll view determine the user's intention by specifying if there is a predominant scrolling axis for content.

The default value is true.

Available in Mac OS X v10.7 and later.
(Read and Write property)

6.27.34 verticalLineScroll as Double

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The amount by which the view scrolls itself vertically when scrolling line by line to aFloat, expressed in the content view's coordinate system.

Notes:

This value is the amount used when the user clicks the scroll arrows on the vertical scroll bar without holding down a modifier key. When displaying text in an NSScrollView, for example, you might set this value to the height of a single line of text in the default font.

(Read and Write property)

6.27.35 verticalPageScroll as Double

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The amount of the document view kept visible when scrolling vertically page by page to aFloat, expressed in the content view's coordinate system.

Notes:

This amount is used when the user clicks the scroll arrows on the vertical scroll bar while holding down the Option key.

This amount expresses the context that remains when the receiver scrolls by one page, allowing the user to orient to the new display. It differs from the line scroll amount, which indicates how far the document view moves. The page scroll amount is the amount common to the content view before and after the document view is scrolled by one page. Thus, setting the page scroll amount to 0.0 implies that the entire visible portion of the document view is replaced when a page scroll occurs.
(Read and Write property)

6.27.36 verticalScrollElasticity as Integer

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The scroll view's vertical elasticity mode.

Notes:

A scroll view can scroll its contents past its bounds to achieve an elastic effect.

When set to `NSScrollElasticityAutomatic`, scrolling the vertical axis beyond its document bounds occurs if any of the following are true: the vertical scroller is visible, the content height is greater than view height, or the horizontal scroller hidden.

Available in Mac OS X v10.7 and later.
(Read and Write property)

6.27.37 verticalScroller as NSScrollerMBS

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's vertical scroller, regardless of whether the receiver is currently displaying it, or nil if the receiver has none.

Notes: (Read and Write property)

6.27.38 Constants

6.27.39 NSScrollElasticityAllowed = 2

Plugin Version: 11.3. **Function:** One of the constants used to determine the elasticity behavior for an axis of the scrollview..

Notes:

Allow content to be scrolled past its bounds on this axis in an elastic fashion.

Available in Mac OS X v10.7 and later.

6.27.40 NSScrollElasticityAutomatic = 0

Plugin Version: 11.3. **Function:** One of the constants used to determine the elasticity behavior for an axis of the scrollview..

Notes:

Automatically determine whether to allow elasticity on this axis.

Available in Mac OS X v10.7 and later.

6.27.41 NSScrollElasticityNone = 1

Plugin Version: 11.3. **Function:** One of the constants used to determine the elasticity behavior for an axis of the scrollview..

Notes:

Disallow scrolling beyond document bounds on this axis.

Available in Mac OS X v10.7 and later.

6.27.42 NSScrollViewFindBarPositionAboveContent = 1

Plugin Version: 11.3. **Function:** One of the constants used to define the position of the find bar in relation to the scroll view.

Notes:

The find bar is displayed above the scroll view content.

Available in Mac OS X v10.7 and later.

6.27.43 NSScrollViewFindBarPositionAboveHorizontalRuler = 0

Plugin Version: 11.3. **Function:** One of the constants used to define the position of the find bar in relation to the scroll view.

Notes:

The find bar is displayed above the horizontal ruler, if visible.

Available in Mac OS X v10.7 and later.

6.27.44 NSScrollViewFindBarPositionBelowContent = 2

Plugin Version: 11.3. **Function:** One of the constants used to define the position of the find bar in relation to the scroll view.

Notes:

The find bar is displayed below the scroll view content.
Available in Mac OS X v10.7 and later.

6.28 class NSSliderMBS

6.28.1 class NSSliderMBS

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSSlider object displays a range of values for something in the application.

Notes:

Sliders can be vertical or horizontal bars or circular dials. An indicator, or knob, notes the current setting. The user can move the knob in the slider's bar or rotate the knob in a circular slider to change the setting.

The NSSlider class uses the NSSliderCell class to implement its user interface.
Subclass of the NSControlMBS class.

6.28.2 Methods

6.28.3 acceptsFirstMouse(event as NSEventMBS) as boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return true if the receiver should be sent a mouseDown event for an initial mouse-down event, false if not.

Notes:

The receiver can either return a value unconditionally or use the location of event e to determine whether or not it wants the event. The default implementation ignores the event and returns false.

Implement this event in a subclass to allow instances to respond to click-through. This allows the user to click on a view in an inactive window, activating the view with one click, instead of clicking first to make the window active and then clicking the view. Most view objects refuse a click-through attempt, so the event simply activates the window. Many control objects, however, such as instances of NSButton and NSSlider, do accept them, so the user can immediately manipulate the control without having to release the mouse button.

6.28.4 closestTickMarkValueToValue(value as Double) as Double

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the value of the tick mark closest to the specified value.

6.28.5 Constructor

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new slider with size 100/100 and position 0/0

Example:

```
dim t as new NSSliderMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.28.6 Constructor(Handle as Integer) 438
- 6.28.7 Constructor(left as Double, top as Double, width as Double, height as Double) 438

6.28.6 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSSlider handle.

Example:

```
dim t as new NSSliderMBS(0, 0, 100, 100)
dim v as new NSSliderMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSSlider and the plugin retains this handle.

See also:

- 6.28.5 Constructor 438
- 6.28.7 Constructor(left as Double, top as Double, width as Double, height as Double) 438

6.28.7 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new slider with the given size and position.

Example:

```
dim x as new NSSliderMBS(0, 0, 100, 100)
```

6.28. CLASS NSSLIDERMBS 439

Notes: On success the handle property is not zero.

See also:

- 6.28.5 Constructor 438
- 6.28.6 Constructor(Handle as Integer) 438

6.28.8 indexOfTickMarkAtPoint(p as NSPointMBS) as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the tick mark closest to the location of the receiver represented by the given point.

Notes:

Returns the index of the tick mark closest to the location specified by point. If point is not within the bounding rectangle (plus an extra pixel of space) of any tick mark, the method returns `NSNotFound`.

In its implementation of this method, the receiving NSSlider instance simply invokes the method of the same name of its NSSliderCell instance. This method invokes `rectOfTickMarkAtIndex:` for each tick mark on the slider until it finds a tick mark containing the point.

See also:

- 6.28.9 indexOfTickMarkAtPoint(x as Double, y as Double) as Integer 439

6.28.9 indexOfTickMarkAtPoint(x as Double, y as Double) as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the tick mark closest to the location of the receiver represented by the given point.

Notes: The index of the tick mark closest to the location specified by point. If point is not within the bounding rectangle (plus an extra pixel of space) of any tick mark, the method returns `NSNotFound` (&h7ffffff).

See also:

- 6.28.8 indexOfTickMarkAtPoint(p as NSPointMBS) as Integer 439

6.28.10 isVertical as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an integer indicating the orientation (horizontal or vertical) of the slider.

Notes: 1 if the receiver is vertical, 0 if it's horizontal, and -1 if the orientation can't be determined (for example, if the slider hasn't been displayed yet). A slider is defined as vertical if its height is greater than its width.

6.28.11 rectOfTickMarkAtIndex(index as Integer) as NSRectMBS

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the bounding rectangle of the tick mark at the given index.

Notes: If no tick mark is associated with index, the method raises `NSRangeException`.

6.28.12 `tickMarkValueAtIndex(index as Integer) as Double`

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's value represented by the tick mark at the specified index.

6.28.13 Properties

6.28.14 `allowsTickMarkValuesOnly` as boolean

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the receiver fixes its values to those values represented by its tick marks.

Notes:

True if the slider fixes its values to the values represented by its tick marks; otherwise, false.
(Read and Write computed property)

6.28.15 `altIncrementValue` as Double

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The amount by which the receiver changes its value when the user Optiondrags the slider knob.

Notes:

The amount by which the value changes when the user drags the slider knob with the Option key held down. Unless you assign a value to `AltIncrementValue`, `altIncrementValue` returns 1.0, and the receiver behaves no differently with the Option key down than with it up.
(Read and Write computed property)

6.28.16 `image` as `NSImageMBS`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** This method has been deprecated. Returns nil.

Notes:

The slider may scale and distort `barImage` to fit inside the bar.

The knob may cover part of the image. If you want the image to be visible all the time, you're better off placing it near the slider.

This method has been deprecated by Apple.
(Read and Write computed property)

6.28.17 knobThickness as Double

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The knob's thickness, in pixels.

Notes:

The thickness of the slider knob. The thickness is defined to be the extent of the knob along the long dimension of the bar. In a vertical slider, then, a knob's thickness is its height; in a horizontal slider, a knob's thickness is its width.

(Read and Write computed property)

6.28.18 maxValue as Double

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum value the receiver can send to its target.

Notes:

The slider's maximum value. A horizontal slider sends its maximum value when the knob is at the right end of the bar; a vertical slider sends it when the knob is at the top.

(Read and Write computed property)

6.28.19 minValue as Double

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** the minimum value the receiver can send to its target.

Notes:

The slider's minimum value. A vertical slider sends its minimum value when its knob is at the bottom; a horizontal slider, when its knob is all the way to the left.

(Read and Write computed property)

6.28.20 numberOfTickMarks as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of tick marks associated with the receiver.

Notes:

The number of the slider's tick marks. The tick marks assigned to the minimum and maximum values are

included.

(Read and Write computed property)

6.28.21 `sliderType` as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The slider type.

Notes:

Either `NSLinearSlider` or `NSCircularSlider`.

(Read and Write computed property)

6.28.22 `tickMarkPosition` as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** How the receiver's tick marks are aligned with it.

Notes:

A constant indicating the position of the tick marks. Possible values are `NSTickMarkBelow`, `NSTickMarkAbove`, `NSTickMarkLeft`, and `NSTickMarkRight` (the last two are for vertical sliders). The default alignments are `NSTickMarkBelow` and `NSTickMarkLeft`.

(Read and Write computed property)

6.28.23 `title` as string

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's title.

Notes:

The default title is the empty string.

(Read and Write computed property)

6.28.24 `titleCell` as `NSCellMBS`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the cell used to draw the receiver's title.

Notes:

You only need to invoke this method if the default title cell, `NSTextFieldCell`, doesn't suit your needsthat is, you want to display the title in a manner that `NSTextFieldCell` doesn't permit. When you do choose to override the default, `titleCell` should be an instance of a subclass of `NSTextFieldCell`.

This method has been deprecated by Apple.
(Read and Write computed property)

6.28.25 `titleColor` as `NSColorMBS`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the color used to draw the receiver's title.

Notes:

This method has been deprecated by Apple.
(Read and Write computed property)

6.28.26 `titleFont` as `NSFontMBS`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the font used to draw the receiver's title.

Notes:

This method has been deprecated by Apple.
(Read and Write computed property)

6.28.27 Constants

6.28.28 `NSCircularSlider=1`

Plugin Version: 8.4. **Function:** One of the slider type constants.

Notes: A circular slider; that is, a dial.

6.28.29 `NSLinearSlider=0`

Plugin Version: 8.4. **Function:** One of the slider type constants.

Notes: A bar-shaped slider.

6.28.30 `NSTickMarkAbove=1`

Plugin Version: 8.4. **Function:** One of the values for the `tickMarkPosition` property.

Notes: Tick marks above (for horizontal sliders).

6.28.31 NSTickMarkBelow=0

Plugin Version: 8.4. **Function:** One of the values for the tickMarkPosition property.

Notes: Tick marks below (for horizontal sliders); the default for horizontal sliders.

6.28.32 NSTickMarkLeft=1

Plugin Version: 8.4. **Function:** One of the values for the tickMarkPosition property.

Notes: Tick marks to the left (for vertical sliders); the default. for vertical sliders

6.28.33 NSTickMarkRight=0

Plugin Version: 8.4. **Function:** One of the values for the tickMarkPosition property.

Notes: Tick marks to the right (for vertical sliders).

6.29 class NSStepperMBS

6.29.1 class NSStepperMBS

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A stepper consists of two small arrows that can increment and decrement a value that appears beside it, such as a date or time.

Notes:

The illustration below shows a stepper to the right of a text field, which would show the stepper's value. Subclass of the NSControlMBS class.

6.29.2 Methods

6.29.3 Constructor

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new stepper with size 100/100 and position 0/0

Example:

```
dim t as new NSStepperMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.29.4 Constructor(Handle as Integer) 445
- 6.29.5 Constructor(left as Double, top as Double, width as Double, height as Double) 446

6.29.4 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSStepper handle.

Example:

```
dim t as new NSStepperMBS(0, 0, 100, 100)
```

```
dim v as new NSStepperMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSStepper and the plugin retains this handle.

See also:

- 6.29.3 Constructor 445
- 6.29.5 Constructor(left as Double, top as Double, width as Double, height as Double) 446

6.29.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new stepper with the given size and position.

Example:

`dim x as new NSStepperMBS(0, 0, 100, 100)`

Notes: On success the handle property is not zero.

See also:

- 6.29.3 Constructor 445
- 6.29.4 Constructor(Handle as Integer) 445

6.29.6 Properties

6.29.7 autorepeat as boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating how the receiver responds to mouse events.

Notes:

True if the first mouse down does one increment (or decrement) and, after a delay of 0.5 seconds, increments (or decrements) at a rate of ten times per second. False if the receiver does one increment (decrement) on a mouse up. The default is true.

(Read and Write computed property)

6.29.8 increment as Double

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The amount by which the receiver will change per increment (decrement).

Notes: (Read and Write computed property)

6.29.9 `maxValue` as Double

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum value.

Notes: (Read and Write computed property)

6.29.10 `minValue` as Double

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The minimum value.

Notes: (Read and Write computed property)

6.29.11 `valueWraps` as boolean

Plugin Version: 10.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver wraps around the minimum and maximum values.

Notes:

If true, then when incrementing or decrementing, the value wraps around to the minimum or maximum. If `valueWraps` is false, the value stays pinned at the minimum or maximum.

For example for an angle where 359 increases to 0.

(Read and Write computed property)

6.30 class NSTableColumnMBS

6.30.1 class NSTableColumnMBS

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSTableColumn stores the display characteristics and attribute identifier for a column in an NSTableView.

Notes: The NSTableColumn determines the width and width limits, resizable, and editability of its column in the NSTableView. It also stores two NSCell objects: the header cell, which is used to draw the column header, and the data cell, used to draw the values for each row. You can control the display of the column by setting the subclasses of NSCell used and by setting the font and other display characteristics for these NSCells. For example, you can use the default NSTextFieldCell for displaying string values or substitute an NSImageCell to display pictures.

6.30.2 Methods

6.30.3 Constructor(identifier as string)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a NSTableColumn with identifier as its identifier and with an NSTextFieldCell as its data cell.

6.30.4 dataCellForRow(row as Integer) as NSCellMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the NSCell object used by the NSTableView to draw values for the receiver.

Notes: NSTableView always calls this method. By default, this method just calls dataCell. Subclasses can override if they need to potentially use different cells for different rows. Subclasses should expect this method to be invoked with row equal to 1 in cases where no actual row is involved but the table view needs to get some generic cell info.

6.30.5 sizeToFit

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Resizes the receiver to fit the width of its header cell.

Notes: If the maximum width is less than the width of the header, the maximum is increased to the header's width. Similarly, if the minimum width is greater than the width of the header, the minimum is reduced to the header's width. Marks the NSTableView as needing display if the width actually changes.

6.30.6 Properties

6.30.7 dataCell as NSCellMBS

Plugin Version: 9.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The NSCell object used by the NSTableView to draw values for the receiver.

Notes:

You can use this property to control the font, alignment, and other text attributes for an NSTableColumn. You can also assign a cell to display things other than text for example, an NSImageCell to display images. (Read and Write property)

6.30.8 Editable as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Controls whether the user can edit cells in the receiver by double-clicking them.

Notes:

If value is true a double click initiates editing; if flag is false it merely sends the double-click event to the NSTableView. You can initiate editing programmatically regardless of this setting with NSTableView's editColumn() method.

(Read and Write property)

6.30.9 headerCell as NSTableHeaderCellMBS

Plugin Version: 9.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The NSCell used to draw the receiver's header to aCell.

Notes: (Read and Write property)

6.30.10 headerToolTip as string

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The tooltip string that is displayed when the cursor pauses over the header cell of the receiver.

Notes: (Read and Write property)

6.30.11 Hidden as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the column is hidden.

Notes: (Read and Write property)

6.30.12 identifier as string

Plugin Version: 9.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The object used by the data source to identify the attribute corresponding to the receiver.

Notes: (Read and Write property)

6.30.13 maxWidth as Double

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The maximum width.
Notes:

Setting this value will also adjusting the current width if it's greater than this value.
(Read and Write property)

6.30.14 minWidth as Double

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The minimum width.
Notes:

Setting this value will also adjusting the current width if it's less than this value.
(Read and Write property)

6.30.15 Resizable as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether this column can be resized.

Notes: (Read and Write property)

6.30.16 resizingMask as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Defines the resizing mode for this column.

Notes:

Use `kNoResizing`, `kAutoresizingMask` and `kUserResizingMask` constants.
(Read and Write property)

6.30.17 sortDescriptorPrototype as NSSortDescriptorMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The table columns sort descriptor prototype.

Notes:

A table column is considered sortable if it has a sort descriptor that specifies the sorting direction, a key to sort by, and a selector that defines how to sort.

(Read and Write property)

6.30.18 tableView as NSTableViewMBS

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The owner tableview.

Notes: (Read and Write property)

6.30.19 title as String

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The title of the table columns header.

Notes: (Read and Write property)

6.30.20 width as Double

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The width of the column.

Notes: (Read and Write property)

6.30.21 Constants

6.30.22 NSTableColumnAutoresizingMask=1

Plugin Version: 9.6. **Function:** One of the constants specify the resizing modes available for the table column.

Notes:

Allows the table column to resize automatically in response to resizing the tableview. Enabling this option is the same as enabling the "Live Resizable" option in Interface Builder. The resizing behavior for the table view is set using the NSTableView method setColumnAutoresizingStyle:.

Available in Mac OS X v10.4 and later.

6.30.23 NSTableColumnNoResizing=0

Plugin Version: 9.6. **Function:** One of the constants specify the resizing modes available for the table column.

Notes:

Prevents the table column from resizing.
Available in Mac OS X v10.4 and later.

6.30.24 NSTableColumnUserResizingMask=2

Plugin Version: 9.6. **Function:** One of the constants specify the resizing modes available for the table column.

Notes:

Allows the table column to be resized explicitly by the user. Enabling this option is the same as enabling the "User Resizable" option in Interface Builder.
Available in Mac OS X v10.4 and later.

6.31 control NSTableControlMBS

6.31.1 control NSTableControlMBS

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control for a NSTableView.

Notes: Please use NSOutlineControlMBS for hierarchical lists and NSTableControlMBS for normal lists.

6.31.2 Properties

6.31.3 AcceptTabs as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the control should accept tab keys.

Notes:

If true, the plugin will not forward the tab keydown/keyup events to Xojo, because Xojo would do switch to next control.

(Read and Write property)

6.31.4 allowsColumnReordering as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view allows the user to rearrange columns by dragging their headers.

Notes:

The default value of this property is true, which allows the user to rearrange the table views columns. You can rearrange columns programmatically regardless of this setting.

(Read and Write property)

6.31.5 allowsColumnResizing as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view allows the user to resize columns by dragging between their headers.

Notes:

The default of this property is true, which allows the user to resize the table views columns. You can resize columns programmatically regardless of this setting.

(Read and Write property)

6.31.6 allowsColumnSelection as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view allows the user to select columns by clicking their headers.

Notes:

The default is false, which prevents the user from selecting columns (if you create the table view in Interface Builder, the default value is true). You can select columns programmatically regardless of this setting. (Read and Write property)

6.31.7 allowsEmptySelection as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view allows the user to select zero columns or rows.

Notes:

The default is true, which allows the user to select zero columns or rows. (Read and Write property)

6.31.8 allowsMultipleSelection as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view allows the user to select more than one column or row at a time.

Notes:

The default is false, which allows the user to select only one column or row at a time. You can select multiple columns or rows programmatically regardless of this setting. (Read and Write property)

6.31.9 autohidesScrollers as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean that indicates whether the scroll view automatically hides its scroll bars when they are not needed.

Notes:

The horizontal and vertical scroll bars are hidden independently of each other. When the value of this property is YES and the content of the scroll view doesn't extend beyond the size of the clip view on a given axis, the scroller on that axis is removed to leave more room for the content. (Read and Write property)

6.31.10 disableCellEvents as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to disable cell based events.

Notes:

The table view can work with cell modes and use NSCell to disable cells.
Or since OS X 10.7 it can work with NSView to display cells or rows.
This property lets you explicitly disable cells and use only views.
(Read and Write property)

6.31.11 disableViewEvents as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to disable view based events.

Notes:

The table view can work with cell modes and use NSCell to disable cells.
Or since OS X 10.7 it can work with NSView to display cells or rows.
This property lets you explicitly disable views and use only cells.
(Read and Write property)

6.31.12 hasHorizontalScroller as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean that indicates whether the scroll view has a horizontal scroller.

Notes:

When the value of this property is true, the scroll view allocates and displays a horizontal scroller as needed.
The default value of this property is false.
(Read and Write property)

6.31.13 hasVerticalScroller as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean that indicates whether the scroll view has a vertical scroller.

Notes:

When the value of this property is true, the scroll view allocates and displays a vertical scroller as needed.
The default value of this property is false.
(Read and Write property)

6.31.14 ScrollView as NSScrollViewMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The scroll view used in this control.

Notes: (Read only property)

6.31.15 View as NSTableViewMBS

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The table view used in this control.

Notes: (Read only property)

See also:

- 6.31.78 view(tableColumn as NSTableColumnMBS, row as Integer) as NSViewMBS 474

6.31.16 Events

6.31.17 acceptDrop(info as NSDraggingInfoMBS, row as Integer, dropOperation as Integer) as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called by TableView when the mouse button is released over a table view that previously decided to allow a drop.

Notes:

info: An object that contains more information about this dragging operation.

row: The index of the proposed target row.

operation: The type of dragging operation.

Returns true if the drop operation was successful, otherwise false.

The data source should incorporate the data from the dragging pasteboard in the implementation of this method. You can use the draggingPasteboard method to get the data for the drop operation from info.

To accept a drop on the second row, row would be 2 and operation would be NSTableViewDropOn. To accept a drop below the last row, row would be TableView.numberOfRows and operation would be NSTableViewDropAbove.

6.31.18 BoundsChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the bounds, but not the frame, changed.

6.31.19 ColumnDidMove(notification as NSNotificationMBS, oldColumn as Integer, newColumn as Integer)

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event informs the delegate that a column was moved by user action in the table view.

6.31.20 ColumnDidResize(notification as NSNotificationMBS, tableColumn as NSTableColumnMBS, OldWidth as Double)

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event informs you that a column was resized in the table view.

6.31.21 dataCell(tableColumn as NSTableColumnMBS, row as Int64) as NSCellMBS

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Optional return a different cells for each row.

Notes:

A different data cell can be returned for any particular tableColumn and row, or a cell that will be used for the entire row (a full width cell). The returned cell should properly implement copyWithZone:, since the cell may be copied by NSTableView. If the tableColumn is non-nil, and nil is returned, then the table will use the default cell from tableColumn.dataCellForRow(Row).

When each row is being drawn, this method will first be called with a nil tableColumn. At this time, you can return a cell that will be used to draw the entire row, acting like a group. If you do return a cell for the 'nil' tableColumn, be prepared to have the other corresponding datasource and delegate methods to be called with a 'nil' tableColumn value. If don't return a cell, the method will be called once for each tableColumn in the tableView, as usual.

6.31.22 didAddRowView(rowView as NSTableRowViewMBS, row as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Tells the delegate that a row view was added at the specified row.

Notes:

rowView: The row view.

row: The index of the row.

At this point, the delegate can add extra views, or modify the properties of rowView.

This method is only valid for NSView-based table views.

6.31.23 `didClickTableColumn(tableColumn as NSTableColumnMBS)`

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called if a table column was clicked on.

6.31.24 `didDragTableColumn(tableColumn as NSTableColumnMBS)`

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent at the time the mouse button goes up in tableView and tableColumn has been dragged during the time the mouse button was down.

Notes:

tableColumn: The table column.

The behavior of this method on Mac OS X v10.5 is different from prior versions. On Mac OS X v 10.5 the dragged column is sent to the subclass. In earlier versions the table column that is currently located at the dragged column's original index is sent.

6.31.25 `didRemoveRowView(rowView as NSTableRowViewMBS, row as Integer)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Tells the delegate that a row view was removed from the table at the specified row.

Notes:

rowView: The row view.

row: The index of the row.

If row equals -1, the row is being deleted from the table and is no longer a valid row; otherwise row is a valid row that is being removed by being moved off screen.

This method is only valid for NSView-based table views.

6.31.26 `didTile`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The tableview did tile.

Notes: The internal tile function properly sizes the table view and its header view and marks it as needing display.

6.31.27 DoubleClick

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse made a double click.

6.31.28 draggingSessionEnded(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this method to determine when a dragging session has ended.

Notes:

session: The dragging session.

screenPoint: The ending drag location in screen coordinates.

operation: The drag operation. See NSDragOperation for supported values.

This delegate method can be used to determine when the dragging source operation ended at a specific location, such as the trash, by checking for an operation of NSDragOperationDelete.

6.31.29 draggingSessionWillBegin(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, rowIndexes as NSIndexSetMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this method to determine when a dragging session will begin.

Notes:

session: The dragging session.

screenPoint: The initial drag location in screen coordinates.

rowIndexes: The indexes of the rows to be dragged, excluding rows that were not dragged due to `pasteboardItemForRow` returning nil.

Implement this method to know when the dragging session is about to begin and to potentially modify the dragging session.

The dragged item order will directly match the pasteboard writer array used to begin the dragging session with the `NSView` method `beginDraggingSessionWithItems`. Hence, the order is deterministic, and can be used in `acceptDrop` when enumerating the `NSDraggingInfo` pasteboard classes.

6.31.30 EnableMenuItems

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** The event where you can enable menu items.

6.31.31 FrameChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the frame changed.

6.31.32 GotFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control itself got focus.

Notes: This only fires if the control itself got focus and not a sub control.

6.31.33 heightForRow(row as Int64) as Double

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to support a table with varying row heights.

Notes: The height returned by this method should not include intercell spacing and must be greater than zero. Performance Considerations: For large tables in particular, you should make sure that this method is efficient. NSTableView may cache the values this method returns, but this should NOT be depended on, as all values may not be cached. To signal a row height change, call noteHeightOfRowsWithIndexesChanged. For a given row, the same row height should always be returned until noteHeightOfRowsWithIndexesChanged is called, otherwise unpredictable results will happen. NSTableView automatically invalidates its entire row height cache in reloadData, and noteNumberOfRowsChanged.

6.31.34 isGroupRow(row as Int64) as boolean

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the delegate to indicate that a specified row is a group row.

Notes:

row: The row index.

Return true if the specified row should have the group row style drawn, false otherwise.

If the cell in row is an NSTextFieldCell and contains only a string, the group row style attributes will automatically be applied to the cell.

Group rows in view-based table views can be made to visually float' by setting the tableview method setFloatsGroupRows to true.

Note: When configured as a source list style table view, rows identified as group rows draw with a specific style unique for source lists.

Available in Mac OS X v10.5 and later.

6.31.35 LeftMouseDown(e as NSEventMBS) as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has pressed the left mouse button.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.31.36 LeftMouseDragged(e as NSEventMBS) as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has moved the mouse with the left button pressed.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.31.37 LeftMouseUp(e as NSEventMBS) as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has released the left mouse button.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.31.38 LostFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control lost focus.

Notes: This only fires if the control itself lost focus and not a sub control.

6.31.39 MenuAction(HitItem as MenuItem) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a menuitem is chosen.

Notes: This allows the control to react on its relevant menu items. Please return true if you handled it or false to give others a chance.

6.31.40MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was pressed inside the controls region at the location passed in to x, y.

Notes:

The coordinates x and y are local to the control, i.e. they represent the position of the mouse click relative to the upper-left corner of the Control.

Return True if you are going to handle the MouseDown. In such a case:

- The Action event, if any, will not execute and the state of the object will not change.
- You will receive the MouseDrag and MouseUp events.

If you return False, the system handles the MouseDown so the above event handlers do not get called.

6.31.41 mouseDownInHeaderOfTableColumn(tableColumn as NSTableColumnMBS)

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to the subclass whenever the mouse button is clicked in the table view's header column.

Notes: tableColumn: The table column.

6.31.42 MouseDrag(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event fires continuously after the mouse button was pressed inside the Control.

Notes:

Mouse location is local to the control passed in to x, y.

As this event is fired continuously (hundreds of time per second), it is your responsibility to determine if the mouse has really moved.

6.31.43 MouseUp(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was released.

Notes: Use the x and y parameters to determine if the mouse button was released within the control's boundaries.

6.31.44 namesOfPromisedFilesDroppedAtDestination(dropDestination as folderItem, DraggedRowsWithIndexes as NSIndexSetMBS) as string()

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array of filenames that represent the indexSet rows for a drag to dropDestination.

Notes:

dropDestination: The drop location where the files are created.

indexSet: The indexes of the items being dragged.

Returns an array of filenames (not full paths) for the created files that the receiver promises to create.

This method is called when a destination has accepted a promise drag.

For more information on file promise dragging, see documentation on the NSDraggingSource protocol and namesOfPromisedFilesDroppedAtDestination:.

6.31.45 nextTypeSelectMatchFromRow(startRow as Int64, endRow as Int64, searchString as string) as Int64

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to modify how type selection works.

Notes:

startRow: The starting row of the search range.

endRow: The ending row of the search range.

searchString: A string containing the typed selection.

Return the first row in the range of startRow through endRow (excluding endRow itself) that matches selectionString. Return -1 if no match is found.

It is possible for endRow to be less than startRow if the search will wrap.

Available in Mac OS X v10.5 and later.

6.31.46 `numberOfRowsInTableView` as Integer

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the table view needs to know the number of rows.

Notes: `numberOfRowsInTableView` is called very frequently, so it must be efficient.

6.31.47 `objectValue(column as NSTableColumnMBS, row as Integer)` as Variant

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a value is required for a given cell.

Notes: Please implement your own arrays to store values.

6.31.48 `OtherMouseDown(e as NSEventMBS)` as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has pressed a mouse button other than the left or right one.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.31.49 `OtherMouseDragged(e as NSEventMBS)` as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has moved the mouse with a button other than the left or right button pressed.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.31.50 `OtherMouseUp(e as NSEventMBS)` as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has released a mouse button other than the left or right button.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.31.51 `pasteboardItemForRow(row as Integer)` as `NSPasteboardItemMBS`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called to allow the table to support multiple item dragging.

Notes:

row: The row.

Returns an instance of NSPasteboardItem. Returning nil excludes the row from being dragged.

This method is required for multi-image dragging.

If this method is implemented, then `writeRowsWithIndexes` will not be called.

6.31.52 RightMouseDown(e as NSEventMBS) as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the view that the user has pressed the right mouse button.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.31.53 RightMouseDragged(e as NSEventMBS) as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has moved the mouse with the right button pressed .

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.31.54 RightMouseUp(e as NSEventMBS) as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has released the right mouse button.

Notes: This event is called before the normal event processing from Xojo happens. So return true to hide event from Xojo runtime.

6.31.55 rowActionsForRow(row as Integer, edge as Integer) as NSTableViewRowActionMBS()

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the control to provide an array of row actions to be attached to the specified edge of a table row and displayed when the user swipes horizontally across the row.

Notes:

row: The index of the target row.

edge: The edge (`NSTableRowActionEdgeLeading` or `NSTableRowActionEdgeTrailing`) for which row actions are requested. This is based on the direction in which the user swiped on the row. Swiping to the right results in an edge value of leading. Swiping to the left results in an edge value of trailing.

Returns an array of row actions (of class `NSTableViewRowActionMBS`) to be enabled on the specified edge of the table row.

Implement this method if your table row supports actions that are displayed when the user swipes horizontally across the row. For example, your table view could use this method to implement a swipe left to delete function in your table rows. When called, this method receives the table view, the index of the row the user swiped, and an edge of type `NSTableRowActionEdge`. The method should return an array of any row actions of class `NSTableViewRowAction` that are supported for the specified edge. If no row actions are available, an empty array should be returned.

If this method isn't implemented, then the table row displays no actions when the user swipes horizontally away from the specified edge.

6.31.56 `rowViewForRow(row as Integer) as NSTableRowViewMBS`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the delegate for a view to display the specified row.

Notes:

row: The row index.

Return an instance or subclass of `NSTableRowView`. If nil is returned, an `NSTableRowView` instance will be created and used.

You can implement this event to return a custom `NSTableRowView` for row.

The reuse queue can be used in the same way as documented in `tableView:view:row:`. The returned view will have attributes properly set to it before its added to the `tableView`.

This method is only valid for `NSView`-based table views.

6.31.57 `ScaleFactorChanged(NewFactor as Double)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backing store scale factor has changed.

Notes: Please invalidate any cached bitmaps or other relevant state.

6.31.58 SelectionDidChange(notification as NSNotificationMBS)

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event informs you that the table view's selection has changed.

6.31.59 selectionIndexesForProposedSelection(proposedSelectionIndexes as NSIndexSetMBS) as NSIndexSetMBS

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the delegate to modify the proposed selection.

Notes:

proposedSelectionIndexes: An index set containing the indexes of the proposed selection.

Return an NSIndexSet instance containing the indexes of the new selection. Return proposedSelectionIndexes if the proposed selection is acceptable, or the value of the table view's existing selection to avoid changing the selection.

This method may be called multiple times with one new index added to the existing selection to find out if a particular index can be selected when the user is extending the selection with the keyboard or mouse.

Implementation of this method is optional. If implemented, this method will be called instead of shouldSelectRow.

Available in Mac OS X v10.5 and later.

6.31.60 SelectionIsChanging(notification as NSNotificationMBS)

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event informs you that the table view's selection is in the process of changing (typically because the user is dragging the mouse across a number of rows).

6.31.61 selectionShouldChangeInTableView as boolean

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the selection should change.

Notes:

Return true to allow the table view to change its selection (typically a row being edited), false to deny selection change.

The user can select and edit different cells within the same row, but can't select another row unless the delegate approves. The subclass can implement this method for complex validation of edited rows based on the values of any of their cells.

6.31.62 setObjectValue(value as Variant, column as NSTableColumnMBS, row as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a cell value is saved to the datasource.

6.31.63 shouldEditTableColumn(tableColumn as NSTableColumnMBS, row as Int64) as boolean

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the cell at the specified row and column can be edited.

Notes:

TableColumn: The table column.

RowIndex: The row index.

Return true to allow editing the cell, false to deny editing.

The subclass can implement this method to disallow editing of specific cells.

Note: This method is only valid for cell-based table views.

6.31.64 shouldReorderColumn(columnIndex as Int64, newColumnIndex as Int64) as boolean

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to the subclass to allow or prohibit the specified column to be dragged to a new location.

Notes:

columnIndex: The index of the column being dragged.

newColumnIndex: The proposed target index of the column.

Return true if the column reordering should be allowed, otherwise false.

When a column is initially dragged by the user, the delegate is first called with a newColumnIndex value of -1. Returning false will disallow that column from being reordered at all. Returning true allows it to be reordered, and the delegate will be called again when the column reaches a new location.

The actual NSTableColumn instance can be retrieved from the tableColumns array.

If this method is not implemented, all columns are considered reorderable.
Available in Mac OS X v10.6 and later.

6.31.65 shouldSelectRow(row as Int64) as boolean

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the table view should allow selection of the specified row.

Notes:

rowIndex: The row index.

Return true to permit selection of the row, false to deny selection.

The delegate can implement this method to disallow selection of particular rows.
For better performance and finer-grain control over the selection, use selectionIndexesForProposedSelection.

6.31.66 shouldSelectTableColumn(tableColumn as NSTableColumnMBS) as boolean

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the specified table column can be selected.

Notes:

TableColumn: The table column.

Return true to permit selection, otherwise false.

The subclass can implement this event to disallow selection of particular columns.

6.31.67 shouldShowCellExpansion(tableColumn as NSTableColumnMBS, row as Int64) as Boolean

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to control cell expansion for a specific row and column.

Notes:

TableColumn: The table column.

row: The row index.

Return true if the tooltip cell should expand, false otherwise.

Cell expansion can occur when the mouse hovers over the specified cell and the cell contents are unable to be fully displayed within the cell. If this method returns true, the full cell contents will be shown in a special floating tool tip view, otherwise the content is truncated.

Note: This method is only valid for cell-based table views.

Available in Mac OS X v10.5 and later.

6.31.68 `shouldTrackCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, row as Int64) as Boolean`

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to control the tracking behavior for a specific cell.

Notes:

cell: The cell to track.

tableColumn: The table column.

row: A row in tableView.

Returns true if the cell should track, false otherwise.

Normally, only selectable or selected cells can be tracked. If you implement this method, cells which are not selectable or selected can be tracked, and vice-versa.

For example, this allows you to have an NSButtonCell in a table which does not change the selection, but can still be clicked on and tracked.

Note: This method is only valid for cell-based table views.

Available in Mac OS X v10.5 and later.

6.31.69 `shouldTypeSelectForEvent(e as NSEventMBS, searchString as string) as Boolean`

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to control type select for a specific event.

Notes:

event: The event.

searchString: The search string or nil if no type select has begun.

Return true to allow type select for event, false otherwise.

Typically, this is called from the table view keyDown implementation and the event will be a key event. Available in Mac OS X v10.5 and later.

6.31.70 sizeToFitWidthOfColumn(column as Int64) as Double

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to provide custom sizing behavior when a column's resize divider is double clicked.

Notes:

column: The index of the column.

Returns the width of the specified column.

By default, NSTableView iterates every row in the table, accesses a cell via preparedCellAtColumn, and requests the cellSize to find the appropriate largest width to use.

For accurate results and performance, it is recommended that this method is implemented when using large tables. By default, large tables use a monte carlo simulation instead of iterating every row.

Available in Mac OS X v10.6 and later.

6.31.71 sortDescriptorsDidChange(oldDescriptors()) as NSSortDescriptorMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called by TableView to indicate that sorting may need to be done.

Notes: The data source typically sorts and reloads the data, and adjusts the selections accordingly. If you need to know the current sort descriptors and the data source doesn't manage them itself, you can get the current sort descriptors by calling TableView.sortDescriptors function.

6.31.72 textShouldBeginEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as boolean

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether text editing should be allowed.

Notes: Return true to allow.

6.31.73 textShouldEndEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as boolean

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether ending text editing should be allowed.

Notes: Return true to allow.

6.31.74 toolTipForCell(cell as NSCellMBS, r as NSRectMBS, tableColumn as NSTableColumnMBS, row as Int64, mouseLocation as NSPointMBS) as string

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a string that is displayed as a tooltip for the specified cell in the column and row.

Notes:

Cell: The cell.

r: The proposed active area of the tooltip. You can modify rect to provide an alternative active area.

TableColumn: The table column.

row: The row index.

mouseLocation: The mouse location.

Return a string containing the tooltip. Return empty string if no tooltip is desired.

By default, rect is computed as cell.drawingRectForBounds(cellFrame).

Available in Mac OS X v10.4 and later.

6.31.75 typeSelectString(tableColumn as NSTableColumnMBS, row as Int64) as string

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to provide an alternate text value used for type selection for a specified row and column.

Notes:

tableColumn: The table column.

row: The row index.

Returns a string that is used in type select comparison for row and tableColumn. Return "" if the row or tableColumn should not be searched.

Implement this method to change the string value that is searched for based on what is displayed. By default, all cells with text in them are searched.

If this event is not implemented the string value is the cell string value.

Implementation of this event is optional.

Available in Mac OS X v10.5 and later.

6.31.76 updateDraggingItemsForDrag(draggingInfo as NSDraggingInfoMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this method to allow the table to update dragging items as they are dragged over a view.

Notes:

The dragging information.

Required for multi-image dragging. Typically this will involve invoking enumerateDraggingItemsWithOptions on the draggingInfo parameter value and setting the draggingItem objects imageComponentsProvider to a proper image based on the content.

For view-based table views, you can use the NSTableCellView method draggingImageComponents. For cell-based tables, use the NSCell method draggingImageComponentsWithFrame.

6.31.77 validateDrop(info as NSDraggingInfoMBS, proposedRow as Integer, dropOperation as Integer) as Integer

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Used by aTableView to determine a valid drop target.

Notes:

info: An object that contains more information about this dragging operation.

row: The index of the proposed target row.

operation: The type of dragging operation proposed.

Returns the dragging operation the data source will perform.

The data source may retarget a drop by calling `setDropRow` and returning something other than `NSDragOperationNone`. A data source might retarget for various reasons, such as to provide better visual feedback when inserting into a sorted position.

To propose a drop on the second row, `row` would be 2 and operation would be `NSTableViewDropOn`. To propose a drop below the last row, `row` would be `tableView.numberOfRows` and operation would be `NSTableViewDropAbove`.

6.31.78 `view(tableColumn as NSTableColumnMBS, row as Integer) as NSViewMBS`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the delegate for a view to display the specified row and column.

Notes:

see also

<https://developer.apple.com/reference/appkit/nstableviewdelegate/1527449-tableview?language=objc>

See also:

- 6.31.15 `View as NSTableViewMBS`

456

6.31.79 `willDisplayCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, row as Int64)`

Plugin Version: 15.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs you that the tableview will display the specified cell at the row in the column.

Notes:

Cell: The cell to be displayed.

TableColumn: The table column.

row: The row index.

The event can modify the display attributes of cell to alter the appearance of the cell.

Because cell is reused for every row in tableColumn, the event must set the display attributes both when drawing special cells and when drawing normal cells.

Note: The implementation of this method must not draw portions of the cell. It should only alter the state of the passed in cell.

6.31.80 `willTile`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The tableview will tile.

Notes: The internal tile function properly sizes the table view and its header view and marks it as needing display.

6.31.81 writeRowsWithIndexes(rowIndexes as NSIndexSetMBS, pboard as NSPasteboardMBS) as boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether a drag operation is allowed.

Notes:

rowIndexes: An index set of row numbers that will be participating in the drag.

pboard: The pasteboard to which to write the drag data.

Returns true if the drag operation is allowed, false otherwise.

Called by TableView after it has been determined that a drag should begin, but before the drag has been started.

To refuse the drag, return false. To start a drag, return true and place the drag data onto pboard (data, owner, and so on). The drag image and other drag-related information will be set up and provided by the table view once this call returns with true.

6.32 class NSTableDataSourceMBS

6.32.1 class NSTableDataSourceMBS

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a data source of a NSTableView.

Notes:

A listbox stores the data itself, but the NSTableView is just a view. so you need to handle the storage of the table view yourself by subclassing this class and filling the events.

6.32.2 Events

6.32.3 Close

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event is called when the datasource is destroyed.

6.32.4 numberOfRowsInTableView as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the table view needs to know the number of rows.

Notes: numberOfRowsInTableView is called very frequently, so it must be efficient.

6.32.5 objectValue(column as NSTableColumnMBS, row as Integer) as Variant

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a value is required for a given cell.

Notes: Please implement your own arrays to store values.

6.32.6 setObjectValue(value as Variant, column as NSTableColumnMBS, row as Integer)

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a cell value is saved to the datasource.

6.32.7 sortDescriptorsDidChange(oldDescriptors()) as NSSortDescriptorMBS)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called by TableView to indicate that sorting may need to be done.

Notes: The data source typically sorts and reloads the data, and adjusts the selections accordingly. If you need to know the current sort descriptors and the data source doesn't manage them itself, you can get the current sort descriptors by calling TableView.sortDescriptors function.

6.33 class NSTableHeaderCellMBS

6.33.1 class NSTableHeaderCellMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSTableHeaderCell is used by an NSTableHeaderView to draw its column headers.

Notes:

See the NSTableViewMBS class specification for more information on how it's used.

Subclasses of NSTableHeaderCell can override drawInteriorWithFrame, editWithFrame, and highlight:withFrame to change the way headers appear. See the NSCell class specification, and the following description, for information on these methods. (This works in Cocoa, but does not yet work in the plugin. If you need, send in a feature request.)

Subclass of the NSTextFieldCellMBS class.

6.33.2 Methods

6.33.3 drawSortIndicatorWithFrame(cellFrame as NSRectMBS, inView as NSViewMBS, ascending as boolean, priority as Integer)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Draws a sorting indicator given a cellFrame contained inside controlView.

Notes:

If priority is 0, this is the primary sort indicator. If ascending is true, a "^^" indicator will be drawn. Override this method to customize the sorting user interface.

Available in Mac OS X v10.3 and later.

6.33.4 sortIndicatorRectForBounds(r as NSRectMBS) as NSRectMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the location to display the sorting indicator given rectangle.

Notes: Available in Mac OS X v10.3 and later.

6.34 class NSTableViewMBS

6.34.1 class NSTableViewMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSTableView is used by an NSTableView to draw headers over its columns and to handle mouse events in those headers.

Notes:

NSTableView uses NSTableViewCell to implement its user interface.

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard. Subclass of the NSViewMBS class.

6.34.2 Methods

6.34.3 columnAtPoint(point as NSPointMBS) as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the column whose header lies under aPoint in the receiver, or 1 if no such column is found.

Notes: point: is expressed in the receiver's coordinate system.

6.34.4 Constructor

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new table header view with size 100/100 and position 0/0

Example:

```
dim t as new NSTableViewMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.34.5 Constructor(Handle as Integer) 479
- 6.34.6 Constructor(left as Double, top as Double, width as Double, height as Double) 480

6.34.5 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSTableView handle.

Example:

```
dim t as new NSTableViewMBS(0, 0, 100, 100)
dim v as new NSTableViewMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSTableView and the plugin retains this handle.
See also:

- 6.34.4 Constructor 479
- 6.34.6 Constructor(left as Double, top as Double, width as Double, height as Double) 480

6.34.6 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new table header view with the given size and position.

Example:

```
dim x as new NSTableViewMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.
See also:

- 6.34.4 Constructor 479
- 6.34.5 Constructor(Handle as Integer) 479

6.34.7 draggedColumn as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** If the user is dragging a column in the receiver, returns the index of that column.

Notes: Otherwise returns 1.

6.34.8 draggedDistance as Double

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** If the user is dragging a column in the receiver, returns the column's horizontal distance from its original position.

Notes: Otherwise the return value is meaningless.

6.34.9 headerRectOfColumn(Column as Integer) as NSRectMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the rectangle containing the header tile for the column at columnIndex.

Notes: Raises an NSInternalInconsistencyException if columnIndex is out of bounds.

6.34.10 resizedColumn as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** If the user is resizing a column in the receiver, returns the index of that column.

Notes: Otherwise returns 1.

6.34.11 Properties**6.34.12 tableView as NSTableViewMBS**

Plugin Version: 12.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The owner tableView.

Notes: (Read and Write computed property)

6.35 class NSTableViewMBS

6.35.1 class NSTableViewMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The NSTableView class is the view shown for a row in an NSTableView.

Notes:

It is responsible for displaying attributes associated with the row, including the selection highlight, and group row look.

Subclass of the NSViewMBS class.

6.35.2 Methods

6.35.3 Constructor

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

6.35.4 Properties

6.35.5 backgroundColor as NSColorMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The background color of the row.

Notes:

The property defaults to the table views backgroundColor, unless usesAlternatingRowBackgroundColors is set to true. In that case, the colors alternate, and are automatically updated as required by insertions and deletions.

The value of the background color can be customized in the NSTableViewMBS.didAddRowView event. The property is animatable.

(Read and Write property)

6.35.6 emphasized as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Determines whether the row will draw with the alternate or secondary color (unless overridden).

Notes:

When emphasized is true, the view will draw with the alternateSelectedControlColor defined by NSColor. When false it will use the secondarySelectedControlColor defined by NSColor.

(Read and Write property)

6.35.7 Floating as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Specifies whether the row is drawn using the floating style.

Notes:

Floating is a temporary attribute that is set when a particular group row is actually floating above other rows. The state may change dynamically based on the position of the group row. Drawing may be different for rows that are currently 'floating'.

(Read and Write property)

6.35.8 groupRowStyle as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Specifies whether this row view is a group row.

Notes:

When true this row is a group row and will draw appropriately.

(Read and Write property)

6.35.9 NextRowSelected as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether next row is selected.

Notes: (Read and Write property)

6.35.10 PreviousRowSelected as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the previous row is selected.

Notes: (Read and Write property)

6.35.11 selected as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Determines whether the row is selected.

Notes:

True if selected, otherwise false.
(Read and Write property)

6.35.12 selectionHighlightStyle as Integer

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Specifies the selection highlight style.

Notes:

The possible values are specified in NSTableViewSelectionHighlightStyle in NSTableView.
(Read and Write property)

6.36 class NSTableViewMBS

6.36.1 class NSTableViewMBS

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSTableView object displays record-oriented data in a table and allows the user to edit values and resize and rearrange columns.

Notes:

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard. Subclass of the NSViewMBS class.

6.36.2 Methods

6.36.3 addTableColumn(column as NSTableColumnMBS)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds a given column as the last column of the receiver.

6.36.4 beginUpdates

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Begins a group of updates for the table view.

Notes:

For NSView-based table views, multiple row changes that is, insertions, deletions, and moves are animated simultaneously by surrounding calls to those method calls with beginUpdates and endUpdates. These methods are nestable.

The selected rows are maintained during the series of insertions, deletions, moves, and scrolling. If a selected row is deleted, a selection changed notification occurs after removeRowsAtIndexes is called.

It is not necessary to call beginUpdates and endUpdates if only one insertion, deletion, or move is occurring and the table view is an NSView-based table view. When using an NSCell-based table view, you must surround any insertion, deletion, or move in an update block for animations to occur.

The main reason for doing a batch update of changes to a table view is to avoid having the table animate unnecessarily.

Note that these methods should be called to reflect changes in your model; they do not make any underlying model changes.

For NSCell-based table views, it is required to call beginUpdates if you want to animate the insertRowsAtIndexes, removeRowsAtIndexes, and moveRowAtIndex.

6.36.5 canDragRowsWithIndexes(rowIndexes as NSIndexSetMBS, mouseDownPoint as NSPointMBS) as Boolean

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the table view allows dragging the rows at with the drag initiated at the specified point.

Notes:

rowIndexes: The row indexes to drag.

mouseDownPoint: The location where the drag was initiated.

Returns no to disallow the drag.

6.36.6 columnAtPoint(p as NSPointMBS) as Integer

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the column a given point lies in.

Notes: Returns the index of the column aPoint lies in, or 1 if aPoint lies outside the receiver's bounds.

See also:

- 6.36.7 columnAtPoint(x as Double, y as Double) as Integer 486

6.36.7 columnAtPoint(x as Double, y as Double) as Integer

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the column a given point lies in.

Notes: Returns the index of the column aPoint lies in, or 1 if aPoint lies outside the receiver's bounds.

See also:

- 6.36.6 columnAtPoint(p as NSPointMBS) as Integer 486

6.36.8 columnForView(view as NSViewMBS) as Integer

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the column index for the specified view.

Notes:

view: The view for which to retrieve the column.

Returns the index of the column containing view in the tableColumns array. This method returns -1 if the view is not in the table view. This method may also return -1 if the row containing the view is being animated away, such as during the deletion of a row.

This method is typically called in the action method of an NSButton (or NSControl) to find out what row (and column) the action should be performed on.

The implementation is O(n) where n is the number of visible rows, so this method should generally not be called within a loop.

6.36.9 columnIndexesInRect(rect as NSRectMBS) as NSIndexSetMBS

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the indexes of the receiver's columns that intersect the specified rectangle.

Notes: Available in Mac OS X v10.5 and later.

6.36.10 columnWithIdentifier(identifier as string) as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the first column in the receiver whose identifier is equal to a given identifier.

Notes: Returns the index of the first column in the receiver whose identifier is equal to anObject (when compared using isEqual:) or 1 if no columns are found with the specified identifier.

6.36.11 Constructor

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new table view with size 100/100 and position 0/0

Example:

```
dim t as new NSTableViewMBS
```

Notes: On success the handle property is not zero.

See also:

- 6.36.12 Constructor(Handle as Integer) 487
- 6.36.13 Constructor(left as Double, top as Double, width as Double, height as Double) 488

6.36.12 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given NSTableView handle.

Example:

```
dim t as new NSTableViewMBS(0, 0, 100, 100)
dim v as new NSTableViewMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a NSTableView and the plugin retains this handle.
See also:

- 6.36.11 Constructor 487
- 6.36.13 Constructor(left as Double, top as Double, width as Double, height as Double) 488

6.36.13 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new table view with the given size and position.

Example:

```
dim x as new NSTableViewMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.
See also:

- 6.36.11 Constructor 487
- 6.36.12 Constructor(Handle as Integer) 487

6.36.14 deselectAll

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Deselects all selected rows or columns if empty selection is allowed; otherwise does nothing.

6.36.15 deselectColumn(column as Integer)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Deselects the column at a given index if it's selected.

Notes: Column is from 0 to numberOfColumns-1.

6.36.16 `deselectRow(row as Integer)`

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Deselects the row at a given index if it's selected.

Notes: Deselects the row at `rowIndex` if it's selected, regardless of whether empty selection is allowed.

6.36.17 `Destructor`

Plugin Version: 9.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

Notes: REALbasic calls this destructor automatically.

6.36.18 `dragImageForRowsWithIndexes(dragRows as NSIndexSetMBS, tableColumns() as NSTableColumnMBS, theEvent as NSEventMBS, byref dragImageOffset as NSPointMBS) as NSImageMBS`

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Computes and returns an image to use for dragging.

Notes:

`dragRows`: An index set containing the row indexes that should be in the image.

`tableColumns`: An array of table columns that should be in the image.

`dragEvent`: The event that initiated the drag.

`dragImageOffset`: An in/out parameter specifying the offset of the cursor in the image, the default value is `NSZeroPoint`. Returning `NSZeroPoint` causes the cursor to be centered.

Returns an `NSImage` containing a custom image for the specified rows and columns participating in the drag.

6.36.19 `edit(column as Integer, row as Integer, selectit as boolean)`

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Edits the cell at `columnIndex` and `rowIndex`, selecting its entire contents if `flag` is true.

Notes:

This method is invoked automatically in response to user actions; you should rarely need to invoke it directly.

This method scrolls the receiver so that the cell is visible, sets up the field editor, and sends `selectWithFrame()` and `editWithFrame()` to the field editor's `NSCell` object with the `NSTableView` as the text delegate.

The row at `rowIndex` must be selected prior to calling `editColumn:row:withEvent:select:`, or an exception will be raised.

6.36.20 endUpdates

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Ends the group of updates for the table view.

Notes: Ends the group of updates for the table view. This method, like beginUpdates, is nestable. See beginUpdates for details.

6.36.21 frameOfCellAtColumnRow(column as Integer, row as Integer) as NSRectMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a rectangle locating the cell that lies at the intersection of the specified column and row.

Notes:

column: The index in the tableColumns array of the column containing the cell whose rectangle you want.

row: The index of the row containing the cell whose rectangle you want.

Returns a rectangle locating the cell that lies at the intersection of columnIndex and rowIndex. This method returns NSRectMBS.Zero if columnIndex or rowIndex is greater than the number of columns or rows in the table view.

You can use this method to update a single cell more efficiently than sending the table view a reloadData message using reloadData function.

The result of this method is used in a drawWithFrame:inView: message to the table column's data cell. You can subclass and override this method to customize the frame of a particular cell. However, never return a frame larger than the default implementation returns.

The default frame is computed to have a height equal to the rectOfRow: for rowIndex, minus the half intercellSpacing height on the top and half on the bottom. The width of frame is equal to the width of the table column minus half the intercellSpacing width on the left, and half on the right.

6.36.22 hiddenRowIndexes as NSIndexSetMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The indexes of all hidden table rows.

Notes: The value of this property is an index set containing the indexes of any hidden table rows. Table rows may be hidden by invoking the hideRowsAtIndexes method. Some drag-and-drop operations also result in hidden rows.

6.36.23 `hideRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)`

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Hides the specified table rows.

Notes:

`indexes`: An index set containing indexes of the rows to be hidden.

`rowAnimation`: An animation effect to be applied when the rows are hidden.

Use this method when you no longer want the data to be visible to the user, but you dont want to permanently remove the data. Hidden table rows have a height of zero and cannot be selected by the user. However, if a selected table row is hidden, it will remain selected.

Hiding a table row causes the `didRemoveRowView` delegate method to be invoked.

6.36.24 `insertRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)`

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Inserts the rows using the specified animation.

Notes:

`indexes`: The final positions of the new rows to be inserted.

`animationOptions`: The animation displayed during the insert. See `NSTableViewAnimationOptions` for the possible values that can be combined using the bitwise OR operator.

The `numberOfRows` in the table view is automatically increased by the count of indexes.

Calling this method multiple times within the same `beginUpdates` and `endUpdates` block is allowed, and changes are processed incrementally.

NSCell-based table views must first call `beginUpdates` before calling this method.

6.36.25 `isColumnSelected(column as Integer) as boolean`

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the column at a given index is selected.

Notes: `column` is from 0 to `numberOfColumns`.

6.36.26 `isRowSelected(row as Integer)` as boolean

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value that indicates whether the row at a given index is selected.

Notes: row is from 0 to to numberOfRows.

6.36.27 `moveColumn(column as Integer, toIndex as Integer)`

Plugin Version: 9.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Moves the column and heading at a given index to a new given index.

Notes:

columnIndex: The current index of the column to move.

newIndex: The new index for the moved column.

This method raises the ColumnDidMove event.

6.36.28 `moveRowAtIndex(oldIndex as Integer, newIndex as Integer)`

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Moves the specified row to the new row location using animation.

Notes:

oldIndex: Initial row index.

newIndex: New row index.

This is similar to removing a row at oldIndex and inserting it at newIndex, except the same view is used and simply has its position updated to the new location.

Changes happen incrementally as they are sent to the table, so as soon as this method is called the row can be considered moved. However the underlying view is not moved until endUpdates has been called.

This method can be called multiple times within the same beginUpdates and endUpdates block.

NSCell-based table views must first call beginUpdates before calling this method.

6.36.29 `noteHeightOfRowsWithIndexesChanged(indexSet as NSIndexSetMBS)`

Plugin Version: 16.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Informs the table view that the rows specified in indexSet have changed height.

Notes:

`indexSet`: Index set of rows that have changed their height.

If you implement `heightOfRow` event this method immediately retiles the table view using the row heights the event provides.

For `NSView`-based tables, this method will animate. To turn off the animation, create an `NSAnimationContext` grouping and set the duration to 0. Then call this method and end the grouping.

For `NSCell`-based tables, this method normally doesn't animate. However, it will animate if you call it inside a `beginUpdates/endUpdates` block.

6.36.30 `noteNumberOfRowsChanged`

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the number of records in its data source has changed.

Notes: This method allows the receiver to update the scrollers in its scroll view without actually reloading data into the receiver. It's useful for a data source that continually receives data in the background over a period of time, in which case the table view can remain responsive to the user while the data is received.

6.36.31 `rectOfColumn(column as Integer) as NSRectMBS`

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the rectangle containing the column at a given index.

Notes:

The rectangle containing the column at `columnIndex`. Returns `NSRectMBS.Zero` (an empty rectangle) if `columnIndex` lies outside the range of valid column indices for the receiver.

You can use this method to update a single column more efficiently than sending the table view a `reloadData` message.

```
aTableView.setNeedsDisplayInRect(aTableView.rectOfColumn(column))
```

6.36.32 `rectOfRow(row as Integer) as NSRectMBS`

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the rectangle containing the row at a given index.

Notes: Returns the rectangle containing the row at `rowIndex`. Returns `NSRectMBS.Zero` (an empty rectangle) if `rowIndex` lies outside the range of valid row indices for the receiver.

6.36.33 reloadData

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Marks the receiver as needing redisplay, so it will reload the data for visible cells and draw the new values.

Notes: This method forces redraw of all the visible cells in the receiver. If you want to update the value in a single cell, column, or row, it is more efficient to use `frameOfCellAtColumn()`, `rectOfColumn()`, or `rectOfRow()` in conjunction with `setNeedsDisplayInRect()`. If you just want to update the scroller, use `noteNumberOfRowsChanged`; if the height of a set of rows changes, use `noteHeightOfRowsWithIndexesChanged()`.

See also:

- 6.36.34 `reloadData(rowIndexes as NSIndexSetMBS, columnIndexes as NSIndexSetMBS)` 494

6.36.34 reloadData(rowIndexes as NSIndexSetMBS, columnIndexes as NSIndexSetMBS)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Reloads the data for only the specified rows and columns.

Notes:

`rowIndexes`: The indexes of the rows to update.

`columnIndexes`: The indexes of the columns to update.

For cells that are visible, the appropriate `dataSource` and `delegate` methods are called and the cells are redrawn.

For tables that support variable row heights, the row height is not re-queried from the delegate; it is your responsibility to invoke `noteHeightOfRowsWithIndexesChanged` if a row height change is required.

For `NSView`-based table views, this method drops the view-cells in the table row, but not the `NSTableRowView` instances.

See also:

- 6.36.33 `reloadData` 494

6.36.35 removeRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes the rows using the specified animation.

Notes:

indexes: An index set containing the rows to remove.

animationOptions: The animation displayed during the insert. See NSTableViewAnimationOptions for the possible values that can be combined using the bitwise OR operator.

This method deletes from the table the rows represented at indexes and automatically decreases numberOfRows by the count of indexes.

The row indexes should be with respect to the current state displayed in the table view, and not the final state, because the specified rows do not exist in the final state.

Calling this method multiple times within the same beginUpdates and endUpdates block is allowed, and changes are processed incrementally.

Changes are processed incrementally as the insertRowsAtIndexes, removeRowsAtIndexes, and the moveRowAtIndex methods are called. It is acceptable to delete row 0 multiple times, as long as there is still a row available.

NSCell-based table views must first call beginUpdates before calling this method.

6.36.36 removeTableColumn(column as NSTableColumnMBS)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes a given column from the receiver.

6.36.37 rowAtPoint(p as NSPointMBS) as Integer

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the row a given point lies in.

Notes: Returns the index of the row aPoint lies in, or 1 if aPoint lies outside the receiver's bounds.

See also:

- 6.36.38 rowAtPoint(x as Double, y as Double) as Integer 495

6.36.38 rowAtPoint(x as Double, y as Double) as Integer

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the row a given point lies in.

Notes: Returns the index of the row aPoint lies in, or 1 if aPoint lies outside the receiver's bounds.

See also:

- 6.36.37 rowAtPoint(p as NSPointMBS) as Integer 495

6.36.39 rowForView(view as NSViewMBS) as Integer

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the row for the specified view.

Notes:

view: The view for which to retrieve the row.

Returns the index of the row containing to view. This method returns -1 if the view is not in the table view. This method may also return -1 if the row containing the view is being animated away, such as during the deletion of a row.

This method is typically called in the action method for an NSButton (or NSControl) to find out what row (and column) the action should be performed on.

The implementation is O(n) where n is the number of visible rows, so this method should generally not be called within a loop.

6.36.40 rowsInRect(rect as NSRectMBS) as NSRangeMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a range of indexes for the rows that lie wholly or partially within the vertical boundaries of the specified rectangle.

Notes:

Rect: A rectangle in the coordinate system of the table view.

Returns a range of indexes for the table views rows that lie wholly or partially within the horizontal boundaries of aRect. If the width or height of aRect is 0, this method returns an NSRange whose length is 0.

The location of the range is the index of the first row in the rectangle, and the length is the number of rows that lie in the rectangle.

6.36.41 rowViewAtRow(row as Integer, makeIfNecessary as Boolean) as NSViewMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a row view at the specified index, creating one if necessary.

Notes:

row: The row index.

makeIfNecessary: True if a view is required, NO if you want to update properties on a view, if one is available.

Returns an instance, or subclass, of NSTableView. Returning nil is also valid if makeIfNecessary is false and the view did not exist.

This method first attempts to return a currently displayed view in the visible area. If there is no visible view, and `makeIfNecessary` is true, a prepared temporary view is returned. If `makeIfNecessary` is false, and the view is not visible, `nil` is returned.

In general, `makeIfNecessary` should be true if you require a resulting view, and false if you want to update properties on a view only if it is available (generally this means it is visible).

An exception is thrown if `row` falls outside of the number of rows in the table (`numberOfRows`). The returned result should generally not be held onto for longer than the current run loop cycle. Its better to call `rowViewAtRow` whenever a view is required.

6.36.42 scrollColumnToVisible(column as Integer)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Scrolls the receiver and header view horizontally in an enclosing `NSClipView` so the column specified by `columnIndex` is visible.

6.36.43 scrollRowToVisible(row as Integer)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Scrolls the receiver vertically in an enclosing `NSClipView` so the row specified by `rowIndex` is visible.

6.36.44 ScrollToLine(Line as Integer, Animated as Boolean)

Plugin Version: 16.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Scrolls to line.

Notes:

If `animated` is true, the scroll is animated.

The line is centered in the middle of the viewable area if possible.

6.36.45 selectAll

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects all rows or all columns, according to whether rows or columns were most recently selected.

Notes: If the table allows multiple selection, this action method selects all rows or all columns, according to whether rows or columns were most recently selected. If nothing has been recently selected, this method selects all rows. If this table doesn't allow multiple selection, this method does nothing.

6.36.46 `selectColumnIndexes(indexes as NSIndexSetMBS, extend as boolean)`

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the column selection using indexes.

Notes: If the extend flag is false the selected columns are specified by indexes. If extend is true, the columns indicated by indexes are added to the collection of already selected columns, providing multiple selection.

6.36.47 `selectedColumnIndexes as NSIndexSetMBS`

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an index set containing the indexes of the selected columns.

Notes: Returns an index set containing the indexes of the selected columns.

6.36.48 `selectedRowIndex as NSIndexSetMBS`

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an index set containing the indexes of the selected rows.

Notes: Available in Mac OS X v10.3 and later.

6.36.49 `selectRowIndex(indexes as NSIndexSetMBS, extend as boolean)`

Plugin Version: 9.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the row selection using indexes.

Notes:

If the extend flag is false the selected rows are specified by indexes. If extend is true, the rows indicated by indexes are added to the collection of already selected rows, providing multiple selection.

Available in Mac OS X v10.3 and later.

6.36.50 `setDraggingSourceOperationMask(mask as Integer, isLocal as Boolean)`

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the default operation mask returned by `draggingSourceOperationMaskForLocal` to mask.

Notes:

mask: The drag operation mask. See `NSDragOperation` for the supported values.

isLocal: True if the destination is the same application, otherwise false. In either case the specified mask value is archived and used.

6.36.51 setDropRow(row as Integer, dropOperation as Integer)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Retargets the proposed drop operation.

Notes:

row: The target row index.

dropOperation: The drop operation. Supported values are specified by NSTableViewDropOperation.

For example, to specify a drop on the second row, specify row as 1, and operation as NSTableViewDropOn. To specify a drop below the last row, specify row as [self numberOfRows] and operation as NSTableViewDropAbove.

Passing a value of 1 for row and NSTableViewDropOn as the operation causes the entire table view to be highlighted rather than a specific row. This is useful if the data displayed by the table view does not allow the user to drop items at a specific row location.

6.36.52 setSortDescriptor(sortDescriptor as NSSortDescriptorMBS)

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the receiver's sort descriptors.

Notes:

A table column is considered sortable if it has a sort descriptor that specifies the sorting direction, a key to sort by, and a selector defining how to sort.

The array of sort descriptors is archived. Sort descriptors persist along with other column information if an autosave name is set.

Calling setSortDescriptors may have the side effect of invoking the data source method tableViewSortDescriptorsDidChange.

6.36.53 setSortDescriptors(sortDescriptors() as NSSortDescriptorMBS)

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the receiver's sort descriptors.

Notes:

A table column is considered sortable if it has a sort descriptor that specifies the sorting direction, a key to sort by, and a selector defining how to sort.

The array of sort descriptors is archived. Sort descriptors persist along with other column information if an autosave name is set.

Calling `setSortDescriptors` may have the side effect of invoking the data source method `tableViewSortDescriptorsDidChange`.

6.36.54 `sizeLastColumnToFit`

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Resizes the last column if there's room so the receiver fits exactly within its enclosing clip view.

6.36.55 `sizeToFit`

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Changes the width of columns in the receiver so all columns are visible.

Notes: All columns are resized to the same size, up to a column's maximum size. This method then invokes `tile`.

6.36.56 `sortDescriptors` as `NSSortDescriptorMBS()`

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's sort descriptors.

6.36.57 `tableColumns` as `NSTableColumnMBS()`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array containing the the `NSTableColumn` objects in the receiver.

Notes: The array returned by `tableColumns` contains all receiver's columns, including those that are hidden.

6.36.58 `tableColumnWithIdentifier(identifier as string)` as `NSTableColumnMBS`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the `NSTableColumn` object for the first column whose identifier is equal to a given object.

Notes: Returns the `NSTableColumn` object for the first column whose identifier is equal to anObject, as compared using `isEqual:`, or `nil` if no columns are found with the specified identifier.

6.36.59 tile

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Properly sizes the receiver and its header view and marks it as needing display.

Notes: Also resets cursor rectangles for the header view and line scroll amounts for the NSScrollView object.

6.36.60 unhideRowsAtIndexes(indexes as NSIndexSetMBS, animationOptions as Integer)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Unhides the specified table rows.

Notes:

indexes: An index set containing indexes of the hidden rows to be shown again.

rowAnimation: An animation effect to be applied when the rows are hidden.

Unhiding a table row causes the didAddRowView event to be invoked.

6.36.61 viewAtColumn(column as Integer, row as Integer, makeIfNecessary as Boolean) as NSViewMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a view at the specified row and column indexes, creating one if necessary.

Notes:

column: The index of the column in the tableColumns array.

row: The row index.

makeIfNecessary: true if a view is required, false if you want to update properties on a view, if one is available.

Returns an instance of NSView.

This method first attempts to return an available view, which is generally in the visible area. If there is no available view, and makeIfNecessary is true, a prepared temporary view is returned. If makeIfNecessary is false, and the view is not available, nil will be returned.

In general, makeIfNecessary should be true if you require a resulting view, and false if you only want to update properties on a view only if it is available (generally this means it is visible).

An exception will be thrown if row is not within the numberOfRows. The returned result should generally not be held onto for longer than the current run loop cycle. Instead they should re-query the table view for the row view.

6.36.62 Properties

6.36.63 `allowsColumnReordering` as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Controls whether the user can drag column headers to reorder columns.

Notes:

The default is true. You can rearrange columns programmatically regardless of this setting.
(Read and Write property)

6.36.64 `allowsColumnResizing` as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value that indicates whether the receiver allows the user to resize columns by dragging between their headers.

Notes: (Read and Write property)

6.36.65 `allowsColumnSelection` as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Controls whether the user can select an entire column by clicking its header.

Notes:

The default is false. You can select columns programmatically regardless of this setting.
(Read and Write property)

6.36.66 `allowsEmptySelection` as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Controls whether the receiver allows zero rows or columns to be selected.

Notes:

Unlike with the other settings that affect selection behavior, you cannot set an empty selection programmatically if empty selection is disallowed.
(Read and Write property)

6.36.67 `allowsMultipleSelection` as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Controls whether the user can select more than one row or column at a time.

Notes:

The default is false. You can select multiple columns or rows programmatically regardless of this setting.
(Read and Write property)

6.36.68 allowsTypeSelect as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver allows the user to type characters to select rows.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

6.36.69 autosaveName as string

Plugin Version: 9.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The name under which table information is automatically saved.

Notes:

The table information is saved separately for each user and for each application that user uses.

Note that even when a table view has an autosave name, it may not be saving table information automatically.

(Read and Write property)

6.36.70 autosaveTableColumns as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the order and width of this table view's columns are automatically saved.

Notes:

If flag is different from the current value, this method also reads in the saved information and sets the table options to match.

The table information is saved separately for each user and for each application that user uses. Note that if autosaveName returns nil, this setting is ignored and table information isn't saved.

(Read and Write property)

6.36.71 backgroundColor as NSColorMBS

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The color used to draw the background of the receiver.

Notes:

The default background color is light gray.
(Read and Write property)

6.36.72 clickedColumn as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the column the user clicked to trigger an action message.

Notes:

The index of the column the user clicked to trigger an action message. Returns 1 if the user clicked in an area of the table view not occupied by columns.

Index is zero based.
(Read only property)

6.36.73 clickedRow as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the row the user clicked to trigger an action message.

Notes:

The index of the row the user clicked to trigger an action message. Returns 1 if the user clicked in an area of the table view not occupied by table rows.

Index is zero based.
(Read only property)

6.36.74 columnAutoresizingStyle as Integer

Plugin Version: 9.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The table's column autoresizing style.

Notes:

Use the following constants:

NSTableViewMBS.kFirstColumnOnlyAutoresizingStyle
NSTableViewMBS.kUniformColumnAutoresizingStyle
NSTableViewMBS.kSequentialColumnAutoresizingStyle
NSTableViewMBS.kReverseSequentialColumnAutoresizingStyle
NSTableViewMBS.kNoColumnAutoresizing
NSTableViewMBS.kLastColumnOnlyAutoresizingStyle

Available in Mac OS X v10.4 and later.
(Read and Write property)

6.36.75 cornerView as NSViewMBS

Plugin Version: 9.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The view used to draw the area to the right of the column headers and above the vertical scroller of the enclosing scroll view.
Notes:

This is by default a simple view that merely fills in its frame, but you can replace it with a custom view using this property.
(Read and Write property)

6.36.76 dataSource as NSTableDataSourceMBS

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The object that provides the data displayed in the table view.
Notes: (Read and Write property)

6.36.77 draggingDestinationFeedbackStyle as Integer

Plugin Version: 9.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The feedback style displayed when the user drags over the table view.
Notes:

Available in Mac OS X v10.6 and later.
(Read and Write property)

6.36.78 editedColumn as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the column being edited.
Notes:

First column has index zero.

If sent during `editColumn()`, the index of the row being edited; otherwise 1.

(Read only property)

6.36.79 `editedRow` as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the row being edited.

Notes:

The first row index is zero.

If sent during `editColumn()`, the index of the row being edited; otherwise 1.

(Read only property)

6.36.80 `effectiveRowSizeStyle` as Integer

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the effective row size style for the table.

Notes:

If the `rowSizeStyle` is `NSTableViewRowSizeStyleDefault`, then this method returns the default size for this table.

The default size is currently set in the System Preferences by the users.

Available in OS X v10.7 and later.

(Read only property)

6.36.81 `floatsGroupRows` as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table view draws grouped rows as if they are floating.

Notes:

Group rows are rows for which the table view delegates `isGroupRow` method returns true. These rows can be displayed as if they are floating in a view-based table view.

The default value of this property is true.

(Read and Write property)

6.36.82 `focusedColumn` as Integer

Plugin Version: 9.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The currently focused column.

Notes:

Returns the index of the column, or -1 if there is no focused column

The focus interaction will always be on the selectedRow of the table. If the selectedRow is a full width cell, then focusedColumn will return 1 when focused..

Available in Mac OS X v10.6 and later.

(Read and Write property)

6.36.83 gridColor as NSColorMBS

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The color used to draw grid lines.

Notes:

The default color is gray.

(Read and Write property)

6.36.84 gridStyleMask as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The receiver's grid style mask.

Notes:

use the constants;

kGridNone	= 0,
kSolidVerticalGridLineMask	= 1
kSolidHorizontalGridLineMask	= 2

(Read and Write property)

6.36.85 headerView as NSTableHeaderViewMBS

Plugin Version: 9.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The NSTableHeaderView object used to draw headers over columns.

Notes:

The NSTableHeaderView object used to draw headers over columns, or nil if the receiver has no header view

(Read and Write property)

6.36.86 highlightedtableColumn as NSTableColumnMBS

Plugin Version: 9.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The table column highlighted in the receiver.

Notes:

A highlightable column header can be used in conjunction with row selection to highlight a particular column of the table. An example of this is how the Mail application indicates the currently sorted column.
(Read and Write property)

6.36.87 intercellSpacing as NSSizeMBS

Plugin Version: 9.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The horizontal and vertical spacing between cells.

Notes:

The default spacing is (3.0, 2.0).
(Read and Write property)

6.36.88 numberOfColumns as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of columns in the receiver.

Notes:

The value returned includes table columns that are currently hidden.
(Read only property)

6.36.89 numberOfRows as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of rows in the receiver.

Notes:

Typically you should not ask the table view how many rows it has; instead you should interrogate the table view's data source.
(Read only property)

6.36.90 numberOfSelectedColumns as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of selected columns.

Notes: (Read only property)

6.36.91 numberOfSelectedRows as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of selected rows.

Notes: (Read only property)

6.36.92 rowActionsVisible as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether a table rows actions are visible.

Notes:

This property contains a Boolean value indicating whether a table rows actions are visible or not the user has swiped the row to reveal the row actions. Set the value of this property to false to hide any visible row actions. Setting the value of this property to true is not supported, and will result in an exception.

(Read and Write property)

6.36.93 rowHeight as Double

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the height of each row in the receiver.

Notes:

The default row height is 16.0.

(Read and Write property)

6.36.94 rowSizeStyle as Integer

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The row size used by the tableview: small, medium, large, or on a custom row by row basis.

Notes:

The row size style can be modified on a row by row basis by invoking the event `heightOfRow`, if implemented.

The `rowSizeStyle` defaults to `NSTableViewRowSizeStyleCustom`. `NSTableViewRowSizeStyleCustom` indicates to use the `rowHeight` of the table, instead of the pre-determined system values.

Generally, `rowSizeStyle` should always be `NSTableViewRowSizeStyleCustom` except for "source lists". To implement variable row heights, set the value to `NSTableViewRowSizeStyleCustom` and implement `tableView:heightOfRow:` in the delegate.

Available in OS X v10.7 and later.
(Read and Write property)

6.36.95 `selectedColumn` as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the last column selected or added to the selection.

Notes:

Returns the index of the last column selected or added to the selection, or 1 if no column is selected.
(Read only property)

6.36.96 `selectedRow` as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the last row selected or added to the selection.

Notes:

Returns the index of the last row selected or added to the selection, or 1 if no row is selected.
(Read only property)

6.36.97 `selectionHighlightStyle` as Integer

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The selection highlight style used by the receiver to indicate row and column selection.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

6.36.98 usesAlternatingRowBackgroundColors as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value that indicates whether the receiver uses the standard alternating row colors for its background.

Notes:

Available in Mac OS X v10.3 and later.

(Read and Write property)

6.36.99 usesStaticContents as Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the table uses static data.

Notes:

A static table does not rely on a data source to provide the number of rows. A static table views contents are set at design time and can be changed programmatically as needed. Typically, you do not change the contents of a static table view after setting them.

In Xcode, any rows you add to a static table are saved in the corresponding nib or storyboard file and loaded with the rest of the table at runtime. You can add table rows programmatically to a static table view using the `insertRowsAtIndexes` method. When adding rows programmatically, your table view delegate must implement the `view` method to provide the corresponding view for any new rows. You can also remove rows at any time using the `removeRowsAtIndexes` method.

A table with static contents must be an `NSView`-based table view.

Available in macOS 10.10 or later.

(Read and Write property)

6.36.100 verticalMotionCanBeginDrag as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether vertical motion is treated as a drag or selection change to flag.

Notes:

If flag is false then vertical motion will not start a drag. The default is true.

Note that horizontal motion is always a valid motion to begin a drag. Most often, you would want to disable vertical dragging when it's expected that horizontal dragging is the natural motion.

(Read and Write property)

6.36.101 `indicatorImageInTableColumn(column as NSTableColumnMBS) as NSImageMBS`

Plugin Version: 9.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The indicator image of a given table column.

Notes:

An indicator image is an arbitrary (small) image that is rendered on the right side of the column header. An example of its use is in Mail to indicate the sorting direction of the currently sorted column in a mailbox. (Read and Write computed property)

6.36.102 `Events`**6.36.103** `ColumnDidMove(notification as NSNotificationMBS, oldColumn as Integer, newColumn as Integer)`

Plugin Version: 9.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event informs the delegate that a column was moved by user action in the table view.

6.36.104 `ColumnDidResize(notification as NSNotificationMBS, column as NSTableColumnMBS, index as Integer)`

Plugin Version: 9.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event informs you that a column was resized in the table view.

6.36.105 dataCell(tableColumn as NSTableColumnMBS, row as Int64) as NSCellMBS

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Optional return a different cells for each row.

Notes:

A different data cell can be returned for any particular tableColumn and row, or a cell that will be used for the entire row (a full width cell). The returned cell should properly implement copyWithZone:, since the cell may be copied by NSTableView. If the tableColumn is non-nil, and nil is returned, then the table will use the default cell from tableColumn.dataCellForRow(Row).

When each row is being drawn, this method will first be called with a nil tableColumn. At this time, you can return a cell that will be used to draw the entire row, acting like a group. If you do return a cell for the 'nil' tableColumn, be prepared to have the other corresponding datasource and delegate methods to be called with a 'nil' tableColumn value. If don't return a cell, the method will be called once for each tableColumn in the tableView, as usual.

6.36.106 didAddRowView(rowView as NSTableRowViewMBS, row as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Tells the delegate that a row view was added at the specified row.

Notes:

rowView: The row view.

row: The index of the row.

At this point, the delegate can add extra views, or modify the properties of rowView.

This method is only valid for NSView-based table views.

6.36.107 didClickTableColumn(tableColumn as NSTableColumnMBS)

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called if a table column was clicked on.

6.36.108 didDragTableColumn(tableColumn as NSTableColumnMBS)

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent at the time the mouse button goes up in tableView and tableColumn has been dragged during the time the mouse button was down.

Notes:

tableColumn: The table column.

The behavior of this method on Mac OS X v10.5 is different from prior versions. On Mac OS X v 10.5 the dragged column is sent to the subclass. In earlier versions the table column that is currently located at the dragged column's original index is sent.

6.36.109 didRemoveRowView(rowView as NSTableRowViewMBS, row as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Tells the delegate that a row view was removed from the table at the specified row.

Notes:

rowView: The row view.

row: The index of the row.

If row equals -1, the row is being deleted from the table and is no longer a valid row; otherwise row is a valid row that is being removed by being moved off screen.

This method is only valid for NSView-based table views.

6.36.110 DoubleClick

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** A double click was recognized.

6.36.111 heightForRow(row as Int64) as Double

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to support a table with varying row heights.

Notes: The height returned by this method should not include intercell spacing and must be greater than zero. Performance Considerations: For large tables in particular, you should make sure that this method is efficient. NSTableView may cache the values this method returns, but this should NOT be depended on, as all values may not be cached. To signal a row height change, call noteHeightOfRowsWithIndexesChanged. For a given row, the same row height should always be returned until noteHeightOfRowsWithIndexesChanged is called, otherwise unpredictable results will happen. NSTableView automatically invalidates its entire row height cache in reloadData, and noteNumberOfRowsChanged.

6.36.112 isGroupRow(row as Int64) as boolean

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the delegate to indicate that a specified row is a group row.

Notes:

row: The row index.

Return true if the specified row should have the group row style drawn, false otherwise.

If the cell in row is an NSTextFieldCell and contains only a string, the group row style attributes will automatically be applied to the cell.

Group rows in view-based table views can be made to visually float' by setting the tableview method setFloatsGroupRows to true.

Note: When configured as a source list style table view, rows identified as group rows draw with a specific style unique for source lists.

Available in Mac OS X v10.5 and later.

6.36.113 mouseDownInHeaderOfTableColumn(tableColumn as NSTableColumnMBS)

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to the subclass whenever the mouse button is clicked in the table view's header column.

Notes: tableColumn: The table column.

6.36.114 nextTypeSelectMatchFromRow(startRow as Int64, endRow as Int64, searchString as string) as Int64

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to modify how type selection works.

Notes:

startRow: The starting row of the search range.

endRow: The ending row of the search range.

searchString: A string containing the typed selection.

Return the first row in the range of startRow through endRow (excluding endRow itself) that matches searchString. Return -1 if no match is found.

It is possible for endRow to be less than startRow if the search will wrap.
Available in Mac OS X v10.5 and later.

6.36.115 rowViewForRow(row as Integer) as NSTableViewMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the delegate for a view to display the specified row.

Notes:

row: The row index.

Return an instance or subclass of NSTableView. If nil is returned, an NSTableView instance will be created and used.

You can implement this event to return a custom NSTableView for row.

The reuse queue can be used in the same way as documented in tableView:view:row:. The returned view will have attributes properly set to it before its added to the tableView.

This method is only valid for NSView-based table views.

6.36.116 SelectionDidChange(notification as NSNotificationMBS)

Plugin Version: 9.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event informs you that the table view's selection has changed.

6.36.117 selectionIndexesForProposedSelection(proposedSelectionIndexes as NSIndexSetMBS) as NSIndexSetMBS

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the delegate to modify the proposed selection.

Notes:

proposedSelectionIndexes: An index set containing the indexes of the proposed selection.

Return an NSIndexSet instance containing the indexes of the new selection. Return proposedSelectionIndexes if the proposed selection is acceptable, or the value of the table view's existing selection to avoid changing the selection.

This method may be called multiple times with one new index added to the existing selection to find out if

a particular index can be selected when the user is extending the selection with the keyboard or mouse.

Implementation of this method is optional. If implemented, this method will be called instead of `shouldSelectRow`.

Available in Mac OS X v10.5 and later.

6.36.118 SelectionIsChanging(notification as NSNotificationMBS)

Plugin Version: 9.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event informs you that the table view's selection is in the process of changing (typically because the user is dragging the mouse across a number of rows).

6.36.119 selectionShouldChangeInTableView as boolean

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the selection should change.

Notes:

Return true to allow the table view to change its selection (typically a row being edited), false to deny selection change.

The user can select and edit different cells within the same row, but can't select another row unless the delegate approves. The subclass can implement this method for complex validation of edited rows based on the values of any of their cells.

6.36.120 shouldEditTableColumn(tableColumn as NSTableColumnMBS, row as Int64) as boolean

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the cell at the specified row and column can be edited.

Notes:

TableColumn: The table column.

RowIndex: The row index.

Return true to allow editing the cell, false to deny editing.

The subclass can implement this method to disallow editing of specific cells.

Note: This method is only valid for cell-based table views.

6.36.121 `shouldReorderColumn(columnIndex as Int64, newColumnIndex as Int64) as boolean`

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to the subclass to allow or prohibit the specified column to be dragged to a new location.

Notes:

`columnIndex`: The index of the column being dragged.

`newColumnIndex`: The proposed target index of the column.

Return true if the column reordering should be allowed, otherwise false.

When a column is initially dragged by the user, the delegate is first called with a `newColumnIndex` value of -1. Returning false will disallow that column from being reordered at all. Returning true allows it to be reordered, and the delegate will be called again when the column reaches a new location.

The actual `NSTableColumn` instance can be retrieved from the `tableColumns` array.

If this method is not implemented, all columns are considered reorderable.

Available in Mac OS X v10.6 and later.

6.36.122 `shouldSelectRow(row as Int64) as boolean`

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the table view should allow selection of the specified row.

Notes:

`rowIndex`: The row index.

Return true to permit selection of the row, false to deny selection.

The delegate can implement this method to disallow selection of particular rows.

For better performance and finer-grain control over the selection, use `selectionIndexesForProposedSelection`.

6.36.123 `shouldSelectTableColumn(tableColumn as NSTableColumnMBS) as boolean`

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the specified table column can be selected.

Notes:

TableColumn: The table column.

Return true to permit selection, otherwise false.

The subclass can implement this event to disallow selection of particular columns.

6.36.124 `shouldShowCellExpansion(tableColumn as NSTableColumnMBS, row as Int64) as Boolean`

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to control cell expansion for a specific row and column.

Notes:

TableColumn: The table column.

row: The row index.

Return true if the tooltip cell should expand, false otherwise.

Cell expansion can occur when the mouse hovers over the specified cell and the cell contents are unable to be fully displayed within the cell. If this method returns true, the full cell contents will be shown in a special floating tool tip view, otherwise the content is truncated.

Note: This method is only valid for cell-based table views.

Available in Mac OS X v10.5 and later.

6.36.125 `shouldTrackCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, row as Int64) as Boolean`

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to control the tracking behavior for a specific cell.

Notes:

cell: The cell to track.

tableColumn: The table column.

row: A row in tableView.

Returns true if the cell should track, false otherwise.

Normally, only selectable or selected cells can be tracked. If you implement this method, cells which are not selectable or selected can be tracked, and vice-versa.

For example, this allows you to have an NSButtonCell in a table which does not change the selection, but can still be clicked on and tracked.

Note: This method is only valid for cell-based table views.

Available in Mac OS X v10.5 and later.

6.36.126 `shouldTypeSelectForEvent(e as NSEventMBS, searchString as string)` as Boolean

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to control type select for a specific event.

Notes:

event: The event.

searchString: The search string or nil if no type select has begun.

Return true to allow type select for event, false otherwise.

Typically, this is called from the table view `keyDown` implementation and the event will be a key event. Available in Mac OS X v10.5 and later.

6.36.127 `sizeToFitWidthOfColumn(column as Int64)` as Double

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to provide custom sizing behavior when a column's resize divider is double clicked.

Notes:

column: The index of the column.

Returns the width of the specified column.

By default, `NSTableView` iterates every row in the table, accesses a cell via `preparedCellAtColumn`, and requests the `cellSize` to find the appropriate largest width to use.

For accurate results and performance, it is recommended that this method is implemented when using large tables. By default, large tables use a monte carlo simulation instead of iterating every row.

Available in Mac OS X v10.6 and later.

6.36.128 textShouldBeginEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as boolean

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether text editing should be allowed.

Notes: Return true to allow.

6.36.129 textShouldEndEditing(control as NSControlMBS, fieldEditor as NSTextMBS) as boolean

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether ending text editing should be allowed.

Notes: Return true to allow.

6.36.130 tooltipForCell(cell as NSCellMBS, r as NSRectMBS, tableColumn as NSTableColumnMBS, row as Int64, mouseLocation as NSPointMBS) as string

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns a string that is displayed as a tooltip for the specified cell in the column and row.

Notes:

Cell: The cell.

r: The proposed active area of the tooltip. You can modify rect to provide an alternative active area.

TableColumn: The table column.

row: The row index.

mouseLocation: The mouse location.

Return a string containing the tooltip. Return empty string if no tooltip is desired.

By default, rect is computed as cell.drawingRectForBounds(cellFrame).

Available in Mac OS X v10.4 and later.

6.36.131 typeSelectString(tableColumn as NSTableColumnMBS, row as Int64) as string

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked to allow the subclass to provide an alternate text value used for type selection for a specified row and column.

Notes:

tableColumn: The table column.

row: The row index.

Returns a string that is used in type select comparison for row and tableColumn. Return "" if the row or tableColumn should not be searched.

Implement this method to change the string value that is searched for based on what is displayed. By default, all cells with text in them are searched.

If this event is not implemented the string value is the cell string value.

Implementation of this event is optional.

Available in Mac OS X v10.5 and later.

6.36.132 view(tableColumn as NSTableColumnMBS, row as Integer) as NSViewMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the delegate for a view to display the specified row and column.

Notes:

see also

<https://developer.apple.com/reference/appkit/nstableviewdelegate/1527449-tableview?language=objc>

6.36.133 willDisplayCell(cell as NSCellMBS, tableColumn as NSTableColumnMBS, row as Int64)

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs you that the tableview will display the specified cell at the row in the column.

Notes:

Cell: The cell to be displayed.

TableColumn: The table column.

row: The row index.

The event can modify the display attributes of cell to alter the appearance of the cell.

Because cell is reused for every row in tableColumn, the event must set the display attributes both when drawing special cells and when drawing normal cells.

Note: The implementation of this method must not draw portions of the cell. It should only alter the state of the passed in cell.

6.36.134 Constants

6.36.135 NSTableRowActionEdgeLeading = 0

Plugin Version: 17.1. **Function:** One of the constants to define table row edges on which row actions are attached.

Notes: Denotes the leading, or left, edge of an table row view.

6.36.136 NSTableRowActionEdgeTrailing = 1

Plugin Version: 17.1. **Function:** One of the constants to define table row edges on which row actions are attached.

Notes: Denotes the trailing, or right, edge of an table row view.

6.36.137 NSTableViewAnimationEffectFade = 1

Plugin Version: 17.1. **Function:** Specifies the animation effects to apply when inserting or removing rows.

Notes: Use a fade for row or column removal. The effect can be combined with any of the slide constants.

6.36.138 NSTableViewAnimationEffectGap = 2

Plugin Version: 17.1. **Function:** Specifies the animation effects to apply when inserting or removing rows.

Notes: Creates a gap for newly inserted rows. This is useful for drag and drop animations that animate to a newly opened gap and should be used in the acceptDrop event.

6.36.139 NSTableViewAnimationEffectNone = 0

Plugin Version: 17.1. **Function:** Specifies the animation effects to apply when inserting or removing rows.

Notes: Use no animation effects.

6.36.140 NSTableViewAnimationSlideDown = & h20

Plugin Version: 17.1. **Function:** Specifies the animation effects to apply when inserting or removing rows.
Notes: Animates a row insertion or removal by sliding downward.

6.36.141 NSTableViewAnimationSlideLeft = & h30

Plugin Version: 17.1. **Function:** Specifies the animation effects to apply when inserting or removing rows.
Notes: Animates a row insertion by sliding from the left. Animates a row removal by sliding towards the left.

6.36.142 NSTableViewAnimationSlideRight = & h40

Plugin Version: 17.1. **Function:** Specifies the animation effects to apply when inserting or removing rows.
Notes: Animates a row insertion by sliding from the right. Animates a row removal by sliding towards the right.

6.36.143 NSTableViewAnimationSlideUp = & h10

Plugin Version: 17.1. **Function:** Specifies the animation effects to apply when inserting or removing rows.
Notes: Animates a row insertion or removal by sliding upward.

6.36.144 NSTableViewDashedHorizontalGridLineMask=8

Plugin Version: 17.1. **Function:** One of the constants to specify grid styles.
Notes: Specifies that the horizontal grid lines should be drawn dashed.

6.36.145 NSTableViewDraggingDestinationFeedbackStyleGap=2

Plugin Version: 17.1. **Function:** One of the dragging styles.
Notes: Provides a gap insertion when dragging over the table. Note that this style is only officially supported for View Based TableViews, but may partially work in Cell Based TableViews. The decision to use the gap style (compared to another style) can be made in `draggingSessionWillBeginAtPoint`, or it can dynamically be changed.

6.36.146 NSTableViewDraggingDestinationFeedbackStyleNone=-1

Plugin Version: 9.6. **Function:** One of the constants to specify the drag styles displayed by the table view.
Notes:

Provides no feedback when the user drags over the table view. This option exists to allow subclasses to implement their dragging destination highlighting, or to make it not show anything all.

Available in Mac OS X v10.6 and later.

6.36.147 NSTableViewDraggingDestinationFeedbackStyleRegular=0

Plugin Version: 9.6. **Function:** One of the constants to specify the drag styles displayed by the table view.
Notes:

Draws a solid round-rect background on drop target rows, and an insertion marker between rows. This style should be used in most cases.

Available in Mac OS X v10.6 and later.

6.36.148 NSTableViewDraggingDestinationFeedbackStyleSourceList=1

Plugin Version: 9.6. **Function:** One of the constants to specify the drag styles displayed by the table view.
Notes:

Draws an outline on drop target rows, and an insertion marker between rows. This style will automatically be set for source lists when the table's `setSelectionHighlightStyle:` is set to `NSTableViewSelectionHighlightStyleSourceList`. This is the standard look for Source Lists, but may be used in other areas as needed.

Available in Mac OS X v10.6 and later.

6.36.149 NSTableViewDropAbove=1

Plugin Version: 9.6. **Function:** One of the constants to specify drop operations.
Notes:

Specifies that the drop should occur above the specified row.

For example, given a table with *n* rows (numbered with row 0 at the top visually), a row of *n*-1 and operation of `NSTableViewDropOn` would specify a drop on the last row. To specify a drop below the last row, you use

a row of `n` and `NSTableViewDropAbove` for the operation.

6.36.150 `NSTableViewDropOn=0`

Plugin Version: 9.6. **Function:** One of the constants to specify drop operations.

Notes:

Specifies that the drop should occur on the specified row.

For example, given a table with `n` rows (numbered with row 0 at the top visually), a row of `n-1` and operation of `NSTableViewDropOn` would specify a drop on the last row. To specify a drop below the last row, you use a row of `n` and `NSTableViewDropAbove` for the operation.

6.36.151 `NSTableViewFirstColumnOnlyAutoresizingStyle=5`

Plugin Version: 9.6. **Function:** One of the constants to specify the autoresizing style.

Notes:

Autoresize only the first table column.

When that table column can no longer be resized, stop autoresizing. Normally you should use one of the sequential autoresizing modes instead.

Available in Mac OS X v10.4 and later.

6.36.152 `NSTableViewGridNone=0`

Plugin Version: 9.6. **Function:** One of the constants for the grid styles.

Notes: Specifies that no grid lines should be displayed.

6.36.153 `NSTableViewLastColumnOnlyAutoresizingStyle=4`

Plugin Version: 9.6. **Function:** One of the constants to specify the autoresizing style.

Notes:

Autoresize only the last table column.

When that table column can no longer be resized, stop autoresizing. Normally you should use one of the

sequential autoresizing modes instead.

Available in Mac OS X v10.4 and later.

6.36.154 NSTableViewNoColumnAutoresizing=0

Plugin Version: 9.6. **Function:** One of the constants to specify the autoresizing style.

Notes:

Disable table column autoresizing.

Available in Mac OS X v10.4 and later.

6.36.155 NSTableViewReverseSequentialColumnAutoresizingStyle=3

Plugin Version: 9.6. **Function:** One of the constants to specify the autoresizing style.

Notes:

Autoresize each table column sequentially, from the first auto-resizable column to the last auto-resizable column; proceed to the next column when the current column has reached its minimum or maximum size.

Available in Mac OS X v10.4 and later.

6.36.156 NSTableViewRowSizeStyleCustom = 0

Plugin Version: 13.4. **Function:** One of the row size style constants.

Notes:

The table will use the `rowHeight` or invoke the delegate method `tableView:heightOfRow:`, if implemented.

The cell layout is not changed.

Available in OS X v10.7 and later.

The row size style constants define the size of the rows in the table view. They are used by the `effectiveRowSizeStyle` and `rowSizeStyle` methods. You can also query the row size in the `NSTableCellView` class' property `rowSizeStyle`.

6.36.157 NSTableViewRowSizeStyleDefault = -1

Plugin Version: 13.4. **Function:** One of the row size style constants.

Notes:

The table will use the system default layout size: small, medium or large.

Available in OS X v10.7 and later.

The row size style constants define the size of the rows in the table view. They are used by the `effectiveRowSizeStyle` and `rowSizeStyle` methods. You can also query the row size in the `NSTableCellView` class' property `rowSizeStyle`.

6.36.158 `NSTableViewRowSizeStyleLarge = 3`

Plugin Version: 13.4. **Function:** One of the row size style constants.

Notes:

The table will use a row height specified for a small table. It is required that the size be fully tested and supported if `NSTableViewRowSizeStyleCustom` is not used.

Available in OS X v10.7 and later.

The row size style constants define the size of the rows in the table view. They are used by the `effectiveRowSizeStyle` and `rowSizeStyle` methods. You can also query the row size in the `NSTableCellView` class' property `rowSizeStyle`.

6.36.159 `NSTableViewRowSizeStyleMedium = 2`

Plugin Version: 13.4. **Function:** One of the row size style constants.

Notes:

The table will use a row height specified for a medium table. It is required that the size be fully tested and supported if `NSTableViewRowSizeStyleCustom` is not used.

Available in OS X v10.7 and later.

The row size style constants define the size of the rows in the table view. They are used by the `effectiveRowSizeStyle` and `rowSizeStyle` methods. You can also query the row size in the `NSTableCellView` class' property `rowSizeStyle`.

6.36.160 `NSTableViewRowSizeStyleSmall = 1`

Plugin Version: 13.4. **Function:** One of the row size style constants.

Notes:

The table will use a row height specified for a small table. It is required that the size be fully tested and supported if `NSTableViewRowSizeStyleCustom` is not used.

Available in OS X v10.7 and later.

The row size style constants define the size of the rows in the table view. They are used by the `effectiveRowSizeStyle` and `rowSizeStyle` methods. You can also query the row size in the `NSTableCellView` class' property `rowSizeStyle`.

6.36.161 NSTableViewSelectionHighlightStyleNone=-1

Plugin Version: 9.6. **Function:** One of the constants to specify the selection highlight styles.

Notes:

Displays no highlight style at all.

Available in Mac OS X v10.6 and later.

6.36.162 NSTableViewSelectionHighlightStyleRegular=0

Plugin Version: 9.6. **Function:** One of the constants for the selectionHighlightStyle property.

Notes:

The regular highlight style of NSTableView. On Mac OS X v10.5 a light blue (returned by sending NSColor a alternateSelectedControlColor message) or light gray color (returned by sending NSColor a secondarySelectedControlColor message).

Available in Mac OS X v10.5 and later.

6.36.163 NSTableViewSelectionHighlightStyleSourceList=1

Plugin Version: 9.6. **Function:** One of the constants for the selectionHighlightStyle property.

Notes:

The source list style of NSTableView. On 10.5, a light blue gradient is used to highlight selected rows.

Note: When using this style, cell subclasses that implement drawsBackground must set the value to false. Otherwise, the cells will draw over the tableview's highlighting.

6.36.164 NSTableViewSequentialColumnAutosizingStyle=2

Plugin Version: 9.6. **Function:** One of the constants to specify the autosizing style.

Notes:

Autosize each table column sequentially, from the last auto-resizable column to the first auto-resizable column; proceed to the next column when the current column has reached its minimum or maximum size.

Available in Mac OS X v10.4 and later.

6.36.165 NSTableViewSolidHorizontalGridLineMask=2

Plugin Version: 9.6. **Function:** One of the constants to specify grid styles.

Notes:

Specifies that horizontal grid lines should be displayed.

Available in Mac OS X v10.3 and later.

You can combine `NSTableViewSolidVerticalGridLineMask` and `NSTableViewSolidHorizontalGridLineMask` with bitwiseor.

6.36.166 NSTableViewSolidVerticalGridLineMask=1

Plugin Version: 9.6. **Function:** One of the constants to specify grid styles.

Notes:

Specifies that vertical grid lines should be displayed.

Available in Mac OS X v10.3 and later.

You can combine `NSTableViewSolidVerticalGridLineMask` and `NSTableViewSolidHorizontalGridLineMask` with bitwiseor.

6.36.167 NSTableViewUniformColumnAutosizingStyle=1

Plugin Version: 9.6. **Function:** One of the constants to specify the autosizing style.

Notes:

Autosize all columns by distributing space equally, simultaneously.

Available in Mac OS X v10.4 and later.

6.37 class NSTableViewRowActionMBS

6.37.1 class NSTableViewRowActionMBS

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSTableViewRowAction object defines a single action to present when the user swipes horizontally on a table row.

Notes:

In an editable table, performing a horizontal swipe on a row reveals a button to delete the row by default. This class lets you define one or more custom actions to display for a given row in your table. Each instance of this class represents a single action to perform and includes the text, formatting information, and behavior for the corresponding button.

To add custom actions to your table views rows, implement the rowActionsForRow event in your table views delegate object. In that method, create and return an array of actions for the specified row. The table handles the remaining work of displaying the action buttons and executing the appropriate handler block when the user clicks the button.

6.37.2 Methods

6.37.3 available as boolean

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check whether this class is available.

Notes: Returns true on macOS 10.11.

6.37.4 Constructor(Style as Integer, Title as String)

Plugin Version: 17.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates and returns a new table view row action object.

Notes:

style: The style characteristics to apply to the button. Use this value to apply default appearance characteristics to the button. These characteristics visually communicate, such as by color, information about what the button does. For example, specify a style of NSTableViewRowActionStyleDestructive to indicate an action is destructive to the underlying data. For a list of possible style values, see NSTableViewRowActionStyle.

title: The string to display in the button. Specify a string localized for the users current language.

Returns a new table row action object that you can return from your table views event.

The style you specify cannot be changed later. You can change the title of the action button. You can also

configure other appearance-related properties of the button using the properties of this class. You can assign the same row action object to multiple rows of your table.

6.37.5 Properties

6.37.6 BackgroundColor as NSColorMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The background color of the action button.

Notes:

Use this property to specify the background color for your button. If you do not specify a value for this property, AppKit assigns a default color based on the value in the style property. Generally, this color is red for destructive actions and blue for nondestructive actions.

(Read and Write property)

6.37.7 Handle as Integer

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The internal object reference.

Notes: (Read and Write property)

6.37.8 Image as NSImageMBS

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The image.

Notes:

Available in macOS 10.12 or later.

(Read and Write property)

6.37.9 Style as Integer

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The style applied to the action button.

Notes:

The value of this property is set at creation time and cannot be changed later.

(Read only property)

6.37.10 Title as String

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The title of the action button.

Notes: (Read and Write property)

6.37.11 Events

6.37.12 Action(row as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when action is invoked.

Notes: The event to execute when the user clicks the button associated with this action. When the user selects the action represented by this object, AppKit executes your event on the apps main thread.

6.37.13 Constants

6.37.14 NSTableViewRowActionStyleDestructive = 1

Plugin Version: 17.1. **Function:** Constants that help define the appearance and behavior of action buttons. **Notes:** Apply a style that indicates that the action might change or delete data. This style changes the value of the backgroundColor property to an appropriate value to reflect the destructive action. After creating the action object, you can change the background color as needed. Destructive actions require a longer swipe to activate, and trigger an animation when a table row is deleted.

6.37.15 NSTableViewRowActionStyleRegular = 0

Plugin Version: 17.1. **Function:** Constants that help define the appearance and behavior of action buttons. **Notes:** Apply the default style to the button. This style does not apply any special coloring to the button.

6.38 control NSTokenFieldControlMBS

6.38.1 control NSTokenFieldControlMBS

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control to host a NSTokenField.

6.38.2 Properties

6.38.3 View as NSTokenFieldMBS

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The view used for the control.

Notes: (Read only property)

6.38.4 Events

6.38.5 BoundsChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the bounds, but not the frame, changed.

6.38.6 completionsForSubstring(substring as string, tokenIndex as Integer, byref selectedIndex as Integer) as Variant()

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to provide an array of appropriate completions for the contents of the receiver.

Notes:

substring: The partial string that is to be completed.

tokenIndex: The index of the token being edited.

selectedIndex: Optionally, you can return by-reference an index into the returned array that specifies which of the completions should be initially selected. If none are to be selected, return by reference -1.

Returns an array of strings that are possible completions.

If the delegate does not implement this method, no completions are provided.

Available in OS X v10.4 and later.

6.38.7 displayStringForRepresentedObject(representedObject as Variant) as string

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to provide a string to be displayed as a proxy for the given represented object.

Notes:

representedObject: A represented object of the token field.

Returns the string to be used as a proxy for representedObject. If you return nil or do not implement this method, then representedObject is displayed as the string.

6.38.8 editingStringForRepresentedObject(representedObject as Variant) as string

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to provide a string to be edited as a proxy for a represented object.

Notes:

representedObject: A represented object of the token field.

Returns a string that's an editable proxy of the represented object, or nil if the token should not be editable.

6.38.9 EnableMenuItems

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** The event where you can enable menu items.

6.38.10 FrameChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the frame changed.

6.38.11 GotFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control itself got focus.

Notes: This only fires if the control itself got focus and not a sub control.

6.38.12 hasMenuForRepresentedObject(representedObject as Variant) as boolean

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to specify whether the given represented object provides a menu.

Notes:

representedObject: A represented object of the token field.

Returns true if the represented object has a menu, false otherwise.
By default tokens in a token field have no menus.

6.38.13 LostFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control lost focus.

Notes: This only fires if the control itself lost focus and not a sub control.

6.38.14 MenuAction(HitItem as MenuItem) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a menuitem is chosen.

Notes: This allows the control to react on its relevant menu items. Please return true if you handled it or false to give others a chance.

6.38.15 menuForRepresentedObject(representedObject as Variant) as NSMenuMBS

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to provide a menu for the specified represented object.

Notes:

representedObject: A represented object of the token field.

Returns the menu associated with the represented object.
By default tokens in a token field do not return menus.

6.38.16MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was pressed inside the controls region at the location passed in to x, y.

Notes:

The coordinates x and y are local to the control, i.e. they represent the position of the mouse click relative to the upper-left corner of the Control.

Return True if you are going to handle theMouseDown. In such a case:

- The Action event, if any, will not execute and the state of the object will not change.
- You will receive the MouseDrag and MouseUp events.

If you return False, the system handles theMouseDown so the above event handlers do not get called.

6.38.17 MouseDrag(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event fires continuously after the mouse button was pressed inside the Control.

Notes:

Mouse location is local to the control passed in to x, y.

As this event is fired continuously (hundreds of time per second), it is your responsibility to determine if the mouse has really moved.

6.38.18 MouseUp(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was released.

Notes: Use the x and y parameters to determine if the mouse button was released within the control's boundaries.

6.38.19 readFromPasteboard(pboard as NSPasteboardMBS) as Variant()

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to return an array of objects representing the data read from the specified pasteboard.

Notes:

pboard: The pasteboard from which to read the represented objects.

Returns an array of represented objects created from the pasteboard data.

6.38.20 `representedObjectForEditingString(editingString as string) as Variant`

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to provide a represented object for the given editing string.

Notes:

`editingString`: The edited string representation of a represented object.

Returns a represented object that is displayed rather than the editing string.

Note: In OS X v10.4, NSTextField trims whitespace around tokens but it does not trim whitespace in OS X versions 10.5.0 and 10.5.1. In OS X v10.5.2, you get whitespace-trimming behavior by either linking against the v10.4 binary or linking against the v10.5 binary and not implementing the this method. If you do not want the whitespace-trimming behavior, link against the v10.5 binary and implement this method, returning the editing string if you have no represented object.

6.38.21 `ScaleFactorChanged(NewFactor as Double)`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backing store scale factor has changed.

Notes: Please invalidate any cached bitmaps or other relevant state.

6.38.22 `shouldAddObjects(tokens() as Variant, index as Integer) as Variant()`

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows to validate the tokens to be added to the receiver at a particular location.

Notes:

`tokens`: An array of tokens to be inserted in the receiver at `index`.

`index`: The index of the receiver in which the array of tokens to be validated (`tokens`) will be inserted.

Returns an array of validated tokens.

The event can return the array unchanged or return a modified array of tokens. To reject the add completely, return an empty array. Returning nil causes an error.

6.38.23 `styleForRepresentedObject(representedObject as Variant) as Integer`

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to return the token style for editing the specified represented object.

Notes:

representedObject: A represented object of the token field.

Returns the style that should be used to display the representedObject. Possible values are shown in NSTokenStyle Values.

If the event implements this method and returns an NSTokenStyle that differs from the style set by setTokenStyle:, the value the event returns is preferred.

If you don't implement this method, the token field's tokenStyle is used.

6.38.24 TextDidBeginEditing(fieldEditor as NSTextMBS, notification as NSNotificationMBS)

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent when a control with editable text begins an editing session.

Notes:

Notification: The notification object. The name of the notification is always NSControlTextDidBeginEditingNotification.

This event is invoked when the user begins editing text in a control such as a text field or a form field. The control posts a NSControlTextDidBeginEditingNotification notification, and if the control's subclass implements this event, it is automatically registered to receive the notification. The field editor is also delivered for inspection.

See TextDidEndEditing for an explanation of why you may not always get one invocation of TextDidBeginEditing for each invocation of TextDidEndEditing.

6.38.25 TextDidChange(fieldEditor as NSTextMBS, notification as NSNotificationMBS)

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent when the text in the receiving control changes.

Notes:

Notification: The notification object. The name of the notification is always NSControlTextDidChangeNotification.

This event is invoked when text in a control such as a text field or form changes. The control posts a

NSControlTextDidChangeNotification notification, and if the control's subclass implements this event, it is automatically registered to receive the notification. The field editor is provided as parameter for inspection.

6.38.26 TextDidEndEditing(fieldEditor as NSTextMBS, notification as NSNotificationMBS)

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent when a control with editable text ends an editing session.

Notes:

Notification: The notification object. The name of the notification is always NSControlTextDidEndEditingNotification.

This event is invoked when the user stops editing text in a control such as a text field or form. The control posts a NSControlTextDidEndEditingNotification notification, and if the control's subclass implements this event, it is automatically registered to receive the notification. The field editor is also provided for inspection.

Warning: In some cases, such as when editing within an instance of NSOutlineView, this method may be invoked without a previous invocation of TextDidBeginEditing. You will only get the TextDidBeginEditing notification if the user actually types something, but you can get the TextDidEndEditing notification if the user just double-clicks the field and then clicks outside the field, without typing.

6.38.27 textShouldBeginEditing(fieldEditor as NSTextMBS) as boolean

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether text editing should be allowed.

Notes:

Return true to allow text editing or false to deny.

Be aware that an event in Xojo without return will cause false to be returned.

6.38.28 textShouldEndEditing(fieldEditor as NSTextMBS) as boolean

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether ending text editing should be allowed.

Notes:

Return true to allow end of text editing or false to deny.

Be aware that an event in Xojo without return will cause false to be returned.

6.38.29 tokenFieldAction

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control's action was triggered.

Notes: For a button if it was pressed.

6.38.30 tokenFieldTextShouldBeginEditing(fieldEditor as NSTextMBS) as boolean

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether text editing should be allowed.

Notes: Return true to allow text editing.

6.38.31 tokenFieldTextShouldEndEditing(fieldEditor as NSTextMBS) as boolean

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called to decide whether ending text editing should be allowed.

Notes: Return true to allow text editing.

6.38.32 writeRepresentedObjects(objects() as Variant, pboard as NSPasteboardMBS) as boolean

Plugin Version: 15.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent so the delegate can write represented objects to the pasteboard corresponding to a given array of display strings.

Notes:

objects: An array of represented objects associated with the token field.

pboard: The pasteboard to which to write the represented objects.

Return true if you writes the represented objects to the pasteboard, false otherwise. If false, the token field writes the display strings to the NSStringPboardType pasteboard.

6.39 control `NSViewControlMBS`

6.39.1 control `NSViewControlMBS`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control to host a generic `NSView`.

6.39.2 Properties

6.39.3 View as `NSViewMBS`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The view used in the control.

Notes:

Use this object to set more options on the control.
(Read only property)

6.39.4 Events

6.39.5 `acceptsFirstMouse(e as NSEventMBS)` as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return true if the receiver should be sent a `mouseDown` event for an initial mouse-down event, false if not.

Notes:

The receiver can either return a value unconditionally or use the location of event `e` to determine whether or not it wants the event. The default implementation ignores the event and returns false.

Implement this event in a subclass to allow instances to respond to click-through. This allows the user to click on a view in an inactive window, activating the view with one click, instead of clicking first to make the window active and then clicking the view. Most view objects refuse a click-through attempt, so the event simply activates the window. Many control objects, however, such as instances of `NSButton` and `NSSlider`, do accept them, so the user can immediately manipulate the control without having to release the mouse button.

6.39.6 `acceptsFirstResponder` as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to accept first responder.

Notes: Return true if your control can have the focus and false if not.

6.39.7 becomeFirstResponder as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the object gets focus.

Notes: Return true to accept.

6.39.8 beginGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a touch gesture.

Notes:

e: An event object representing the gesture beginning.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.39.9 canBecomeKeyView as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the receiver can become key view.

Notes: Returns true if the receiver can become key view, false otherwise.

6.39.10 Close

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom view is destroyed.

6.39.11 concludeDragOperation(sender as NSDraggingInfoMBS)

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging operation is complete, signaling the receiver to perform any necessary clean-up.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

For this method to be invoked, the previous `performDragOperation` must have returned `true`.

The destination implements this method to perform any tidying up that it needs to do, such as updating its visual representation now that it has incorporated the dragged data. This message is the last message sent from sender to the destination during a dragging session.

If the sender object's `animatesToDestination` property was set to `true` in `prepareForDragOperation`, then the drag image is still visible. At this point you should draw the final visual representation in the view. When this method returns, the drag image is removed from the screen. If your final visual representation matches the visual representation in the drag, this is a seamless transition.

6.39.12 `draggingEnded(sender as NSDraggingInfoMBS)`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to be notified when a drag operation ends in some other destination.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

This method might be used by a destination doing auto-expansion in order to collapse any auto-expands.

6.39.13 `draggingEntered(sender as NSDraggingInfoMBS) as Integer`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image enters destination bounds or frame; delegate returns dragging operation to perform.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in `NSDragOperation` in the `NSDraggingInfo` reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous `draggingEntered` message.

Invoked when a dragged image enters the destination but only if the destination has registered for the pasteboard data type involved in the drag operation. Specifically, this method is invoked when the mouse pointer enters the destination's bounds rectangle (if it is a view object) or its frame rectangle (if it is a window object).

This method must return a value that indicates which dragging operation the destination will perform when the image is released. In deciding which dragging operation to return, the method should evaluate the overlap between both the dragging operations allowed by the source (obtained from sender with the `draggingSourceOperationMask` method) and the dragging operations and pasteboard data types the destination

itself supports.

If none of the operations is appropriate, this method should return `NSDragOperationNone` (this is the default response if the method is not implemented by the destination). A destination will still receive `draggingUpdated` and `draggingExited` even if `NSDragOperationNone` is returned by this method.

6.39.14 `draggingExited(sender as NSDraggingInfoMBS)`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image exits the destination's bounds rectangle (in the case of a view object) or its frame rectangle (in the case of a window object).

Notes: sender: The object sending the message; use it to get details about the dragging operation.

6.39.15 `draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging session has completed.

Notes:

session: The dragging session.

screenPoint: The point where the drag ended, in screen coordinates.

operation: The drag operation. See constants for drag operation types.

Available in OS X v10.7 and later.

6.39.16 `draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag moves on the screen.

Notes:

session: The dragging session.

screenPoint: The point where the drag moved to, in screen coordinates.

Available in OS X v10.7 and later.

6.39.17 `draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Declares the types of operations the source allows to be performed. (required)

Notes:

session: The dragging session.

context: The dragging context. See `NSDraggingContext` constants for the supported values.

Return the appropriate dragging operation as defined in constants.

In the future Apple may provide more specific "within" values in the future. To account for this, for unrecognized localities, return the operation mask for the most specific context that you are concerned with.

6.39.18 `draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag will begin.

Notes:

session: The dragging session.

screenPoint: The point where the drag will begin, in screen coordinates.

Available in OS X v10.7 and later.

6.39.19 `draggingSourceOperationMaskForLocal(flag as boolean) as Integer`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns an integer bit mask indicating the types of dragging operations the source object will allow to be performed on the dragged image's data.

Notes:

(Deprecated in OS X v10.7. This method is informally deprecated. It is only called if the source does not implement the `NSDraggingSource` protocol methods. This method will be formally deprecated in a future OS release.)

isLocal: True indicates that the candidate destination object (the window or view over which the dragged image is currently poised) is in the same application as the source, while a false value indicates that the destination object is in a different application.

A mask, created by combining the dragging operations listed in the NSDraggingOperation section of NSDraggingInfo protocol reference using the C bitwise OR operator. If the source does not permit any dragging operations, it should return NSDraggingOperationNone.

If not implemented, the default value is NSDraggingOperationCopy | NSDraggingOperationLink | NSDraggingOperationGeneric | NSDraggingOperationPrivate.

Available in OS X v10.0 and later. Deprecated in OS X v10.7.

6.39.20 draggingUpdated(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked periodically as the image is held within the destination area, allowing modification of the dragging operation or mouse-pointer position.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDraggingOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

For this to be invoked, the destination must have registered for the pasteboard data type involved in the drag operation. The messages continue until the image is either released or dragged out of the window or view.

This method provides the destination with an opportunity to modify the dragging operation depending on the position of the mouse pointer inside of the destination view or window object. For example, you may have several graphics or areas of text contained within the same view and wish to tailor the dragging operation, or to ignore the drag event completely, depending upon which object is underneath the mouse pointer at the time when the user releases the dragged image and the performDragOperation method is invoked.

You typically examine the contents of the pasteboard in the draggingEntered method, where this examination is performed only once, rather than in the draggingUpdated method, which is invoked multiple times.

Only one destination at a time receives a sequence of draggingUpdated messages. If the mouse pointer is within the bounds of two overlapping views that are both valid destinations, the uppermost view receives these messages until the image is either released or dragged out.

6.39.21 drawFocusRingMask(g as NSGraphicsMBS) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Draw the focus ring mask for the view.

Notes:

If false is returned, the default method from NSView class runs.

This method provides the shape of the focus ring mask by drawing the focus ring mask. An implementation of this method should draw in the view's interior (bounds) coordinate space, that the focus ring style has been set (it will be set it to NSFocusRingOnly to capture the focus ring itself), and that the fill and stroke colors have been set to an arbitrary fully opaque color.

Subclasses that find the default behavior insufficient should only draw the focus ring shape.

The NSView default implementation of this method simply fills self.bounds.
Available in Mac OS X v10.7 and later.

Please use NSGraphicsMBS class for drawing.

6.39.22 DrawRect(g as NSGraphicsMBS, left as Double, top as Double, width as Double, height as Double)

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The paint event with the rectangle which needs to be redrawn.

6.39.23 EnableMenuItems

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** The event where you can enable menu items.

6.39.24 endGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has ended a touch gesture.

Notes:

e: An event object representing the gesture end.
Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.39.25 focusRingMaskBounds as NSRectMBS

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the focus ring mask bounds.

Notes:

Return nil to run default NSView method.

Return a rectangle containing the mask in the view's interior (bounds) coordinate space.

The mask bounds allows the focus ring's overall size and position to be determined before it is drawn.

Subclasses must override this method if they require the display of a focus ring.

The NSView default implementation of this method simply returns NSRectMBS.Zero.

Note: The information provided by focusRingMaskBounds will enable Accessibility to identify selected subelements for zoom tracking, so it is important that this method provide a reasonably tight bounding box and that noteFocusRingMaskChanged is invoked as described.

6.39.26 ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the modifier keys will be ignored for this dragging session.

Notes:

session: The dragging session.

Return true if the modifier keys will be ignored, false otherwise.

Available in OS X v10.7 and later.

6.39.27 isOpaque as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether this view is opaque.

6.39.28 `keyDown(e as NSEventMBS)` as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes:

Return true if you handled this event.

Please return true in `becomeFirstResponder` and `acceptsFirstResponder`, so your `nview` can become first responder and receive key events.

6.39.29 `keyUp(e as NSEventMBS)` as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes:

Return true if you handled this event.

Please return true in `becomeFirstResponder` and `acceptsFirstResponder`, so your `nview` can become first responder and receive key events.

6.39.30 `magnifyWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a pinch gesture.

Notes:

`e`: An event object representing the magnify gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.39.31 `MenuItemAction(MenuItem as MenuItem)` As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a `menuItem` is chosen.

Notes: This allows the control to react on its relevant menu items. Please return true if you handled it or false to give others a chance.

6.39.32 menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS) as NSMenuMBS

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return a context-sensitive pop-up menu for a given mouse-down event.

Notes:

theEvent: An object representing a mouse-down event.
defaultMenu: The menu as constructed by super class.

The receiver can use information in the mouse event, such as its location over a particular element of the receiver, to determine what kind of menu to return. For example, a text object might display a text-editing menu when the cursor lies over text and a menu for changing graphics attributes when the cursor lies over an embedded image.

The default implementation returns the default menu.

6.39.33 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.39.34 mouseDownCanMoveWindow as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called so you can decide what happens with mouse down.

Notes:

Return true if you do not need to handle a mouse down and it can pass through to superviews; False if you need to handle the mouse down.

This allows iApp-type applications to determine the region by which a window can be moved. By default, this method returns false if the view is opaque; otherwise, it returns true. Subclasses can override this method to return a different value.

6.39.35 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.39.36 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.39.37 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.39.38 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.39.39 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.39.40 Open

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom NSView is created.

6.39.41 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.39.42 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.39.43 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.
Third mouse button.

6.39.44 performDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked after the released image has been removed from the screen, signaling the receiver to import the pasteboard data.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return if the destination accepts the data, it returns true; otherwise it returns false. The default is to return false.

For this method to be invoked, the previous `prepareForDragOperation` message must have returned true. The destination should implement this method to do the real work of importing the pasteboard data represented by the image.

If the sender object's `animatesToDestination` was set to true in `prepareForDragOperation`, then setup any animation to arrange space for the drag items to animate to. Also at this time, enumerate through the

dragging items to set their destination frames and destination images.

6.39.45 `prepareForDragOperation(sender as NSDraggingInfoMBS)` as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the image is released, allowing the receiver to agree to or refuse drag operation.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Returns true if the receiver agrees to perform the drag operation and false if not.

This method is invoked only if the most recent `draggingEntered` or `draggingUpdated` message returned an acceptable drag-operation value.

If you want the drag items to animate from their current location on screen to their final location in your view, set the sender object's `animatesToDestination` property to true in your implementation of this method.

6.39.46 `pressureChange(e as NSEventMBS)` as boolean

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Informs the current object that a pressure change occurred on a system that supports pressure sensitivity.

Notes:

This method is invoked automatically in response to user actions. `event` is the event that initiated the change in pressure.

Available in OS X v10.10.3 and later.

6.39.47 `resignFirstResponder` as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Focus is going away.

Notes: Return true to accept.

6.39.48 `rightMouseDown(e as NSEventMBS, x as Double, y as Double)` as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.39.49 rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.39.50 rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

6.39.51 rotateWithEvent(e as NSEventMBS) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a rotation gesture.

Notes:

e: An event object representing the rotate gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.39.52 ScaleFactorChanged(NewFactor as Double)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backing store scale factor has changed.

Notes: Please invalidate any cached bitmaps or other relevant state.

6.39.53 scrollWheel(e as NSEventMBS) as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the subclass that the mouse's scroll wheel has moved.

Notes:

e: An object encapsulating information about the wheel-scrolling event.

The default implementation simply passes this message to the next responder.

Return true to not pass the event.

6.39.54 `swipeWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a swipe gesture.

Notes:

`e`: An event object representing the swipe gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

6.39.55 `updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging images should be changed.

Notes:

`sender`: The object sending the message; use this object to get details about the dragging operation.

While a destination may change the dragging images at any time, it is recommended to wait until this method is called before updating the dragging images.

This allows the system to delay changing the dragging images until it is likely that the user will drop on this destination. Otherwise, the dragging images will change too often during the drag which would be distracting to the user.

6.39.56 `viewDidMoveToWindow`

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that it has been added to a new view hierarchy.

Notes:

The default implementation does nothing; subclasses can implement this event to perform whatever actions are necessary.

`window` may return nil when this method is invoked, indicating that the receiver does not currently reside in any window. This occurs when the receiver has just been removed from its superview or when the receiver has just been added to a superview that does not itself have a window. Overrides of this method may choose to ignore such cases if they are not of interest.

6.39.57 wantsPeriodicDraggingUpdates as boolean

Plugin Version: 15.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the destination object whether it wants to receive periodic draggingUpdated messages.

Notes:

Return true if the destination wants to receive periodic draggingUpdated messages, false otherwise.

If the destination returns false, these messages are sent only when the mouse moves or a modifier flag changes. Otherwise the destination gets the default behavior, where it receives periodic dragging-updated messages even if nothing changes.

6.40 class ProgressBar

6.40.1 class ProgressBar

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in progress-bar class in REALbasic.

6.40.2 Methods

6.40.3 NSProgressIndicatorMBS as NSProgressIndicatorMBS

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSProgressIndicatorMBS object for the given control.

Example:

```
MsgBox ProgressBar1.NSProgressIndicatorMBS.className
```

Notes: This way you can manipulate Cocoa controls directly.

6.41 class ProgressWheel

6.41.1 class ProgressWheel

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in ProgressWheel class in REALbasic.

6.41.2 Methods

6.41.3 NSProgressIndicatorMBS as NSProgressIndicatorMBS

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSProgressIndicatorMBS object for the given control.

Notes: This way you can manipulate Cocoa controls directly.

6.42 class PushButton

6.42.1 class PushButton

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in push-button class in REALbasic.

6.42.2 Methods

6.42.3 NSButtonMBS as NSButtonMBS

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSButtonMBS object for the given control.

Example:

```
MsgBox PushButton1.NSButtonMBS.className
```

Notes: This way you can manipulate Cocoa controls directly.

6.43 class ScrollBar

6.43.1 class ScrollBar

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in Scrollbar class in REALbasic.

6.43.2 Methods

6.43.3 NSScrollerMBS as NSScrollerMBS

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSScrollerMBS object for the given control.

Example:

```
MsgBox ScrollBar1.NSScrollerMBS.className
```

Notes: This way you can manipulate Cocoa controls directly.

6.44 class Separator

6.44.1 class Separator

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in Separator class in REALbasic.

6.44.2 Methods

6.44.3 NSBoxMBS as NSBoxMBS

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSBoxMBS object for the given control.

Notes: This way you can manipulate Cocoa controls directly.

6.45 class Slider

6.45.1 class Slider

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in slider class in REALbasic.

6.45.2 Methods

6.45.3 NSSliderMBS as NSSliderMBS

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSSliderMBS object for the given control.

Example:

```
MsgBox Slider1.NSSliderMBS.className
```

Notes: This way you can manipulate Cocoa controls directly.

6.46 class TextArea

6.46.1 class TextArea

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The built in textarea class in REALbasic.

Example:

```
// make a PDF from a textarea in Cocoa REALbasic target:

// find view
dim n as NSViewMBS = TextArea1.NSViewMBS
if n = nil then
MsgBox "Only in Cocoa!"
Return
end if

// make pdf data
dim s as string = n.dataWithPDFInsideRect(0,0,n.frame.Width, n.frame.Height)

// save
dim f as FolderItem = GetSaveFolderItem("", "test.pdf")

if f<>Nil then

dim b as BinaryStream = BinaryStream.Create(f, true)

b.Write s

end if
```

Notes: Requires RB 2009r4 or newer.

6.46.2 Methods

6.46.3 NSScrollViewMBS as NSScrollViewMBS

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSScrollViewMBS object for the given control.

Example:

```
MsgBox TextArea1.NSScrollViewMBS.className
```

Notes: This way you can manipulate Cocoa controls directly.

6.47 class UpDownArrows

6.47.1 class UpDownArrows

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The build in control class in REALbasic.

6.47.2 Methods

6.47.3 NSStepperMBS as NSStepperMBS

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSStepperMBS object for the given control.

Notes: This way you can manipulate Cocoa controls directly.

Chapter 7

Cocoa Networking

7.1 class NSHTTPCookieMBS

7.1.1 class NSHTTPCookieMBS

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An NSHTTPCookie object represents an HTTP cookie.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// we collect domain names
dim domains(-1) as string
for each cookie as NSHTTPCookieMBS in cookies
if domains.IndexOf(cookie.domain) <0 then
domains.Append cookie.domain
end if
next

// and display them
MsgBox "You have cookies from this domains: "+Join(domains, ", ")
```

Notes:

It's an immutable object initialized from a dictionary containing the cookie attributes.

Two versions of cookies are supported:

Version 0: This version refers to "traditional" or "old-style" cookies, the original cookie format defined by Netscape. The majority of cookies encountered are in this format.

Version 1: This version refers to cookies as defined in RFC 2965, HTTP State Management Mechanism.

7.1.2 Methods

7.1.3 comment as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's comment string.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display comment
MsgBox "Comment: " + Cookie.comment
```

Notes: The receiver's comment string or "" if the cookie has no comment. This string is suitable for presentation to the user, explaining the contents and purpose of this cookie.

7.1.4 commentURL as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's comment URL.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display comment URL
MsgBox "commentURL: " + Cookie.commentURL
```

Notes: The receiver's comment URL or "" if the cookie has none. This value specifies a URL which is suitable for presentation to the user as a link for further information about this cookie.

7.1.5 Constructor(properties as dictionary)

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an initialized NSHTTPCookie object using the provided properties.

Example:

```
// create dictionary with properties:
dim prop as new Dictionary
dim d as new date
d.Year = d.Year + 1

prop.Value(NSHTTPCookieMBS.NSHTTPCookieVersion)="0"
prop.Value(NSHTTPCookieMBS.NSHTTPCookieName)="test"
prop.Value(NSHTTPCookieMBS.NSHTTPCookieValue)="some value"
prop.Value(NSHTTPCookieMBS.NSHTTPCookieOriginURL)="http://www.mbsplugins.de/"
prop.Value(NSHTTPCookieMBS.NSHTTPCookieDomain)="www.mbsplugins.de"
prop.Value(NSHTTPCookieMBS.NSHTTPCookiePath)="/"
prop.Value(NSHTTPCookieMBS.NSHTTPCookieExpires)=d

// create cookie from properties
dim cookie as new NSHTTPCookieMBS(prop)

// and display properties
dim dic as Dictionary = cookie.properties
dim list(-1) as string

for each key as Variant in dic.keys
List.Append key.StringValue+": " +dic.Value(key).StringValue
next

MsgBox Join(list,EndOfLine)
```

Notes:

properties: The properties for the new cookie object, expressed as key value pairs.

Handle is non zero on success.

7.1.6 cookiesWithResponseHeaderFields(headerFields as dictionary, URL as string) as NSHTTPCookieMBS()

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array of NSHTTPCookie objects corresponding to the provided response header fields for the provided URL.

Notes:

headerFields: The header fields used to create the NSHTTPCookie objects.

URL: The URL associated with the created cookies.

Returns the array of created cookies.

This method ignores irrelevant header fields in headerFields, allowing dictionaries to contain additional data.

If headerFields does not specify a domain for a given cookie, the cookie is created with a default domain value of theURL.

If headerFields does not specify a path for a given cookie, the cookie is created with a default path value of `"/"`.

7.1.7 cookieWithProperties(dic as dictionary) as NSHTTPCookieMBS

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates and initializes an NSHTTPCookie object using the provided properties.

Example:

```
// create dictionary with properties:
```

```
dim prop as new Dictionary
```

```
dim d as new date
```

```
d.Year = d.Year + 1
```

```
prop.Value(NSHTTPCookieMBS.NSHTTPCookieVersion)="0"
```

```
prop.Value(NSHTTPCookieMBS.NSHTTPCookieName)="test"
```

```
prop.Value(NSHTTPCookieMBS.NSHTTPCookieValue)="some value"
```

```
prop.Value(NSHTTPCookieMBS.NSHTTPCookieOriginURL)="http://www.mbsplugins.de/"
```

```
prop.Value(NSHTTPCookieMBS.NSHTTPCookieDomain)="www.mbsplugins.de"
```

```
prop.Value(NSHTTPCookieMBS.NSHTTPCookiePath)="/"
```

```
prop.Value(NSHTTPCookieMBS.NSHTTPCookieExpires)=d
```

```
// create cookie from properties
```

```
dim cookie as NSHTTPCookieMBS = NSHTTPCookieMBS.cookieWithProperties(prop)
```

```
// and display properties
```

```
dim dic as Dictionary = cookie.properties
```

```

dim list(-1) as string

for each key as Variant in dic.keys
List.Append key.StringValue+": "+dic.Value(key).StringValue
next

MsgBox Join(list,EndOfLine)

```

Notes:

dic: The properties for the new cookie object, expressed as key value pairs.

Returns the newly created cookie object. Returns nil if the provided properties are invalid.

See NSHTTPCookie* shared method for more information on the available header field constants and the constraints imposed on the values in the dictionary.

7.1.8 domain as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the domain of the receiver's cookie.

Example:

```

// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display domain:
MsgBox "Domain: "+Cookie.Domain

```

Notes: If the domain does not start with a dot, then the cookie is only sent to the exact host specified by the domain. If the domain does start with a dot, then the cookie is sent to other hosts in that domain as well, subject to certain restrictions. See RFC 2965 for more detail.

7.1.9 expiresDate as date

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's expiration date.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display date:
MsgBox "Domain: "+Cookie.expiresDate.ShortTime+" "+Cookie.expiresDate.LongTime
```

Notes: The receiver's expiration date, or nil if there is no specific expiration date such as in the case of "session-only" cookies. The expiration date is the date when the cookie should be deleted.

7.1.10 isHTTPOnly as boolean

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the receiver should only be sent to HTTP servers per RFC 2965.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display isHTTPOnly value:
MsgBox "isHTTPOnly: "+str(cookie.isHTTPOnly)
```

Notes:

Returns true if this cookie should only be sent via HTTP headers, false otherwise.

Cookies may be marked as HTTP only by a server (or by a javascript). Cookies marked as such must only be sent via HTTP Headers in HTTP requests for URL's that match both the path and domain of the respective cookies.

Important: Cookies specified as HTTP only should not be delivered to any javascript applications to prevent cross-site scripting vulnerabilities.

7.1.11 isSecure as boolean

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether his cookie should only be sent over secure channels.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display isSecure value:
MsgBox "isSecure: "+str(cookie.isSecure)
```

Notes: True if this cookie should only be sent over secure channels, otherwise false.

7.1.12 isSessionOnly as boolean

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the receiver should be discarded at the end of the session (regardless of expiration date).

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display isSessionOnly value:
MsgBox "isSessionOnly: "+str(cookie.isSessionOnly)
```

Notes: True if the receiver should be discarded at the end of the session (regardless of expiration date), otherwise false.

7.1.13 name as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's name.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display name:
MsgBox "name: "+Cookie.name
```

7.1.14 NSHTTPCookieComment as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String containing the comment for the cookie.
Only valid for Version 1 cookies and later. This header field is optional.

7.1.15 NSHTTPCookieCommentURL as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String containing the comment URL for the cookie.
Only valid for Version 1 cookies or later. This header field is optional.

7.1.16 NSHTTPCookieDiscard as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String stating whether the cookie should be discarded at the end of the session.
String value must be either "TRUE" or "FALSE". This header field is optional. Default is "FALSE", unless this is cookie is version 1 or greater and a value for NSHTTPCookieMaximumAge is not specified, in which case it is assumed "TRUE".

7.1.17 NSHTTPCookieDomain as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String containing the domain for the cookie.

A value must be specified for either NSHTTPCookieDomain or NSHTTPCookieOriginURL. If this header field is missing the domain is inferred from the value for NSHTTPCookieOriginURL.

7.1.18 NSHTTPCookieExpires as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An Date object or String specifying the expiration date for the cookie.

This header field is only used for Version 0 cookies. This header field is optional.

7.1.19 NSHTTPCookieMaximumAge as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String containing an integer value stating how long in seconds the cookie should be kept, at most.

Only valid for Version 1 cookies and later. Default is "0". This field is optional.

7.1.20 NSHTTPCookieName as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes: An String object containing the name of the cookie. This field is required.

7.1.21 NSHTTPCookieOriginURL as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String containing the URL that set this cookie.

A value must be specified for either `NSHTTPCookieDomain` or `NSHTTPCookieOriginURL`.

7.1.22 `NSHTTPCookiePath` as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String containing the path for the cookie. This field is required if you are using the `NSHTTPCookieDomain` key instead of the `NSHTTPCookieOriginURL` key.

If you are using the `NSHTTPCookieOriginURL` key, the path is inferred if it is not provided. The default value is `"/`.

7.1.23 `NSHTTPCookiePort` as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String containing comma-separated integer values specifying the ports for the cookie.

Only valid for Version 1 cookies or later. The default value is an empty string (`""`). This header field is optional.

7.1.24 `NSHTTPCookieSecure` as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String indicating that the cookie should be transmitted only over secure channels.

Providing any value for this key indicates that the cookie should remain secure.

7.1.25 `NSHTTPCookieValue` as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String containing the value of the cookie.

This header field is required.

7.1.26 NSHTTPCookieVersion as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary constants for cookies.

Notes:

An String that specifies the version of the cookie.

Must be either "0" or "1". The default is "0". This header field is optional.

7.1.27 path as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's path.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display path:
MsgBox "path: "+Cookie.path
```

Notes: The cookie will be sent with requests for this path in the cookie's domain, and all paths that have this prefix. A path of "/" means the cookie will be sent for all URLs in the domain.

7.1.28 portList as Integer()

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's port list.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display port list

dim PortList(-1) as Integer = cookie.portList
if UBound(PortList)=-1 then
```

```

MsgBox "Port List: all ports."
else
dim list(-1) as string
for each port as Integer in portList
List.Append str(port)
next

MsgBox "Port List: "+Join(list, ", ")
end if

```

Notes: The list of ports for the cookie, returned as an array of integers. If the cookie has no port list this method returns nil and the cookie will be sent to any port. Otherwise, the cookie is only sent to ports specified in the port list.

7.1.29 properties as dictionary

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's cookie properties.

Example:

```

// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display properties

dim dic as Dictionary = cookie.properties
dim list(-1) as string

for each key as Variant in dic.keys
List.Append key.StringValue+": "+dic.Value(key).StringValue
next

MsgBox Join(list,EndOfLine)

```

Notes:

Returns dictionary representation of the receiver's cookie properties. This dictionary can be used with Constructor or cookieWithProperties to create an equivalent NSHTTPCookie object.

7.1.30 requestHeaderFieldsWithCookies(cookies()) as NSHTTPCookieMBS) as dictionary

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a dictionary of header fields corresponding to a provided array of cookies.

Example:

```
// create dictionary with properties:
dim prop as new Dictionary
dim d as new date
d.Year = d.Year + 1

prop.Value(NSHTTPCookieMBS.NSHTTPCookieVersion)="0"
prop.Value(NSHTTPCookieMBS.NSHTTPCookieName)="test"
prop.Value(NSHTTPCookieMBS.NSHTTPCookieValue)="some value"
prop.Value(NSHTTPCookieMBS.NSHTTPCookieOriginURL)="http://www.mbsplugins.de/"
prop.Value(NSHTTPCookieMBS.NSHTTPCookieDomain)="www.mbsplugins.de"
prop.Value(NSHTTPCookieMBS.NSHTTPCookiePath)="/"
prop.Value(NSHTTPCookieMBS.NSHTTPCookieExpires)=d

// create cookie from properties
dim cookie as new NSHTTPCookieMBS(prop)
dim cookies(-1) as NSHTTPCookieMBS
cookies.Append cookie

// get request headers
dim dic as Dictionary = NSHTTPCookieMBS.requestHeaderFieldsWithCookies(cookies)

// and show them:
dim list(-1) as string

for each key as Variant in dic.keys
List.Append key.StringValue+": " + dic.Value(key).StringValue
next

MsgBox Join(list,EndOfLine)
```

Notes:

cookies: The cookies from which the header fields are created.

Returns the dictionary of header fields created from the provided cookies. This dictionary can be used to add cookies to a request.

7.1.31 value as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's value.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display value
MsgBox "Value: " + Cookie.value
```

7.1.32 version as Integer

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the receiver's version.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// pick first one
dim cookie as NSHTTPCookieMBS = cookies(0)

// display version value:
MsgBox "Version: " + str(Cookie.Version)
```

Notes: Returns the receiver's version. Version 0 maps to "old-style" Netscape cookies. Version 1 maps to RFC 2965 cookies.

7.1.33 Properties

7.1.34 Handle as Integer

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal object reference.

Notes: (Read and Write property)

7.2 class NSHTTPCookieStorageMBS

7.2.1 class NSHTTPCookieStorageMBS

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** NSHTTPCookieStorage implements a singleton object (shared instance) that manages the shared cookie storage.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// we collect values
dim list(-1) as string
for each cookie as NSHTTPCookieMBS in cookies
List.Append cookie.name+": "+cookie.value
next

// and display them
MsgBox join(list, EndOfLine)
```

Notes:

These cookies are shared among all applications and are kept in sync cross-process.

Note: Changes made to the cookie accept policy affect all currently running applications using the cookie storage.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

7.2.2 Methods

7.2.3 Constructor

Plugin Version: 12.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

7.2.4 cookies as NSHTTPCookieMBS()

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the cookie storage's cookies.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookies

// we collect values
dim list(-1) as string
for each cookie as NSHTTPCookieMBS in cookies
List.Append cookie.name+": "+cookie.value
next

// and display them
MsgBox join(list, EndOfLine)
```

Notes: Returns an array containing all of the cookie storage's cookies.

7.2.5 cookiesForURL(URL as string) as NSHTTPCookieMBS()

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns all the cookie storage's cookies that are sent to a specified URL.

Example:

```
// query list of all cookies in shared storage
dim cookies(-1) as NSHTTPCookieMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookiesForURL("http://www.apple.com/")

// we collect values for apple.com:
dim list(-1) as string
for each cookie as NSHTTPCookieMBS in cookies
List.Append cookie.name+": "+cookie.value
next

// and display them
MsgBox join(list, EndOfLine)
```

Notes: An application can use NSHTTPCookie method requestHeaderFieldsWithCookies to turn this array into a set of header fields to add to an NSMutableURLRequest object.

7.2.6 cookiesToArray(cookies() as NSHTTPCookieMBS) as Integer

Plugin Version: 16.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Puts the cookie storage's cookies in the given array.

Example:

```

// get storage
dim s as NSHTTPCookieStorageMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage

// predim an array with a lot of space
dim cookies(5000) as NSHTTPCookieMBS

// now ask plugin to put cookies inside
dim c as Integer = s.cookiesToArray(cookies)

// show count
MsgBox str(c)+" cookies"

// pick first and show name
dim cookie as NSHTTPCookieMBS = cookies(0)
MsgBox cookie.name

```

Notes:

Returns total number of cookies.

This is for REALbasic 2007 where the cookies function doesn't work.

For Real Studio and Xojo you can use cookies function.

7.2.7 deleteCookie(cookie as NSHTTPCookieMBS)

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Deletes the specified cookie from the cookie storage.

7.2.8 NSHTTPCookieManagerAcceptPolicyChangedNotification as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names you can register with the NSNotificationObserverMBS class.

Notes:

This notification is posted when the acceptance policy of the NSHTTPCookieStorage instance has changed. In Mac OS X, cookies are shared among applications, meaning this notification can be sent in response to another application's actions. Cookies are not shared among applications in iOS.

The notification object is the NSHTTPCookieStorage instance. This notification does not contain a userInfo dictionary.

7.2.9 NSHTTPCookieManagerCookiesChangedNotification as string

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names you can register with the NSNotificationObserverMBS class.

Notes:

This notification is posted when the cookies stored in the NSHTTPCookieStorage instance have changed. In Mac OS X, cookies are shared among applications, meaning this notification can be sent in response to another application's actions. Cookies are not shared among applications in iOS.

The notification object is the NSHTTPCookieStorage instance. This notification does not contain a userInfo dictionary.

7.2.10 setCookie(cookie as NSHTTPCookieMBS)

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Stores a specified cookie in the cookie storage if the cookie accept policy permits.

Notes: The cookie replaces an existing cookie with the same name, domain, and path, if one exists in the cookie storage. This method accepts the cookie only if the receiver's cookie accept policy is NSHTTPCookieAcceptPolicyAlways or NSHTTPCookieAcceptPolicyOnlyFromMainDocumentDomain. The cookie is ignored if the receiver's cookie accept policy is NSHTTPCookieAcceptPolicyNever.

7.2.11 setCookies(cookies() as NSHTTPCookieMBS, URL as string, mainDocumentURL as string)

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds an array of cookies to the receiver if the receiver's cookie acceptance policy permits.

Notes:

cookies: The cookies to add.

URL: The URL associated with the added cookies.

mainDocumentURL: The URL of the main HTML document for the top-level frame, if known. Can be "". This URL is used to determine if the cookie should be accepted if the cookie accept policy is NSHTTPCookieAcceptPolicyOnlyFromMainDocumentDomain.

The cookies will replace existing cookies with the same name, domain, and path, if one exists in the cookie storage. The cookie will be ignored if the receiver's cookie accept policy is NSHTTPCookieAcceptPolicyNever.

To store cookies from a set of response headers, an application can use cookiesWithResponseHeaderFields passing a header field dictionary and then use this method to store the resulting cookies in accordance with the receiver's cookie acceptance policy.

7.2.12 sharedHTTPCookieStorage as NSHTTPCookieStorageMBS

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the shared cookie storage instance.

Example:

```
dim s as NSHTTPCookieStorageMBS = NSHTTPCookieStorageMBS.sharedHTTPCookieStorage
dim cookies() as NSHTTPCookieMBS = s.cookies
MsgBox str(UBound(cookies)+1)+" cookies"
```

7.2.13 Properties**7.2.14 Handle as Integer**

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal reference to the NSHTTPCookieStorage object.

Notes: (Read and Write property)

7.2.15 cookieAcceptPolicy as Integer

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The cookie storage's cookie accept policy.

Example:

```
Select case NSHTTPCookieStorageMBS.sharedHTTPCookieStorage.cookieAcceptPolicy
case NSHTTPCookieStorageMBS.NSHTTPCookieAcceptPolicyOnlyFromMainDocumentDomain
MsgBox "Cookies: only from main document domain"
case NSHTTPCookieStorageMBS.NSHTTPCookieAcceptPolicyNever
MsgBox "Cookies: never"
case NSHTTPCookieStorageMBS.NSHTTPCookieAcceptPolicyAlways
MsgBox "Cookies: always"
else
MsgBox "Cookies: unknown setting"
end Select
```

Notes:

The default cookie accept policy is NSHTTPCookieAcceptPolicyAlways.

Changing the cookie policy affects all currently running applications using the cookie storage.
(Read and Write computed property)

7.2.16 Constants

7.2.17 NSHTTPCookieAcceptPolicyAlways = 0

Plugin Version: 11.1. **Function:** One of the cookie accept policy constants.

Notes: Accept all cookies. This is the default cookie accept policy.

7.2.18 NSHTTPCookieAcceptPolicyNever = 1

Plugin Version: 11.1. **Function:** One of the cookie accept policy constants.

Notes: Reject all cookies.

7.2.19 NSHTTPCookieAcceptPolicyOnlyFromMainDocumentDomain = 2

Plugin Version: 11.1. **Function:** One of the cookie accept policy constants.

Notes: Accept cookies only from the main document domain.

Chapter 8

Controls

8.1 class Bevelbutton

8.1.1 class Bevelbutton

Plugin Version: 3.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** An extension of Realbasic's internal control.

Notes:

The clock functions are hacks to REALbasic which uses undocumented functions.

This function does currently not work with the Mac Cocoa target of REALbasic. If you need it, please send in a feature request.

8.1.2 Methods

8.1.3 NSButtonMBS as NSButtonMBS

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSButtonMBS object for the given control.

Example:

```
MsgBox BevelButton1.NSButtonMBS.className
```

Notes: This way you can manipulate Cocoa controls directly.

8.2 class Checkbox

8.2.1 class Checkbox

Plugin Version: 2.9, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** An extension of Realbasic's internal control.

8.2.2 Methods

8.2.3 NSButtonMBS as NSButtonMBS

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSButtonMBS object for the given control.

Example:

```
MsgBox CheckBox1.NSButtonMBS.className
```

Notes: This way you can manipulate Cocoa controls directly.

8.3 class Listbox

8.3.1 class Listbox

Plugin Version: 13.0, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** The built in listbox class in REALbasic.

8.3.2 Methods

8.3.3 HorizontalNSScrollerMBS as NSScrollerMBS

Plugin Version: 13.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns horizontal scrollbar for a listbox.

Notes: Only for Cocoa target.

8.3.4 VerticalNSScrollerMBS as NSScrollerMBS

Plugin Version: 13.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns vertical scrollbar for a listbox.

Notes: Only for Cocoa target.

8.4 class Radiobutton

8.4.1 class Radiobutton

Plugin Version: 2.9, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** An extension of Realbasic's internal control.

8.4.2 Methods

8.4.3 NSButtonMBS as NSButtonMBS

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSButtonMBS object for the given control.

Example:

```
MsgBox RadioButton1.NSButtonMBS.className
```

Notes: This way you can manipulate Cocoa controls directly.

Chapter 9

CoreGraphics

9.1 class QuartzFilterManagerMBS

9.1.1 class QuartzFilterManagerMBS

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class to manage the quartz filters on the system.

9.1.2 Methods

9.1.3 filterPanel as NSPanelMBS

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the panel where users can select a filter.

Example:

```
dim m as QuartzFiltermanagerMBS
dim p as NSPanelMBS
```

```
m=new QuartzFiltermanagerMBS
p=m.filterPanel
p.Show
```

Notes: Returns nil on any error.

9.1.4 filters as QuartzFilterMBS()

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array with all filters.

Example:

```
dim q as new QuartzFilterManagerMBS
dim a() as QuartzFilterMBS
```

```
a=q.filters
```

```
MsgBox str(ubound(a)+1)+" filters found."
```

9.1.5 filtersInDomains(domains() as string) as QuartzFilterMBS()

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array with all filters in the given domains.

Example:

```
dim domains() as string = array(QuartzFilterManagerMBS.kQuartzFilterPrintingDomain)
dim a() as QuartzFilterMBS = QuartzFilterManagerMBS.filtersInDomains(domains)
```

```
MsgBox str(ubound(a)+1)+" filters found."
```

9.1.6 filterView as QuartzFilterViewMBS

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The view which you can use to select views.

Notes: You can use the panel as an extra window or add this view to one of your settings windows.

9.1.7 selectedFilter as QuartzFilterMBS

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The currently selected filter.

9.1.8 selectFilter(filter as QuartzFilterMBS) as boolean

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects a filter.
Notes: Returns true on success.

9.1.9 Properties

9.1.10 Handle as Integer

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal used handle to the filter manager.
Notes: (Read and Write property)

9.1.11 Events

9.1.12 didAddFilter(filter as QuartzFilterMBS)

Plugin Version: 8.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The given filter was added to the filter list.

9.1.13 didModifyFilter(filter as QuartzFilterMBS)

Plugin Version: 8.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The given filter was modified.

9.1.14 didRemoveFilter(filter as QuartzFilterMBS)

Plugin Version: 8.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The given filter was removed.

9.1.15 didSelectFilter(filter as QuartzFilterMBS)

Plugin Version: 8.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The selection changed to the new filter.

9.1.16 Constants

9.1.17 kQuartzFilterApplicationDomain="kQuartzFilterApplicationDomain"

Plugin Version: 11.2. **Function:** One of the filter domain constants.

Example:

```
dim domains() as string = array(QuartzFilterManagerMBS.kQuartzFilterApplicationDomain)
dim a() as QuartzFilterMBS = QuartzFilterManagerMBS.filtersInDomains(domains)
```

```
MsgBox str(ubound(a)+1)+" filters found."
```

9.1.18 kQuartzFilterPDFWorkflowDomain="kQuartzFilterPDFWorkflowDomain"

Plugin Version: 11.2. **Function:** One of the filter domain constants.

Example:

```
dim domains() as string = array(QuartzFilterManagerMBS.kQuartzFilterPDFWorkflowDomain)
dim a() as QuartzFilterMBS = QuartzFilterManagerMBS.filtersInDomains(domains)
```

```
MsgBox str(ubound(a)+1)+" filters found."
```

9.1.19 kQuartzFilterPrintingDomain="kQuartzFilterPrintingDomain"

Plugin Version: 11.2. **Function:** One of the filter domain constants.

Example:

```
dim domains() as string = array(QuartzFilterManagerMBS.kQuartzFilterPrintingDomain)
dim a() as QuartzFilterMBS = QuartzFilterManagerMBS.filtersInDomains(domains)
```

```
MsgBox str(ubound(a)+1)+" filters found."
```

9.2 class QuartzFilterMBS

9.2.1 class QuartzFilterMBS

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The Quartz filter class.

Example:

```
// Create a couple of PDF files to test different Quartz filters

// get some picture
dim pic as Picture = LogoMBS(500)
dim image as new NSImageMBS(pic)

// create page with picture
dim page as new PDFPageMBS(image)

// create new document
dim doc as new PDFDocumentMBS

// add page
doc.insertPage(page,0)

// get filters
dim manager as new QuartzFilterManagerMBS
dim filters() as QuartzFilterMBS = Manager.filters

for each filter as QuartzFilterMBS in filters

// save PDF with this filter
dim file as FolderItem = SpecialFolder.Desktop.Child(filter.localizedName+".pdf")

call doc.write(file, filter)

next
```

Notes:

This filters can be used to change PDFs on writing like to reduce the file size.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

9.2.2 Methods

9.2.3 applyToContext(CGContextHandle as Integer) as boolean

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Applies a filter to a given context.

Example:

```
dim c as CGContextMBS // your context
dim fi as QuartzFilterMBS
```

```
fi=QuartzFilterMBS.quartzFilterWithFile(SpecialFolder.Desktop.Child("Reduce File Size.qfilter"))
```

```
call fi.applyToContext(c.Handle)
```

Notes: Returns true on success.

9.2.4 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

9.2.5 localizedName as string

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The localized name of the filter.

Example:

```
dim q as new QuartzFilterManagerMBS
dim s(-1) as string
```

```
dim a() as QuartzFilterMBS = q.filters
```

```
for each f as QuartzFilterMBS in a
s.append f.localizedName
next
```

```
MsgBox Join(s,EndOfLine)
```

9.2.6 quartzFilterWithFile(file as folderitem) as QuartzFilterMBS

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads a quartz filter from the given folderitem.

Example:

```
dim c as CGContextMBS // your context
dim fi as QuartzFilterMBS
dim file as folderitem

file=SpecialFolder.Desktop.Child("Reduce File Size.qfilter")
fi=QuartzFilterMBS.quartzFilterWithFile(file)

call fi.applyToContext(c.Handle)
```

Notes:

Returns nil on any error.
Requires Mac OS X 10.5.

9.2.7 quartzFilterWithURL(url as string) as QuartzFilterMBS

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads the quartz filter from the given URL.

Notes:

Returns nil on any error.
Requires Mac OS X 10.5.

9.2.8 removeFromContext(CGContextHandle as Integer)

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes a filter from a CGContext.

Notes: Pass CGContextMBS.handle and make sure it is not 0.

9.2.9 url as string

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The URL where this filter is located.

Example:

```
dim q as new QuartzFilterManagerMBS
dim s(-1) as string
```

```
dim a() as QuartzFilterMBS = q.filters
```

```
for each f as QuartzFilterMBS in a
s.append f.url
next
```

```
MsgBox Join(s,EndOfLine)
```

9.2.10 Properties

9.2.11 Handle as Integer

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal handle to the filter object.

Notes: (Read and Write property)

9.3 class QuartzFilterViewMBS

9.3.1 class QuartzFilterViewMBS

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The view to select quartz filters.

Notes:

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard.
Subclass of the NSViewMBS class.

9.3.2 Methods

9.3.3 Constructor

Plugin Version: 12.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new Quartz Filter View with size 100/100 and position 0/0

Example:

```
dim t as new QuartzFilterViewMBS
```

Notes: On success the handle property is not zero.

See also:

- 9.3.4 Constructor(Handle as Integer) 599
- 9.3.5 Constructor(left as Double, top as Double, width as Double, height as Double) 600

9.3.4 Constructor(Handle as Integer)

Plugin Version: 12.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given QuartzFilterViewMBS handle.

Example:

```
dim t as new QuartzFilterViewMBS(0, 0, 100, 100)
```

```
dim v as new QuartzFilterViewMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a QuartzFilterView and the plugin retains this handle.

See also:

- 9.3.3 Constructor 599
- 9.3.5 Constructor(left as Double, top as Double, width as Double, height as Double) 600

9.3.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 12.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new Quartz Filter View with the given size and position.

Example:

```
dim x as new QuartzFilterViewMBS(0, 0, 100, 100)
```

Notes:

On success the handle property is not zero.

The new movie view object must be inserted into the view hierarchy of an NSWindow before it can be used.

This method is the designated initializer for the QuartzFilterView class.

See also:

- 9.3.3 Constructor 599
- 9.3.4 Constructor(Handle as Integer) 599

9.3.6 sizeToFit

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Resizes the view to the best size.

Chapter 10

DiscRecording

10.1 class DRBurnMBS

10.1.1 class DRBurnMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class to perform and monitor the burning of a CD or DVD disc.

Notes:

Each time you want to burn to a disc, an instance of DRBurnMBS needs to be created.

When an instance is created, you pass in an instance of DRDevice to let the DRBurn object know what device to use. This object is retained for the life of the DRBurn instance. Before burning, you can set several options that control the behavior of the burn and the handling of the disc once the burn completes.

A DRBurn object will send out notifications through the DRNotificationCenter mechanism to broadcast the burn state to any interested observers. However, if for some reason you don't want to use notifications, you can poll the burn object at any time for the current status using the status properties. This is not recommended in any application using a run loop, because it involves polling.

All methods in this class will catch exceptions from Cocoa and raise a NSErrorMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

10.1.2 Methods

10.1.3 abort

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Stops the burn.

Notes:

When this method returns the burn might not actually be fully stopped but it has been cancelled and only cleanup is going on. If a burn has not completed writing data to disc, you just made a coaster.

Typically this method is only used as a result of the user hitting a cancel/stop button somewhere in the user interface.

10.1.4 burnForDevice(device as DRDeviceMBS) as DRBurnMBS

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an autoreleased burn object.

Notes: Once a burn is created with this method, the object is ready to write data to the disc.

10.1.5 Constructor(device as DRDeviceMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a burn object.

Notes: Once a burn is created with this method, the object is ready to write data to the disc.

10.1.6 device as DRDeviceMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the device being used for the burn.

Notes: Returns nil on any error.

10.1.7 DRBurnAppendableKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes: The burn property whose value is a boolean indicating if the disc will still be appendable after the burn. If this key is not present, the burn will default to a value of false and the disc will be marked as not appendable.

10.1.8 DRBurnCompletionActionEject as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An string value for the CompletionAction indicating that the burn object should eject the disc from the drive when the burn completes.

10.1.9 DRBurnCompletionActionKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes: The burn property whose value is a String containing one of the completion actions possible for the disc handling. If this key is not present, the burn will default to a value of DRBurnCompletionActionEject and the disc will be ejected.

10.1.10 DRBurnCompletionActionMount as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An string value for the CompletionAction property indicating that the burn object should mount the disc on the desktop when the burn completes.

10.1.11 DRBurnDoubleLayerL0DataZoneBlocksKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes:

The burn property key whose value is an double containing the number of blocks desired for the layer 0 data zone on a double layer writable disc.

The size of the layer 0 data zone dictates where the transition point is from layer 0 to layer 1. If this key is present, the data zone size will be set prior to the start of the burn using the value for this key. If it is not present, the default layer 0 data zone will be used (half the available blocks on an empty disc).

The transition point can be specified two ways. If the value specified in this key is greater than 1.0, then it will designate an absolute block number for the transition point. In this case, the block number should be a multiple of 16 and at least 40000h per specification. If the value is less than 1.0, it will specify the percentage of the burn that should reside on layer 0. A typical value is 0.5, designating half the burn for each layer. A value of 0.0 or 1.0 will not change the layer 0 transition point.

10.1.12 DRBurnFailureActionEject as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An string constant for FailureAction indicating that the burn object should eject the disc from the drive if the burn fails.

10.1.13 DRBurnFailureActionKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes:

The burn property whose value is a string containing a one of the failure actions possible for the disc handling.

If this key is not present, the burn will default to a value of DRBurnFailureActionEject and the disc will be ejected.

10.1.14 DRBurnFailureActionNone as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An string constant for FailureAction indicating that the burn object should do nothing with the disc if the burn fails.

10.1.15 DRBurnOverwriteDiscKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes: The burn property whose value is a boolean indicating if the disc will be overwritten from block zero for the burn. If this key is not present, the burn will default to a value of false and the disc will be appended.

10.1.16 DRBurnRequestedSpeedKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes: The burn property whose value is a number containing the speed at which the burn should run, expressed as a float value of kilobytes per second. If this key is not present, the speed will default to DRDeviceBurnSpeedMax.

10.1.17 DRBurnStatusChangedNotification as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The notification name for a status update on a burn operation.

Notes: See the "DataBurn with Events and Notification" example project.

10.1.18 DRBurnStrategyBDDAO as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the string constants for the burn strategy.

Notes: An string value for DRBurnStrategyKey representing the DAO (disc-at-once) burn strategy for BD (Blu-ray). This strategy applies only to BDs.

10.1.19 DRBurnStrategyCDSAIO as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the string constants for the burn strategy.

Notes: An String value for DRBurnStrategyKey representing the SAO (session-at-once) burn strategy for CD.

10.1.20 DRBurnStrategyCDTAIO as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the string constants for the burn strategy.

Notes: An String value for DRBurnStrategyKey representing the TAO (track-at-once) burn strategy for CD.

10.1.21 DRBurnStrategyDVDDAO as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the string constants for the burn strategy.

Notes: An String value for DRBurnStrategyKey representing the DAO (disc-at-once) burn strategy for DVD. This strategy applies only to DVDs; it is invalid when burning to CD media.

10.1.22 DRBurnStrategyIsRequiredKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes:

The burn property whose value is a `BOOL` indicating whether the burn strategy/strategies listed for `DRBurnStrategyKey` are the only strategies allowed. If this key is not present, the burn will default to a value of false.

If this value is set to true, and the device does not support the type(s) of burn requested, the burn will fail with `kDRDeviceBurnStrategyNotAvailableErr` .

If this value is set to false, and the device does not support the type(s) of burn requested, the engine will choose an alternate burn strategy automatically - one that will provide an equivalent disc.

10.1.23 `DRBurnStrategyKey` as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes:

The burn property whose value is a string, or array of strings, indicating the burn strategy or strategies that are suggested. If this key is not present, the burn engine picks an appropriate burn strategy automatically. Most clients will not need to specify a specific burn strategy.

When more than one strategy is suggested, the burn engine will attempt to use the first strategy in the list which is available. A burn strategy will never be used if it cannot write the required data: for example, TAO cannot be used to write CD-Text.

The presence of this key by itself is just a suggestion, and if the burn engine cannot fulfill the request it will burn using whatever strategy is available. To make the suggestion into a requirement, add `DRBurnStrategyIsRequiredKey` with a value of true.

10.1.24 `DRBurnTestingKey` as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes:

The burn property whose value is a boolean indicating if the burn will run as a test burn.

When this is set and the burn object is sent `writeLayout`, the entire burn process proceeds as if data would be written to the disc, but the laser is not turned on to full power, so the physical disc is not modified.

If this key is not present or the selected burning device does not support test burning, the burn will default to a value of false and a normal burn will occur.

10.1.25 DRBurnUnderrunProtectionKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes:

The burn property whose value is a boolean indicating if burn underrun protection will be on or off for devices which support it.

For those devices which support it, burn underrun protection is enabled by default.

If the device supports burn underrun protection and this key is not present, the burn will default to a value of true and burn underrun protection will be enabled.

10.1.26 DRBurnVerifyDiscKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes: The burn property whose value is a boolean indicating if the disc will be verified after being burned. If this key is not present, the burn will default to a value of true and the disc will be verified.

10.1.27 DRCDTextKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes:

This key points to a DRCDTextBlockMBS, or array of DRCDTextBlockMBS objects containing the CD-Text information for the disc. If this key is not present, the burn will not write CD-Text.

Before using this key, you should to make sure that the device supports CD-Text by checking the value of DRDeviceCanWriteCDTextKey in the device's write capabilities dictionary.

If this value is set to true, and the device does not support writing CD-Text, the burn will fail with kDRDeviceCantWriteCDTextErr.

10.1.28 DRErrorStatusAdditionalSenseStringKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: String describing the RBC additional sense code and additional sense code qualifier pair returned by the device. If no sense is reported, this key will not be present.

10.1.29 `DRErrorStatusErrorInfoStringKey` as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: String describing extended error information in a user appropriate manner.

10.1.30 `DRErrorStatusErrorKey` as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: Number containing the OS error code for the error.

10.1.31 `DRErrorStatusErrorStringKey` as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: String describing the error in a user appropriate manner.

10.1.32 `DRErrorStatusKey` as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: The key in the status dictionary for the error dictionary.

10.1.33 `DRErrorStatusSenseCodeStringKey` as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: String describing the RBC sense code returned by the device. If no sense is reported, this key will not be present.

10.1.34 DRErrorStatusSenseKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: String containing the raw RBC sense information structure reported by the device. If no sense is reported, this key will not be present.

10.1.35 DRMediaCatalogNumberKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes:

The burn property whose value is a memoryblock containing exactly 13 bytes of data, which will be written to the disc as the Media Catalog Number. If this key is not present, it will default to all zeroes, indicating that a MCN is not supplied.

This value is the UPC/EAN product number, and should conform to the specifications of the UCC and EAN. See ean-int.org and uc-council.org for more details on the UPC/EAN standard.

<http://www.ean-int.org/>

<http://www.uc-council.org/>

10.1.36 DRStatusCurrentSessionKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: Number indicating the current session being burned.

10.1.37 DRStatusCurrentSpeedKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: Number indicating the current burn speed.

10.1.38 DRStatusCurrentTrackKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: Number indicating the current track being burned.

10.1.39 DRStatusEraseTypeKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: String indicating the type of erase operation.

10.1.40 DRStatusPercentCompleteKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes:

A key for the status dictionaries.

Number containing the percent complete of the operation expressed as a floating point number from 0 to 1.

10.1.41 DRStatusProgressCurrentKPS as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The current burn speed in kilobytes per second.

Notes: This is an optional key within the DRStatusProgressInfoKey dictionary. The value of this key, if present, is a Number containing the write speed of the burn.

10.1.42 DRStatusProgressCurrentXFactor as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The current burn speed in a media appropriate x-factor

Notes: This is an optional key within the DRStatusProgressInfoKey dictionary. The value of this key, if present, is a number containing the appropriate x-factor for the media.

10.1.43 DRStatusProgressInfoKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes:

A dictionary of extended progress information.

A key for the status dictionary. The value of this key is a reference to a Dictionary object containing ex-

tended progress information.

10.1.44 DRStatusStateDone as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey. Indicates the operation is finished and it succeeded.

10.1.45 DRStatusStateErasing as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey in the erase status dictionary.

Notes: Indicates the erase is currently in progress.

10.1.46 DRStatusStateFailed as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey. Indicates the operation is finished and it failed.

10.1.47 DRStatusStateFinishing as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey in the burn status dictionary.

Notes: Indicates the burn is finishing up (closing the last session, writing the TOC, etc).

10.1.48 DRStatusStateKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes:

A key for the status dictionaries.

String indicating the current state of the operation.

10.1.49 DRStatusStateNone as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey. Indicates the operation has not yet begun.

10.1.50 DRStatusStatePreparing as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey. Indicates the operation is preparing to begin.

10.1.51 DRStatusStateSessionClose as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey in the burn status dictionary.

Notes: Indicates the burn is closing a session on disc. The exact session being closing is contained in DRStatusCurrentSessionKey.

10.1.52 DRStatusStateSessionOpen as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey in the burn status dictionary.

Notes: Indicates the burn is opening a session on disc. The exact session being opened is contained in DRStatusCurrentSessionKey.

10.1.53 DRStatusStateTrackClose as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey in the burn status dictionary.

Notes: Indicates the burn is closing a track on disc. The exact track being closed is contained in DRStatusCurrentTrackKey.

10.1.54 DRStatusStateTrackOpen as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey in the burn status dictionary.

Notes: Indicates the burn is opening a track on disc. The exact track being opened is contained in DRStatusCurrentTrackKey.

10.1.55 DRStatusStateTrackWrite as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey in the burn status dictionary.

Notes: Indicates the burn is writing a track on disc. The exact track being written is contained in DRStatusCurrentTrackKey.

10.1.56 DRStatusStateVerifying as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value for DRStatusStateKey. Indicates the operation is verifying what it did.

10.1.57 DRStatusTotalSessionsKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: Number indicating the total number of sessions being burned.

10.1.58 DRStatusTotalTracksKey as string

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the dictionary keys for the burn status dictionary.

Notes: Number indicating the total number of tracks in the current session being burned.

10.1.59 DRSynchronousBehaviorKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property key constants.

Notes:

The burn property whose value is a BOOL indicating if burn operations will behave synchronously. If this key is not present, it will default to a value of false and burn operations will behave asynchronously.

Synchronous operations do not post status notifications, and will not return until they are completed. Status can still be queried at any time, and will remain valid even after the burn operation has finished.

10.1.60 status as dictionary

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a dictionary describing the status of the burn.

Notes: The same dictionary is returned through the DRBurnStatusChangedNotification notification.

10.1.61 writeImageFile(ImageFile as FolderItem) as boolean

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Writes the image tracks to the disc.

Notes:

Requires Mac OS X 10.4.

ImageFile: The path to the image file. This file must be one that can be read by DiscRecording. The supported image types include: .dmg, .iso, .cue, and .toc. For .cue and .toc files the corresponding data files (.bin, .img, etc) must also be present and correctly referenced in the .cue/.toc file.

Returns true on success and false on failure.

See also:

- 10.1.62 writeImageFile(ImagePath as String) as boolean 614

10.1.62 writeImageFile(ImagePath as String) as boolean

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Writes the image tracks to the disc.

Notes:

Requires Mac OS X 10.4.

ImageFile: The path to the image file. This file must be one that can be read by DiscRecording. The supported image types include: .dmg, .iso, .cue, and .toc. For .cue and .toc files the corresponding data files (.bin, .img, etc) must also be present and correctly referenced in the .cue/.toc file.

Returns true on success and false on failure.

See also:

- 10.1.61 writeImageFile(ImageFile as FolderItem) as boolean 614

10.1.63 writeLayout(track as DRTrackMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Writes the track to the disc.

Notes: A single session disc will be created with the given track.

See also:

- 10.1.64 writeLayout(tracks() as DRTrackMBS) 615

10.1.64 writeLayout(tracks() as DRTrackMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Writes the tracks to the disc.

Notes: A multi session disc will be created with the given tracks.

See also:

- 10.1.63 writeLayout(track as DRTrackMBS) 615

10.1.65 Properties**10.1.66 appendable as boolean**

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Indicates whether the burn is appendable.

Example:

```
dim b as DRBurnMBS // get a burn object
b.appendable=true
```

Notes:

When a burn completes, it can mark the disc so that no more data can be written to it. This creates a closed or non-appendable disc (which is the most compatible with audio CD players). If this method returns false, then the disc will be marked as closed and no data can be appended to it. A return value of true indicates further burns can be appended to the disc.

(Read and Write computed property)

10.1.67 BurnFailureAction as string

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** What to do on a failure.

Notes:

The burn property whose value is a string containing a one of the failure actions possible for the disc handling.

If this key is not present, the burn will default to a value of `DRBurnFailureActionEject` and the disc will be ejected.

(Read and Write computed property)

10.1.68 completionAction as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The action to be performed at the end of the burn.

Notes:

Value must be `DRBurnCompletionActionEject`, `DRBurnCompletionActionMount` or empty for default.

(Read and Write computed property)

10.1.69 DoubleLayerL0DataZoneBlocks as Double

Plugin Version: 8.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A double containing the number of blocks desired for the layer 0 data zone on a double layer writable disc.

Notes:

The size of the layer 0 data zone dictates where the transition point is from layer 0 to layer 1. If this key is present, the data zone size will be set prior to the start of the burn using the value for this key. If it is not present, the default layer 0 data zone will be used (half the available blocks on an empty disc).

The transition point can be specified two ways. If the value specified in this key is greater than 1.0, then it will designate an absolute block number for the transition point. In this case, the block number should be a multiple of 16 and at least `& h40000` per specification. If the value is less than 1.0, it will specify the percentage of the burn that should reside on layer 0. A typical value is 0.5, designating half the burn for each layer. A value of 0.0 or 1.0 will not change the layer 0 transition point.

(Read and Write computed property)

10.1.70 MediaCatalogNumber as memoryblock

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The media catalog number as a binary data string.

Notes:

The burn property whose value is a memoryblock containing exactly 13 bytes of data, which will be written to the disc as the Media Catalog Number. If this key is not present, it will default to all zeroes, indicating that a MCN is not supplied.

This value is the UPC/EAN product number, and should conform to the specifications of the UCC and

EAN. See

<http://www.ean-int.org/>

and

<http://www.uc-council.org/>

for more details on the UPC/EAN standard.

(Read and Write computed property)

10.1.71 Overwrite as boolean

Plugin Version: 8.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The burn property whose value is a boolean indicating if the disc will be overwritten from block zero for the burn.

Notes:

If this key is not present, the burn will default to a value of false and the disc will be appended.

(Read and Write computed property)

10.1.72 properties as dictionary

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The properties dictionary of the burn.

Notes: (Read and Write computed property)

10.1.73 requestedBurnSpeed as single

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The speed at which this burn will attempt to write data.

Notes:

The actual speed also depends on the capabilities of the bus the device is on, the maximum speed of the device itself, and the media used.

Value is a float indicating the speed the burn should run at in kilobytes per second.

(Read and Write computed property)

10.1.74 Testing as boolean

Plugin Version: 8.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the burn will run as a test burn.

Notes:

When this is set and the burn starts, the entire burn process proceeds as if data would be written to the disc, but the laser is not turned on to full power, so the physical disc is not modified.

If this key is not present or the selected burning device does not support test burning, the burn will default to a value of false and a normal burn will occur.

(Read and Write computed property)

10.1.75 UnderrunProtection as boolean

Plugin Version: 8.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A boolean indicating if burn underrun protection will be on or off for devices which support it.

Notes:

For those devices which support it, burn underrun protection is enabled by default.

If the device supports burn underrun protection and this key is not present, the burn will default to a value of *true* and burn underrun protection will be enabled.

(Read and Write computed property)

10.1.76 verifyDisc as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Indicates whether the resulting disc will be verified.

Example:

```
dim b as DRBurnMBS // get a burn object
b.verifyDisc=true
```

Notes:

After data is written to disc, the data can be verified. The verification process will read the data on the disc back into memory and compare it to the data originally used to write to disc. The type of verification is determined by a track property on a track-by-track basis. See the DRTrackMBS documentation for more information on verification types.

(Read and Write computed property)

10.2 class DRBurnProgressPanelMBS

10.2.1 class DRBurnProgressPanelMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Run and display progress while burning data to media.

Example:

```
dim track as DRTrackMBS
dim bsp as DRBurnSetupPanelMBS
dim bpp as DRBurnProgressPanelMBS

// we need a track
track=CreateTrack

if track<>nil then
  bsp=new DRBurnSetupPanelMBS

  // set a few options
  bsp.setCanSelectAppendableMedia true
  bsp.setCanSelectTestBurn true

  if bsp.runSetupPanel=bsp.NSOKButton then
    bpp=new DRBurnProgressPanelMBS

    // And start off the burn itself. This will put up the progress dialog
    // and do all the nice pretty things that a happy app does.
    bpp.beginProgressPanelForBurn bsp.burnObject, track

  else
    MsgBox "You pressed cancel."
  end if
end if
```

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.
Subclass of the `NSPanelMBS` class.

10.2.2 Methods

10.2.3 beginProgressPanelForBurn(burn as DRBurnMBS, track as DRTrackMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Presents the progress panel on screen and begins the burn process.

Notes:

This method returns control to the caller after it has displayed the progress sheet and begun the burn. Once the method has returned the caller can perform other operations while the burn continues.

Burns a single session disc with one track.

See also:

- 10.2.4 beginProgressPanelForBurn(burn as DRBurnMBS, tracks() as DRTrackMBS) 620

10.2.4 beginProgressPanelForBurn(burn as DRBurnMBS, tracks() as DRTrackMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Presents the progress panel on screen and begins the burn process.

Notes:

This method returns control to the caller after it has displayed the progress sheet and begun the burn. Once the method has returned the caller can perform other operations while the burn continues.

Burns a multi session disc with several tracks.

See also:

- 10.2.3 beginProgressPanelForBurn(burn as DRBurnMBS, track as DRTrackMBS) 620

10.2.5 beginProgressPanelForImageFile(burn as DRBurnMBS, file as folderitem) as boolean

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Presents the progress panel on screen and begins the burn process.

Notes:

This method returns control to the caller after it has displayed the progress sheet and begun the burn. Once the method has returned the caller can perform other operations while the burn continues.

Burns the image file located on the given position.

This file must be one that can be read by DiscRecording. The supported image types include: .dmg, .iso, .cue, and .toc. For .cue and .toc files the corresponding data files (.bin, .img, etc) must also be present and

correctly referenced in the .cue/.toc file.

See also:

- 10.2.6 beginProgressPanelForImageFile(burn as DRBurnMBS, file as string) as boolean 621

10.2.6 beginProgressPanelForImageFile(burn as DRBurnMBS, file as string) as boolean

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Presents the progress panel on screen and begins the burn process.

Notes:

This method returns control to the caller after it has displayed the progress sheet and begun the burn. Once the method has returned the caller can perform other operations while the burn continues.

Burns the image file located on the given position.

This file must be one that can be read by DiscRecording. The supported image types include: .dmg, .iso, .cue, and .toc. For .cue and .toc files the corresponding data files (.bin, .img, etc) must also be present and correctly referenced in the .cue/.toc file.

See also:

- 10.2.5 beginProgressPanelForImageFile(burn as DRBurnMBS, file as folderitem) as boolean 620

10.2.7 beginProgressSheetForBurn(burn as DRBurnMBS, track as DRTrackMBS, docWindow as NSWindowMBS)

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Presents the progress panel as a sheet and begins the burn process.

Notes:

docWindow: The window the sheet will be attached to. If docWindow is not nil, the panel slides down as a sheet running as a document modal window. If owner is nil, this is an error.

This method returns control to the caller after it has displayed the progress sheet and begun the burn. Once the method has returned the caller can perform other operations while the burn continues.

Burns a single session disc with one track.

See also:

- 10.2.8 beginProgressSheetForBurn(burn as DRBurnMBS, tracks() as DRTrackMBS, docWindow as NSWindowMBS) 622

10.2.8 beginProgressSheetForBurn(burn as DRBurnMBS, tracks() as DRTrackMBS, docWindow as NSWindowMBS)

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Presents the progress panel as a sheet and begins the burn process.

Notes:

docWindow: The window the sheet will be attached to. If docWindow is not nil, the panel slides down as a sheet running as a document modal window. If owner is nil, this is an error.

This method returns control to the caller after it has displayed the progress sheet and begun the burn. Once the method has returned the caller can perform other operations while the burn continues.

Burns a multi session disc with several tracks.

See also:

- 10.2.7 beginProgressSheetForBurn(burn as DRBurnMBS, track as DRTrackMBS, docWindow as NSWindowMBS) 621

10.2.9 beginProgressSheetForImageFile(burn as DRBurnMBS, file as folderitem, docWindow as NSWindowMBS) as boolean

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Presents the progress panel as a sheet and begins the burn process.

Notes:

docWindow: The window the sheet will be attached to. If docWindow is not nil, the panel slides down as a sheet running as a document modal window. If owner is nil, this is an error.

This method returns control to the caller after it has displayed the progress sheet and begun the burn. Once the method has returned the caller can perform other operations while the burn continues.

Burns the image file located on the given position.

This file must be one that can be read by DiscRecording. The supported image types include: .dmg, .iso, .cue, and .toc. For .cue and .toc files the corresponding data files (.bin, .img, etc) must also be present and correctly referenced in the .cue/.toc file.

See also:

- 10.2.10 beginProgressSheetForImageFile(burn as DRBurnMBS, file as string, docWindow as NSWindowMBS) as boolean 623

10.2.10 beginProgressSheetForImageFile(burn as DRBurnMBS, file as string, docWindow as NSWindowMBS) as boolean

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Presents the progress panel as a sheet and begins the burn process.

Notes:

docWindow: The window the sheet will be attached to. If docWindow is not nil, the panel slides down as a sheet running as a document modal window. If owner is nil, this is an error.

This method returns control to the caller after it has displayed the progress sheet and begun the burn. Once the method has returned the caller can perform other operations while the burn continues.

Burns the image file located on the given position.

This file must be one that can be read by DiscRecording. The supported image types include: .dmg, .iso, .cue, and .toc. For .cue and .toc files the corresponding data files (.bin, .img, etc) must also be present and correctly referenced in the .cue/.toc file.

See also:

- 10.2.9 beginProgressSheetForImageFile(burn as DRBurnMBS, file as folderitem, docWindow as NSWindowMBS) as boolean 622

10.2.11 Constructor

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new burn progress panel.

10.2.12 DRBurnProgressPanelDidFinishNotification as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names for use with a burn progress panel.

Notes:

Posted when the DRBurnProgressPanel has finished and is about to go away.

This notification contains a notification object but no userInfo dictionary. The notification object is the DRBurnProgressPanel that will be closed.

10.2.13 DRBurnProgressPanelWillBeginNotification as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names for use with a burn progress panel.

Notes:

Posted when the DRBurnProgressPanel is about to begin displaying progress.

This notification contains a notification object but no userInfo dictionary. The notification object is the DRBurnProgressPanel that will be displayed.

10.2.14 stopBurn

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's stop button.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.2.15 Properties

10.2.16 Description as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The description string displayed in the panel.

Notes:

If no description is explicitly set, this method will return the standard text string.

The panel's description is typically a short text string that gives an indication to the user what operation is being performed. If no description is explicitly set, the progress panel uses a standard text string suitable to the burn.

(Read and Write computed property)

10.2.17 VerboseProgressStatus as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The verbosity of the progress feedback.

Notes:

If verbose is true, the panel will update status for every change. If verbose is false, the panel will filter some status messages and only update for major changes. The default for the panel is filter the status messages.

(Read and Write computed property)

10.2.18 Events

10.2.19 `burnProgressPanelBurnDidFinish(burn as DRBurnMBS)` as boolean

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to handle the end-of-burn feedback.

Notes: This method allows the delegate to handle or modify the end-of-burn feedback performed by the progress panel. Return true to indicate the delegate handled the burn completion and the standard feedback should be suppressed. If this method returns false, the normal end-of-burn handling is performed (displaying an error if appropriate, playing an "I'm done" sound, etc). The delegate is messaged before the progress panel is ordered out so a sheet may be displayed on a progress panel displayed as a window.

10.2.20 `burnProgressPanelDidFinish`

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notification sent by the panel after ordering out.

Notes: If the delegate implements this method it will receive the message after the panel is removed from display.

10.2.21 `burnProgressPanelWillBegin`

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notification sent by the panel before display.

Notes: If the delegate implements this method it will receive the message immediately before the panel is displayed.

10.3 class DRBurnSetupPanelMBS

10.3.1 class DRBurnSetupPanelMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Manages a panel that allows users to specify the parameters of an burn.

Example:

```

dim track as DRTrackMBS
dim bsp as DRBurnSetupPanelMBS
dim bpp as DRBurnProgressPanelMBS

// we need a track
track=CreateTrack

if track<>nil then
bsp=new DRBurnSetupPanelMBS

// set a few options
bsp.setCanSelectAppendableMedia true
bsp.setCanSelectTestBurn true

if bsp.runSetupPanel=bsp.NSOKButton then
bpp=new DRBurnProgressPanelMBS

// And start off the burn itself. This will put up the progress dialog
// and do all the nice pretty things that a happy app does.
bpp.beginProgressPanelForBurn bsp.burnObject, track

else
MsgBox "You pressed cancel."
end if
end if

```

Notes:

This class supports choosing the the device to use, whether or not to verify the burned data and how to handle the burned disc when it completes.

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DRSetupPanelMBS class.

10.3.2 Methods

10.3.3 appendable

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's appendable checkbox.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.3.4 burnObject as DRBurnMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates and returns a new DRBurn object that's configured to write data to the currently selected device.

Notes:

The new DRBurn object is configured based on the settings in the setup panel when the user clicks the OK button.

Do not invoke this method within a modal session because the burn object information is only updated just before the modal session ends.

Returns nil on any error.

10.3.5 burnSpeed

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's burn speed popup button.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.3.6 completionAction

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks one of the panel's completion action radio buttons.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.3.7 Constructor

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new burn setup panel.

10.3.8 DRBurnSetupPanelDefaultButtonDefaultTitle as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constant to use for the build title so it is replaced by the real default title string.

10.3.9 expand

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's expand button.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.3.10 setCanSelectAppendableMedia(flag as boolean)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Specifies whether the user can choose to leave the disc appendable.

Notes:

This method controls whether the appendable checkbox is enabled.

If the data being written to disc does not lend itself to having more data appended on to it, you can disable the ability of the user to leave the disc open.

This method must be called before the panel is displayed.

Set to yes to enable the appendable checkbox, false to disable.

10.3.11 setCanSelectTestBurn(flag as boolean)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Specifies whether the user can choose to make a test burn.

Notes:

This method controls whether a checkbox should be added to the receiver that allows the user to set the

burn to be a test burn. By default, the test burn button is not displayed.

This method must be called before the panel is displayed.

Set to yes to show the test burn checkbox, false to hide it.

10.3.12 setDefaultButtonTitle(title as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the title for the receiver's default button to title.

Example:

```
dim panel as new DRBurnSetupPanelMBS
```

```
panel.setDefaultButtonTitle "Do Burn"
```

Notes: Normally, the default button is "Burn".

10.3.13 testBurn

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's test burn checkbox.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.3.14 verifyBurn

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's verify burn checkbox.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.4 class DRCDTextBlockMBS

10.4.1 class DRCDTextBlockMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class for a Text block.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

10.4.2 Methods

10.4.3 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

10.4.4 encoding as Integer

Plugin Version: 8.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The text encoding to use.

10.4.5 language as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The language of this text block.

10.5 class DRDeviceMBS

10.5.1 class DRDeviceMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Represents a physical CD/DVD drive connected to the computer.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

10.5.2 Methods

10.5.3 acquireExclusiveAccess as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Attempts to acquire an exclusive access session with the device.

Notes:

Acquiring exclusive access to the device prevents any process other than the one acquiring access from communicating with the device. So once exclusive access is granted, the device is unusable by any other process. Because of this all volumes mounted from media in the drive must be unmounted before exclusive access can be granted.

Exclusive access can be acquired multiple times. Each time this method is called, a call to releaseExclusiveAccess must be made at a later time, otherwise the process will never release its exclusive access.

Returns true if the exclusinve access is acquired and false if not.

10.5.4 acquireMediaReservation

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Indicate an interest in the blank media reservation.

Example:

```
dim d as DRDeviceMBS // get a device
d.AcquireMediaReservation
```

Notes: Blank media participates in a reservation system thats allows applications to express their claim on

blank media to other applications. Indicating an interest in the reservation isn't enough to assume its been acquired, as there are likely to be other applications in the system whom have also indicated an interest in the blank media reservation.

10.5.5 `bsdName` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the `bsd /dev` node name.

10.5.6 `closeTray` as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Commands the device to close its tray.

Notes:

Does nothing if the device does not have a tray (slotload).
Returns true if the tray could be closed and false if not.

10.5.7 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

10.5.8 `device(index as UInt32)` as `DRDeviceMBS`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Queries the device with the given index.

Notes:

Index from 0 to `deviceCount-1`.

Same as `devices()`, but if you only need one, this method is more efficient.

10.5.9 `deviceCount` as `UInt32`

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Queries the number of devices on this computer.

10.5.10 deviceForBSDName(bsdName as string) as DRDeviceMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Obtains a DRDevice for the device corresponding to the bsd /dev node.

Notes: If the device is not an authoring device (i.e., CDR, CDRW, DVR-R, etc), returns nil.

10.5.11 deviceForIORegistryEntryPath(path as string) as DRDeviceMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Obtains a DRDevice for the device at the path.

Notes: If the device is not an authoring device (i.e., CDR, CDRW, DVR-R, etc), returns nil.

10.5.12 devices as DRDeviceMBS()

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Obtains a static list of devices connected to the computer.

Example:

```
// shows all devices with their product names:
dim devices() as DRDeviceMBS = DRDeviceMBS.devices
```

```
for each dd as DRDeviceMBS in devices
MsgBox dd.info.lookup(DRDeviceMBS.DRDeviceProductNameKey, "?")
next
```

Notes: Returns all CD/DVD devices connected to the computer at the time this method is called. Since devices can come and go at any time, the output of this method is simply a snapshot of the set of devices connected.

10.5.13 displayName as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a string suitable for display in the user interface.

10.5.14 DRDeviceAppearedNotification as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with a DRBurn object.

Notes:

Posted by a DRNotificationCenter when a device is added to the system.

This notification is registered for only by name.

The object associated with this notification is the the device that has appeared. The userInfo is the same dictionary returned by info for that device.

10.5.15 DRDeviceBurnSpeedBD1x as single

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible burn speed values.

Notes: 4496.0 KB/sec.

10.5.16 DRDeviceBurnSpeedCD1x as single

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible burn speed values.

Notes: 176.4 KB/sec.

10.5.17 DRDeviceBurnSpeedDVD1x as single

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible burn speed values.

Notes: 1385.0 KB/sec.

10.5.18 DRDeviceBurnSpeedHDDVD1x as single

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible burn speed values.

Notes: 4568.0 KB/sec.

10.5.19 DRDeviceBurnSpeedMax as single

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible burn speed values.

Notes: A value representing the maximum speed at which a device can burn. The actual speed will vary from device to device.

10.5.20 DRDeviceBurnSpeedsKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the status method.

Notes: An array containing the possible burn speeds available to use. This key may not be present if no media is inserted.

10.5.21 DRDeviceCanTestWriteCDKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Value for this key is a boolean value indicating whether the device can perform a test burn to CD media.

10.5.22 DRDeviceCanTestWriteDVDKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: A boolean value indicating whether the device can perform a test burn to DVD media.

10.5.23 DRDeviceCanUnderrunProtectCDKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device supports burn underrun protection when writing to CD media.

10.5.24 DRDeviceCanUnderrunProtectDVDKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device supports burn underrun protection when writing to DVD media.

10.5.25 DRDeviceCanWriteBDKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to some type of BD (Blu-ray) based media.

10.5.26 DRDeviceCanWriteBDREKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to BD-RE media.

10.5.27 DRDeviceCanWriteBDRKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to BD-R media.

10.5.28 DRDeviceCanWriteCDKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to some type of CD based media.

10.5.29 DRDeviceCanWriteCDRawKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device supports a raw mode burn strategy for CD. Raw mode is sometimes incorrectly referred to as DAO (disc-at-once).

10.5.30 DRDeviceCanWriteCDRKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to CD-R media.

10.5.31 DRDeviceCanWriteCDRWKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to CD-RW media.

10.5.32 DRDeviceCanWriteCDSAOKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device supports a SAO (session-at-once) burn strategy for CD.

10.5.33 DRDeviceCanWriteCDTAOKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device supports a TAO (track-at-once) burn strategy for CD.

10.5.34 DRDeviceCanWriteCDTextKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write CD-Text information to media.

10.5.35 DRDeviceCanWriteDVDDAOKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device supports a DAO (disc-at-once) burn strategy on DVD media.

10.5.36 DRDeviceCanWriteDVDKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to some type of DVD based media.

10.5.37 DRDeviceCanWriteDVDPlusRDoubleLayerKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to DVD+R DL media.

10.5.38 DRDeviceCanWriteDVDPlusRKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to DVD+R media.

10.5.39 DRDeviceCanWriteDVDPlusRWDoubleLayerKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to DVD+RW DL media.

10.5.40 DRDeviceCanWriteDVDPlusRWKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to DVD+RW media.

10.5.41 DRDeviceCanWriteDVDRAMKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to DVD-RAM media.

10.5.42 DRDeviceCanWriteDVDRDualLayerKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to DVD-R DL media.

10.5.43 DRDeviceCanWriteDVDRKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to DVD-R media.

10.5.44 DRDeviceCanWriteDVDRWDualLayerKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to DVD-RW DL media.

10.5.45 DRDeviceCanWriteDVDRWKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to DVD-RW media.

10.5.46 DRDeviceCanWriteHDDVDKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to some type of HDDVD based media.

10.5.47 DRDeviceCanWriteHDDVDRAMKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to HD DVD-RAM media.

10.5.48 DRDeviceCanWriteHDDVDRDualLayerKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to HD DVD-R DL media.

10.5.49 DRDeviceCanWriteHDDVDRKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to HD DVD-R media.

10.5.50 DRDeviceCanWriteHDDVDRWDualLayerKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to HD DVD-RW DL media.

10.5.51 DRDeviceCanWriteHDDVDRWKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to HD DVD-RW media.

10.5.52 DRDeviceCanWriteIndexPointsKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write index points to CD media.

10.5.53 DRDeviceCanWriteISRCKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write ISRC to CD media.

10.5.54 DRDeviceCanWriteKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceWriteCapabilitiesKey dictionary.

Notes: Boolean value indicating whether the device can write to some type of media.

10.5.55 DRDeviceCurrentWriteSpeedKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the status method.

Notes: Number containing the current burning speed of this device.

10.5.56 DRDeviceDisappearedNotification as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with a DRBurn object.

Notes:

Posted by a DRNotificationCenter when a device is removed from the system.

The object associated with this notification is the the device that has disappeared. The userInfo is the same dictionary returned by info for that device.

10.5.57 DRDeviceFirmwareRevisionKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Notes: String containing the firmware revision extracted from the device.

10.5.58 DRDeviceIORegistryEntryPathKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String containing the path of the device in the IO Registry.

Notes: One of the keys in the dictionary returned by the info method.

10.5.59 DRDeviceIsBusyKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the status method.

Notes: Number containing a boolean value indicating whether the device is busy or not.

10.5.60 DRDeviceIsTrayOpenKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the status method.

Notes: Number containing a boolean value indicating whether the device's tray is open or not.

10.5.61 DRDeviceLoadingMechanismCanEjectKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Notes: Number describing if the loading mechanism of the drive can eject.

10.5.62 DRDeviceLoadingMechanismCanInjectKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Notes: Number describing if the loading mechanism of the drive can inject.

10.5.63 DRDeviceLoadingMechanismCanOpenKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Notes: Number describing if the loading mechanism of the drive can open.

10.5.64 DRDeviceMaximumWriteSpeedKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the status method.

Notes: Number containing the maximum burning speed of this device.

10.5.65 DRDeviceMediaBlocksFreeKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: Number containing the amount of space available (in blocks) on the media to be written to. If the media already contains data and this value will be less than the normal maximum size of the disc. This value will normally only be used if the intent is to append data onto an open disc.

10.5.66 DRDeviceMediaBlocksOverwritableKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes:

Number containing the total amount of writable space available (in blocks) on the media to be written to - if that media can be overwritten. Media that can be overwritten is designated through the DRDeviceMediaIsOverwritableKey .

The overwritable space is the amount of space on the disc that would be available if any data currently on the disc is first erased.

10.5.67 DRDeviceMediaBlocksUsedKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: Number containing the amount of space currently used (in blocks) for existing data.

10.5.68 DRDeviceMediaBSDNameKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: String containing the BSD /dev node name assigned to the media in the device.

10.5.69 DRDeviceMediaClassBD as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value of the DRDeviceMediaClassKey.

Notes: Indicates the media is some type of BD (Blu-ray) based media.

10.5.70 DRDeviceMediaClassCD as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value of the DRDeviceMediaClassKey.

Notes: Indicates the media is some type of CD based media.

10.5.71 DRDeviceMediaClassDVD as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value of the DRDeviceMediaClassKey.

Notes: Indicates the media is some type of DVD based media.

10.5.72 DRDeviceMediaClassHDDVD as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value of the DRDeviceMediaClassKey.

Notes: Indicates the media is some type of HD DVD based media.

10.5.73 DRDeviceMediaClassKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: String containing the class of media present in the drive.

10.5.74 DRDeviceMediaClassUnknown as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One possible value of the DRDeviceMediaClassKey.

Notes: Indicates the media class is unknown.

10.5.75 DRDeviceMediaDoubleLayerL0DataZoneBlocksKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: Number containing the amount of space available (in blocks) on layer 0 of a double layer piece of media.

10.5.76 DRDeviceMediaFreeSpaceKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: MSF value of the amount of space available on the media to be written to. If the media already contains data and this value will be less than the normal maximum size of the disc. This value will normally

only be used if the intent is to append data onto an open disc.

10.5.77 DRDeviceMediaInfoKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the status method.

Notes: Dictionary of information describing the media currently in the device. This key may not be present if no media is inserted.

10.5.78 DRDeviceMediaIsAppendableKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: Number containing a boolean value indicating that data can be appended to the existing data (if any).

10.5.79 DRDeviceMediaIsBlankKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: Number containing a boolean value indicating whether data has previously been written to the media.

10.5.80 DRDeviceMediaIsErasableKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: Number containing a boolean value indicating whether this media can be erased.

10.5.81 DRDeviceMediaIsOverwritableKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes:

Number containing a boolean value indicating that the data on the disc (if any) can be overwritten. Rewritable media can always be erased, and then rewritten in its entirety, so it is always considered over-

writable.

Write-once media, if its blank, can also be written in its entirety and is also considered overwritable.

Write-once media, that has been partially written, can never again enter a state where it is entirely writable and will have lost its overwritable designation.

10.5.82 DRDeviceMediaIsReservedKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: Number containing a boolean value indicating whether the media is reserved for exclusive use by the current process.

10.5.83 DRDeviceMediaOverwritableSpaceKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes:

MSF value of the amount of writable space available on the media to be written to - if that media can be overwritten. Media that can be overwritten is designated through the DRDeviceMediaIsOverwritableKey .

The overwritable space is the amount of space on the disc that would be available if any data currently on the disc is first erased.

10.5.84 DRDeviceMediaSessionCountKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: Number containing the current number of sessions present on the media.

10.5.85 DRDeviceMediaStateInTransition as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values for the DRDeviceMediaStateKey.

Notes: The media is transitioning from one state to another (i.e., being spun up/down).

10.5.86 DRDeviceMediaStateKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the status method.

Notes: String describing the state of the media.

10.5.87 DRDeviceMediaStateMediaPresent as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values for the DRDeviceMediaStateKey.

Notes: Device contains media of some type.

10.5.88 DRDeviceMediaStateNone as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values for the DRDeviceMediaStateKey.

Notes: No media is present in the device.

10.5.89 DRDeviceMediaTrackCountKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: Number containing the number of tracks present on the media.

10.5.90 DRDeviceMediaTypeBDR as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a BD-R.

10.5.91 DRDeviceMediaTypeBDRE as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a BD-RE.

10.5.92 DRDeviceMediaTypeBDROM as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a BD-ROM.

10.5.93 DRDeviceMediaTypeCDR as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a CD-R.

10.5.94 DRDeviceMediaTypeCDROM as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a CD-ROM.

10.5.95 DRDeviceMediaTypeCDRW as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a CD-RW.

10.5.96 DRDeviceMediaTypeDVDPlusR as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a DVD+R.

10.5.97 DRDeviceMediaTypeDVDPlusRDoubleLayer as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a DVD+R Double Layer.

10.5.98 DRDeviceMediaTypeDVDDPlusRW as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a DVD+RW.

10.5.99 DRDeviceMediaTypeDVDDPlusRWDoublLayer as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a DVD+RW Double Layer.

10.5.100 DRDeviceMediaTypeDVDR as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a DVD+RW.

10.5.101 DRDeviceMediaTypeDVDRAM as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a DVD-RAM.

10.5.102 DRDeviceMediaTypeDVDRDualLayer as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a DVD-R DL.

10.5.103 DRDeviceMediaTypeDVDRom as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a DVD-ROM.

10.5.104 DRDeviceMediaTypeDVDRW as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a DVD-RW.

10.5.105 DRDeviceMediaTypeDVDRWDualLayer as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a DVD-RW DL.

10.5.106 DRDeviceMediaTypeHDDVDR as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a HD DVD-R.

10.5.107 DRDeviceMediaTypeHDDVDRAM as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a HD DVD-RAM.

10.5.108 DRDeviceMediaTypeHDDVDRDualLayer as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a HD DVD-R DL.

10.5.109 DRDeviceMediaTypeHDDVDROM as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a HD DVD-ROM.

10.5.110 DRDeviceMediaTypeHDDVDRW as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a HD DVD-RW.

10.5.111 DRDeviceMediaTypeHDDVDRWDualLayer as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: Media is a HD DVD-RW DL.

10.5.112 DRDeviceMediaTypeKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: String containing the type of media inserted in the device.

10.5.113 DRDeviceMediaTypeUnknown as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDeviceMediaTypeKey.

Notes: The type of the media cannot be determined.

10.5.114 DRDeviceMediaUsedSpaceKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the DRDeviceMediaInfoKey dictionary.

Notes: MSF value of the amount of space currently used for existing data.

10.5.115 DRDevicePhysicalInterconnectATAPI as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDevicePhysicalInterconnectKey.

Notes: Device is connected on an ATAPI interface.

10.5.116 DRDevicePhysicalInterconnectFibreChannel as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDevicePhysicalInterconnectKey.

Notes: Device is connected through a Fibre Channel interface.

10.5.117 DRDevicePhysicalInterconnectFireWire as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDevicePhysicalInterconnectKey.

Notes: Device is connected through a Firewire interface.

10.5.118 DRDevicePhysicalInterconnectKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Notes: String describing the connection of the device to the computer.

10.5.119 DRDevicePhysicalInterconnectLocationExternal as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDevicePhysicalInterconnectLocationKey.

Notes: Device is connected to the machine externally.

10.5.120 DRDevicePhysicalInterconnectLocationInternal as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDevicePhysicalInterconnectLocationKey.

Notes: Device is connected to the machine internally.

10.5.121 DRDevicePhysicalInterconnectLocationKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Notes: String describing the location of the device (e.g. internal/external).

10.5.122 DRDevicePhysicalInterconnectLocationUnknown as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDevicePhysicalInterconnectLocationKey.

Notes: It's not known how the device is connected.

10.5.123 DRDevicePhysicalInterconnectSCSI as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDevicePhysicalInterconnectKey.

Notes: Device is connected on a SCSI interface.

10.5.124 DRDevicePhysicalInterconnectUSB as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the DRDevicePhysicalInterconnectKey.

Notes: Device is connected through a USB interface.

10.5.125 DRDeviceProductNameKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Example:

```
// shows all devices with their product names:  
dim devices() as DRDeviceMBS = DRDeviceMBS.devices
```

```
for each dd as DRDeviceMBS in devices  
MsgBox dd.info.lookup(DRDeviceMBS.DRDeviceProductNameKey, "?")  
next
```

Notes: String containing the product name extracted from the device.

10.5.126 DRDeviceStatusChangedNotification as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with a DRBurn object.

Notes:

Posted by a DRNotificationCenter when the media in a device changes state. This can include being ejected, inserted, becoming busy, etc.

The object for this notification is the device who's media is changing state. The userInfo for this notification is the same dictionary returned by status for that device.

10.5.127 DRDeviceSupportLevelAppleShipping as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the values for DRDeviceSupportLevelKey.

Notes: This value indicates this device is shipping in some Apple machine.

10.5.128 DRDeviceSupportLevelAppleSupported as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the values for DRDeviceSupportLevelKey.

Notes: This value indicates this device has been tested by Apple for support.

10.5.129 DRDeviceSupportLevelKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Notes: String describing the support level the device enjoys from the engine.

10.5.130 DRDeviceSupportLevelNone as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the values for DRDeviceSupportLevelKey.

Notes: This value indicates this device is not supported.

10.5.131 DRDeviceSupportLevelUnsupported as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the values for DRDeviceSupportLevelKey.

Notes: This value indicates the device is unsupported, but the engine will try to use it anyway.

10.5.132 DRDeviceSupportLevelVendorSupported as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the values for DRDeviceSupportLevelKey.

Notes: This value indicates this device has been tested by a third party for support.

10.5.133 DRDeviceTrackInfoKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the status method.

Notes: Dictionary containing dictionaries describing the tracks. DRTracks from the DRDeviceTrackRefsKey are used as keys into this dictionary.

10.5.134 DRDeviceTrackRefsKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the status method.

Notes: An array containing a list of DRTrack objects describing any tracks that are already on the disc.

10.5.135 DRDeviceVendorNameKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Notes: String containing the vendor name extracted from the device.

10.5.136 DRDeviceWriteBufferSizeKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Notes: Number containing the size of the write buffer of the device.

10.5.137 DRDeviceWriteCapabilitiesKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the keys in the dictionary returned by the info method.

Notes: Dictionary containing the capabilities of the device for writing different kinds of media.

10.5.138 ejectMedia as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Commands the device to eject the media.

Notes:

This command first unmounts any volumes associated with the media and then eject the media from the drive. If the media could not be ejected, most likely this is because a volume associated with the media could not be unmounted.

Returns true if the media could be ejected and false if not.

10.5.139 info as dictionary

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a dictionary of information describing the device.

Notes: The information returned include the types of media the device can write to, how it's connected and its identifying information such as the vendor and product name.

10.5.140 ioRegistryEntryPath as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the path to the device in the IO Registry.

10.5.141 isEqualToDevice(value as DRDeviceMBS) as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Compares the receiver to another device.

Notes: Returns true if the receiver is equal to otherDevice.

10.5.142 isValid as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether or not the device represented by the receiver is still attached to the computer.

Notes:

Because of the way some physical interconnects work, a device which is unplugged and replugged in does not necessarily look like the same device to the computer and would be invalid in that instance.

Returns true if the device is valid and false if not.

10.5.143 mediaIsAppendable as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true if the media in the device can have more data appended to any existing data.

10.5.144 mediaIsBlank as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true the media in the device is blank.

10.5.145 mediaIsBusy as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true if the media is in use by some process - even the one making this call.

10.5.146 mediaIsErasable as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true if the media can be erased (i.e., CD-RW, DVD-RW, etc).

10.5.147 mediaIsOverwritable as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true if the media in the device can be fully (re)written.

10.5.148 `mediaIsPresent` as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Reports the presence of the media.

10.5.149 `mediaIsReserved` as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true if the application calling this method currently holds the reservation on the media.

10.5.150 `mediaIsTransitioning` as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true if the media is in transition (spinning up or down for example).

10.5.151 `mediaSpaceFree` as DRMSFMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the amount of free space on the media.

10.5.152 `mediaSpaceOverwritable` as DRMSFMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the amount of writable space on the media.

10.5.153 `mediaSpaceUsed` as DRMSFMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the amount of used space on the media.

10.5.154 `mediaType` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the type of media currently inserted into the device.

10.5.155 openTray as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Commands the device to open it's tray.

Notes:

Does nothing if the device does not have a tray (slotload). If there is media in the drive this method will do nothing and return false. In this case use ejectMedia to eject the media and open the tray.

Returns true if the tray could be opened and false if not.

10.5.156 PhysicalInterconnect as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The connection of the device to the computer.

10.5.157 PhysicalInterconnectLocation as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The location of the device (internal/external/unknown).

Notes: Use the DRDevicePhysicalInterconnectLocation* constants.

10.5.158 releaseExclusiveAccess

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Releases the latest exclusive access request for the device.

Notes: A call to this method must be made for every call to acquireExclusiveAccess, otherwise the process will never release its exclusive access.

10.5.159 releaseMediaReservation

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Releases any media reservation that might be in place for the device.

Notes: If media is inserted and reserved, then the reservation will be passed on to the next process with a reservation request.

10.5.160 status as dictionary

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a dictionary of information describing the media in the device.

Notes: In addition to information about the media (type, space available/used, etc), the dictionary returned includes those pieces of information about the device itself which are in part determined by the media (i.e., maximum burn speed).

10.5.161 trayIsOpen as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Reports the tray state of the device.

Notes: Returns true if the device has a tray and it is open.

10.5.162 writesCD as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Reports the device's ability to burn to CD-type media.

Notes: Returns true if the device has the ability to write to CD-R media.

10.5.163 writesDVD as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Reports the device's ability to burn to DVD-type media.

Notes: Returns true if the device has the ability to write to DVD-R media.

10.6 class DRERASEMBS

10.6.1 class DRERASEMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Perform and monitor the erasing a rewritable CD or DVD disc.

Notes: All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

10.6.2 Methods

10.6.3 Constructor(device as DRDeviceMBS)

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes an erase object.

10.6.4 device as DRDeviceMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the device being used for the erase.

10.6.5 DRERASESTATUSCHANGEDNOTIFICATION as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names you can use to register notifications on the erase status.

10.6.6 DRERASETYPECOMPLETE as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A constant to be used for the eraseType property.

Notes: Configures the erase object to perform a complete erase, erasing every byte on the disk. This operation is slow (on the order of 30 minutes) to complete.

10.6.7 `DREraseTypeKey` as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property names in the properties dictionary of the erase object.

10.6.8 `DREraseTypeQuick` as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A constant to be used for the `eraseType` property.

Notes: Configures the erase object to perform a quick erase, doing the minimal amount of work to make the disc appear blank. This operation typically takes only a minute or two.

10.6.9 `eraseForDevice(device as DRDeviceMBS)` as `DREraseMBS`

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates and returns an erase object.

Notes: Returns nil on any error.

10.6.10 `start`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Begin the process of erasing media.

Notes: This method only kicks off the erase. Once the erasure starts, control returns to the caller.

10.6.11 `status` as dictionary

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a dictionary containing the status of the erase.

Notes: The same dictionary is returned through the `DREraseStatusChangedNotification` notification.

10.6.12 Properties

10.6.13 `eraseType` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The type of erase to be performed.

Notes: (Read and Write computed property)

10.6.14 properties as dictionary

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The properties dictionary of the erase.

Notes: (Read and Write computed property)

10.7 class DREraseProgressPanelMBS

10.7.1 class DREraseProgressPanelMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Panel to display progress while erasing media.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `NSPanelMBS` class.

10.7.2 Methods

10.7.3 beginProgressPanelForErase(erase as DREraseMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Presents the progress panel on screen and begins the erase process.

Notes: This method returns control to the caller after it has displayed the progress sheet and begun the erase. Once the method has returned the caller can perform other operations while the erase continues.

10.7.4 beginProgressSheetForErase(erase as DREraseMBS, docWindow as NSWindowMBS)

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Presents the progress panel as a sheet and begins the erase process.

Notes:

erase: The object performing the erase.

docWindow: The window the sheet will be attached to. If docWindow is not nil, the panel slides down as a sheet running as a document modal window. If owner is nil, this is an error.

This method returns control to the caller after it has displayed the progress sheet and begun the erase. Once the method has returned the caller can perform other operations while the erase continues.

10.7.5 Constructor

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor which creates the erase progress panel.

10.7.6 DRERaseProgressPanelDidFinishNotification as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names for use with an erase progress panel.

Notes:

Posted when the DRERaseProgressPanel has finished and is about to go away.

This notification contains a notification object but no userInfo dictionary. The notification object is the DRERaseProgressPanel that will be closed.

10.7.7 DRERaseProgressPanelWillBeginNotification as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names for use with an erase progress panel.

Notes:

Posted when the DRERaseProgressPanel is about to begin displaying progress.

This notification contains a notification object but no userInfo dictionary. The notification object is the DRERaseProgressPanel that will be displayed.

10.7.8 Properties

10.7.9 Description as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The description string displayed in the panel.

Notes:

If no description is explicitly set, this method will return the standard text string.

The panel's description is typically a short text string that gives an indication to the user what operation is being performed. If no description is explicitly set, the progress panel uses a standard text string suitable to the erase.

(Read and Write computed property)

10.7.10 Events

10.7.11 `eraseProgressPanelDidFinish`

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notification sent by the panel after ordering out.

10.7.12 `eraseProgressPanelEraseDidFinish(erase as DREraseMBS)` as boolean

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to handle the end-of-erase feedback.

Notes: This method allows the delegate to handle or modify the end-of-erase feedback performed by the progress panel. Return true to indicate the delegate handled the erase completion and the standard feedback should be suppressed. If this method returns false, the normal end-of-erase handling is performed (displaying an error if appropriate, playing an "I'm done" sound, etc). The delegate is messaged before the progress panel is ordered out so a sheet may be displayed on a progress panel displayed as a window.

10.7.13 `eraseProgressPanelWillBegin`

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notification sent by the panel before display.

10.8 class DREraseSetupPanelMBS

10.8.1 class DREraseSetupPanelMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Manages a panel that allows users to specify the parameters of an erase.

Notes:

This class supports choosing the device to use and what sort of erase to perform. When the panel is closed by the user choosing to erase the media in the device, the device is exclusively held by the application for its own use to prevent possible bad or corrupt media from causing problem for the rest of the system. This means that if the erase object obtained from the panel is not used to do an erase, the device will remain unavailable to other applications until the exclusive access is released.

Subclass of the DRSetupPanelMBS class.

10.8.2 Methods

10.8.3 Constructor

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create the erase setup panel.

Example:

```
dim d as DREraseSetupPanelMBS
```

```
d=new DREraseSetupPanelMBS
```

```
call d.runSetupPanel
```

10.8.4 eraseObject as DREraseMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates and returns a new DRErase object that's configured to erase the disc in the currently selected device.

Notes:

The new DRErase object is configured based on the settings in the setup panel when the user clicks the OK button.

Do not invoke this method within a modal session runSetupPanel because the erase object information is only updated just before the modal session ends.

Returns a new DRErase object.

10.9 class DRFileMBS

10.9.1 class DRFileMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Represents a file to be created on the disc.

Notes:

A file can be either a pointer to an existing file (residing on a hard drive for example) or can be created at burn time from data passed into the file object as requested. DRFiles can only exist inside of DRFolder objects.

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DRFSObjectMBS class.

10.9.2 Methods

10.9.3 Constructor

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Dummy constructor. See also:

- 10.9.4 Constructor(name as string) 668
- 10.9.5 Constructor(name as string, data as memoryblock) 669
- 10.9.6 Constructor(path as folderitem) 669

10.9.4 Constructor(name as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a "virtual" file object.

Notes:

This type of DRFile burns the data produced to the output disc, creating a file with the passed in name.

You need to subclass the DRFileMBS class and handle the events.

See also:

- 10.9.3 Constructor 668
- 10.9.5 Constructor(name as string, data as memoryblock) 669
- 10.9.6 Constructor(path as folderitem) 669

10.9.5 Constructor(name as string, data as memoryblock)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a "virtual" file object.

Notes: This type of DRFile burns the data passed in to disc, creating a file with the passed in name.

See also:

- 10.9.3 Constructor 668
- 10.9.4 Constructor(name as string) 668
- 10.9.6 Constructor(path as folderitem) 669

10.9.6 Constructor(path as folderitem)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a "real" file object

Notes: This type of DRFile reads in data from an existing file located at path and burns that data to disc.

See also:

- 10.9.3 Constructor 668
- 10.9.4 Constructor(name as string) 668
- 10.9.5 Constructor(name as string, data as memoryblock) 669

10.9.7 DRLinkTypeFinderAlias as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constant used with linkWithLinkType to create a Finder alias.

10.9.8 DRLinkTypeHardLink as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constant used with linkWithLinkType to create a hard link.

10.9.9 DRLinkTypeSymbolicLink as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constant used with linkWithLinkType to create a symbolic link.

10.9.10 fileWithPath(path as folderitem) as DRFileMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a "real" file object.

Example:

```
dim file as FolderItem = GetFolderItem("/System/Library/Fonts/Helvetica.dfont", FolderItem.PathType-Shell)
dim f as DRFileMBS = DRFileMBS.fileWithPath(file)
```

```
MsgBox f.baseName
```

Notes: This type of DRFile reads in data from an existing file located at path and burns that data to disc. See also:

- 10.9.11 fileWithPath(path as string) as DRFileMBS 670

10.9.11 fileWithPath(path as string) as DRFileMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a "real" file object.

Example:

```
dim f as DRFileMBS = DRFileMBS.fileWithPath("/System/Library/Fonts/Helvetica.dfont")
```

```
MsgBox f.baseName
```

Notes: This type of DRFile reads in data from an existing file located at path and burns that data to disc. See also:

- 10.9.10 fileWithPath(path as folderitem) as DRFileMBS 670

10.9.12 finderAliasPointingTo(original as DRFSObjectMBS, filesystem as string) as DRFileMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a Finder alias to another file on the output disc.

Notes:

original: The file to point he hard link to

filesystem: The filesystem this link will exist on.

As with Mac OS X 10.6.4 this method seems to create an empty file only (no alias).

10.9.13 `hardLinkPointingTo(original as DRFileMBS, filesystem as string) as DRFileMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a hard link to another file on the output disc.

Notes:

original: The file to point the hard link to

filesystem: The filesystem this link will exist on.

As with Mac OS X 10.6.4 this method seems to crash always.

10.9.14 `linkWithLinkType(linkType as string, original as DRFSObjectMBS, filesystem as string) as DRFileMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a file object to point to another file on the output disc.

Example:

```
dim SomeFolder as new DRFolderMBS("Some new folder")
```

```
// Let's have a file to test
```

```
dim data as string = "Hello World" // file content
```

```
dim name as string = "test.txt" // file name
```

```
dim testfile as DRFileMBS = DRFileMBS.virtualFileWithName(name, data)
```

```
// and create a sym link for it
```

```
dim SymLink as DRFileMBS = DRFileMBS.linkWithLinkType(DRFileMBS.DRLinkTypeSymbolicLink, testfile, DRFileMBS.DRHFSPPlus)
```

```
if SymLink = nil then
```

```
  MsgBox "SymLink is nil!"
```

```
else
```

```
  SomeFolder.addChild SymLink
```

```
end if
```

Notes:

linkType: The type of link that will be created.

original: The file to point he hard link to
 filesystem: The filesystem this link will exist on.

10.9.15 `symLinkPointingTo(original as DRFSObjectMBS, filesystem as string) as DRFileMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a symbolic link to another file on the output disc.

Example:

```
dim SomeFolder as new DRFolderMBS("Some new folder")

// Let's have a file to test

dim data as string = "Hello World" // file content
dim name as string = "test.txt" // file name
dim testfile as DRFileMBS = DRFileMBS.virtualFileWithName(name, data)

// and create a sym link for it
dim SymLink as DRFileMBS = DRFileMBS.symLinkPointingTo(testfile, DRFileMBS.DRHFSPPlus)
if SymLink = nil then
  MsgBox "SymLink is nil!"
else
  SomeFolder.addChild SymLink
end if
```

Notes:

original: The file to point he hard link to
 filesystem: The filesystem this link will exist on.

As with Mac OS X 10.6.4 this method seems to work just fine.

10.9.16 `virtualFileWithName(name as string, data as memoryblock) as DRFileMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a "virtual" file object.

Example:

```
dim data as string = "Hello World" // file content
dim name as string = "test.txt" // file name
```



```
dim f as DRFileMBS = DRFileMBS.virtualFileWithName(name, data)
```

```
MsgBox f.baseName
```

Notes: This type of DRFile burns the data passed in to disc, creating a file with the passed in name.

10.9.17 Events

10.9.18 calculateSizeOfFile(fork as Integer, estimating as boolean) as uint64

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Calculates the size of a file's fork.

Notes:

This method may be sent at any time after the file object has been instantiated. Requests that the receiver calculate the file size of file fork (for instance data or resource).

If estimate is true, you are being asked for an estimate of the final fork size, perhaps to provide an estimate of the track size, and do not have to be exact. Estimates should err on the high side; it's better to overestimate than underestimate.

An estimate call may be made at any time.

If estimate is false, you are being asked for the actual fork size, to be used in the burn. This call is only made in the burn phase.

fork: The fork of the file whose size is to be calculated.

estimate: If the file size should be estimated or exact.

Return the length of the file's fork.

10.9.19 cleanupFileAfterBurn

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Cleanup the file once the burn is complete.

Notes: Sent to the receiver after the burn completes. This would be an appropriate place to close files, or do any other teardown work needed. This message will always be sent regardless of whether the burn succeeded or failed.

10.9.20 `prepareFileForBurn` as `boolean`

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Prepare the file object for burning.

Notes:

Sent to the receiver before the burn begins. This would be an appropriate method to open files, or do any other prep work needed. The disc's entire hierarchy is completely in place and can be queried if needed.

After this call, the burn's content is locked down, and you should be able to respond to the `calculateSizeOfFile` messages with exact values.

10.9.21 `prepareFileForVerification` as `boolean`

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Prepare the file object for verification.

Notes: Called during the burn (after production, before the `cleanupFileAfterBurn` event is called) to indicate that verification is about to begin. Now would be a good time to rewind to the start of the file, reset state machines, or do whatever else is needed to prepare to produce again.

10.9.22 `produceFile(fork as Integer, buffer as memoryblock, Bufferlen as uint32, address as uint64, blocksize as uint32)` as `uint32`

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Calculates the size of a file's fork.

Notes:

Sent during the burn (after the `prepareFileForBurn` message) requesting that the receiver produce the data fork contents.

The receiver should fill up the buffer passed in as full as possible and then return control to the caller. Since while burning, keeping the drive's buffer full is of utmost importance, you should not perform lengthy operations or block for data in this method. This method should return the number of bytes actually in the buffer or 0 to indicate that there was an error producing the data.

You may be asked to produce twice, once during the actual burn and once during verification.

`fork`: The fork of the file to produce.

buffer: The buffer to produce data into.
bufferLength: The length of the buffer to produce data into
blockSize: The size of the track blocks

Return the number of bytes produced.

10.9.23 Constants

10.9.24 DRFileForkData = 0

Plugin Version: 7.4. **Function:** The constant which specifies which fork is currently needed.

Notes:

The data fork contains the primary information for the file and is the fork used for files such as JPEGs, text files, etc.

The resource fork contains secondary meta-data, which is not important to the primary content of the file and may safely be ignored when the file is sent to a filesystem or OS which does not support multiple forks.

10.9.25 DRFileForkResource = 1

Plugin Version: 7.4. **Function:** The constant which specifies which fork is currently needed.

Notes:

The data fork contains the primary information for the file and is the fork used for files such as JPEGs, text files, etc.

The resource fork contains secondary meta-data, which is not important to the primary content of the file and may safely be ignored when the file is sent to a filesystem or OS which does not support multiple forks.

10.10 class DRFolderMBS

10.10.1 class DRFolderMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class for folder objects used in filesystem creation.

Notes:

A DRFile object is a subclass of DRFSObject and represents a folder on the finished disc. DRFolders can be either a pointer to an existing folder (residing on a hard drive for example) or can be a "virtual" folder which existsonly on the resulting burned disc. A DRFolder pointing to an existing folder ("real" folder) cannot have it's contents changed - only those files/folders which are children of the actual folder on disk will be included on the resulting disc. "Virtual" folders are entirely created programatically and any virtual folder structure can exist and be burned to disc. It is possible to convert a "real" folder to a "virtual" folder using the makeVirtual method.

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DRFSObjectMBS class.

10.10.2 Methods

10.10.3 addChild(child as DRFSObjectMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds an object reference (either a file or folder) as a child of a virtual folder object.

Notes: This method only applies to virtual folders. Real folders are considered "leaf nodes" and cannot have children.

10.10.4 children as DRFSObjectMBS()

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array containing the children of a virtual folder.

Notes: The order of children in the array is arbitrary – since the various filesystems being generated may have different sorting requirements, there is no one true way to sort the children. The ordering will change only when children are added or removed. You should sort the children according to the needs of your display, and in a consistent manner. This function only applies to virtual folders. Real folders are considered "leaf nodes" and should not be passed into this call.

10.10.5 Constructor

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The dummy constructor.

See also:

- 10.10.6 Constructor(name as string) 677
- 10.10.7 Constructor(path as folderitem) 677

10.10.6 Constructor(name as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a "virtual" folder object with a name.

See also:

- 10.10.5 Constructor 677
- 10.10.7 Constructor(path as folderitem) 677

10.10.7 Constructor(path as folderitem)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a DRFolder object that will use the folder contents of the folder located at path as a source.

See also:

- 10.10.5 Constructor 677
- 10.10.6 Constructor(name as string) 677

10.10.8 count as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of children of a virtual folder.

Notes: This method returns a "shallow" count of only those children that are immediately contained within the virtual folder. This method only applies to virtual folders. Real folders are considered "leaf nodes" and should not be passed into this call.

10.10.9 folderWithPath(path as folderitem) as DRFolderMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a DRFolder object that will use the folder contents of the folder located at path as a source.

See also:

- 10.10.10 `folderWithPath(path as string)` as `DRFolderMBS`

678

10.10.10 `folderWithPath(path as string)` as `DRFolderMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a `DRFolder` object that will use the folder contents of the folder located at `path` as a source.

See also:

- 10.10.9 `folderWithPath(path as folderitem)` as `DRFolderMBS`

677

10.10.11 `makeVirtual`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Changes the real `DRFolder` object into a "virtual" `DRFolder` object.

Notes: The virtual folder created in this way is a snapshot of the on-disk folder at the moment of the call. The newly created virtual folder will contain real folder and file objects corresponding to the on-disk children of the original on-disk folder. If the on-disk folder is modified (eg, if the folder attributes change, or if children are added to or removed from the on-disk tree): during this call, the virtual folder may or may not reflect the changes. If modified after this call, the virtual folder will not reflect the changes.

10.10.12 `removeChild(child as DRFSObjectMBS)`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes an object reference (either a file or folder) as a child of a virtual folder object.

Notes: This method only applies to virtual folders. Real folders are considered "leaf nodes" and cannot have children.

10.10.13 `virtualFolderWithName(name as string)` as `DRFolderMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a "virtual" folder object with a name.

10.11 class DRFSObjectMBS

10.11.1 class DRFSObjectMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class which defines common features of all filesystem content objects.

Notes:

Please read Apples documentation for more details.

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

10.11.2 Methods

10.11.3 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

10.11.4 DRAccessDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Date containing the item's last-accessed date.

10.11.5 DRAllFilesystems as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The key for accessing the name or properties for the file in all filesystems together.

Notes: When this key is used to refer to a name, it refers to the base name (which has no naming restrictions).

10.11.6 DRAttributeModificationDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Date containing the item's attribute modification date.

10.11.7 DRBackupDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Date containing the item's backup date.

10.11.8 DRContentModificationDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Date containing the item's content modification date.

10.11.9 DRCreationDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Date containing the item's creation date.

10.11.10 DREffectiveDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Date containing the item's effective date.

10.11.11 DRExpirationDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Date containing the item's expiration date.

10.11.12 DRHFSPPlus as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The key for accessing the HFS+ name/properties for the file.

Notes: HFS+ names can be up to 255 decomposed unicode characters long.

10.11.13 DRHFSPPlusCatalogNodeID as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Number containing item's catalog node ID (HFS+ only). Currently, this value if set is only a suggestion. The burn engine will attempt to use this node ID, but may use another value if it needs to resolve conflicts. Default behavior is to allocate node IDs incrementally from kHFSFirstUserCatalogNodeID.

10.11.14 DRHFSPPlusTextEncodingHint as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes:

Number containing the item's text encoding hint (HFS+ only).

This value is used by the MacOS to help when converting the natively UTF-16 filename into an 8-bit-per-character representation (such as MacRoman, Shift-JIS, or UTF8). If not set, default behavior is to call CFStringGetMostCompatibleMacStringEncoding (CFStringGetSmallestEncoding()).

10.11.15 DRInvisible as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Boolean indicating whether the item is invisible or not.

10.11.16 DRISO9660 as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The key for accessing the ISO-9660 properties for the file.

Notes: This key cannot be used to refer to the name of the file; it is ambiguous, since the name may be in either level 1 or level 2 format.

10.11.17 DRISO9660LevelOne as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The key for accessing the ISO-9660 level 1 name for the file.

Notes:

This key is used to refer specifically to the name generated for ISO-9660 if the ISO level is set to 1. When used for a property, it is equivalent in use to the DRISO9660 key and acts as a synonym for that key.

ISO9660 level 1 names are in the form typically known as 8.3 - eight characters of name and three characters of extension (if it's a file; directories can't have extensions). Character set is limited to A-Z, 0-9, and ..

10.11.18 DRISO9660LevelTwo as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The key for accessing the ISO-9660 level 2 name for the file.

Notes:

This key is used to refer specifically to the name generated for ISO-9660 if the ISO level is set to 2. When used for a property, it is equivalent in use to the DRISO9660 key and acts as a synonym for that key.

ISO9660 level 2 names can be 32 chars long, are limited to a subset of the 7-bit ASCII chars (capital letters, numbers, space, punctuation), and are only allowed one "." character.

10.11.19 DRISO9660VersionNumber as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Number containing the ISO9660 version number for the object. Default value is 1.

10.11.20 DRJoliet as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The key for accessing the Joliet name/properties for the file.

Notes: Joliet names can be 64 precomposed unicode characters long, but are only allowed one "." character and many punctuation characters are illegal.

10.11.21 DRMacExtendedFinderFlags as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Number containing the item's extended Finder flags (MacOS only).

10.11.22 DRMacFileCreator as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: A binary string containing the OSType for the file creator (MacOS only).

10.11.23 DRMacFileType as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: A binary string containing the OSType for the file type (MacOS only).

10.11.24 DRMacFinderFlags as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Number containing the item's Finder flags (MacOS only). The invisible bit is ignored - use DRInvisible instead.

10.11.25 DRMacFinderHideExtension as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: A boolean indicating whether the extension should be hidden in the Finder or not. The default is false and only applies to files.

10.11.26 DRMacIconLocation as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: A binary string containing a Point (not NSPoint) for the item's icon location in its parent folder

(MacOS only).

10.11.27 DRMacScrollPosition as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Binary string containing a Point (not NSPoint) for the folder's scroll position (MacOS only).

10.11.28 DRMacWindowBounds as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Binary string containing a Rect (not NSRect) for the window bounds for a folder (MacOS only).

10.11.29 DRMacWindowView as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Number containing the folder's window view type (MacOS only).

10.11.30 DRPosixFileMode as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Number containing the item's POSIX file mode.

10.11.31 DRPosixGID as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Number containing the item's POSIX GID.

10.11.32 DRPosixUID as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Number containing the item's POSIX UID.

10.11.33 DRRecordingDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Date containing the item's recording date.

10.11.34 DRUDF as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The key for accessing the UDF name/properties for the file.

10.11.35 DRUDFApplicationIdentifierSuffix as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Optional key. Binary string of up to 8 bytes in length, for application use. The presence of this key requires the DRApplicationIdentifier key.

10.11.36 DRUDFExtendedFilePermissions as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes:

Number indicating the extended UDF file permissions of this file.

Bit 0: Change attributes for others (low order bit) Bit 1: Delete permissions for others Bit 2: Change attributes for group Bit 3: Delete permissions for group Bit 4: Change attributes for owner Bit 5: Delete permissions for owner Bit 6 & 7: Reserved If this key is not present, DRPosixFileMode will be used with the above bits being set to the corresponding write bit for owner, group, and others. If DRPosixFileMode is not present, the file mode from the file on disc will be used, again using the write bit for these permissions.

10.11.37 DRUDFInterchangeLevel as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Optional key. Number containing the volume interchange level. See the UDF specs for details.

10.11.38 DRUDFMaxInterchangeLevel as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Optional key. Number containing the maximum volume interchange level number. See the UDF specs for details.

10.11.39 DRUDFMaxVolumeSequenceNumber as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Optional key. Number containing the maximum volume sequence number. See the UDF specs for details.

10.11.40 DRUDFPrimaryVolumeDescriptorNumber as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Optional key. Number containing the primary volume sequence number. See the UDF specs for details.

10.11.41 DRUDFRealTimeFile as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Number indicating whether the file is a UDF Real-Time file.

10.11.42 DRUDFVersion102 as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** This value is used in DRUDFWriteVersion.

10.11.43 DRUDFVersion150 as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** This value is used in DRUDFWriteVersion.

10.11.44 DRUDFVolumeSequenceNumber as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Optional key. Number containing the volume sequence number. See the UDF specs for details.

10.11.45 DRUDFVolumeSetIdentifier as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Optional key. The Volume Set Identifier for the UDF volume set. If this key is not present, DRVVolumeSet will be used if present. The Volume Set Identifier is composed of the Volume Set Timestamp, the Implementation Use, and a the string contained in this property.

10.11.46 DRUDFVolumeSetImplementationUse as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Optional key. A binary string (8 bytes in length) for implementation use data. See the UDF specs for details.

10.11.47 DRUDFVolumeSetTimestamp as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Optional key. A date object for the volume set timestamp. See the UDF specs for details.

10.11.48 DRUDFWriteVersion as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the property keys.

Notes: Optional key. This property key defines the version for the UDF structures written to disk. Values

are defined in UDF Version types.

10.11.49 `effectiveFilesystemMask` as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The effective filesystem mask set for the receiver.

10.11.50 `isVirtual` as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Indicates whether the receiver is real or virtual.

Notes:

True if the receiver is virtual and false if real.

10.11.51 `mangledNameForFilesystem(filesystem as string)` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A single mangled filesystem-specific name for this fsubject.

Notes: Use `DRISO9660LevelOne`, `DRISO9660`, `DRHFSPPlus`, `DRUDF`, `DRJoliet`, `DRISO9660LevelTwo` or `DRAllFilesystems` for the filesystem parameter.

10.11.52 `mangledNames` as dictionary

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a dictionary containing all of the filesystem-specific names for the receiver, each one mangled for uniqueness.

Notes: The dictionary will return only the names which are indicated by the receiver's effective mask. If the receiver's effective mask is zero, an empty dictionary is returned.

10.11.53 `parent` as DRFolderMBS

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The parent object.

10.11.54 `propertiesForFilesystem(filesystem as string, mergeWithOtherFilesystems as boolean) as dictionary`

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns all the filesystem properties set for the specified filesystem.

Notes:

filesystem: The filesystem to look in.

merge: If true, also look for properties in the umbrella DRAllFilesystems .

Normally you would call this method with merge set to true since you are interested in the set of properties that will be used when writing the object to disc. But if you have a need to determine what properties are set just for a specific filesystem, then pass in false for merge. In this case only the specific filesystem is checked. So if filesystem is set to DRHFSPlus and merge is false then the properties dictionary contains the values set for the HFS+ filesystem only. If no properties have been directly set for HFS+ yet, then this properties dictionary will be empty.

10.11.55 `propertyForKey(key as string, filesystem as string, mergeWithOtherFilesystems as boolean) as Variant`

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a file/folder property specified by key for the specified filesystem.

Notes:

key: The property to return.

filesystem: The filesystem to look in.

merge: If true, also look for the property in the umbrella DRAllFilesystems .

Returns the value associated with the property.

Normally you would call this method with merge set to true since you are interested in the property that will be used when writing the object to disc. But if you have a need to determine what property is set just for a specific filesystem, then pass in false for merge. In this case only the specific filesystem is checked. So if DRHFSPlus is passed in for filesystem and merge is false then the property returned is the value set for the HFS+ filesystem only. If that property has not been directly set for HFS+ yet, then the returned value will be nil.

10.11.56 `setProperty(Value as dictionary, filesystem as string)`

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the value of all the receiver's properties specified by the keys in properties for the specific filesystem.

Notes:

properties: The value of the property.
filesystem: The filesystem to set the property in.

The properties are set only in the filesystem dictionary specified by filesystem. DRAllFilesystems may be specified as the filesystem in which case the umbrella property affecting all filesystems at once will be set. Setting properties for DRAllFilesystems does not preclude setting a filesystem specific property.

10.11.57 setProperty(Value as Variant, key as string, filesystem as string)

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the value of the receiver's property specified by key for the specific filesystem.

Notes:

property: The value of the property.
key: The property key.
filesystem: The filesystem to set the property in.

The property is set only in the filesystem dictionary specified by filesystem. DRAllFilesystems may be specified as the filesystem in which case the umbrella property affecting all filesystems at once will be set. Setting a property for DRAllFilesystems does not preclude setting a filesystem specific property.

10.11.58 sourcePath as string

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The source path.

10.11.59 Properties

10.11.60 baseName as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the base name for the receiver.

Notes:

The base name is the name from which any necessary filesystem-specific names are automatically generated.

Because the content creation API is able to generate multiple filesystems which require multiple varied naming conventions, a sensible system for naming is required. Thus each file has a "base name" which corresponds to its default name in any filesystem.

Whenever possible, the "base name" will be used in the generated filesystem without modification. If the

name cannot be used as-is (if, for example, it contains illegal characters, exceeds the length requirements, doesn't meet the required format, or a name collision is detected) then an acceptable name that meets the filesystem's criteria will be generated automatically from the base name.

The default base name for a real file or folder is the actual on-disk name of the item.
(Read and Write computed property)

10.11.61 `explicitFilesystemMask` as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The explicit filesystem mask set for the receiver.

Notes: (Read and Write computed property)

10.11.62 `specificNameForFilesystem(filesystem as string)` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A single filesystem-specific name for this fsubject.

Notes:

Use `DRISO9660LevelOne`, `DRISO9660`, `DRHFSPPlus`, `DRUDF`, `DRJoliet`, `DRISO9660LevelTwo` or `DRAllFilesystems` for the filesystem parameter.

(Read and Write computed property)

10.11.63 `specificNames` as dictionary

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The names used for the receiver in the different filesystems all at once.

Notes:

An Dictionary of filesystem keys with corresponding name strings as their values for each specific filesystem name that should be set.

Every effort will be made to use the names passed in. However, if a name is illegal, it will be modified to fit the rules for that filesystem's names. Because of this, you should always call `specificNames` after `setSpecificNames`: to ensure that you are always displaying the most current names to the user.

(Read and Write computed property)

10.11.64 Constants

10.11.65 DRFilesystemInclusionMaskHFSPlus = 8

Plugin Version: 7.4. **Function:** The value which indicates the object should be included in the HFS+ filesystem.

10.11.66 DRFilesystemInclusionMaskISO9660 = 1

Plugin Version: 7.4. **Function:** The value which indicates the object should be included in the ISO9660 filesystem.

10.11.67 DRFilesystemInclusionMaskJoliet = 2

Plugin Version: 7.4. **Function:** The value which indicates the object should be included in the Joliet filesystem.

10.11.68 DRFilesystemInclusionMaskUDF = 4

Plugin Version: 7.4. **Function:** The value which indicates the object should be included in the UDF filesystem.

10.12 class DRMSFMBS

10.12.1 class DRMSFMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Minutes/Seconds/Frames handling.

Notes:

On CDs, minutes/seconds/frames are used to identify positioning on a disc (which is most useful on an audio disc), but applies to any position on a disc no matter what type of data is present.

A frame is equivalent to a sector or block in normal disk parlance. 75 frames make up one second, so a 2 second pause (typical pregap size) is 150 frames.

All methods in this class will catch exceptions from Cocoa and raise a `NSError` instead. Using the `message`, `name` and `reason` properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

10.12.2 Methods

10.12.3 Constructor

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The dummy constructor.

See also:

- 10.12.4 `Constructor(frames as Integer)` 693
- 10.12.5 `Constructor(s as string)` 694

10.12.4 `Constructor(frames as Integer)`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an `msf` object whose length is frames.

See also:

- 10.12.3 `Constructor` 693
- 10.12.5 `Constructor(s as string)` 694

10.12.5 Constructor(s as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an msf object initialized to the value represented by string

See also:

- 10.12.3 Constructor 693
- 10.12.4 Constructor(frames as Integer) 693

10.12.6 description as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a textual representation.

10.12.7 descriptionWithFormat(format as string) as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a textual representation of the receiver.

Notes:

The format string is very similar to

A printf-style format string with % -escaped formatting characters.

% %	A "% " character
% m	Minutes as a decimal number
% s	Seconds as a decimal number
% f	Frames as a decimal number

In addition to these formatting characters an optional length specifier can come between then % and the formatting character. This length specifier will force the field in question to be at least that wide. For example a format specifier of "% 02m:% 02s" will cause a DRMSF object representing 3 minutes 9 seconds to be formatted as "03:09".

A formatter is aware of and respects rounding. If a bit of the msf is no zero, but the format does not display that value, the next higher value will be increased by one to reflect that. Extending our example above, an DRMSF with a value of 3 minutes, 9 seconds, 15 frames using a format specifier of "% 02m:% 02s", will be formatted as "03:10" since the 15 frames rounds up the seconds to the next value

Returns a string containing a textual representation of the object utilizing the specified format.

10.12.8 frames as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of frames represented by the receiver.

Notes: This method differs from sectors in that it returns to the caller the number of frames remaining in the current second. For example an DRMSF value of 5:30:72 will return 72 from frames.

10.12.9 isEqualToMSF(value as DRMSFMBS) as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Compares on emsf to another.

Notes: True if the two object are equal, false otherwise.

10.12.10 minutes as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of minutes represented by the receiver.

Notes: If the receiver represents a non integral number of minutes, only the whole minute value is returned. For example an DRMSF value of 5:30:72 will return 5 from a minutes.

10.12.11 msf as DRMSFMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an msf object with no length/time.

Notes: Returns nil on any error.

10.12.12 msfByAdding(value as DRMSFMBS) as DRMSFMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds an msf to the receiver.

Notes: Returns nil on any error.

10.12.13 msfBySubtracting(value as DRMSFMBS) as DRMSFMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Subtracts an msf to the receiver.

Notes: Returns nil on any error.

10.12.14 `msfWithFrames(frames as Integer)` as `DRMSFMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an `msf` object whose length is `frames`.

Notes: Returns `nil` on any error.

10.12.15 `msfWithString(s as string)` as `DRMSFMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an `msf` object initialized to the value represented by `string`.

Notes: Returns `nil` on any error.

10.12.16 `seconds as Integer`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of seconds represented by the receiver.

Notes: If the receiver represents a non integral number of seconds, only the whole second value is returned. For example an `DRMSF` value of `5:30:72` will return `30` from seconds.

10.12.17 `sectors as Integer`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the total number of frames/sectors represented by the receiver.

Notes:

This method differs from `frames` in that it returns to the caller the total number of frames/sectors represented by the object.

For example an `DRMSF` value of `5:30:72` will return `24822` from sectors.

10.13 class DRSetupPanelMBS

10.13.1 class DRSetupPanelMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Base class for the DiscRecordingUI setup panels.

Notes:

Provides a base framework for handling device selection, media ejection and confirming or cancelling the panel.

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `NSPanelMBS` class.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

10.13.2 Methods

10.13.3 cancel

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's cancel button.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.13.4 close

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's close button.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.13.5 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

10.13.6 eject

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's eject button.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.13.7 ok

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's default button.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.13.8 open

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the user clicks the panel's open button.

Notes: If you overwrite this method in Real Studio, your method will not be called. You can only call this method to trigger the same behavior as if the user clicked the control.

10.13.9 runSetupPanel as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Displays the panel and begins its event loop.

Notes: Returns NSOKButton (if the user clicks the default button) or NSCancelButton (if the user clicks the Cancel button).

10.13.10 Events

10.13.11 determineBestDevice(deviceA as DRDeviceMBS, deviceB as DRDeviceMBS) as DRDeviceMBS

Plugin Version: 10.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called to let you decide which device is better to use.

Notes: Default returns device A.

10.13.12 DeviceContainsSuitableMedia(device as DRDeviceMBS, byref prompt as string) as boolean

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This delegate method allows the delegate to determine if the media inserted in the device is suitable for whatever operation is to be performed.

Notes:

device: The device that contains the media being asked about.
prompt: Pass back a string object describing the media state.

Return false to disable the default button.

10.13.13 DeviceCouldBeTarget(device as DRDeviceMBS) as boolean

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Allows the delegate to determine if device can be used as a target.

Notes:

This method is used to limit the menu to only those devices that you want to appear. For example, a DVD burning application might use this to limit the menu to only devices that are capable of writing DVD-Rs.

device: The candidate device.
Returns true if the device is acceptable, false if not.

10.13.14 DeviceSelectionChanged(device as DRDeviceMBS)

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent by the default notification center when the device selection in the panel has changed.

10.13.15 SetupPanelShouldHandleMediaReservations as boolean

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event allows the delegate to control how media reservations are handled.

Notes: Return false to indicate the delegate will handle media reservations. Return true to indicate the setupPanel should handle media reservations itself.

10.13.16 Constants**10.13.17 NSCancelButton = 0**

Plugin Version: 7.4. **Function:** The value runSetupPanel returns if the Cancel button is clicked.

10.13.18 NSOKButton = 1

Plugin Version: 7.4. **Function:** The value runSetupPanel returns if the OK button is clicked.

10.14 class DRTrackMBS

10.14.1 class DRTrackMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The DRTrack class represents a track on the burned disc.

Example:

```
dim track as DRTrackMBS
dim bsp as DRBurnSetupPanelMBS
dim bpp as DRBurnProgressPanelMBS

// we need a track
track=CreateTrack

if track<>nil then
    bsp=new DRBurnSetupPanelMBS

    // set a few options
    bsp.setCanSelectAppendableMedia true
    bsp.setCanSelectTestBurn true

    if bsp.runSetupPanel=bsp.NSOKButton then
        bpp=new DRBurnProgressPanelMBS

        // And start off the burn itself. This will put up the progress dialog
        // and do all the nice pretty things that a happy app does.
        bpp.beginProgressPanelForBurn bsp.burnObject, track

    else
        MsgBox "You pressed cancel."
    end if
end if
```

Notes:

A DRTrack provides data to the for the burn and contains a description of the track on disc (length, block type, data format, etc). Data is provided for the burn in a real-time thread. It is up to the track to provide this data in a timely manner, otherwise a burn underrun can occur and ruin a disc.

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

10.14.2 Methods

10.14.3 Constructor

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Dummy constructor.

10.14.4 DRAbstractFile as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: DRFileMBS object pointing to the abstract file for ISO and Joliet volumes. The file must be in the root directory.

10.14.5 DRApplicationIdentifier as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: String indicating the application identifier for ISO, Joliet and UDF volumes.

10.14.6 DRAudioFourChannelKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes:

For CD-DA audio tracks only. This key points to a boolean value indicating whether the track data has four channels, as opposed to the two channels of normal stereo. If this key is not present, the engine will use a default value of false and standard two-channel stereo is assumed.

Note that while four-channel is technically allowed in the Red Book, it never caught on and is probably being replaced by SACD, so you probably shouldn't attempt to use it.

On the media, this key corresponds to bit 3 of the control field in sub-channel Q.

10.14.7 DRAudioPreEmphasisKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: For CD-DA audio tracks only. This key points to a boolean value indicating whether the track includes pre-emphasis of 50/15us. If this key is not present, the engine will use a default value of false. On the media, this key corresponds to bit 0 of the control field in sub-channel Q.

10.14.8 DRBibliographicFile as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: DRFile pointing to the bibliographic file for ISO and Joliet volumes. The file must be in the root directory.

10.14.9 DRBlockSize as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number indicating the block size of the track. Currently always 2048. Do not change.

10.14.10 DRBlockSizeKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the size in bytes of each track block. See the Mt. Fuji (INF-8090i) specification for CD/DVD devices for possible values for this property.

10.14.11 DRBlockTypeKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the type of each track block. See the Mt. Fuji (INF-8090i) specification for CD/DVD devices for possible values for this property.

10.14.12 DRCopyrightFile as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: DRFileMBS pointing to the copyright file for ISO and Joliet volumes. The file must be in the root directory.

10.14.13 DRDataFormKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the data form of each block in the track. See the Mt. Fuji (INF-8090i) specification for CD/DVD devices for possible values for this property.

10.14.14 DRDataPreparer as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: String indicating the data preparer for ISO and Joliet volumes.

10.14.15 DRDefaultDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Date containing the default date to use for any unspecified dates in the filesystem. The current date and time is used if unspecified.

10.14.16 DRDVDCopyrightInfoKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: For DVD tracks only. A binary string containing the DVD copyright info structure sent through the SEND DVD STRUCTURE command. The contents of this will be sent directly to the drive.

10.14.17 DRDVDTimestampKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: For DVD tracks only. Binary string containing the DVD timestamp structure sent through the SEND DVD STRUCTURE command. The contents of this will be sent directly to the drive.

10.14.18 DRFreeBlocksKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the length, in blocks, which is still available in a writable track.

10.14.19 DRIndexPointsKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes:

For CD tracks only. This key points to an NSArray of NSNumbers, indicating the index points inside the track. Each index point is specified as a number of blocks (frames) relative to the start of the track. There are 75 blocks in one second of CD audio. No more than 98 index points may be specified for a track.

Not all drives are capable of writing index points, and not all consumer CD players report or use them. If this key is present in any track and the drive cannot write index points, the burn will fail with `kDRDeviceCantWriteIndexPointsErr`.

10.14.20 DRISOLevel as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the ISO level of the ISO-9660 filesystem on the track. Currently should be 1 or 2.

10.14.21 DRISOMacExtensions as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Boolean indicating whether the track should have Mac extensions.

10.14.22 DRISORockRidgeExtensions as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Boolean indicating whether the track should have RockRidge (POSIX) extensions.

10.14.23 DRMaxBurnSpeedKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the maximum burn speed at which data can be produced. The speed is represented in KB/s (1 KB = 1000 bytes). This key can only be used to limit the speed at which the burn runs.

10.14.24 DRNextWritableAddressKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the LBA of the next writable address in the track. This key is not present in closed tracks.

10.14.25 DRPreGapIsRequiredKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes:

For CD tracks only. Number indicating whether the pregap listed for the track is required. If this key is not present, the track will behave as though the key were false.

If this key's value is set to true and the device does not support the exact pregap length, the burn will fail with a return value of `kDRDevicePregapLengthNotAvailableErr` .

If this key's value is set to true and the device does not support any of the suggested pregap length, the engine will choose an alternate pregap length.

10.14.26 DRPreGapLengthKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: For CD tracks only. Number containing the length of silence or data at the beginning of the track. This defaults to 2 seconds of silence. If this key is present, the track producer will be asked for the pregap data first. If the producer implements the proper selector, then it's the responsibility of the producer to provide data for the pregap, otherwise that length of silence will be produced by Disc Recording.

10.14.27 DRPublisher as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: String indicating the publisher for ISO and Joliet volumes.

10.14.28 DRSCMSCopyrightFree as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: One possible value for the DRSerialCopyManagementStateKey. Indicates that the track has no copying restrictions. Copies of this track should also be copyright free.

10.14.29 DRSCMSCopyrightProtectedCopy as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: One possible value for the DRSerialCopyManagementStateKey. Indicates that the track is a first-generation copy of an original that was subject to copy protection. No further digital copying should be allowed.

10.14.30 DRSCMSCopyrightProtectedOriginal as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: One possible value for the DRSerialCopyManagementStateKey. Indicates that the track is an original subject to copyright protection. Digital copying of this track should be allowed, but copies should be marked with SCMS.

10.14.31 DRSerialCopyManagementStateKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes:

For CD tracks only. This key points to a string value indicating the SCMS state of the track. If this key is not present, no SCMS data is written.

Not all drives are capable of writing SCMS. If this key is present in any track and the drive cannot write SCMS, the burn will fail with `kDRDeviceCantWriteSCMS`Err.

10.14.32 DRSessionFormatKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the session format of the track. See the Mt. Fuji (INF-8090i) specification for CD/DVD devices for possible values for this property.

10.14.33 DRSessionNumberKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the physical session number of a track.

10.14.34 DRSubchannelDataFormKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes:

The property whose value is the data mode of the subchannel data sent to the drive. If this key is not present, the track will default to a value of DRSubchannelDataFormNone and no subchannel information will be requested from the producer.

Subchannel data is returned from the producer in the same production method that produces normal user data. Normally a producer returns user data in chunks of DRBlockSizeKey size. When subchannel data is also produced, the producer is expected to return user data of DRBlockSizeKey in length with an additional 96 bytes of subchannel data. Depending on the data form specified in this key, the format of this 96 bytes is either in raw or pack format. When subchannel data is requested from the producer, the DRFlagSubchannelDataRequested flag is set in the flags parameter of producePreGapForTrack or produceDataForTrack and blockSize is increased by 96 bytes.

10.14.35 DRSubchannelDataFormNone as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A value for DRSubchannelDataFormKey indicating that the subchannel data will not be provided by the producer.

10.14.36 DRSubchannelDataFormPack as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: A value for DRSubchannelDataFormKey indicating that the producer will be asked to provide pack format subchannel data for the track. If this form is selected, the drive will perform P and Q parity calculations on each pack and interleave the packs before writing them to disc. This corresponds to a subchannel data form of 0xC0.

10.14.37 DRSubchannelDataFormRaw as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: A value for DRSubchannelDataFormKey indicating that the producer will be asked to provide raw format subchannel data for the track. If this form is selected, the producer must have performed P and Q parity calculations for each pack and done proper interleaving of the subchannel data. The drive will fill in the P-Q subchannel information and write the R-W subchannel data as is to the disc. This corresponds to a subchannel data form of & h40.

10.14.38 DRSuppressMacSpecificFiles as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Boolean indicating whether the track should suppress Mac-specific files from non-HFS filesystems.

10.14.39 DRSystemIdentifier as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: String indicating the system identifier for ISO and Joliet volumes.

10.14.40 DRTrackIsEmptyKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing a boolean value and indicates whether the track is empty.

10.14.41 DRTrackISRCKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes:

For CD-DA audio tracks only. This key points to a memoryblock containing exactly 12 bytes, which will be written to the disc as the International Standard Recording Code (ISRC). If this key is not present, no ISRC is written.

The use of this value should conform to the specifications of the IFPI. More details:

<http://www.ifpi.org/isrc/>

Not all drives are capable of the write modes necessary to write the ISRC. If this key is present in any track and the drive cannot write the ISRC, the burn will fail with `kDRDeviceCantWriteISRC`Err.

10.14.42 DRTrackLengthKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number representing the length of the track.

10.14.43 DRTrackModeKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the track mode of the track. See the Mt. Fuji (INF-8090i) specification for CD/DVD devices for possible values for this property.

10.14.44 DRTrackNumberKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the physical track number of a track.

10.14.45 DRTrackPacketSizeKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the number of blocks per packet for the disc. It will only be present if the disc contains fixed packets. This key will contain 16 for DVD media, and typically contains either 16 or 32 for CD media.

10.14.46 DRTrackPacketTypeFixed as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** If this is the value of the DRTrackPacketTypeKey then the disc is written with fixed sized packets. When this value is present the DRPacketSizeKey will also be present.

10.14.47 DRTrackPacketTypeKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: String indicating the kind of packets being written.

10.14.48 DRTrackPacketTypeVariable as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** If this is the value of the DRTrackPacketTypeKey then the disc is written with sequential variable sized packets. The presence of this value indicates the lack of the DRPacketSizeKey.

10.14.49 DRTrackStartAddressKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Number containing the LBA of the start address for the track.

10.14.50 DRTrackTypeClosed as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** If this is the value of the DRTrackTypeKey then the track has been written and is closed.

10.14.51 DRTrackTypeIncomplete as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** If this is the value of the DRTrackTypeKey then the track is not invisible or reserved and is available for writing.

10.14.52 DRTrackTypeInvisible as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: If this is the value of the DRTrackTypeKey then the track is invisible and available to writing. If it is packet written and not closed, DRPacketTypeKey will be present, along with DRTrackPacketType and DRTrackPacketSize keys.

10.14.53 DRTrackTypeKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: String indicating the type of track. Possible values are: DRTrackTypeInvisible , DRTrackTypeIncomplete , DRTrackTypeReserved or DRTrackTypeClosed.

10.14.54 DRTrackTypeReserved as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: If this is the value of the DRTrackTypeKey then the track is reserved for writing.

10.14.55 DRVerificationTypeChecksum as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the VerificationType.

Notes: The engine will verify the track data with an internally calculated checksum.

10.14.56 DRVerificationTypeKey as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: String indicating the type of verification to be performed. If this is not present, the track will not

be verified.

10.14.57 DRVerificationTypeNone as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the VerificationType property.

Notes: No verification is desired, so verification will be skipped.

10.14.58 DRVerificationTypeProduceAgain as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the VerificationType property.

Notes: The engine will simply begin another production cycle and start calling produceDataForTrack again.

10.14.59 DRVerificationTypeReceiveData as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the possible values of the VerificationType property.

Notes: The engine will begin reading data from the disc and calling verifyDataForTrack.

10.14.60 DRVolumeCheckedDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Date containing the volume-checked date for HFS+ volumes. DRDefaultDate is used if unspecified.

10.14.61 DRVolumeCreationDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Date containing the volume creation date. DRDefaultDate is used if unspecified.

10.14.62 DRVolumeEffectiveDate as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Date containing the date and time at which the volume is effective for ISO and Joliet volumes.

10.14.63 `DRVVolumeExpirationDate` as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Date containing the volume expiration date for ISO and Joliet volumes.

10.14.64 `DRVVolumeModificationDate` as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: Date containing the volume modification date. `DRDefaultDate` is used if unspecified.

10.14.65 `DRVVolumeSet` as string

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the key constants for the properties dictionary.

Notes: String indicating the volume set name for ISO and Joliet volumes.

10.14.66 `estimateLength` as `UInt64`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Asks the track producer for a size estimate.

Notes:

This method calls the track producer to ask it to estimate the size needed for its data.

For some types of track, this call may be very expensive. For example, a `DRFilesystemTrack` may need to iterate folders on disk to provide an accurate estimate, which (if a large number of files and folders are involved) can cause this call to take 30 seconds or more. Since your main thread should not be allowed to block for this long, you may wish to call this function on a separate thread.

Requires Mac OS X 10.3.

10.14.67 testProductionSpeedForInterval(seconds as Double) as Double

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Tests the production speed for a specified interval.

Notes:

Runs a fake "production" cycle, repeatedly asking the receiver for data by calling its producer's produceDataIntoBuffer for the specified time interval.

Use this function to verify that the the production code can produce data fast enough to satisfy the data throughput requirements of the burn.

Returns the calculated maximum speed the at which the receiver can produce data. This value should be used when setting up a burn to limit the burn speed

10.14.68 testProductionSpeedForLength(length as Integer) as Double

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Tests the production speed for a specified byte count.

Notes:

Runs a fake "production" cycle, repeatedly asking the receiver for data by calling its producer's produceDataIntoBuffer:length:atAddress:blockSize:ioFlags: until the specified length number of bytes have been produced.

Use this function to verify that the the production code can produce data fast enough to satisfy the data throughput requirements of the burn.

Returns the calculated maximum speed the at which the receiver can produce data. This value should be used when setting up a burn to limit the burn speed

Length: length of test in seconds.

10.14.69 trackForAudioFile(path as folderitem) as DRTrackMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an audio track capable of burning RedBook CD audio from a file.

Example:

```
dim f as FolderItem
f=SelectFolder
if f<>nil then
// Create tracks for the audio files
```

```

dim tracks(-1) as DRTrackMBS
dim c as Integer=f.Count
for i as Integer=1 to c
dim g as FolderItem=f.Item(i)
if g<>nil and g.visible then
dim track as DRTrackMBS=DRTrackMBS.trackForAudioFile(g)
if track<>nil then
tracks.Append track
end if
end if
next

// display gui
if UBound(tracks)>=0 then
dim bsp as DRBurnSetupPanelMBS=new DRBurnSetupPanelMBS // you may want to use your own sub-
class to catch events
if bsp.runSetupPanel=bsp.NSOKButton then
dim bpp as new DRBurnProgressPanelMBS // you may want to use your own subclass to catch events
bpp.beginProgressPanelForBurn(bsp.burnObject, tracks)
end if
end if
end if

```

Notes:

This function creates a track object configured and primed to output RedBook audio CD data. It accepts any file readable by QuickTime and extracts the audio data (if any) from the file, translating that into the correct format for output to the disc.

Returns nil on any error. Requires Mac OS X 10.3.
See also:

- 10.14.70 trackForAudioFile(path as string) as DRTrackMBS

716

10.14.70 trackForAudioFile(path as string) as DRTrackMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an audio track capable of burning RedBook CD audio from a file.

Notes:

This function creates a track object configured and primed to output RedBook audio CD data. It accepts any file readable by QuickTime and extracts the audio data (if any) from the file, translating that into the correct format for output to the disc.

Returns nil on any error. Requires Mac OS X 10.3.

See also:

- 10.14.69 trackForAudioFile(path as folderitem) as DRTrackMBS 715

10.14.71 trackForRootFolder(folder as DRFolderMBS) as DRTrackMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a filesystem track capable of burning a folder.

Notes: Returns a track which contains the given folder as root.

See also:

- 10.14.72 trackForRootFolder(folder as folderitem) as DRTrackMBS 717

10.14.72 trackForRootFolder(folder as folderitem) as DRTrackMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a filesystem track capable of burning a folder.

Notes: Returns a track which contains the given folder as root.

See also:

- 10.14.71 trackForRootFolder(folder as DRFolderMBS) as DRTrackMBS 717

10.14.73 Properties

10.14.74 BlockSize as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The size in bytes of each track block.

Notes: (Read and Write computed property)

10.14.75 BlockType as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The type of each track block.

Notes: (Read and Write computed property)

10.14.76 DataForm as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The data form of each block in the track.

Notes: (Read and Write computed property)

10.14.77 length as DRMSFMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the length of the track data.

Notes:

The length returned does not include the length of the pregap. Only the length of the track data itself is returned.

(Read and Write computed property)

10.14.78 MaxBurnSpeed as Double

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A number containing the maximum burn speed at which data can be produced.

Notes:

The speed is represented in KB/s (1 KB = 1000 bytes). This value can only be used to limit the speed at which the burn runs.

(Read and Write computed property)

10.14.79 preGap as DRMSFMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The length of the pre gap.

Notes: (Read and Write computed property)

10.14.80 PreGapIsRequired as boolean

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A boolean indicating whether the pregap listed for the track is required.

Notes:

For CD tracks only.

If this value is not set, the track will behave as though the value were false.

If this value is set to true and the device does not support the exact pregap length, the burn will fail with a return value of `kDRDevicePregapLengthNotAvailableErr`.

If this value is set to true and the device does not support any of the suggested pregap length, the engine will choose an alternate pregap length.

(Read and Write computed property)

10.14.81 PreGapLength as Double

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A number containing the length of silence or data at the beginning of the track.

Notes:

For CD tracks only.

This defaults to 2 seconds of silence. If this value is set, the track producer will be asked for the pregap data first.

If the producer implements the proper event, then it's the responsibility of the producer to provide data for the pregap, otherwise that length of silence will be produced by Disc Recording.

(Read and Write computed property)

10.14.82 properties as dictionary

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The properties dictionary of the track

Notes: (Read and Write computed property)

10.14.83 SessionFormat as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The session format of the track.

Notes: (Read and Write computed property)

10.14.84 TrackISRC as memoryblock

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The property for the tracks ISRC data.

Notes:

For CD-DA audio tracks only. This key points to a memoryblock containing exactly 12 bytes, which will be written to the disc as the International Standard Recording Code (ISRC). If this key is not present, no ISRC is written.

The use of this value should conform to the specifications of the IFPI. See <http://www.ifpi.org/isrc/> for more details on the ISRC standard.

Not all drives are capable of the write modes necessary to write the ISRC. If this key is present in any track and the drive cannot write the ISRC, the burn will fail with `kDRDeviceCantWriteISRC`Err. (Read and Write computed property)

10.14.85 TrackMode as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The track mode of the track.

Notes: (Read and Write computed property)

10.14.86 VerificationType as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The type of verification requested.

Notes:

Value should be `DRVerificationTypeReceiveData`, `DRVerificationTypeProduceAgain`, `DRVerificationTypeNone` or `DRVerificationTypeChecksum`. (Read and Write computed property)

10.14.87 Events

10.14.88 cleanupTrackAfterBurn

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Cleans up the track after the burn completes.

Notes:

Called after burning is complete. Typically you'll clean up what was setup in `prepareTrackForBurn`. Since this method is called after the laser is turned off and the burn is finished, this method can perform time consuming tasks.

True to indicate that the burn should proceed and false to indicate a failure occurred.

10.14.89 cleanupTrackAfterVerification as boolean

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Cleans up the track after the verification completes.

Notes:

Once the verification phase is complete, this method is called. The class implementing the method has a chance to do anything up to and including failing the verification.

Return true to indicate success, false to indicate failure.

10.14.90 estimateLengthOfTrack as uint64

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Estimates the size of the track to be burned.

Notes:

This message is sent outside of a burn cycle in response to a -estimateLength message sent to the track.

Returns the number of blocks of data that the track will occupy. The estimate should be reasonably accurate, and no smaller than the actual size that will be needed.

Only on Mac OS X 10.3 and newer.

10.14.91 prepareTrack(burn as DRBurnMBS) as boolean

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Prepares the track for burning.

Notes:

Called before any burning starts. Do any sort of setup that needs to be performed (such as opening files). This method can calculate and update the exact track length that will be burned.

Since this method is called before the laser is turned on, this method can perform time consuming tasks.

burn: The burn object controlling the burn

Return true to indicate that the burn should proceed and false to indicate a failure occurred.

10.14.92 `prepareTrackForVerification` as boolean

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Prepare the track to be verified.

Notes:

This method is called after the burn completes writing data to disc and before verification phase starts. Now would be a good time to prepare to produce data again by rewinding to the start of files, etc.

Return true to indicate that the verification should proceed and false to indicate a failure occurred.

10.14.93 `produceDataForTrack`(buffer as memoryblock, Bufferlen as uint32, address as uint64, blockSize as uint32, byref flags as uint32) as uint32

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Produces the track data.

Notes:

This method is called many times over the course of a burn to obtain data for the track. The buffer passed in will be a multiple of blockSize (bufferLength == blockSize * N, where N >1) and should be filled as full as possible with data. address is the sector address on the disc from the start of the track that is the buffer will be written to.

Since while burning, keeping the drive's buffer full is of utmost importance, you should not perform lengthy operations or block for data in this method. This method should return the number of bytes actually in the buffer or 0 to indicate that there was an error producing the data..

buffer: The buffer to place data into

bufferLength: The length of buffer

address: The on-disc address of where data will be written

blockSize: the size of each block on the disc. It's best to return a multiple of this size.

flags: Some flags. Not yet used.

Return the number of bytes produced.

10.14.94 `producePreGapForTrack`(buffer as memoryblock, Bufferlen as uint32, address as uint64, blockSize as uint32, byref flags as uint32) as uint32

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Produces the pregap data.

Notes:

This method is called to obtain data for the track's pregap. If the DRPreGapLengthKey key is present in the track properties, the track producer will be asked for the pregap data first. If the producer implements this selector, then it's the responsibility of the producer to provide data for the pregap, otherwise that length of silence will be produced by DiscRecording.

The buffer passed in will be a multiple of blockSize (bufferLength = blockSize * N, where N >1) and should be filled as full as possible with data. address is the sector address on the disc from the start of the track that is the buffer will be written to.

Since while burning, keeping the drive's buffer full is of utmost importance, you should not perform lengthy operations or block for data in this method. This method should return the number of bytes actually in the buffer or 0 to indicate that there was an error producing the data..

buffer: The buffer to place data into

bufferLength: The length of buffer

address: The on-disc address of where data will be written

blockSize the size of each block on the disc. It's best to return a multiple of this size.

flags: Some flags (not used).

Return the number of bytes produced.

10.14.95 verifyDataForTrack(buffer as memoryblock, Bufferlen as uint32, address as uint64, blocksize as uint32, byref flags as uint32) as boolean

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Cleans up the track after the burn completes.

Notes:

If the class implementing this method asks for a verification type of DRVerificationTypeReceiveData, then a series of calls to this method will start. It's up to the class to reproduce the data again and compare it to the data passed in buffer. The buffer passed in will be a multiple of blockSize (bufferLength == blockSize * N, where N >1). address is the sector address on the disc from the start of the track that is the buffer was written to.

buffer: The data read in from the track to compare with

bufferLength: The length of buffer

address: The on-disc address of where data will was read from.

blockSize: the size of each block on the disc. It's best to return a multiple of this size.

flags: Some flags. Not used.

Return true to indicate that the data compared successfully and false to indicate a failure occurred.

10.14.96 `verifyPreGapForTrack(buffer as memoryblock, Bufferlen as uint32, address as uint64, blockSize as uint32, byref flags as uint32)` as boolean

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Checks the integrity track pregap after a burn.

Notes:

If the class implementing this method asks for a verification type of `DRVerificationTypeReceiveData`, then a series of calls to this method will start. It's up to the class to reproduce the pregap again and compare it to the data passed in `buffer`. The `buffer` passed in will be a multiple of `blockSize` (`bufferLength == blockSize * N`, where $N > 1$). `address` is the sector address on the disc from the start of the track that is the `buffer` was written to.

`buffer`: The data read in from the track to compare with

`bufferLength`: The length of `buffer`

`address`: The on-disc address of where data will be read from.

`blockSize`: the size of each block on the disc. It's best to return a multiple of this size.

`flags`: Some flags. (not used)

Return true to indicate that the data compared successfully and false to indicate a failure occurred.

10.14.97 Constants

10.14.98 `DRFlagSubchannelDataRequested = 2`

Plugin Version: 10.4. **Function:** A flag passed to `producePreGapForTrack` or `produceDataForTrack`.

Notes:

Indicates that the `blockSize` passed in includes room for subchannel data.

Data producers should check this flag and perform subchannel data production in addition to user data production. Each block requested from the producer in this case will be formatted as [user data (as specified in track properties)] [subchannel data(96 bytes)] .

For example an audio producer callback should repeatedly produce 2352 bytes of audio data into bytes 0-2351 of the block and an additional 96 bytes of subchannel data into bytes 2352-2447.

10.14.99 `kDRBlockSizeAudio = 2352`

Plugin Version: 10.3. **Function:** One of the block size constants.

Notes: Audio data.

10.14.100 kDRBlockSizeDVDDData = 2048

Plugin Version: 10.3. **Function:** One of the block size constants.
Notes: DVD data.

10.14.101 kDRBlockSizeMode1Data = 2048

Plugin Version: 10.3. **Function:** One of the block size constants.
Notes: Mode 1 data.

10.14.102 kDRBlockSizeMode2Data = 2332

Plugin Version: 10.3. **Function:** One of the block size constants.
Notes: Mode 2 data. Photo CD and CD-i use this.

10.14.103 kDRBlockSizeMode2Form1Data = 2048

Plugin Version: 10.3. **Function:** One of the block size constants.
Notes: Mode 2 Form 1 data.

10.14.104 kDRBlockSizeMode2Form2Data = 2324

Plugin Version: 10.3. **Function:** One of the block size constants.
Notes: Mode 2 Form 2 data.

10.14.105 kDRBlockTypeAudio = 0

Plugin Version: 10.3. **Function:** One of the block type constants.
Notes: Audio data.

10.14.106 kDRBlockTypeDVDDData = 8

Plugin Version: 10.3. **Function:** One of the block type constants.
Notes: DVD data.

10.14.107 kDRBlockTypeMode1Data = 8

Plugin Version: 10.3. **Function:** One of the block type constants.
Notes: Mode 1 data.

10.14.108 kDRBlockTypeMode2Data = 13

Plugin Version: 10.3. **Function:** One of the block type constants.
Notes: Mode 2 data. Photo CD and CD-i use this.

10.14.109 kDRBlockTypeMode2Form1Data = 10

Plugin Version: 10.3. **Function:** One of the block type constants.
Notes: Mode 2 Form 1 data.

10.14.110 kDRBlockTypeMode2Form2Data = 12

Plugin Version: 10.3. **Function:** One of the block type constants.
Notes: Mode 2 Form 2 data.

10.14.111 kDRDataFormAudio = 0

Plugin Version: 10.3. **Function:** One of the data form constants.
Notes: Audio data.

10.14.112 kDRDataFormDVDDData = 16

Plugin Version: 10.3. **Function:** One of the data form constants.
Notes: DVD data.

10.14.113 kDRDataFormMode1Data = 16

Plugin Version: 10.3. **Function:** One of the data form constants.
Notes: Mode 1 data.

10.14.114 kDRDataFormMode2Data = 32

Plugin Version: 10.3. **Function:** One of the data form constants.
Notes: Mode 2 data. Photo CD and CD-i use this.

10.14.115 kDRDataFormMode2Form1Data = 32

Plugin Version: 10.3. **Function:** One of the data form constants.
Notes: Mode 2 Form 1 data.

10.14.116 kDRDataFormMode2Form2Data = 32

Plugin Version: 10.3. **Function:** One of the data form constants.
Notes: Mode 2 Form 2 data.

10.14.117 kDRSessionFormatAudio = 0

Plugin Version: 10.3. **Function:** One of the constants for the session format.
Notes: Audio data.

10.14.118 kDRSessionFormatCDI = 16

Plugin Version: 10.3. **Function:** One of the constants for the session format.
Notes: CD-I disc.

10.14.119 kDRSessionFormatCDXA = 32

Plugin Version: 10.3. **Function:** One of the constants for the session format.
Notes: CD-ROM XA disc.

10.14.120 kDRSessionFormatDVDData = 0

Plugin Version: 10.3. **Function:** One of the constants for the session format.
Notes: DVD data.

10.14.121 kDRSessionFormatMode1Data = 0

Plugin Version: 10.3. **Function:** One of the constants for the session format.
Notes: Mode 1 data.

10.14.122 kDRTrackMode1Data = 4

Plugin Version: 10.3. **Function:** One of the track mode constants.
Notes: Mode 1 data.

10.14.123 kDRTrackMode2Data = 4

Plugin Version: 10.3. **Function:** One of the track mode constants.
Notes: Mode 2 data. Photo CD and CD-i use this.

10.14.124 kDRTrackMode2Form1Data = 4

Plugin Version: 10.3. **Function:** One of the track mode constants.
Notes: Mode 2 Form 1 data.

10.14.125 kDRTrackMode2Form2Data = 4

Plugin Version: 10.3. **Function:** One of the track mode constants.
Notes: Mode 2 Form 2 data.

10.14.126 kDRTrackModeAudio = 0

Plugin Version: 10.3. **Function:** One of the track mode constants.
Notes: Audio data.

10.14.127 kDRTrackModeDVDData = 5

Plugin Version: 10.3. **Function:** One of the track mode constants.

Notes: DVD data.

Chapter 11

HTMLViewer Mac

11.1 class DOMAbstractViewMBS

11.1.1 class DOMAbstractViewMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.1.2 Methods

11.1.3 document as DOMDocumentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.2 class DOMAttrMBS

11.2.1 class DOMAttrMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMNodeMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.2.2 Methods

11.2.3 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.2.4 ownerElement as DOMElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.2.5 specified as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.2.6 Properties

11.2.7 value as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.3 class DOMCDATASectionMBS

11.3.1 class DOMCDATASectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMTextMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.4 class DOMCharacterDataMBS

11.4.1 class DOMCharacterDataMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMNodeMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.4.2 Methods

11.4.3 appendData(arg as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.4.4 deleteData(offset as Integer, count as Integer)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.4.5 insertData(offset as Integer, arg as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.4.6 length as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.4.7 `replaceData(offset as Integer, count as Integer, arg as string)`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.4.8 `substringData(offset as Integer, count as Integer) as string`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.4.9 Properties

11.4.10 `data as string`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.5 class DOMCommentMBS

11.5.1 class DOMCommentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMCharacterDataMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.6 class DOMCounterMBS

11.6.1 class DOMCounterMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.6.2 Methods

11.6.3 identifier as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.6.4 listStyle as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.6.5 separator as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.7 class DOMCSSCharsetRuleMBS

11.7.1 class DOMCSSCharsetRuleMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMCSSRuleMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.7.2 Methods

11.7.3 encoding as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.8 class DOMCSSFontFaceRuleMBS

11.8.1 class DOMCSSFontFaceRuleMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMCSSRuleMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.8.2 Methods

11.8.3 style as DOMCSSStyleDeclarationMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.9 class DOMCSSImportRuleMBS

11.9.1 class DOMCSSImportRuleMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMCSSRuleMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.9.2 Methods

11.9.3 href as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.9.4 media as DOMMediaListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.9.5 styleSheet as DOMCSSStyleSheetMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.10 class DOMCSSMediaRuleMBS

11.10.1 class DOMCSSMediaRuleMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMCSSRuleMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.10.2 Methods

11.10.3 cssRules as DOMCSSRuleListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.10.4 deleteRule(index as Integer)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.10.5 insertRule(rule as string, index as Integer) as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.10.6 media as DOMMediaListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.11 class DOMCSSPageRuleMBS

11.11.1 class DOMCSSPageRuleMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMCSSRuleMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.11.2 Methods

11.11.3 style as DOMCSSStyleDeclarationMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.11.4 Properties

11.11.5 selectorText as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.12 class DOMCSSPrimitiveValueMBS

11.12.1 class DOMCSSPrimitiveValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMCSSValueMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.12.2 Methods

11.12.3 getCounterValue as DOMCounterMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.12.4 getRectValue as DOMRectMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.12.5 getRGBColorValue as DOMRGBColorMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.12.6 getStringValue as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.12.7 primitiveType as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The type of this value.

Notes: See the constants for possible values.

11.12.8 setStringValue(StringType as Integer, StringValue as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.12.9 Properties

11.12.10 getFloatValue(unitType as Integer) as single

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.12.11 Constants

11.12.12 DOM_CSS_ATTR = 22

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.13 DOM_CSS_CM = 6

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.14 DOM_CSS_COUNTER = 23

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.15 DOM_CSS_DEG = 11

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.16 DOM_CSS_DIMENSION = 18

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.17 DOM_CSS_EMS = 3

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.18 DOM_CSS_EXS = 4

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.19 DOM_CSS_GRAD = 13

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.20 DOM_CSS_HZ = 16

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.21 DOM_CSS_IDENT = 21

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.22 DOM_CSS_IN = 8

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.23 DOM_CSS_KHZ = 17

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.24 DOM_CSS_MM = 7

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.25 DOM_CSS_MS = 14

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.26 DOM_CSS_NUMBER = 1

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.27 DOM_CSS_PC = 10

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.28 DOM_CSS_PERCENTAGE = 2

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.29 DOM_CSS_PT = 9

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.30 DOM_CSS_PX = 5

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.31 DOM_CSS_RAD = 12

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.32 DOM_CSS_RECT = 24

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.33 DOM_CSS_RGBCOLOR = 25

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.34 DOM_CSS_S = 15

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.35 DOM_CSS_STRING = 19

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.36 DOM_CSS_UNKNOWN = 0

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.12.37 DOM_CSS_URI = 20

Plugin Version: 7.4. **Function:** A constant for the primitiveType property.

11.13 class DOMCSSRuleListMBS

11.13.1 class DOMCSSRuleListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class for a list of css rules.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMObjectMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.13.2 Methods

11.13.3 `item(index as UInt32) as DOMCSSRuleMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the item with the given index or nil.

Notes: Index is zero based.

11.13.4 `length as Integer`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of items in this list.

11.14 class DOMCSSRuleMBS

11.14.1 class DOMCSSRuleMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEnvironmentMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.14.2 Methods

11.14.3 parentRule as DOMCSSRuleMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.14.4 parentStyleSheet as DOMCSSStyleSheetMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.14.5 type as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The type of this rule.
Notes: See the constants for possible values.

11.14.6 Properties

11.14.7 cssText as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.14.8 Constants

11.14.9 DOM_CHARSET_RULE = 2

Plugin Version: 7.4. **Function:** A constant for the type property.

11.14.10 DOM_IMPORT_RULE = 3

Plugin Version: 7.4. **Function:** A constant for the type property.

11.14.11 DOM_MEDIA_RULE = 4

Plugin Version: 7.4. **Function:** A constant for the type property.

11.14.12 DOM_STYLE_RULE = 1

Plugin Version: 7.4. **Function:** A constant for the type property.

11.14.13 DOM_UNKNOWN_RULE = 0

Plugin Version: 7.4. **Function:** A constant for the type property.

11.15 class DOMCSSStyleDeclarationMBS

11.15.1 class DOMCSSStyleDeclarationMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEnvironmentMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.15.2 Methods

11.15.3 Constructor

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

11.15.4 getPropertyCSSValue(propertyName as string) as DOMCSSValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.15.5 getPropertyPriority(propertyName as string) as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.15.6 getPropertyValue(propertyName as string) as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.15.7 item(index as UInt32) as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.15.8 length as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.15.9 parentRule as DOMCSSRuleMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.15.10 removeProperty(propertyName as string) as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.15.11 setProperty(propertyName as string, value as string, priority as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.15.12 Properties

11.15.13 azimuth as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.14 background as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.15 backgroundAttachment as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.16 backgroundColor as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.17 backgroundImage as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.18 backgroundPosition as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.19 backgroundRepeat as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.20 border as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.21 borderBottom as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.22 borderBottomColor as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.23 borderBottomStyle as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.24 borderBottomWidth as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.25 borderCollapse as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.26 `borderColor` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.27 `borderLeft` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.28 `borderLeftColor` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.29 `borderLeftStyle` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.30 `borderLeftWidth` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.31 `borderRight` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.32 `borderRightColor` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.33 `borderRightStyle` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.34 `borderRightWidth` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.35 `borderSpacing` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.36 `borderStyle` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.37 `borderTop` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.38 borderTopColor as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.39 borderTopStyle as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.40 borderTopWidth as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.41 borderWidth as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.42 bottom as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.43 captionSide as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.44 clear as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.45 clip as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.46 colorValue as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.47 content as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.48 counterIncrement as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.49 counterReset as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.50 `cssFloat` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.51 `cssText` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.52 `cue` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.53 `cueAfter` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.54 `cueBefore` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.55 `cursor` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.56 direction as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.57 display as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.58 elevation as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.59 emptyCells as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.60 font as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.61 fontFamily as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.62 `fontSize` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.63 `fontSizeAdjust` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.64 `fontStretch` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.65 `fontStyle` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.66 `fontVariant` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.67 `fontWeight` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.68 height as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.69 left as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.70 letterSpacing as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.71 lineHeight as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.72 listStyle as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.73 listStyleImage as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.74 `listStylePosition` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.75 `listStyleType` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.76 `margin` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.77 `marginBottom` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.78 `marginLeft` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.79 `marginRight` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.80 marginTop as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.81 markerOffset as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.82 marks as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.83 maxHeight as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.84 maxWidth as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.85 minHeight as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.86 minWidth as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.87 orphans as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.88 outline as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.89 outlineColor as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.90 outlineStyle as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.91 outlineWidth as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.92 overflow as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.93 padding as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.94 paddingBottom as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.95 paddingLeft as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.96 paddingRight as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.97 paddingTop as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.98 page as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.99 pageBreakAfter as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.100 pageBreakBefore as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.101 pageBreakInside as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.102 pause as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.103 pauseAfter as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.104 pauseBefore as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.105 pitch as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.106 pitchRange as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.107 playDuring as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.108 position as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.109 quotes as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.110 richness as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.111 right as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.112 size as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.113 speak as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.114 speakHeader as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.115 speakNumeral as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.116 speakPunctuation as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.117 speechRate as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.118 stress as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.119 tableLayout as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.120 textAlign as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.121 textDecoration as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.122 textIndent as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.123 textShadow as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.124 textTransform as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.125 top as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.126 unicodeBidi as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.127 verticalAlign as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.128 visibility as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.129 voiceFamily as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.130 volume as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.131 whiteSpace as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.132 widows as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.133 width as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.134 wordSpacing as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.15.135 zIndex as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.16 class DOMCSSStyleRuleMBS

11.16.1 class DOMCSSStyleRuleMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMCSSRuleMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.16.2 Methods

11.16.3 style as DOMCSSStyleDeclarationMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.16.4 Properties

11.16.5 selectorText as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.17 class DOMCSSStyleSheetMBS

11.17.1 class DOMCSSStyleSheetMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMStyleSheetMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.17.2 Methods

11.17.3 `cssRules` as `DOMCSSRuleListMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.17.4 `deleteRule(index as Integer)`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.17.5 `insertRule(rule as string, index as Integer) as Integer`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.17.6 `ownerRule` as `DOMCSSRuleMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.18 class DOMCSSUnknownRuleMBS

11.18.1 class DOMCSSUnknownRuleMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMCSSRuleMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.19 class DOMCSSValueListMBS

11.19.1 class DOMCSSValueListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class for a list of css values.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMCSSValueMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.19.2 Methods

11.19.3 item(index as UInt32) as DOMCSSValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the item with the given index or nil.

Notes: Index is zero based.

11.19.4 length as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of items in this list.

11.20 class DOMCSSValueMBS

11.20.1 class DOMCSSValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEnvironmentMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.20.2 Methods

11.20.3 cssValueType as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The type of this value.

Notes: See the constants for possible values.

11.20.4 Properties

11.20.5 cssText as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.20.6 Constants

11.20.7 DOM_CSS_CUSTOM = 3

Plugin Version: 7.4. **Function:** A constant for the cssValueType property.

11.20.8 DOM_CSS_INHERIT = 0

Plugin Version: 7.4. **Function:** A constant for the cssValueType property.

11.20.9 DOM_CSS_PRIMITIVE_VALUE = 1

Plugin Version: 7.4. **Function:** A constant for the cssValueType property.

11.20.10 DOM_CSS_VALUE_LIST = 2

Plugin Version: 7.4. **Function:** A constant for the cssValueType property.

11.21 class DOMDocumentFragmentMBS

11.21.1 class DOMDocumentFragmentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMNodeMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.22 class DOMDocumentMBS

11.22.1 class DOMDocumentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMNodeMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.22.2 Methods

11.22.3 createAttribute(name as string) as DOMAttrMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.4 createAttributeNS(namespaceURI as string, qualifiedName as string) as DOMAttrMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.5 createCDATASection(data as string) as DOMCDATASectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.6 createComment(data as string) as DOMCommentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.7 createCSSStyleDeclaration as DOMCSSStyleDeclarationMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.8 createDocumentFragment as DOMDocumentFragmentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.9 createElement(tagName as string) as DOMELEMENTMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.10 createElementNS(namespaceURI as string, qualifiedName as string) as DOMELEMENTMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.11 createEntityReference(name as string) as DOMEntityReferenceMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.12 createProcessingInstruction(target as string, data as string) as DOM-ProcessingInstructionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.13 createRange as DOMRangeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.14 createTextNode(data as string) as DOMTextMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.15 defaultView as DOMAbstractViewMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.16 doctype as DOMDocumentTypeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.17 documentElement as DOMELEMENTMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.18 getComputedStyle(elt as DOMELEMENTMBS, pseudoElt as string) as DOMCSSStyleDeclarationMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.19 getElementById(elementId as string) as DOMELEMENTMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.20 `getElementsByTagName(name as string)` as `DOMNodeListMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.21 `getElementsByTagNameNS(namespaceURI as string, localName as string)` as `DOMNodeListMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.22 `getOverrideStyle(elt as DOMELEMENTMBS, pseudoElt as string)` as `DOMCSSStyleDeclarationMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.23 `implementation` as `DOMImplementationMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.24 `importNode(importedNode as DOMNodeMBS, deep as boolean)` as `DOMNodeMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.22.25 `styleSheets` as `DOMStyleSheetListMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.23 class DOMDocumentTypeMBS

11.23.1 class DOMDocumentTypeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMNodeMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.23.2 Methods

11.23.3 entities as DOMELEMENTMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.23.4 internalSubset as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.23.5 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.23.6 notations as DOMELEMENTMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.23.7 publicId as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.23.8 systemId as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24 class DOMELEMENTMBS

11.24.1 class DOMELEMENTMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSElementMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMNodeMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.24.2 Methods

11.24.3 `getAttribute(name as string) as string`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.4 `getAttributeNode(name as string) as DOMAttrMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.5 `getAttributeNodeNS(namespaceURI as string, localName as string) as DOMAttrMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.6 `getAttributeNS(namespaceURI as string, localName as string) as String`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.7 getElementsByTagName(name as string) as DOMNodeListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.8 getElementsByTagNameNS(namespaceURI as string, localName as string) as DOMNodeListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.9 hasAttribute(name as string) as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.10 hasAttributeNS(namespaceURI as string, localName as string) as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.11 removeAttribute(name as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.12 removeAttributeNode(oldAttr as DOMAttrMBS) as DOMAttrMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.13 removeAttributeNS(namespaceURI as string, qualifiedName as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.14 `setAttribute(name as string, value as string)`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.15 `setAttributeNode(newAttr as DOMAttrMBS) as DOMAttrMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.16 `setAttributeNodeNS(newAttr as DOMAttrMBS) as DOMAttrMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.17 `setAttributeNS(namespaceURI as string, qualifiedName as string, value as string)`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.18 `style as DOMCSSStyleDeclarationMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.24.19 `tagName as String`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.25 class DOMEntityMBS

11.25.1 class DOMEntityMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEntityMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMNodeMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.25.2 Methods

11.25.3 notationName as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.25.4 publicId as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.25.5 systemId as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.26 class DOMEntityReferenceMBS

11.26.1 class DOMEntityReferenceMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMNodeMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.27 class DOMHTMLAnchorElementMBS

11.27.1 class DOMHTMLAnchorElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.27.2 Methods

11.27.3 blur

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.27.4 focus

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.27.5 Properties

11.27.6 accessKey as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.7 charset as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.8 coords as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.9 href as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.10 hreflang as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.11 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.12 rel as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.13 rev as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.14 shape as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.15 tabIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.16 target as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.27.17 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28 class DOMHTMLAppletElementMBS

11.28.1 class DOMHTMLAppletElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.28.2 Properties

11.28.3 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28.4 alt as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28.5 archive as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28.6 code as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28.7 codeBase as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28.8 height as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28.9 hspace as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28.10 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28.11 objectValue as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28.12 vspace as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.28.13 width as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.29 class DOMHTMLAreaElementMBS

11.29.1 class DOMHTMLAreaElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEnvironmentMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.29.2 Properties

11.29.3 accessKey as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.29.4 alt as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.29.5 coords as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.29.6 href as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.29.7 noHref as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.29.8 shape as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.29.9 tabIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.29.10 target as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.30 class DOMHTMLBaseElementMBS

11.30.1 class DOMHTMLBaseElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.30.2 Properties

11.30.3 href as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.30.4 target as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.31 class DOMHTMLBaseFontElementMBS

11.31.1 class DOMHTMLBaseFontElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.31.2 Properties

11.31.3 colorValue as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.31.4 face as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.31.5 size as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.32 class DOMHTMLBodyElementMBS

11.32.1 class DOMHTMLBodyElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.32.2 Properties

11.32.3 aLink as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.32.4 background as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.32.5 bgColor as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.32.6 link as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.32.7 text as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.32.8 vLink as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.33 class DOMHTMLBRElementMBS

11.33.1 class DOMHTMLBRElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.33.2 Properties

11.33.3 clear as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.34 class DOMHTMLButtonElementMBS

11.34.1 class DOMHTMLButtonElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLFormElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.34.2 Methods

11.34.3 form as DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.34.4 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.34.5 Properties

11.34.6 accessKey as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.34.7 disabled as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.34.8 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.34.9 tabIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.34.10 value as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.35 class DOMHTMLCollectionMBS

11.35.1 class DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMObjectMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.35.2 Methods

11.35.3 `item(index as UInt32) as DOMNodeMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.35.4 `length as Integer`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.35.5 `namedItem(name as string) as DOMNodeMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.36 class DOMHTMLDirectoryElementMBS

11.36.1 class DOMHTMLDirectoryElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.36.2 Properties

11.36.3 compact as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.37 class DOMHTMLDivElementMBS

11.37.1 class DOMHTMLDivElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMHTMLDivElementMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.37.2 Properties

11.37.3 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.38 class DOMHTMLDListElementMBS

11.38.1 class DOMHTMLDListElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.38.2 Properties

11.38.3 compact as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.39 class DOMHTMLDocumentMBS

11.39.1 class DOMHTMLDocumentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMDocumentMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.39.2 Methods

11.39.3 anchors as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.4 applets as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.5 close

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.6 domain as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.7 forms as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.8 getElementById(elementId as string) as DOMELEMENTMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.9 getElementsByName(elementName as string) as DOMNodeListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.10 images as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.11 links as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.12 open

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.13 referrer as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.14 URL as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.15 write(text as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.16 writeln(text as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.39.17 Properties

11.39.18 body as DOMHTMLMElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.39.19 cookie as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.39.20 title as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Example:

```
dim f as WebFrameMBS = HTMLViewer1.mainFrameMBS
dim doc as DOMDocumentMBS = f.DOMDocument
```

```
if doc isa DOMHTMLDocumentMBS then // works only if you loaded html document in htmlviewer.  
dim h as DOMHTMLDocumentMBS = DOMHTMLDocumentMBS(doc)  
MsgBox h.Title  
end if
```

Notes: (Read and Write computed property)

11.40 class DOMHTMLMElementMBS

11.40.1 class DOMHTMLMElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMELEMENTMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.40.2 Methods

11.40.3 children as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.40.4 isContentEditable as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.40.5 Properties

11.40.6 className as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.40.7 contentEditable as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.40.8 dir as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.40.9 idName as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.40.10 innerHTML as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.40.11 innerText as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.40.12 lang as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.40.13 outerHTML as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.40.14 `outerText` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.40.15 `title` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.41 class DOMHTMLEmbedElementMBS

11.41.1 class DOMHTMLEmbedElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.41.2 Properties

11.41.3 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.41.4 height as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.41.5 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.41.6 src as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.41.7 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.41.8 width as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.42 class DOMHTMLFieldSetElementMBS

11.42.1 class DOMHTMLFieldSetElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLFormElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.42.2 Methods

11.42.3 form as DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.43 class DOMHTMLFontElementMBS

11.43.1 class DOMHTMLFontElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.43.2 Properties

11.43.3 colorValue as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.43.4 face as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.43.5 size as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.44 class DOMHTMLFormElementMBS

11.44.1 class DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.44.2 Methods

11.44.3 elements as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.44.4 length as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.44.5 reset

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.44.6 submit

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.44.7 Properties

11.44.8 acceptCharset as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.44.9 action as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.44.10 enctype as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.44.11 method as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.44.12 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.44.13 target as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.45 class DOMHTMLFrameElementMBS

11.45.1 class DOMHTMLFrameElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.45.2 Methods

11.45.3 contentDocument as DOMDocumentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.45.4 Properties

11.45.5 frameBorder as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.45.6 longDesc as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.45.7 `marginHeight` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.45.8 `marginWidth` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.45.9 `name` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.45.10 `noResize` as Boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.45.11 `scrolling` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.45.12 `src` as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.46 class DOMHTMLFrameSetElementMBS

11.46.1 class DOMHTMLFrameSetElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.46.2 Properties

11.46.3 cols as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.46.4 rows as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.47 class DOMHTMLHeadElementMBS

11.47.1 class DOMHTMLHeadElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.47.2 Properties

11.47.3 profile as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.48 class DOMHTMLHeadingElementMBS

11.48.1 class DOMHTMLHeadingElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.48.2 Properties

11.48.3 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.49 class DOMHTMLHRElementMBS

11.49.1 class DOMHTMLHRElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.49.2 Properties

11.49.3 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.49.4 noShade as Boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.49.5 size as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.49.6 width as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.50 class DOMHTMLHtmlElementMBS

11.50.1 class DOMHTMLHtmlElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.50.2 Properties

11.50.3 version as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.51 class DOMHTMLIFrameElementMBS

11.51.1 class DOMHTMLIFrameElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.51.2 Methods

11.51.3 contentDocument as DOMDocumentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.51.4 Properties

11.51.5 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.51.6 frameBorder as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.51.7 height as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.51.8 longDesc as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.51.9 marginHeight as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.51.10 marginWidth as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.51.11 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.51.12 scrolling as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.51.13 src as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.51.14 width as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52 class DOMHTMLImageElementMBS

11.52.1 class DOMHTMLImageElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.52.2 Properties

11.52.3 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.4 alt as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.5 border as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.6 height as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.7 hspace as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.8 isMap as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.9 longDesc as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.10 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.11 src as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.12 useMap as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.13 vspace as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.52.14 width as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53 class DOMHTMLInputElementMBS

11.53.1 class DOMHTMLInputElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLFormElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.53.2 Methods

11.53.3 blur

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.53.4 click

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.53.5 focus

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.53.6 form as DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.53.7 selectMethod

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.53.8 Properties

11.53.9 accept as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.10 accessKey as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.11 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.12 alt as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.13 checked as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.14 defaultChecked as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.15 defaultValue as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.16 disabled as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.17 maxLength as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.18 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.19 readOnly as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.20 size as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.21 src as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.22 tabIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.23 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.24 useMap as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.53.25 value as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.54 class DOMHTMLIsIndexElementMBS

11.54.1 class DOMHTMLIsIndexElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMHTMLFormElementMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.54.2 Methods

11.54.3 form as DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.54.4 Properties

11.54.5 prompt as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.55 class DOMHTMLLabelElementMBS

11.55.1 class DOMHTMLLabelElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMHTMLFormElementMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.55.2 Methods

11.55.3 form as DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.55.4 Properties

11.55.5 accessKey as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.55.6 htmlFort as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.56 class DOMHTMLLegendElementMBS

11.56.1 class DOMHTMLLegendElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLFormElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.56.2 Methods

11.56.3 form as DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.56.4 Properties

11.56.5 accessKey as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.56.6 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.57 class DOMHTMLLIElementMBS

11.57.1 class DOMHTMLLIElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.57.2 Properties

11.57.3 type as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.57.4 value as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.58 class DOMHTMLLinkElementMBS

11.58.1 class DOMHTMLLinkElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.58.2 Properties

11.58.3 charset as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.58.4 disabled as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.58.5 href as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.58.6 hreflang as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.58.7 media as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.58.8 rel as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.58.9 rev as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.58.10 target as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.58.11 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.59 class DOMHTMLMapElementMBS

11.59.1 class DOMHTMLMapElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMHTMLMapElementMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.59.2 Methods

11.59.3 areas as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.59.4 Properties

11.59.5 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.60 class DOMHTMLMenuElementMBS

11.60.1 class DOMHTMLMenuElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.60.2 Properties

11.60.3 compact as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.61 class DOMHTMLMetaElementMBS

11.61.1 class DOMHTMLMetaElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.61.2 Properties

11.61.3 content as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.61.4 httpEquiv as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.61.5 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.61.6 scheme as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.62 class DOMHTMLModElementMBS

11.62.1 class DOMHTMLModElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLModElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.62.2 Properties

11.62.3 cite as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.62.4 dateTime as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63 class DOMHTMLObjectElementMBS

11.63.1 class DOMHTMLObjectElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.63.2 Methods

11.63.3 cells as DOMDocumentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.63.4 form as DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.63.5 Properties

11.63.6 align as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.7 archive as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.8 border as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.9 code as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.10 codeBase as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.11 codeType as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.12 data as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.13 declareValue as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.14 height as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.15 hspace as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.16 name as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.17 standby as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.18 tabIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.19 type as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.20 useMap as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.21 vspace as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.63.22 width as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.64 class DOMHTMLLOListElementMBS

11.64.1 class DOMHTMLLOListElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.64.2 Properties

11.64.3 compact as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.64.4 start as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.64.5 type as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.65 class DOMHTMLOptGroupElementMBS

11.65.1 class DOMHTMLOptGroupElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMHTMLMElementMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.65.2 Properties

11.65.3 content as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.65.4 label as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.66 class DOMHTMLOptionElementMBS

11.66.1 class DOMHTMLOptionElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.66.2 Methods

11.66.3 form as DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.66.4 index as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.66.5 text as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.66.6 Properties

11.66.7 defaultSelected as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.66.8 disabled as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.66.9 label as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.66.10 selected as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.66.11 value as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.67 class DOMHTMLOptionsCollectionMBS

11.67.1 class DOMHTMLOptionsCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.67.2 Methods

11.67.3 item(index as Integer) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.67.4 namedItem(name as string) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.67.5 Properties

11.67.6 length as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.68 class DOMHTMLParagraphElementMBS

11.68.1 class DOMHTMLParagraphElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.68.2 Properties

11.68.3 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.69 class DOMHTMLParamElementMBS

11.69.1 class DOMHTMLParamElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.69.2 Properties

11.69.3 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.69.4 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.69.5 value as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.69.6 valueType as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.70 class DOMHTMLPreElementMBS

11.70.1 class DOMHTMLPreElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.70.2 Properties

11.70.3 width as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.71 class DOMHTMLQuoteElementMBS

11.71.1 class DOMHTMLQuoteElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.71.2 Properties

11.71.3 cite as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.72 class DOMHTMLScriptElementMBS

11.72.1 class DOMHTMLScriptElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.72.2 Properties

11.72.3 charset as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.72.4 defer as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.72.5 eventValue as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.72.6 htmlFor as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.72.7 src as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.72.8 text as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.72.9 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.73 class DOMHTMLSelectElementMBS

11.73.1 class DOMHTMLSelectElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.73.2 Methods

11.73.3 add(element as DOMHTMLElementMBS, before as DOMHTMLElementMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.73.4 blur

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.73.5 focus

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.73.6 form as DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.73.7 length as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.73.8 options as DOMHTMLOptionsCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.73.9 remove(index as Integer)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.73.10 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.73.11 Properties

11.73.12 disabled as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.73.13 multiple as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.73.14 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.73.15 selectedIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.73.16 size as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.73.17 tabIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.73.18 value as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.74 class DOMHTMLStyleElementMBS

11.74.1 class DOMHTMLStyleElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.74.2 Properties

11.74.3 content as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.74.4 media as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.74.5 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.75 class DOMHTMLTableCaptionElementMBS

11.75.1 class DOMHTMLTableCaptionElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.75.2 Properties

11.75.3 align as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76 class DOMHTMLTableCellElementMBS

11.76.1 class DOMHTMLTableCellElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.76.2 Methods

11.76.3 cellIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.76.4 Properties

11.76.5 abbr as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.6 align as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.7 axis as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.8 bgColor as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.9 ch as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.10 chOff as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.11 colSpan as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.12 headers as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.13 height as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.14 noWrap as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.15 rowSpan as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.16 scope as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.17 vAlign as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.76.18 width as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.77 class DOMHTMLTableColElementMBS

11.77.1 class DOMHTMLTableColElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.77.2 Properties

11.77.3 align as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.77.4 ch as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.77.5 chOff as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.77.6 span as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.77.7 `vAlign` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.77.8 `width` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78 class DOMHTMLTableElementMBS

11.78.1 class DOMHTMLTableElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.78.2 Methods

11.78.3 createCaption as DOMHTMLElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.78.4 createTFoot as DOMHTMLElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.78.5 createThead as DOMHTMLElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.78.6 deleteCaption

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.78.7 deleteRow(index as Integer)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.78.8 deleteTFoot

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.78.9 deleteTHead

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.78.10 insertRow(index as Integer) as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.78.11 rows as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.78.12 tBodies as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.78.13 Properties

11.78.14 align as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.15 bgColor as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.16 border as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.17 caption as DOMHTMLTableCaptionElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.18 cellPadding as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.19 cellSpacing as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.20 `frameBorders` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.21 `rules` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.22 `summary` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.23 `tFoot` as `DOMHTMLTableSectionElementMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.24 `tHead` as `DOMHTMLTableSectionElementMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.78.25 `width` as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.79 class DOMHTMLTableRowElementMBS

11.79.1 class DOMHTMLTableRowElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.79.2 Methods

11.79.3 cells as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.79.4 deleteCell(index as Integer)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.79.5 insertCell(index as Integer) as DOMHTMLElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.79.6 rowIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.79.7 sectionRowIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.79.8 Properties

11.79.9 align as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.79.10 bgColor as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.79.11 ch as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.79.12 chOff as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.79.13 vAlign as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.80 class DOMHTMLTableSectionElementMBS

11.80.1 class DOMHTMLTableSectionElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.80.2 Methods

11.80.3 deleteRow(index as Integer)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.80.4 insertRow(index as Integer) as DOMHTMLElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.80.5 rows as DOMHTMLCollectionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.80.6 Properties

11.80.7 align as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.80.8 ch as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.80.9 chOff as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.80.10 vAlign as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.81 class DOMHTMLTextAreaElementMBS

11.81.1 class DOMHTMLTextAreaElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLFormElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.81.2 Methods

11.81.3 blur

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.81.4 focus

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.81.5 form as DOMHTMLFormElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.81.6 selectMethod

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.81.7 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.81.8 Properties

11.81.9 accessKey as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.81.10 cols as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.81.11 defaultValue as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.81.12 disabled as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.81.13 name as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.81.14 readOnly as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.81.15 rows as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.81.16 tabIndex as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.81.17 value as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.82 class DOMHTMLTitleElementMBS

11.82.1 class DOMHTMLTitleElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLMElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.82.2 Properties

11.82.3 text as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.83 class DOMHTMLUListElementMBS

11.83.1 class DOMHTMLUListElementMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMHTMLElementMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.83.2 Properties

11.83.3 compact as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.83.4 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.84 class DOMImplementationMBS

11.84.1 class DOMImplementationMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.84.2 Methods

11.84.3 createCSSStyleSheet(title as string, media as string) as DOMCSSStyleSheetMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.84.4 createDocument(namespaceURI as string, qualifiedName as string, doc-type as string) as DOMDocumentTypeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.84.5 createDocumentType(qualifiedName as string, publicId as string, systemId as string) as DOMDocumentTypeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.84.6 hasFeature(feature as string, version as string) as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.85 class DOMMediaListMBS

11.85.1 class DOMMediaListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class for a list of medias.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.85.2 Methods

11.85.3 appendMedium(newMedium as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.85.4 deleteMedium(oldMedium as string)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.85.5 item(index as Integer) as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the item with the given index or "".

Notes: Index is zero based.

11.85.6 length as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of items in this list.

11.85.7 Properties

11.85.8 mediaText as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.86 class DOMNamedNodeMapMBS

11.86.1 class DOMNamedNodeMapMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

See also:

http://www.w3schools.com/dom/dom_namednodemap.asp

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.86.2 Methods

11.86.3 getNamedItem(name as string) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.86.4 getNamedItemNS(namespaceURI as string, localName as string) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.86.5 item(index as UInt32) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.86.6 length as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.86.7 removeNamedItem(name as string) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.86.8 removeNamedItemNS(namespaceURI as string, localName as string) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.86.9 setNamedItem(arg as DOMNodeMBS) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.86.10 setNamedItemNS(arg as DOMNodeMBS) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.87 class DOMNodeListMBS

11.87.1 class DOMNodeListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class for a list of nodes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

see also

http://www.w3schools.com/dom/dom_nodelist.asp

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.87.2 Methods

11.87.3 item(index as UInt32) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the item with the given index or nil.

Notes: Index is zero based.

11.87.4 length as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of items in this list.

11.88 class DOMNodeMBS

11.88.1 class DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

see also

http://www.w3schools.com/dom/dom_node.asp

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.88.2 Methods

11.88.3 appendChild(newChild as DOMNodeMBS) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.4 childNodes as DOMNodeListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.5 cloneNode(deep as boolean) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.6 firstChild as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.7 `getAttributes` as `DOMNamedNodeMapMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: Renamed `Attributes` parameter to `getAttributes` in plugin version 8.2.

11.88.8 `hasAttributes` as `boolean`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.9 `hasChildNodes` as `boolean`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.10 `insertBefore(newChild as DOMNodeMBS, refChild as DOMNodeMBS)` as `DOMNodeMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.11 `isSupported(feature as string, version as string)` as `boolean`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.12 `lastChild` as `DOMNodeMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.13 localName as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.14 namespaceURI as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.15 nextSibling as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.16 nodeName as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.17 nodeType as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The type of this node.

Notes: See the constants for possible values.

11.88.18 normalize

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.19 ownerDocument as DOMDocumentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.20 parentNode as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.21 previousSibling as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.22 removeChild(oldChild as DOMNodeMBS) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.23 replaceChild(newChild as DOMNodeMBS, oldChild as DOMNodeMBS) as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.88.24 Properties

11.88.25 nodeValue as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.88.26 prefix as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.88.27 Constants

11.88.28 DOM_ATTRIBUTE_NODE = 2

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.29 DOM_CDATA_SECTION_NODE = 4

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.30 DOM_COMMENT_NODE = 8

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.31 DOM_DOCUMENT_FRAGMENT_NODE = 11

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.32 DOM_DOCUMENT_NODE = 9

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.33 DOM_DOCUMENT_TYPE_NODE = 10

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.34 DOM_ELEMENT_NODE = 1

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.35 DOM_ENTITY_NODE = 6

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.36 DOM_ENTITY_REFERENCE_NODE = 5

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.37 DOM_NOTATION_NODE = 12

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.38 DOM_PROCESSING_INSTRUCTION_NODE = 7

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.88.39 DOM_TEXT_NODE = 3

Plugin Version: 7.4. **Function:** A constant for the nodeType property.

11.89 class DOMNotationMBS

11.89.1 class DOMNotationMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMNodeMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.89.2 Methods

11.89.3 publicId as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.89.4 systemId as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.90 class DOMObjectMBS

11.90.1 class DOMObjectMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `WebScriptObjectMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.90.2 Methods

11.90.3 sheet as DOMStyleSheetMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.91 class DOMProcessingInstructionMBS

11.91.1 class DOMProcessingInstructionMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMNodeMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.91.2 Methods

11.91.3 target as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.91.4 Properties

11.91.5 data as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.92 class DOMRangeMBS

11.92.1 class DOMRangeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.92.2 Methods

11.92.3 cloneContents as DOMDocumentFragmentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.4 cloneRange as DOMRangeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.5 collapse(toStart as boolean)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.6 collapsed as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.7 commonAncestorContainer as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.8 compareBoundaryPoints(how as Integer, sourceRange as DOMRangeMBS) as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.9 deleteContents

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.10 detach

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.11 endContainer as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.12 endOffset as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.13 extractContents as DOMDocumentFragmentMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.14 insertNode(newNode as DOMNodeMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.15 selectNode(refNode as DOMNodeMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.16 selectNodeContents(refNode as DOMNodeMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.17 setEnd(refNode as DOMNodeMBS, offset as Integer)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.18 setEndAfter(refNode as DOMNodeMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.19 setEndBefore(refNode as DOMNodeMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.20 setStart(refNode as DOMNodeMBS, offset as Integer)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.21 setStartAfter(refNode as DOMNodeMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.22 setStartBefore(refNode as DOMNodeMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.23 startContainer as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.24 startOffset as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.25 surroundContents(newParent as DOMNodeMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.26 toString as string

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.92.27 Constants**11.92.28 DOM_BAD_BOUNDARYPOINTS_ERR = 1**

Plugin Version: 7.4. **Function:** A constant for a special offset value.

11.92.29 DOM_END_TO_END = 2

Plugin Version: 7.4. **Function:** A constant for a special offset value.

11.92.30 DOM_END_TO_START = 3

Plugin Version: 7.4. **Function:** A constant for a special offset value.

11.92.31 DOM_INVALID_NODE_TYPE_ERR = 2

Plugin Version: 7.4. **Function:** A constant for a special offset value.

11.92.32 DOM_START_TO_END = 1

Plugin Version: 7.4. **Function:** A constant for a special offset value.

11.92.33 DOM_START_TO_START = 0

Plugin Version: 7.4. **Function:** A constant for a special offset value.

11.93 class DOMRectMBS

11.93.1 class DOMRectMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.93.2 Methods

11.93.3 bottom as DOMCSSPrimitiveValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The bottom distance.

11.93.4 left as DOMCSSPrimitiveValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The left distance.

11.93.5 right as DOMCSSPrimitiveValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The right distance.

11.93.6 top as DOMCSSPrimitiveValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The top distance.

11.94 class DOMRGBColorMBS

11.94.1 class DOMRGBColorMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMObjectMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.94.2 Methods

11.94.3 alpha as DOMCSSPrimitiveValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The alpha color component.

11.94.4 blue as DOMCSSPrimitiveValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The blue color component.

11.94.5 green as DOMCSSPrimitiveValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The green color component.

11.94.6 red as DOMCSSPrimitiveValueMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The red color component.

11.95 class DOMStyleSheetListMBS

11.95.1 class DOMStyleSheetListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class for a list of style sheets.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMObjectMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.95.2 Methods

11.95.3 `item(index as UInt32) as DOMStyleSheetMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the item with the given index or nil.

Notes:

There is a bug in Webkit 2.x which makes this method returns only `DOMStyleSheetMBS` objects and not `DOMCSSStyleSheetMBS` objects.

Index is zero based.

11.95.4 `length as Integer`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of items in this list.

11.96 class DOMStyleSheetMBS

11.96.1 class DOMStyleSheetMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the DOMObjectMBS class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.96.2 Methods

11.96.3 href as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.96.4 media as DOMMediaListMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.96.5 ownerNode as DOMNodeMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.96.6 parentStyleSheet as DOMStyleSheetMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.96.7 title as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.96.8 type as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.96.9 Properties

11.96.10 disabled as boolean

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

Notes: (Read and Write computed property)

11.97 class DOMTextMBS

11.97.1 class DOMTextMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the DOM classes.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Subclass of the `DOMCharacterDataMBS` class.

This is a subclass of an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.97.2 Methods

11.97.3 `splitText(offset as Integer)` as `DOMTextMBS`

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Check the DOM documentation for details on this function.

11.98 class HTMLViewer

11.98.1 class HTMLViewer

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Class in Realbasic 2005 for HTML rendering.

Notes: The class itself is available on all platforms, but all the plugin methods are currently only working on Mac OS X.

11.98.2 Methods

11.98.3 backForwardListMBS as WebBackForwardListMBS

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backforward list for this webView.

Notes: Nil on failure.

11.98.4 canGoBackMBS as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the history can be used to move back one website.

Example:

```
MsgBox str(HTMLViewer1.canGoBackMBS)
```

11.98.5 canGoForwardMBS as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the history can be used to move forward one website.

Example:

```
MsgBox str(HTMLViewer1.canGoForwardMBS)
```

11.98.6 canMakeTextLargerMBS as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the text size can be increased.

Example:

```
MsgBox str(HTMLViewer1.canMakeTextLargerMBS)
```

11.98.7 canMakeTextSmallerMBS as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the text size can be decreased.

Example:

```
MsgBox str(HTMLViewer1.canMakeTextSmallerMBS)
```

11.98.8 canResetPageZoomMBS as boolean

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether web page can be reset.

Example:

```
MsgBox str(HTMLViewer1.canResetPageZoomMBS)
```

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSEExceptionMBS` about the function not being available.

11.98.9 CanShowMIMETYPEAsHTMLMBS(mime as string) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Checks if the the MIME type is a type that the WebKit will interpret as HTML.

Example:

```
MsgBox str(HTMLViewer1.CanShowMIMETYPEAsHTMLMBS("text/plain"))
```

Notes:

Returns false on any error and true on success.
See also `FileExtensionToMimeTypeMBS` function.

11.98.10 CanShowMIMETypeMBS(mime as string) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Checks if the WebKit can show content of a certain MIME type.

Example:

```
MsgBox str(HTMLViewer1.CanShowMIMETypeMBS("text/plain"))
```

Notes:

Returns false on any error and true on success.
See also FileExtensionToMimeTypeMBS function.

11.98.11 canZoomPageInMBS as boolean

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether web page can be zoomed in.

Example:

```
MsgBox str(HTMLViewer1.canZoomPageInMBS)
```

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an NSEExceptionMBS about the function not being available.

11.98.12 canZoomPageOutMBS as boolean

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether web page can be zoomed out.

Example:

```
MsgBox str(HTMLViewer1.canZoomPageOutMBS)
```

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an NSEExceptionMBS about the function not being available.

11.98.13 ClearFocusMBS

Plugin Version: 7.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Clears the focus.

Example:

```
HTMLViewer1.ClearFocusMBS
```

Notes: If the focus is on the webpage, it will be cleared so there is no focus on the window. Useful if you want to workaroud a focus bug in the htmlviewer control.

11.98.14 EstimatedProgressMBS as Double

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** An estimate of the percent complete for a document load.

Example:

```
MsgBox str(HTMLViewer1.EstimatedProgressMBS)
```

Notes: This value will range from 0 to 1.0 and, once a load completes, will remain at 1.0 until a new load starts, at which point it will be reset to 0. The value is an estimate based on the total number of bytes expected to be received for a document, including all it's possible subresources. For more accurate progress indication it is recommended that you implement a WebFrameLoadDelegate and a WebResourceLoadDelegate.

11.98.15 EvaluateJavaScriptMBS(code as string) as string

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Runs the given java script and returns the result.

Example:

```
// shows current user agent string which the control sends to website
MsgBox htmlviewer1.EvaluateJavaScriptMBS("navigator.userAgent")
```

```
// using eval:
MsgBox HTMLViewer1.EvaluateJavaScriptMBS("eval(""x=10;y=20;x*y"")")
```

```
// with function:
MsgBox HTMLViewer1.EvaluateJavaScriptMBS(" test(); function test() { x = 10 ; y = 20; return x * y; } ")
```

```
// with multiline script:
dim s as string = "test();" + EndOfLine + _
"function test()" + EndOfLine + _
" { " + EndOfLine + _
```

```
" x = 10;" +EndOfLine+_
" y = 20;" +EndOfLine+_
" return x * y;" +EndOfLine+_
" } "
```

```
MsgBox HTMLViewer1.EvaluateJavaScriptMBS(s)
```

Notes:

Returns "" on any error.

In Safari 2 we used "return 1+2;" while in Safari 3 we only need "1+2;". The return is no longer needed. Be aware that there is an implicit return now with Safari 3!

For Windows use IERunJavaScriptMBS function.

11.98.16 GetPageFormatMBS as string

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The current page format settings as a string.

Example:

```
MsgBox HTMLViewer1.GetPageFormatMBS
// shows a big XML String
```

Notes:

Can be used to save current printer settings to a preferences file.
Value is an empty string until a page format is defined.

11.98.17 GoBackMBS

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Go back to the previous URL in the backforward list.

Example:

```
HTMLViewer1.GoBackMBS
```

Notes: Returns true if able to go back in the backforward list, false otherwise.

11.98.18 GoForwardMBS

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Go forward to the next URL in the backforward list.

Example:

```
HTMLViewer1.GoForwardMBS
```

Notes: Returns true if able to go forward in the backforward list, false otherwise.

11.98.19 goToBackForwardItemMBS(item as WebHistoryItemMBS) as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Moves on the history to the given item.

Notes: Returns true on success or false on failure.

11.98.20 HandleMBS as Integer

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The Handle of the WebView behind the HTMLViewer control.

Example:

```
MsgBox str(HTMLViewer1.HandleMBS)
```

Notes: Must be non zero for the plugin functions to work.

11.98.21 HTMLTextMBS as string

Plugin Version: 12.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns HTML text for this document.

Notes: This is the text as we generate it from current DOM tree. It is not the html text we loaded from the website. To get this original html text, please use HTMLViewer1.mainFrameMBS.dataSource.data instead.

11.98.22 InstallWebDownloadDelegateMBS(WebDownloadDelegate as WebDownloadDelegateMBS)

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Installs a WebDownloadDelegateMBS to receive events from htmlviewer control.

Notes: You need to keep a reference to this WebDownloadDelegateMBS object in the window where the htmlviewer is inside so the class is not destroyed too early.

11.98.23 InstallWebFrameLoadDelegateMBS(WebFrameLoadDelegate as WebFrameLoadDelegateMBS)

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Installs a WebFrameLoadDelegateMBS to receive events from htmlviewer control.

Notes: You need to keep a reference to this WebFrameLoadDelegateMBS object in the window where the htmlviewer is inside so the class is not destroyed too early.

11.98.24 InstallWebPolicyDelegateMBS(WebPolicyDelegate as WebPolicyDelegateMBS)

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Installs a WebPolicyDelegateMBS to receive events from htmlviewer control.

Notes: You need to keep a reference to this WebPolicyDelegateMBS object in the window where the htmlviewer is inside so the class is not destroyed too early.

11.98.25 InstallWebResourceLoadDelegateMBS(WebResourceLoadDelegate as WebResourceLoadDelegateMBS)

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Installs a WebResourceLoadDelegateMBS to receive events from htmlviewer control.

Notes: You need to keep a reference to this WebResourceLoadDelegateMBS object in the window where the htmlviewer is inside so the class is not destroyed too early.

11.98.26 InstallWebUIDelegateMBS(WebUIDelegate as WebUIDelegateMBS)

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Installs a HTMLViewerUIDelegateMBS to receive events from htmlviewer control.

Notes: You need to keep a reference to this HTMLViewerUIDelegateMBS object in the window where the htmlviewer is inside so the class is not destroyed too early.

11.98.27 LoadHTMLStringMBS(data as memoryblock, mime as string, encoding as string, url as string)

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Loads data as a webpage.

Example:

```
HTMLViewer1.LoadHTMLStringMBS "<b>test</b>","text/plain","","" // show as plain text
HTMLViewer1.LoadHTMLStringMBS "<b>test</b>","text/html","","" // show as html
```

Notes:

data: The data to use for the main page of the document.

mime: The MIME type of the data. e.g. "text/html"

textencoding: The encoding of the data.

url: The base URL to apply to relative URLs within the document.

All parameters can be empty if needed.

Using "text/plain" mime type you can show source code of website.

Like a most Webkit Methods this one can not be called from a thread.

See also:

- 11.98.28 LoadHTMLStringMBS(text as string, url as string)

928

11.98.28 LoadHTMLStringMBS(text as string, url as string)

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Loads a html page from a string.

Example:

```
HTMLViewer1.LoadHTMLStringMBS("<p>Hello <a href = \"\"realbasic/\"\">realbasic</a></p>", "http://www.monkeybreadsoftware.de/")
```

Notes:

html: The string to use for the main page of the document.

url: The base URL to apply to relative URLs within the document. (optional)

Like most Webkit Methods this one can not be called from a thread.

See also:

- 11.98.27 LoadHTMLStringMBS(data as memoryblock, mime as string, encoding as string, url as string)

11.98.29 LoadRequest(request as NSURLRequestMBS)

Plugin Version: 9.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Loads the given url request.

Example:

```
dim r as NSURLRequestMBS = NSURLRequestMBS.requestWithURL("http://www.apple.de")
HTMLViewer1.LoadRequest r
```

Notes: Like most Webkit Methods this one can not be called from a thread.

11.98.30 LoadURLMBS(url as string)

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Loads the url.

Example:

```
htmlviewer1.LoadURLMBS "http://www.monkeybreadsoftware.de"
```

Notes:

Like most Webkit Methods this one can not be called from a thread.

Internally this calls LoadRequest with a NSURLRequest based on the given URL.

See also:

- 11.98.31 LoadURLMBS(url as string, CachePolicy as Integer, TimeOut as Double)

11.98.31 LoadURLMBS(url as string, CachePolicy as Integer, TimeOut as Double)

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** htmlviewer1.LoadURLMBS "http://www.monkeybreadsoftware.de", 1, 2.0

Notes:

The timeout interval is in seconds.

Constants for the CachePolicy parameter:

Like most Webkit Methods this one can not be called from a thread.

Internally this calls LoadRequest with a NSURLRequest based on the given URL. It is Webkit's decision

<code>const UseProtocolCachePolicy</code>	= 0	Specifies that the caching logic defined in the protocol implementation, if any, is used for a particular URL load request. This is the default policy for URL load requests.
<code>const ReloadIgnoringCacheData</code>	= 1	Specifies that the data for the URL load should be loaded from the originating source. No existing cache data should be used to satisfy a URL load request.
<code>const ReturnCacheDataElseLoad</code>	= 2	Specifies that the existing cached data should be used to satisfy the request, regardless of its age or expiration date. If there is no existing data in the cache corresponding to the request, the data is loaded from the originating source.
<code>const ReturnCacheDataDontLoad</code>	= 3	Specifies that the existing cache data should be used to satisfy a request, regardless of its age or expiration date. If there is no existing data in the cache corresponding to a URL load request, no attempt is made to load the data from the originating source, and the load is considered to have failed. This constant specifies a behavior that is similar to an "offline" mode.

what it does based on the given constants.

See also:

- 11.98.30 `LoadURLMBS(url as string)`

929

11.98.32 `mainFrameMBS` as `WebFrameMBS`

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The main webframe currently displayed.

Example:

```
// get the current page url:
```

```
MsgBox HTMLViewer1.mainFrameMBS.dataSource.request.URL
```

```
// get the html data of the current page:
```

```
MsgBox HTMLViewer1.mainFrameMBS.dataSource.data
```

Notes: Nil if no is present.

11.98.33 `makeTextLargerMBS`

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Increases the text size in the webview.

Example:

```
HTMLViewer1.LoadPage "<p>Hello</p>", nil
HTMLViewer1.makeTextLargerMBS
```

11.98.34 makeTextSmallerMBS

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Decreases the text size in the webview.

Example:

```
HTMLViewer1.LoadPage "<p>Hello</p>", nil
HTMLViewer1.makeTextSmallerMBS
```

11.98.35 mediaVolumeMBS as Double

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Queries the maximum volume of all sounds generated on this webview.

Example:

```
// shows 1 normally
MsgBox str(HTMLViewer1.mediaVolumeMBS)

// set to 50%
HTMLViewer1.setMediaVolumeMBS 0.5

// and check
MsgBox str(HTMLViewer1.mediaVolumeMBS)
```

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSExceptionMBS` about the function not being available.

11.98.36 NSScrollViewMBS as Variant

Plugin Version: 11.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the scrollview for this webviewer.

Example:

```
// get the scrollview
dim s as NSScrollViewMBS = HTMLViewer1.NSScrollViewMBS

// and destroy the scrollbars
s.horizontalScroller = nil
s.verticalScroller = nil
```

Notes:

Same as calling `HTMLViewer.mainFrameMBS.frameView.documentView.enclosingScrollView`.

We return a variant to avoid plugin dependencies. Please assign to a `NSScrollViewMBS` variable.

11.98.37 PageSetupDialogMBS(sheetTarget as window=nil) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Shows a page setup sheet.

Example:

`call HTMLViewer1.PageSetupDialogMBS(Window1)`

Notes:

If `sheetTarget` is `nil` a modal dialog is shown and the function returns after the user clicked one of the buttons to close the dialog.

If `sheetTarget` is a valid window reference this window will show a sheet and the function returns while the sheet waits for mouseclicks.

Returns true on success.

11.98.38 pageSizeMultiplierMBS as Double

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Queries the page size multiplier.

Example:

`MsgBox str(HTMLViewer1.pageSizeMultiplierMBS)`

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSEExceptionMBS` about the function not being available.

11.98.39 PrintDialogMBS(sheetTarget as window=nil, PDFFile as folderitem=nil) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Show the print sheet and allows the user to print the web content.

Example:

```
call HTMLViewer1.PrintDialogMBS(Window1)
```

Notes:

If sheetTarget is nil a modal dialog is shown and the function returns after the user clicked one of the buttons to close the dialog.

If sheetTarget is a valid window reference this window will show a sheet and the function returns while the sheet waits for mouseclicks.

If PDFFile is not nil, printing is redirected to a PDF file.

Returns true on success.

11.98.40 PrintDialogVisibleMBS as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether a printing sheet is visible.

Example:

```
MsgBox str(HTMLViewer1.PrintDialogVisibleMBS)
```

Notes:

Used with the PageSetupDialog and the PrintDialog methods.

Returns true when a dialog is visible and false when not.

11.98.41 PrintingEndMBS

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Releases memory from the printing code.

Notes: First call PrintingStartMBS with your page size, then call several times PrintingPageMBS and finally call PrintingEndMBS.

11.98.42 PrintingPageMBS(index as UInt32) as Memoryblock

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the given page as string.

Notes:

On any error the function returns nil.
The string contains an one page PDF document.

First call PrintingStartMBS with your page size, then call several times PrintingPageMBS and finally call PrintingEndMBS.

You may want to set
HTMLViewer.preferencesMBS.shouldPrintBackgrounds = true
HTMLViewer.preferencesMBS.allowsAnimatedImageLooping = true
to get a print which includes backgrounds and animated images.

11.98.43 PrintingStartMBS(width as Double, height as Double) as Integer

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Starts the printing code.

Example:

```
dim i,c as Integer
dim f as FolderItem
dim s as string
dim b as BinaryStream
```

```
HTMLViewer1.preferencesMBS.shouldPrintBackgrounds = true // with backgrounds
HTMLViewer1.preferencesMBS.allowsAnimatedImageLooping = true // and with animated images
```

```
c=HTMLViewer1.PrintingStartMBS(800,600)
i=0
while i<c
s=HTMLViewer1.PrintingPageMBS(i)

f=SpecialFolder.Desktop.Child("Page "+str(i+1)+".pdf")
b=f.CreateBinaryFile("")
if b<>nil then
b.Write s
b.Close
end if
i=i+1
wend
```

```
HTMLViewer1.PrintingEndMBS
```

```
MsgBox str(c)+" pages printed."
```

Notes:

First call PrintingStartMBS with your page size, then call several times PrintingPageMBS and finally call PrintingEndMBS.

Only one print job can be processed at the same time as they use all the same global properties.

Returns the number of pages to be printed.

11.98.44 PrintMBS(PDFFile as folderitem=nil) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Prints the web content without a dialog.

Example:

```
MsgBox str(HTMLViewer1.PrintMBS)
```

Notes:

If PDFFile is not nil, printing is redirected to a PDF file.
Returns true on success.

11.98.45 PrintToPDFFileMBS(PDFFile as folderitem, LeftMargin as Double = 50.0, TopMargin as Double = 50.0, RightMargin as Double = 50.0, BottomMargin as Double = 50.0) as boolean

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Prints the PDF to a file.

Example:

```
dim file as folderitem = Specialfolder.desktop.child("test.pdf")
if not HTMLViewer1.PrintToPDFFileMBS(file) then
msgbox "Failed"
end if
```

Notes:

This uses the Cocoa printing system to format the web pages into nice pages.

Returns true on success.

Margin is measured in points in the user coordinate space.

11.98.46 reloadFromOriginMBS

Plugin Version: 12.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Action method that performs an end-to-end revalidation using cache-validating conditionals if possible.

Notes: Available in OS X v10.6 and later. On older versions the plugin will fall back to normal reload method.

11.98.47 ReloadMBS

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Reloads the current page.

Example:

```
HTMLViewer1.ReloadMBS
```

11.98.48 RenderDocumentToEPSMBS as Memoryblock

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the content of the view as a EPS file's data.

Example:

```
dim f as FolderItem
```

```
dim b as BinaryStream
```

```
// create a new pdf with current content of view
f=SpecialFolder.Desktop.Child("test.eps")
b=f.CreateBinaryFile("")
b.Write theHTMLViewer.RenderDocumentToEPSMBS
b.Close
```

```
f.Launch // show the pdf in preview
```

Notes:

Returns nil on any error.

Will resize the eps page to match the size of the website.

11.98.49 RenderDocumentToPDFMBS as Memoryblock

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the content of the view as a PDF file's data.

Example:

```
dim f as FolderItem
dim b as BinaryStream

// create a new pdf with current content of view
f=SpecialFolder.Desktop.Child("test.pdf")
b=f.CreateBinaryFile("")
b.Write theHTMLViewer.RenderDocumentToPDFMBS
b.Close

f.Launch // show the pdf in preview
```

Notes:

Returns nil on any error.
Will resize the pdf page to match the size of the website.

11.98.50 RenderEPSMBS as Memoryblock

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the content of the view as a EPS file's data.

Example:

```
dim f as FolderItem
dim b as BinaryStream

// create a new pdf with current content of view
f=SpecialFolder.Desktop.Child("test.eps")
b=f.CreateBinaryFile("")
b.Write theHTMLViewer.RenderEPSMBS
b.Close

f.Launch // show the pdf in preview
```

Notes:

Returns nil on any error.
 If there is a scrollbar, it will be included.
 For nice printouts, use the `webview/htmlviewer printmbs` method.

11.98.51 RenderPDFMBS as Memoryblock

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the content of the view as a PDF file's data.

Example:

```
dim f as FolderItem
dim b as BinaryStream

// create a new pdf with current content of view
f=SpecialFolder.Desktop.Child("test.pdf")
b=f.CreateBinaryFile("")
b.Write theHTMLViewer.RenderPDFMBS
b.Close

f.Launch // show the pdf in preview
```

Notes:

Returns nil on any error.
 If there is a scrollbar, it will be included.
 For nice printouts, use the `webview/htmlviewer printmbs` method.

11.98.52 RenderWebsiteImageMBS(ResolutionScale as Double = 1.0) as NSImageMBS

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Makes a screenshot of the current displayed content.

Example:

```
dim f as FolderItem
dim b as BinaryStream
dim i as NSImageMBS
dim p as string

i=HTMLViewer1.RenderWebsiteImageMBS

p=i.PNGRepresentation
```

```
f=SpecialFolder.Desktop.Child("test.png")  
b=f.CreateBinaryFile("")  
b.Write p
```

Notes:

Nil on failure.

The image returned is the page completely without scrollbars, so it may be a few thousand pixels height and may not fit on a page to print.

The value of this variant must be an object of class NSImageMBS.

Added ResolutionScale in version 13.1 to allow to get high res images. Pass 2 for a retina resolution image (independent of whether your app runs on retina display).

11.98.53 resetPageZoomMBS

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Resets the web page zoom.

Example:

```
HTMLViewer1.resetPageZoomMBS
```

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an NSExceptionMBS about the function not being available.

11.98.54 SearchForMBS(text as string, Forward as boolean, CaseSensitive as boolean, Wrap as Boolean) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Searches a document view for a string and highlights the string if it is found.

Example:

```
call HTMLViewer1.SearchForMBS "holiday",true,false,true
```

Notes:

Starts the search from the current selection. Will search across all frames.

text: The string to search for.

forward: True to search forward, False to search backwards.

caseSensitive: True to for case-sensitive search, False for case-insensitive search.

Returns true if found, false if not found.

11.98.55 setMaintainsBackForwardListMBS(value as boolean)

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the back forward history list is created by the webview.

Example:

```
HTMLViewer1.setMaintainsBackForwardListMBS true
```

Notes: Default is true.

11.98.56 setMediaVolumeMBS(value as Double)

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sets the maximum volume of all sounds generated on this webview.

Example:

```
HTMLViewer1.setMediaVolumeMBS 0.5
```

Notes:

Sets a master volume control for all media elements in the WebView. Valid values are 0..1.

This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSExcptionMBS` about the function not being available.

11.98.57 SetPageFormatMBS(data as string) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Loads page format settings from a string.

Notes: Returns true on success and false on failure.

11.98.58 setPageSizeMultiplierMBS(value as Double)

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sets the page size multiplier.

Example:

```
HTMLViewer1.setPageSizeMultiplierMBS 2.0
```

Notes:

Change the zoom factor of the page in views managed by this webView.
value: A fractional percentage value, 1.0 is 100% .

This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSExceptionMBS` about the function not being available.

11.98.59 StopLoadingMBS

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Stop any pending loads on the frame's data source, and its children.

Example:

```
HTMLViewer1.StopLoadingMBS
```

11.98.60 SupportsTextEncodingMBS as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Find out if the current web page supports text encodings.

Example:

```
MsgBox str(HTMLViewer1.SupportsTextEncodingMBS)
```

Notes: Returns true if the document view of the current web page can support different text encodings.

11.98.61 userAgentForURLMBS(url as string) as String

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The user agent used for accessing the given URL.

Example:

```
msgbox htmlviewer1.userAgentForURLMBS("http://www.apple.com")  
// shows: Mozilla/5.0 (Macintosh; U; PPC Mac OS X; de-de) AppleWebKit/419 (KHTML, like Gecko)
```

Notes: An empty string on failure else the user-agent string for the supplied URL.

11.98.62 VisibleHeightMBS as Double

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The visible height of the htmlviewer control.

Example:

```
MsgBox str(HTMLViewer1.VisibleWidthMBS)+" x "+str(HTMLViewer1.VisibleHeightMBS)
```

Notes: Bounds is the width and height of the controls area, but visible is only a part depending on the window size. So if Bounds are equal to the visible part, there is no scrollbar.

11.98.63 VisibleLeftMBS as Double

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The left position of the visible area.

Example:

```
MsgBox str(HTMLViewer1.VisibleLeftMBS)+" x "+str(HTMLViewer1.VisibleTopMBS)
```

Notes: Should be 0.

11.98.64 VisibleTopMBS as Double

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The top position of the visible area.

Example:

```
MsgBox str(HTMLViewer1.VisibleLeftMBS)+" x "+str(HTMLViewer1.VisibleTopMBS)
```

Notes: Should be 0.

11.98.65 VisibleWidthMBS as Double

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The visible width of the htmlviewer control.

Example:

```
MsgBox str(HTMLViewer1.VisibleWidthMBS)+" x "+str(HTMLViewer1.VisibleHeightMBS)
```

Notes: Bounds is the width and height of the controls area, but visible is only a part depending on the window size. So if Bounds are equal to the visible part, there is no scrollbar.

11.98.66 WebViewMBS as WebViewMBS

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the webview for this htmlviewer.

Example:

```
HTMLViewer1.WebViewMBS.toolTip = "Test tooltip"
```

Notes: Nil on failure.

11.98.67 zoomPageInMBS

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Zooms web page in.

Example:

```
HTMLViewer1.zoomPageInMBS
```

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an NSExceptionMBS about the function not being available.

11.98.68 zoomPageOutMBS

Plugin Version: 11.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Zooms web page out.

Example:

```
HTMLViewer1.zoomPageOutMBS
```

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSEExceptionMBS` about the function not being available.

11.98.69 Properties

11.98.70 `ApplicationNameForUserAgentMBS` as String

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The application name.

Example:

```
htmlviewer1.ApplicationNameForUserAgentMBS="test"  
// useragent is now "Mozilla/5.0 (Macintosh; U; PPC Mac OS X; de-de) AppleWebKit/417.9 (KHTML, like  
Gecko) test"
```

Notes:

This name will be used in user-agent strings that are chosen for best results in rendering web pages.
(Read and Write computed property)

11.98.71 `BoundsHeightMBS` as Double

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The height of the `htmlviewer` control.

Example:

```
MsgBox str(HTMLViewer1.BoundsLeftMBS)+" "+str(HTMLViewer1.BoundsTopMBS)+" "+str(HTMLViewer1.BoundsWidthMBS)+" "+str(HTMLViewer1.BoundsHeightMBS)
```

Notes:

Bounds is the width and height of the controls area, but visible is only a part depending on the window size. So if Bounds are equal to the visible part, there is no scrollbar.
(Read and Write computed property)

11.98.72 BoundsLeftMBS as Double

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The left position of the control size.

Example:

```
MsgBox str(HTMLViewer1.BoundsLeftMBS)+" "+str(HTMLViewer1.BoundsTopMBS)+" "+str(HTMLViewer1.BoundsWidthMBS)+" "+str(HTMLViewer1.BoundsHeightMBS)
```

Notes:

Should be 0.
(Read and Write computed property)

11.98.73 BoundsTopMBS as Double

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The top position of the view size.

Example:

```
MsgBox str(HTMLViewer1.BoundsLeftMBS)+" "+str(HTMLViewer1.BoundsTopMBS)+" "+str(HTMLViewer1.BoundsWidthMBS)+" "+str(HTMLViewer1.BoundsHeightMBS)
```

Notes:

Should be 0.
(Read and Write computed property)

11.98.74 BoundsWidthMBS as Double

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The width of the htmlviewer control.

Example:

```
dim w as NSViewMBS
```

```
w=HTMLViewer1.mainFrameMBS.frameView.documentView
```

```
MsgBox "width: "+str(w.Bounds.Width)+" height: "+str(w.Bounds.Height)
```

```
w=HTMLViewer1.WebViewMBS
```

```
MsgBox "width: "+str(w.Bounds.Width)+" height: "+str(w.Bounds.Height)
```

Notes:

Bounds is the width and height of the controls area, but visible is only a part depending on the window size. So if Bounds are equal to the visible part, there is no scrollbar.
(Read and Write computed property)

11.98.75 ContinuousSpellCheckingEnabledMBS as boolean

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether continuous spell checking is enabled.

Example:

```
htmlviewer1.ContinuousSpellCheckingEnabledMBS=True
```

Notes: (Read and Write computed property)

11.98.76 CustomTextEncodingNameMBS as String

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The custom text encoding name.

Example:

```
MsgBox HTMLViewer1.CustomTextEncodingNameMBS
```

Notes:

On getting:

The custom text encoding name or "" if no custom text encoding name has been set.

On setting:

Make the page display with a different text encoding; stops any load in progress.

The text encoding passed in overrides the normal text encoding smarts including what's specified in a web page's header or HTTP response.

The text encoding automatically goes back to the default when the top level frame changes to a new location. Setting the text encoding name to nil makes the webView use default encoding rules.

(Read and Write computed property)

11.98.77 CustomUserAgentMBS as String

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The custom user-agent string or nil if no custom user-agent string has been set.

Example:

```
htmlviewer1.CustomUserAgentMBS=NewCFStringMBS("HelloWorldBrowser")
```

Notes: (Read and Write computed property)

11.98.78 dashboardBehaviorMBS(behavior as Integer) as boolean

Plugin Version: 7.8, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Get or set the htmlviewer behavior.

Notes:

This is a private API from Apple which may break in the future.
It seems to exist for the dashboard application to switch some flags for event handling.

Behavior constants:

```
const WebDashboardBehaviorAlwaysSendMouseEventsToAllWindows = 0
```

```
const WebDashboardBehaviorAlwaysSendActiveNullEventsToPlugIns = 1
```

```
const WebDashboardBehaviorAlwaysAcceptsFirstMouse = 2
```

```
const WebDashboardBehaviorAllowWheelScrolling = 3
```

```
const WebDashboardBehaviorUseBackwardCompatibilityMode = 4
```

(Read and Write computed property)

11.98.79 DrawsBackgroundMBS as Boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Enable or disable the background drawing.

Example:

```
HTMLViewer1.DrawsBackgroundMBS = false
```

Notes:

Works only with Webkit on Mac OS X 10.3.9 and newer.

Returns false on unsupported Webkit versions.

If you set it to false, the background is not drawn and you can have transparent websites like the Dashboard widgets.

(Read and Write computed property)

11.98.80 EditableMBS as boolean

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the user is allowed to edit the document.

Notes:

You can change the receiver's document programmatically regardless of this setting.
Available in Mac OS X v10.3.9 and later.

Normally, an HTML document is not editable unless the elements within the document are editable. This method provides a low-level way to make the contents of a WebView object editable without altering the document or DOM structure.

True if the receiver allows the user to edit the document. False if an element in the receiver's document can be edited only if the CONTENTEDITABLE attribute has been set on the element or one of its parent elements.

(Read and Write computed property)

11.98.81 FrameHeightMBS as Double

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The height of the view frame.

Example:

```
MsgBox str(HTMLViewer1.FrameLeftMBS)+" "+str(HTMLViewer1.FrameTopMBS)+" "+str(HTMLViewer1.FrameWidthMBS)+" "+str(HTMLViewer1.FrameHeightMBS)
```

Notes: (Read and Write computed property)

11.98.82 FrameLeftMBS as Double

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The left position of the view frame.

Example:

```
MsgBox str(HTMLViewer1.FrameLeftMBS)+" "+str(HTMLViewer1.FrameTopMBS)+" "+str(HTMLViewer1.FrameWidthMBS)+" "+str(HTMLViewer1.FrameHeightMBS)
```

Notes: (Read and Write computed property)

11.98.83 FrameTopMBS as Double

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The top position of the view frame.

Example:

```
MsgBox str(HTMLViewer1.FrameLeftMBS)+" "+str(HTMLViewer1.FrameTopMBS)+" "+str(HTMLViewer1.FrameWidthMBS)+" "+str(HTMLViewer1.FrameHeightMBS)
```

Notes: (Read and Write computed property)

11.98.84 FrameWidthMBS as Double

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The width of the view frame.

Example:

```
MsgBox str(HTMLViewer1.FrameLeftMBS)+" "+str(HTMLViewer1.FrameTopMBS)+" "+str(HTMLViewer1.FrameWidthMBS)+" "+str(HTMLViewer1.FrameHeightMBS)
```

Notes: (Read and Write computed property)

11.98.85 GroupNameMBS as string

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The group name for this WebView.

Example:

```
HTMLViewer1.GroupNameMBS = "Hello"
```

Notes:

JavaScript may access named frames within the same group.
(Read and Write computed property)

11.98.86 mediaStyleMBS as String

Plugin Version: 7.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The value to use for the CSS media property.

Example:

```
htmlviewer1.mediaStyleMBS="print"
```

Notes:

Set or get the media style for the WebView. The mediaStyle will override the normal value of the CSS media property. Setting the value to nil will restore the normal value.

(Read and Write computed property)

11.98.87 PreferencesIdentifierMBS as string

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The string to use a prefix for storing values for this WebView in the user defaults database.

Example:

```
MsgBox HTMLViewer1.PreferencesIdentifierMBS
```

Notes:

If the WebPreferences for this WebView are stored in the user defaults database, the string set in this method will be used a key prefix.

(Read and Write computed property)

11.98.88 preferencesMBS as WebPreferencesMBS

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The preferences for this htmlviewer.

Example:

```
HTMLViewer1.preferencesMBS.defaultFontSize = 10  
HTMLViewer1.Loadpage "<p>Hello</p>", nil
```

Notes:

Nil on failure.

(Read and Write computed property)

11.98.89 ScrollHeightMBS as single

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The height of the scroll view.

Example:

```
MsgBox str(HTMLViewer1.ScrollWidthMBS)+" "+str(HTMLViewer1.ScrollHeightMBS)
```

Notes: (Read and Write computed property)

11.98.90 ScrollLeftMBS as single

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The left position of the scroll view.

Example:

```
HTMLViewer1.ScrollLeftMBS=HTMLViewer1.ScrollLeftMBS+5
```

Notes:

You can set this value to scroll manually.
(Read and Write computed property)

11.98.91 ScrollTopMBS as single

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The top position of the scroll view.

Example:

```
HTMLViewer1.ScrollTopMBS=HTMLViewer1.ScrollTopMBS+5
```

Notes:

You can set this value to scroll manually.
(Read and Write computed property)

11.98.92 ScrollWidthMBS as single

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The width of the scroll view.

Example:

```
MsgBox str(HTMLViewer1.ScrollWidthMBS)+" "+str(HTMLViewer1.ScrollHeightMBS)
```

Notes: (Read and Write computed property)

11.98.93 TextSizeMultiplierMBS as single

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The size of the text rendering in views managed by this webView.

Example:

```
HTMLViewer1.LoadPage "<p>Hello</p>", nil  
HTMLViewer1.TextSizeMultiplierMBS = 5
```

Notes:

A fractional percentage value, 1.0 is 100% .
(Read and Write computed property)

11.98.94 toolTipMBS as String

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The tooltip for this htmlviewer.

Example:

```
HTMLViewer1.toolTipMBS = "Test tooltip"
```

Notes: (Read and Write computed property)

11.98.95 visibleMBS as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether the control is visible.

Example:

```
MsgBox str(HTMLViewer1.visibleMBS)
```

Notes:

True is visible and false if hidden.
(Read and Write computed property)

11.99 Globals

11.99.1 InstallWebDownloadDelegate(extends w as WebViewMBS, theDelegate as WebDownloadDelegateMBS)

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Installs a WebDownloadDelegateMBS to receive events from webview.

Notes: You need to keep a reference to this WebDownloadDelegateMBS object in the window where the webview is inside so the class is not destroyed too early.

11.99.2 InstallWebFrameLoadDelegate(extends w as WebViewMBS, theDelegate as WebFrameLoadDelegateMBS)

Plugin Version: 8.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Installs a WebFrameLoadDelegateMBS to receive events from a webview control.

Notes: You need to keep a reference to this WebFrameLoadDelegateMBS object in the window where the htmlviewer is inside so the class is not destroyed too early.

11.99.3 InstallWebPolicyDelegate(extends w as WebViewMBS, theDelegate as WebPolicyDelegateMBS)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Installs a WebPolicyDelegateMBS to receive events from a webview control.

Notes: You need to keep a reference to this WebPolicyDelegateMBS object in the window where the htmlviewer is inside so the class is not destroyed too early.

11.99.4 InstallWebResourceLoadDelegate(extends w as WebViewMBS, theDelegate as WebResourceLoadDelegateMBS)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Installs a WebResourceLoadDelegateMBS to receive events from a webview control.

Notes: You need to keep a reference to this WebResourceLoadDelegateMBS object in the window where the WebView is inside so the class is not destroyed too early.

11.99.5 InstallWebUIDelegate(extends w as WebViewMBS, theDelegate as WebUIDelegateMBS)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Installs a HTMLViewerUIDelegateMBS to receive events from a webview control.

Notes: You need to keep a reference to this HTMLViewerUIDelegateMBS object in the window where the htmlviewer is inside so the class is not destroyed too early.

11.100 class WebArchiveMBS

11.100.1 class WebArchiveMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class to represent a webarchive.

Notes:

WebArchive represents a main resource as well as all the subresources and subframes associated with the main resource.

The main resource can be an entire web page, a portion of a web page, or some other kind of data such as an image.

This class can be used for saving standalone web pages, representing portions of a web page on the pasteboard, or any other application where one class is needed to represent rich web content.

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

11.100.2 Methods

11.100.3 Constructor(data as Memoryblock)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The initializer for creating a WebArchive from data.

Notes: data: The data representing the archive. This can be obtained using WebArchive's data method. See also:

- 11.100.4 Constructor(mainResource as WebResourceMBS) 956
- 11.100.5 Constructor(mainResource as WebResourceMBS, subresources() as WebResourceMBS) 956
- 11.100.6 Constructor(mainResource as WebResourceMBS, subresources() as WebResourceMBS, subframeArchives() as WebArchiveMBS) 956

11.100.4 Constructor(mainResource as WebResourceMBS)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A constructor for WebArchive.

Notes: Creates a new archive object with the given webresources.

See also:

- 11.100.3 Constructor(data as Memoryblock) 955
- 11.100.5 Constructor(mainResource as WebResourceMBS, subresources() as WebResourceMBS) 956
- 11.100.6 Constructor(mainResource as WebResourceMBS, subresources() as WebResourceMBS, subframeArchives() as WebArchiveMBS) 956

11.100.5 Constructor(mainResource as WebResourceMBS, subresources() as WebResourceMBS)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A constructor for WebArchive.

Notes:

Creates a new archive object with the given webresources.

The array can be empty.

See also:

- 11.100.3 Constructor(data as Memoryblock) 955
- 11.100.4 Constructor(mainResource as WebResourceMBS) 956
- 11.100.6 Constructor(mainResource as WebResourceMBS, subresources() as WebResourceMBS, subframeArchives() as WebArchiveMBS) 956

11.100.6 Constructor(mainResource as WebResourceMBS, subresources() as WebResourceMBS, subframeArchives() as WebArchiveMBS)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A constructor for WebArchive.

Notes:

Creates a new archive object with the given webresources.

The arrays can be empty.

See also:

- 11.100.3 Constructor(data as Memoryblock) 955
- 11.100.4 Constructor(mainResource as WebResourceMBS) 956
- 11.100.5 Constructor(mainResource as WebResourceMBS, subresources() as WebResourceMBS) 956

11.100.7 data as Memoryblock

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The data representation of the archive.

Notes: The data returned by this method can be used to save a web archive to a file or to place a web archive on the pasteboard using `WebArchivePboardType`. To create a `WebArchive` using the returned data, use the matching constructor.

11.100.8 mainResource as WebResourceMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The main resource of the archive.

Notes: Nil on any error.

11.100.9 subframeArchives as WebArchiveMBS()

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The archives representing the subframes of the archive (can be empty).

11.100.10 subresources as WebResourceMBS()

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The subresource of the archive (can be empty).

11.100.11 Properties

11.100.12 Handle as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The handle to the internal used `WebArchive` object.

Notes: (Read and Write property)

11.101 class WebBackForwardListMBS

11.101.1 class WebBackForwardListMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** WebBackForwardList holds an ordered list of WebHistoryItems that comprises the back and forward lists.

Notes:

Note that the methods which modify instances of this class do not cause navigation to happen in other layers of the stack; they are only for maintaining this data structure.

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.101.2 Methods

11.101.3 addItem(item as WebHistoryItemMBS)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds an entry to the list.

Notes:

The added entry is inserted immediately after the current entry.

If the current position in the list is not at the end of the list, elements in the forward list will be dropped at this point. In addition, entries may be dropped to keep the size of the list within the maximum size.

11.101.4 backItem as WebHistoryItemMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the entry right before the current entry.

11.101.5 backListCount as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the back list's current count.

11.101.6 backListWithLimit(limit as Integer) as WebHistoryItemMBS()

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a portion of the list before the current entry.

Notes:

limit: A cap on the size of the array returned.

An array of items before the current entry. The entries are in the order that they were originally visited.

11.101.7 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

11.101.8 containsItem(item as WebHistoryItemMBS) as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the item is part of the list.

Notes: Returns true if the item is found.

11.101.9 currentItem as WebHistoryItemMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the current entry.

11.101.10 forwardItem as WebHistoryItemMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the entry right after the current entry.

11.101.11 forwardListCount as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the forward list's current count.

11.101.12 forwardListWithLimit(limit as Integer) as WebHistoryItemMBS()

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a portion of the list after the current entry.

Notes:

limit: A cap on the size of the array returned.

An array of items after the current entry, or nil if there are none. The entries are in the order that they were originally visited.

11.101.13 goBack

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Move the current pointer back to the entry before the current entry.

11.101.14 goForward

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Move the current pointer ahead to the entry after the current entry.

11.101.15 goToItem(item as WebHistoryItemMBS)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Move the current pointer to the given entry.

11.101.16 itemAtIndex(index as Integer) as WebHistoryItemMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an entry the given distance from the current entry.

Notes:

index: Index of the desired list item relative to the current item; 0 is current item, -1 is back item, 1 is forward item, etc.

Returns the entry the given distance from the current entry. If index exceeds the limits of the list, nil is returned.

11.101.17 Properties

11.101.18 Handle as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal WebBackForwardList reference.

Notes: (Read and Write property)

11.101.19 capacity as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The list's maximum size.

Notes: (Read and Write computed property)

11.101.20 PageCacheSize as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of pages that may be cached.

Notes: (Read and Write computed property)

11.102 class WebDataSourceMBS

11.102.1 class WebDataSourceMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A WebDataSource represents the data associated with a web page.

Notes:

A datasource has a WebDocumentRepresentation which holds an appropriate representation of the data. WebDataSources manage a hierarchy of WebFrames. WebDataSources are typically related to a view by their containing WebFrame.

All methods in this class will catch exceptions from Cocoa and raise a NSErrorMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

11.102.2 Methods

11.102.3 addSubresource(Subresource as WebResourceMBS)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds a subresource to the data source.

Notes:

Adds a subresource to the data source's list of subresources.

Later, if something causes the data source to load the URL of the subresource, the data source will load the data from the subresource instead of from the network. For example, if one wants to add an image that is already downloaded to a web page, addSubresource can be called so that the data source uses the downloaded image rather than accessing the network. NOTE: If the data source already has a subresource with the same URL, addSubresource will replace it.

11.102.4 Constructor(request as NSURLRequestMBS)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new data source based on the given request.

Notes: Handle will be non 0 on success.

11.102.5 data as MemoryBlock

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The data will be incomplete until the datasource has completely loaded.

Notes: Returns the raw data associated with the datasource. Returns nil if the datasource hasn't loaded any data.

11.102.6 initialRequest as NSURLRequestMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a reference to the original request that created the datasource.

Notes: This request will be unmodified by WebKit.

11.102.7 isLoading as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true if there are any pending loads.

11.102.8 mainResource as WebResourceMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The main resource for this web data resource.

Notes: Nil on any error.

11.102.9 pageTitle as string

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns "" or the page title.

11.102.10 representation as WebDocumentRepresentationMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A representation holds a type specific representation of the datasource's data.

Notes:

The representation class is determined by mapping a MIME type to a class.

The representation is created once the MIME type of the datasource content has been determined.

Returns the representation associated with this datasource.

Returns nil if the datasource hasn't created its representation.

11.102.11 request as NSURLRequestMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the request that was used to create this datasource.

Notes: Nil on any error.

11.102.12 response as NSURLResponseMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The response for the data source.

Notes: Nil on any error.

11.102.13 subresourceForURL(url as string) as WebResourceMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a subresource for a given URL.

Notes: Returns non-nil if the data source has fully downloaded a subresource with the given URL.

11.102.14 subresources as WebResourceMBS()

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns all the subresources associated with the data source.

Notes: The returned array only contains subresources that have fully downloaded.

11.102.15 textEncodingName as string

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns either the override encoding, as set on the WebView for this dataSource or the encoding from the response.

11.102.16 unreachableURL as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** This will be non-empty only for dataSources created by calls to the WebFrame method loadAlternateHTMLString.

11.102.17 webArchive as WebArchiveMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** This method constructs a WebArchive using the original downloaded data.

Notes:

In the case of HTML, if the current state of the document is preferred, webArchive should be called on the DOM document instead.

Returns a WebArchive representing the data source, its subresources and child frames.
Nil on any error.

11.102.18 webFrame as WebFrameMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Return the frame that represents this data source.

Notes: Nil on any error.

11.102.19 Properties

11.102.20 Handle as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The handle to the internal used WebDataSource reference.

Notes: (Read and Write property)

11.103 class WebDocumentRepresentationMBS

11.103.1 class WebDocumentRepresentationMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class to represent a web document representation.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.103.2 Methods

11.103.3 canProvideDocumentSource as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true if the representation can provide document source.

11.103.4 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

11.103.5 documentSource as string

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the textual source representation of the document.

Notes: For HTML documents this is the original HTML source.

11.103.6 title as string

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Return the title for the document.

11.103.7 Properties

11.103.8 Handle as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal used handle to a WebDocumentRepresentation.

Notes: (Read and Write property)

11.104 class WebDocumentViewMBS

11.104.1 class WebDocumentViewMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The view to render a webdocument.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

You can embed this view in a CustomNSVIEWMBS to get more events for mouse and keyboard.
Subclass of the NSVIEWMBS class.

11.104.2 Methods

11.104.3 attributedString as NSAttributedStringMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** the document view content as one attributed string.

Example:

```
// save website as word document (if possible)
```

```
dim f as FolderItem
```

```
dim b as BinaryStream
```

```
dim a as NSAttributedStringMBS
```

```
a=HTMLViewer1.mainFrameMBS.frameView.documentView.attributedString
```

```
f=SpecialFolder.Desktop.Child("test.doc")
```

```
b=f.CreateBinaryFile("")
```

```
b.Write a.docFormatFromRange(0,a.length)
```

```
b.Close
```

Notes:

Works only if TextFunctionsAvailable returns true.
Returns nil on failure.

11.104.4 dataSourceUpdated(dataSource as WebDataSourceMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Called when the corresponding data source has received data.

11.104.5 deselectAll

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Deselects all text in the document view.

Example:

```
HTMLViewer1.mainFrameMBS.frameView.documentView.selectAll
```

Notes: Works only if TextFunctionsAvailable returns true.

11.104.6 Image as NSImageMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Makes a screenshot of the current displayed content.

Example:

```
dim f as FolderItem
dim b as BinaryStream
dim i as NSImageMBS
dim p as string
```

```
i=theWebDocumentView.Image
```

```
p=i.PNGRepresentation
```

```
f=SpecialFolder.Desktop.Child("test.png")
```

```
b=f.CreateBinaryFile("")
```

```
b.Write p
```

Notes:

Nil on failure.

The image returned is the page completely without scrollbars, so it may be a few thousand pixels height and may not fit on a page to print.

11.104.7 layout

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Called when the document view must immediately layout.

Notes: For simple views, setting the frame is a sufficient implementation of this method.

11.104.8 print

Plugin Version: 9.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Prints this view.

Notes: This is printing the whole view. The Cocoa framework shows print dialog and progress bar window for you.

11.104.9 SearchFor(text as string, Forward as boolean, CaseSensitive as boolean, Wrap as Boolean) as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Searches a document view for a string and highlights the string if it is found.

Example:

```
call myWebDocumentView.SearchFor "holiday", true, false, true
```

Notes:

Starts the search from the current selection. Will search across all frames.

text: The string to search for.

forward: True to search forward, False to search backwards.

caseSensitive: True to for case-sensitive search, False for case-insensitive search.

Returns true if found, false if not found.

Works only if SearchFunctionsAvailable returns true.

11.104.10 SearchFunctionsAvailable as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the document view implements the search functions.

Notes: Not all document view classes support all functions.

11.104.11 selectAll

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects all text in the document view.

Example:

```
HTMLViewer1.mainFrameMBS.frameView.documentView.selectAll
```

Notes: Works only if TextFunctionsAvailable returns true.

11.104.12 selectedAttributedString as NSAttributedStringMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Attributed string that represents the current selection.

Notes: Works only if TextFunctionsAvailable returns true.

11.104.13 SelectedString as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String that represents the current selection.

Example:

```
MsgBox HTMLViewer1.mainFrameMBS.frameView.documentView.SelectedString
```

Notes: Works only if TextFunctionsAvailable returns true.

11.104.14 setDataSource(dataSource as WebDataSourceMBS)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Called when the corresponding data source has been created.

11.104.15 setNeedsLayout(flag as boolean)

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Called when WebKit has determined that the document view needs to layout.

11.104.16 `stringValue` as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The plain text content of this document view.

Example:

```
MsgBox HTMLViewer1.mainFrameMBS.frameView.documentView.stringValue
```

Notes:

Works only if `TextFunctionsAvailable` returns true.

This method should be named `string`, but RB does not allow that.

11.104.17 `supportsTextEncoding` as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** True if the document view support text encoding, false if it doesn't.

Notes: Works only if `TextFunctionsAvailable` returns true.

11.104.18 `TextFunctionsAvailable` as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the document view implements the text functions.

Notes: Not all document view subclasses support all functions.

11.105 class WebDownloadDelegateMBS

11.105.1 class WebDownloadDelegateMBS

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for receiving events about downloads running in a htmlviewer/webviewer.

Notes:

The NSURLDownloadDelegate protocol defines methods that allow an object to receive informational callbacks about the asynchronous load of a download's URL request. Other delegate methods provide facilities that allow the delegate to customize the process of performing an asynchronous URL load.

Note that these delegate methods will be called on the thread that started the asynchronous load operation for the associated NSURLDownload object.

- A `didBegin` message will be sent to the delegate immediately upon starting the download.
- Zero or more `willSendRequest` messages will be sent to the delegate before any further messages are sent if it is determined that the download must redirect to a new location. The delegate can allow the redirect, modify the destination or deny the redirect.
- Zero or more `didReceiveAuthenticationChallenge` messages will be sent to the delegate if it is necessary to authenticate in order to download the request and NSURLDownload does not already have authenticated credentials.
- Zero or more `didCancelAuthenticationChallenge` messages will be sent to the delegate if NSURLDownload cancels the authentication challenge due to encountering a protocol implementation error.
- Zero or more `didReceiveResponse` messages will be sent to the delegate before receiving a `didReceiveDataOfLength` message. The only case where `didReceiveResponse` is not sent to a delegate is when the protocol implementation encounters an error before a response could be created.
- Zero or more `didReceiveDataOfLength` messages will be sent before `didFinish` or `didFailWithError` is sent to the delegate.
- Zero or one `decideDestinationWithSuggestedFilename` will be sent to the delegate when sufficient information has been received to determine the suggested filename for the downloaded file. The delegate will not receive this message if `setDestination` has already been sent to the NSURLDownload instance.
- A `didCreateDestination` message will be sent to the delegate when the NSURLDownload instance creates the file on disk.
- If NSURLDownload determines that the downloaded file is in a format that it is able to decode (MacBinary, Binhex or gzip), the delegate will receive a `shouldDecodeSourceDataOfMIMETYPE`. The delegate should return true to decode the data, false otherwise.
- Unless an NSURLDownload instance receives a cancel message, the delegate will receive one and only one `didFinish` or `didFailWithError`: message, but never both. In addition, once either of messages are sent, the delegate will receive no further messages for the given NSURLDownload.

Please use one delegate class per HTMLViewer (or WebViewMBS) and make sure they live about the same time. Our class keeps a reference on the WebView, so we can remove our delegate when the delegate is destroyed.

11.105.2 Events

11.105.3 `canAuthenticateAgainstProtectionSpace(download as NSURLDownloadMBS, protectionSpace as NSURLProtectionSpaceMBS) as boolean`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to determine whether the delegate is able to respond to a protection space's form of authentication. (required)

Notes:

download: The download sending the message.

protectionSpace: The protection space that generates an authentication challenge.

This method is called before `didReceiveAuthenticationChallenge`, allowing the delegate to inspect a protection space before attempting to authenticate against it. By returning true, the delegate indicates that it can handle the form of authentication, which it does in the subsequent call to `didReceiveAuthenticationChallenge`. Not implementing this method is the same as returning false, in which case default authentication handling is used.

Available in Mac OS X v10.6 and later.

11.105.4 Close

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The close event.

Notes: Called when the delegate is destroyed.

11.105.5 `decideDestinationWithSuggestedFilename(download as NSURLDownloadMBS, filename as string)`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The delegate receives this message when download has determined a suggested filename for the downloaded file. (required)

Notes:

download: The URL download object sending the message.

filename: The suggested filename for the download.

The suggested filename is either derived from the last path component of the URL and the MIME type or,

if the download was encoded, from the encoding. If the delegate wishes to modify the path, it should send `setDestination` to download.

The delegate will not receive this message if `setDestination` has already been called for the download.

Available in Mac OS X v10.2 and later.

11.105.6 `DidBegin(download as NSURLDownloadMBS)`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent immediately after a download object begins a download. (required)

Notes:

download: The URL download object sending the message.

Available in Mac OS X v10.2 and later.

11.105.7 `didCancelAuthenticationChallenge(download as NSURLDownloadMBS, challenge as NSURLAuthenticationChallengeMBS)`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent if an authentication challenge is canceled due to the protocol implementation encountering an error. (required)

Notes:

download: The URL download object sending the message.

challenge: The authentication challenge that caused the download object to cancel the download.

If the delegate receives this message the download will fail and the delegate will receive a `didFailWithError` message.

Available in Mac OS X v10.2 and later.

11.105.8 `didCreateDestination(download as NSURLDownloadMBS, path as string, file as folderitem)`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent when the destination file is created. (required)

Notes:

download: The URL download object sending the message.

path: The path to the destination file.
file: The path to the destination file as folderitem.

Available in Mac OS X v10.2 and later.

11.105.9 **didFailWithError(download as NSURLDownloadMBS, error as NSErrorMBS)**

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent if the download fails or if an I/O error occurs when the file is written to disk. (required)

Notes:

download: The URL download object sending the message.
error: The error that caused the failure of the download.

Any partially downloaded file will be deleted.

Once the delegate receives this message, it will receive no further messages for download.
Available in Mac OS X v10.2 and later.

11.105.10 **DidFinish(download as NSURLDownloadMBS)**

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent when a download object has completed downloading successfully and has written its results to disk. (required)

Notes:

download: The URL download object sending the message.

The delegate will receive no further messages for download.
Available in Mac OS X v10.2 and later.

11.105.11 **didReceiveAuthenticationChallenge(download as NSURLDownloadMBS, challenge as NSURLAuthenticationChallengeMBS)**

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent when the URL download must authenticate a challenge in order to download the request. (required)

Notes:

download: The URL download object sending the message.
challenge: The URL authentication challenge that must be authenticated in order to download the request.

This method gives the delegate the opportunity to determine the course of action taken for the challenge: provide credentials, continue without providing credentials or cancel the authentication challenge and the download.

The delegate can determine the number of previous authentication challenges by sending the message `previousFailureCount` to `challenge`.

If the previous failure count is 0 and the value returned by `proposedCredential` is `nil`, the delegate can create a new `NSURLCredential` object, providing information specific to the type of credential, and send a `useCredential` message to `challenge`, passing the credential and `challenge` as parameters. If `proposedCredential` is not `nil`, the value is a credential from the URL or the shared credential storage that can be provided to the user as feedback.

The delegate may decide to abandon further attempts at authentication at any time by sending `challenge` a `continueWithoutCredentialForAuthenticationChallenge` or a `cancelAuthenticationChallenge` message. The specific action is implementation dependent.

If the delegate implements this method, the download will suspend until [`challenge sender`] is sent one of the following messages: `useCredential`, `continueWithoutCredentialForAuthenticationChallenge` or `cancelAuthenticationChallenge`.

If the delegate does not implement this method the default implementation is used. If a valid credential for the request is provided as part of the URL, or is available from the `NSURLCredentialStorage` the challenge is sent a `useCredential:forAuthenticationChallenge` with the credential. If the challenge has no credential or the credentials fail to authorize access, then `continueWithoutCredentialForAuthenticationChallenge` is sent to `challenge sender` instead.

Available in Mac OS X v10.2 and later.

11.105.12 `didReceiveDataOfLength(download as NSURLDownloadMBS, length as UInt64)`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent as a download object receives data incrementally. (required)

Notes:

`download`: The URL download object sending the message.

`length`: The amount of data received in this increment of the download, measured in bytes.

Available in Mac OS X v10.2 and later.

11.105.13 `didReceiveResponse(download as NSURLDownloadMBS, response as NSURLResponseMBS)`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent when a download object has received sufficient load data to construct the `NSURLResponse` object for the download. (required)

Notes:

download: The URL download object sending the message.

response: The URL response object received as part of the download. response is immutable and will not be modified after this method is called.

In some rare cases, multiple responses may be received for a single download. In this case, the client should assume that each new response resets the download progress to 0 and should check the new response for the expected content length.

Available in Mac OS X v10.2 and later.

11.105.14 `Open`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The open event.

Notes:

Called just after the delegate has been installed in a `htmlviewer` control.

This allows you to initialize your stuff before the first event is called.

11.105.15 `shouldDecodeSourceDataOfMIMETYPE(download as NSURLDownloadMBS, encodingType as string) as boolean`

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent when a download object determines that the downloaded file is encoded to inquire whether the file should be automatically decoded. (required)

Notes:

download: The URL download object sending the message.

encodingType: The type of encoding used by the downloaded file. The supported encoding formats are `MacBinary ("application/macbinary")`, `Binhex ("application/mac-binhex40")` and `gzip ("application/gzip")`.

Return true to decode the file, false otherwise.

The delegate may receive this message more than once if the file has been encoded multiple times. This

method is not called if the downloaded file is not encoded.
Available in Mac OS X v10.2 and later.

11.105.16 ShouldUseCredentialStorage(download as NSURLDownloadMBS) as boolean

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent to determine whether the URL loader should consult the credential storage to authenticate the download. (required)

Notes:

connection: The connection sending the message.

This method is called before any attempt to authenticate is made. By returning false, the delegate tells the download not to consult the credential storage and makes itself responsible for providing credentials for any authentication challenges. Not implementing this method is the same as returning true. The delegate is free to consult the credential storage itself when it receives a didReceiveAuthenticationChallenge message.

Available in Mac OS X v10.6 and later.

11.105.17 willResumeWithResponse(download as NSURLDownloadMBS, response as NSURLResponseMBS, startingByte as Int64)

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent when a download object has received a response from the server after attempting to resume a download. (required)

Notes:

download: The URL download object sending the message.

response: The URL response received from the server in response to an attempt to resume a download.

The location of the start of the resumed data, in bytes.

Available in Mac OS X v10.4 and later.

11.105.18 willSendRequest(download as NSURLDownloadMBS, request as NSURLRequestMBS, redirectResponse as NSURLResponseMBS) as NSURLRequestMBS

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Sent when the download object determines that it must change URLs in order to continue loading a request. (required)

Notes:

download: The URL download object sending the message.

request: The proposed redirected request. The delegate should inspect the redirected request to verify that it meets its needs, and create a copy with new attributes to return to the connection if necessary.

redirectResponse: The URL response that caused the redirect. May be nil in cases where this method is not being sent as a result of involving the delegate in redirect processing.

Return the actual URL request to use in light of the redirection response. The delegate may copy and modify request as necessary to change its attributes, return request unmodified, or return nil.

If the delegate wishes to cancel the redirect, it should call the download object's cancel method. Alternatively, the delegate method can return nil to cancel the redirect, and the download will continue to process. This has special relevance in the case where redirectResponse is not nil. In this case, any data that is loaded for the download will be sent to the delegate, and the delegate will receive a downloadDidFinish: or download:didFailWithError: message, as appropriate.

The delegate can receive this message as a result of transforming a request's URL to its canonical form, or for protocol-specific reasons, such as an HTTP redirect. The delegate implementation should be prepared to receive this message multiple times.

Available in Mac OS X v10.2 and later.

11.105.19 WindowForAuthenticationSheet(download as NSURLDownloadMBS) as NSWindowMBS

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called to query the right window when automatically prompting with a sheet.

11.106 class WebFrameLoadDelegateMBS

11.106.1 class WebFrameLoadDelegateMBS

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The delegate to receive events about frames being loaded.

Notes:

A WebView's WebFrameLoadDelegate tracks the loading progress of its frames. When a data source of a frame starts to load, the data source is considered provisional". Once at least one byte is received, the data source is considered "committed". This is done so the contents of the frame will not be lost if the new data source fails to successfully load.

Please use one delegate class per HTMLViewer (or WebViewMBS) and make sure they live about the same time. Our class keeps a reference on the WebView, so we can remove our delegate when the delegate is destroyed.

11.106.2 Events

11.106.3 Close

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The close event.

Notes: Called when the delegate is destroyed.

11.106.4 didCancelClientRedirectForFrame(WebView as WebViewMBS, frame as WebFrameMBS) as boolean

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when a client redirect is cancelled.

Notes:

WebView: The web view containing the frame.

frame: The frame being loaded.

This might happen if a frame changes locations before a pending client redirect is fired. The client redirect occurred in frame.

11.106.5 `didChangeLocationWithinPageForFrame(Web View as WebViewMBS, frame as WebFrameMBS)` as boolean

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that the scroll position in a frame has changed

Notes:

frame: The frame that scrolled

This method is called when anchors within a page have been clicked.

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.6 `didCommitLoadForFrame(Web View as WebViewMBS, frame as WebFrameMBS)` as boolean

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that the load has changed from provisional to committed

Notes:

frame: The frame for which the load has committed

This method is called after the provisional data source has become the committed data source.

In some cases, a single load may be committed more than once. This happens in the case of multipart/x-mixed-replace, also known as "server push". In this case, a single location change leads to multiple documents that are loaded in sequence. When this happens, a new commit will be sent for each document.

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.7 `didFailLoadWithError(Web View as WebViewMBS, ErrorString as string, frame as WebFrameMBS)` as boolean

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that the committed load of a frame has failed

Notes:

error: The error that occurred

frame: The frame that failed to load

This method is called after a data source has committed but failed to completely load.

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.8 didFailProvisionalLoadWithError(WebView as WebViewMBS, ErrorString as string, frame as WebFrameMBS) as boolean

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that the provisional load has failed

Notes:

error: The error that occurred

frame: The frame for which the error occurred

This method is called after the provisional data source has failed to load.

The frame will continue to display the contents of the committed data source if there is one.

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.9 didFinishLoadForFrame(WebView as WebViewMBS, frame as WebFrameMBS) as boolean

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that the committed load of a frame has completed

Notes:

frame: The frame that finished loading

This method is called after the committed data source of a frame has successfully loaded and will only be called when all subresources such as images and stylesheets are done loading. Plug-In content and JavaScript-requested loads may occur after this method is called.

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.10 `didReceiveIcon(Web View as WebViewMBS, image as NSImageMBS, frame as WebFrameMBS) as boolean`

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that a page icon image for a frame has been received

Notes:

image: The icon image. Also known as a "favicon".

frame: The frame for which a page icon has been received

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.11 `didReceiveServerRedirectForProvisionalLoadForFrame(Web View as WebViewMBS, frame as WebFrameMBS) as boolean`

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that a server redirect occurred during the provisional load.

Notes:

frame: The frame for which the redirect occurred

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.12 `didReceiveTitle(Web View as WebViewMBS, title as string, frame as WebFrameMBS) as boolean`

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that the page title for a frame has been received

Notes:

title: The new page title

frame: The frame for which the title has been received

The title may update during loading; clients should be prepared for this.

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.13 didStartProvisionalLoadForFrame(Web View as Web ViewMBS, frame as WebFrameMBS) as boolean

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that the provisional load of a frame has started

Notes:

frame: The frame for which the provisional load has started

This method is called after the provisional data source of a frame has started to load.

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.14 Open

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The open event.

Notes:

Called just after the delegate has been installed in a htmlviewer control.

This allows you to initialize your stuff before the first event is called.

11.106.15 willCloseFrame(Web View as Web ViewMBS, frame as WebFrameMBS) as boolean

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that a pending client-side redirect has been cancelled

Notes:

frame: The frame for which the pending redirect was cancelled

A client-side redirect can be cancelled if a frame changes location before the timeout.

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.16 **willPerformClientRedirectToURL(Web View as Web ViewMBS, URL as String, delay as Double, fireDate as Date, frame as WebFrameMBS) as boolean**

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that a frame will perform a client-side redirect

Notes:

frame: The frame for which the pending redirect was cancelled

URL: The URL to be redirected to

seconds: Seconds in which the redirect will happen

date: The fire date

name: The frame on which the redirect will occur

This method can be used to continue progress feedback while a client-side redirect is pending.

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.106.17 **windowScriptObjectAvailable(Web View as Web ViewMBS, windowScriptObject as WebScriptObjectMBS) as boolean**

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Notifies the delegate that the scripting object for a page is available.

Notes:

This is called before the page is loaded. It may be useful to allow delegates to bind native objects to the window.

windowScriptObject: The WebScriptObject for the window in the scripting environment.

If you have code in this event, return true to block the event from being sent to the next delegate. Return false to allow sending to next delegate.

11.107 class WebFrameMBS

11.107.1 class WebFrameMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Every web page is represented by at least one WebFrame.

Notes:

A WebFrame has a WebFrameView and a WebDataSource.

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.107.2 Methods

11.107.3 childFrames as WebFrameMBS()

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The frames in the array are associated with a frame set or iframe.

Notes: Returns an array of WebFrames.

11.107.4 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

11.107.5 dataSource as WebDataSourceMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the committed data source.

Example:

```
// shows the page source in a msgbox:
```

```
dim w as WebFrameMBS
```

```
w=HTMLViewer1.mainFrameMBS
```

```
msgbox w.dataSource.data
```

Notes: Will return nil if the provisional data source hasn't yet been loaded.

11.107.6 DOMDocument as Variant

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The DOM representation of this web document.

Notes: The value of this variant must be an object of class DOMDocumentMBS.

11.107.7 findFrameNamed(name as string) as WebFrameMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** This method returns a frame with the given name.

Notes:

findFrameNamed returns self for `_self` and `_current`, the parent frame for `_parent` and the main frame for `_top`.

findFrameNamed returns self for `_parent` and `_top` if the receiver is the mainFrame.

findFrameNamed first searches from the current frame to all descending frames then the rest of the frames in the WebView. If still not found, findFrameNamed searches the frames of the other WebViews.

11.107.8 frameElement as Variant

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the FRAME element from the HTML source code as a DOM HTML Element object.

Notes:

nil on any error.

The value of this variant must be an object of class DOMHTMLElementMBS.

11.107.9 frameView as WebFrameViewMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The WebFrameView for this frame.

11.107.10 loadArchive(archive as WebArchiveMBS)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Causes WebFrame to load a WebArchive.

11.107.11 LoadHTMLString(data as memoryblock, mime as string, encoding as string, url as string)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads a html string.
Notes:

data: The data to use for the main page of the document.

mime: The MIME type of the data.

encoding: The encoding of the data.

url: The base URL to apply to relative URLs within the document.

See also:

- 11.107.12 LoadHTMLString(text as string, url as string) 989

11.107.12 LoadHTMLString(text as string, url as string)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads a html string.
Notes:

text: The string to use for the main page of the document.

url: The base URL to apply to relative URLs within the document.

See also:

- 11.107.11 LoadHTMLString(data as memoryblock, mime as string, encoding as string, url as string)
989

11.107.13 LoadURL(url as string)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads the given URL.

See also:

- 11.107.14 LoadURL(url as string, CachePolicy as Integer, TimeOut as Double) 989

11.107.14 LoadURL(url as string, CachePolicy as Integer, TimeOut as Double)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads the url.
Notes:

The timeout interval is in seconds.

Constants for the `CachePolicy` parameter:

<code>const UseProtocolCachePolicy</code>	= 0	Specifies that the caching logic defined in the protocol implementation, if any, is used for a particular URL load request. This is the default policy for URL load requests.
<code>const ReloadIgnoringCacheData</code>	= 1	Specifies that the data for the URL load should be loaded from the originating source. No existing cache data should be used to satisfy a URL load request.
<code>const ReturnCacheDataElseLoad</code>	= 2	Specifies that the existing cached data should be used to satisfy the request, regardless of its age or expiration date. If there is no existing data in the cache corresponding the request, the data is loaded from the originating source.
<code>const ReturnCacheDataDontLoad</code>	= 3	Specifies that the existing cache data should be used to satisfy a request, regardless of its age or expiration date. If there is no existing data in the cache corresponding to a URL load request, no attempt is made to load the data from the originating source, and the load is considered to have failed. This constant specifies a behavior that is similar to an "offline" mode.

See also:

- 11.107.13 `LoadURL(url as string)` 989

11.107.15 `name as String`

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The frame name.

11.107.16 `parentFrame as WebFrameMBS`

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The frame containing this frame, or nil if this is a top level frame.

Notes: Nil on any error.

11.107.17 `provisionalDataSource as WebDataSourceMBS`

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Will return the provisional data source.

Notes: The provisional data source will be nil if no data source has been set on the frame, or the data source has successfully transitioned to the committed data source.

11.107.18 reload

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Reloads the frame.

11.107.19 reloadFromOrigin

Plugin Version: 12.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Performs an end-to-end revalidation using cache-validating conditionals if possible.

Notes:

End-to-end reload may be necessary if the cache entry has become corrupted for some reason.

Available in OS X v10.6 and later. So this raises exception on older OS X versions. In that case, please catch exception and call reload.

11.107.20 stopLoading

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Stop any pending loads on the frame's data source, and its children.

11.107.21 webView as WebViewMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the WebView for the document that includes this frame.

11.107.22 Properties

11.107.23 Handle as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal used reference to a WebFrame object.

Notes: (Read and Write property)

11.108 class WebFrameViewMBS

11.108.1 class WebFrameViewMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class to display a webframe.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard.
Subclass of the NSViewMBS class.

11.108.2 Methods

11.108.3 Constructor

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new web frame view with size 100/100 and position 0/0

Example:

```
dim t as new WebFrameViewMBS
```

Notes: On success the handle property is not zero.
See also:

- 11.108.4 Constructor(Handle as Integer) 992
- 11.108.5 Constructor(left as Double, top as Double, width as Double, height as Double) 993

11.108.4 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given WebFrameView handle.

Example:

```
dim t as new WebFrameViewMBS(0, 0, 100, 100)
dim v as new WebFrameViewMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```


11.108. CLASS WEBFRAMEVIEWMBS 993

Notes: The handle is casted to a WebFrameView and the plugin retains this handle.
See also:

- 11.108.3 Constructor 992
- 11.108.5 Constructor(left as Double, top as Double, width as Double, height as Double) 993

11.108.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new button with the given size and position.

Example:

```
dim x as new WebFrameViewMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.
See also:

- 11.108.3 Constructor 992
- 11.108.4 Constructor(Handle as Integer) 992

11.108.6 documentView as WebDocumentViewMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the WebFrameView's document subview.

Notes: Returns nil on error or the subview that renders the WebFrameView's contents.

11.108.7 webFrame as WebFrameMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the WebFrame associated with this WebFrameView.

11.108.8 Properties

11.108.9 allowsScrolling as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the WebFrameView allows its document to be scrolled.

Notes:

True to allow the document to be scrolled, false to disallow scrolling.
(Read and Write computed property)

11.109 class WebHistoryItemMBS

11.109.1 class WebHistoryItemMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** WebHistoryItems are created by WebKit to represent pages visited.

Notes:

The WebBackForwardList and WebHistory classes both use WebHistoryItems to represent pages visited. With the exception of the displayTitle, the properties of WebHistoryItems are set by WebKit. WebHistoryItems are normally never created directly.

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

11.109.2 Methods

11.109.3 Constructor(URLstring as String, title as string, lastVisited as date)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Constructor for a new history item with the given values.

Example:

```
dim w as WebHistoryItemMBS
dim d as new date
```

```
w=new WebHistoryItemMBS("http://www.apple.com","Apple Inc.",d)
```

Notes:

WebHistoryItems are normally created for you by the WebKit.

You may use this method to prepopulate a WebBackForwardList, or create 'artificial' items to add to a WebBackForwardList. When first initialized the URLstring and originalURLstring will be the same.

See also:

- 11.109.4 Constructor(URLstring as String, title as string, lastVisited as Double) 995

11.109.4 Constructor(URLstring as String, title as string, lastVisited as Double)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Constructor for a new history item with the given values.

Notes:

WebHistoryItems are normally created for you by the WebKit.

You may use this method to prepopulate a WebBackForwardList, or create 'artificial' items to add to a WebBackForwardList. When first initialized the URLString and originalURLString will be the same.

See also:

- 11.109.3 Constructor(URLString as String, title as string, lastVisited as date) 995

11.109.5 icon as NSImageMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The favorite icon of the page represented by this item.

Notes: This icon returned will be determined by the WebKit.

11.109.6 lastVisited as date

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The last time the page represented by this item was visited.

Notes: Nil on any error.

11.109.7 lastVisitedTimeInterval as Double

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The last time the page represented by this item was visited.

Notes: The interval is since the reference date as determined by NSDate. This value is normally set by the WebKit.

11.109.8 originalURLString as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The string representation of the original URL of this item.

Notes: This value is normally set by the WebKit.

11.109.9 title as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The title of the page represented by this item.

Notes: This title cannot be changed by the client. This value is normally set by the WebKit when a page

title for the item is received.

11.109.10 URLString as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The string representation of the URL represented by this item.

Notes:

The URLString may be different than the originalURLString if the page redirected to a new location. This value is normally set by the WebKit.

The value is the string corresponding to the final URL of this item.

11.109.11 Properties

11.109.12 Handle as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The handle to the internal used WebHistoryItem reference.

Notes: (Read and Write property)

11.109.13 alternateTitle as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A title that may be used by the client to display this item.

Notes: (Read and Write computed property)

11.110 class WebHistoryMBS

11.110.1 class WebHistoryMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** WebHistory is used to track pages that have been loaded by WebKit.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.110.2 Methods

11.110.3 addItem(item as WebHistoryItemMBS)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds an item to the history.

11.110.4 addItems(items() as WebHistoryItemMBS)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds all items in the array to the history.

11.110.5 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

11.110.6 itemForURL(url as string) as WebHistoryItemMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Get an item for a specific URL.

Notes:

URL: The URL of the history item to search for.

Returns an item matching the URL or nil on any error.

11.110.7 loadFromURL(file as folderitem, byref description as string) as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads a web history from the given file.

Notes:

Returns true if successful, false otherwise.

description will be set to the error description on return in case of an error.

See also:

- 11.110.8 loadFromURL(url as string, byref description as string) as boolean 999

11.110.8 loadFromURL(url as string, byref description as string) as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads a web history from the given URL.

Notes:

Returns true if successful, false otherwise.

description will be set to the error description on return in case of an error.

See also:

- 11.110.7 loadFromURL(file as folderitem, byref description as string) as boolean 999

11.110.9 optionalSharedHistory as WebHistoryMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A shared WebHistory instance initialized with the default history file.

Notes:

Nil on any error.

If you set it, don't set it to nil.

(Read and Write computed property)

11.110.10 orderedItemsLastVisitedOnDay(day as date) as WebHistoryItemMBS()

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Get an array of WebHistoryItem that were last visited on the day represented by the specified date, ordered from most recent to oldest.

Notes: Returns an array of WebHistoryItems last visited on the indicated day or nil.

11.110.11 `orderedLastVisitedDays` as `date()`

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Get an array of dates, each one representing a unique day that contains one or more history items, ordered from most recent to oldest.

11.110.12 `removeAllItems`

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes all items from this history.

11.110.13 `removeItem`(`item` as `WebHistoryItemMBS`)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes a `WebHistoryItem` from the `WebHistory`.

11.110.14 `removeItems`(`items()` as `WebHistoryItemMBS`)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes an array of `WebHistoryItems` from the `WebHistory`.

11.110.15 `saveToURL`(`file` as `folderitem`, `byref description` as `string`) as `boolean`

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Save history to file.
Notes:

It is the client's responsibility to call this at appropriate times.

Returns true if successful, false otherwise.

`description` will be set to the error description on return in case of an error.

See also:

- 11.110.16 `saveToURL`(`url` as `string`, `byref description` as `string`) as `boolean`

1000

11.110.16 `saveToURL`(`url` as `string`, `byref description` as `string`) as `boolean`

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Save history to URL.
Notes:

11.110. CLASS WEBHISTORYMBS

1001

It is the client's responsibility to call this at appropriate times.

Returns true if successful, false otherwise.

description will be set to the error description on return in case of an error.

See also:

- 11.110.15 saveToURL(file as folderitem, byref description as string) as boolean

1000

11.110.17 Properties

11.110.18 Handle as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The handle to the internal used WebHistory reference.

Notes: (Read and Write property)

11.110.19 historyAgeInDaysLimit as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum number of days to be read from stored history.

Notes: (Read and Write computed property)

11.110.20 historyItemLimit as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum number of items that will be stored by the WebHistory.

Notes: (Read and Write computed property)

11.111 class WebOpenPanelResultListenerMBS

11.111.1 class WebOpenPanelResultListenerMBS

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** WebView user interface delegates that implement the `runOpenPanelForFileButtonWithResultListener` method use the methods defined in this protocol to communicate with the listener object.

Notes:

The methods allow the delegate to send a cancel message, or set the selected file name. This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.111.2 Methods

11.111.3 cancel

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when a file open operation was cancelled.

11.111.4 chooseFilename(file as folderitem)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Handles the results of a file open panel.

Notes: This method is invoked when a file was selected in a file open panel.

See also:

- 11.111.5 chooseFilename(filename as string) 1002

11.111.5 chooseFilename(filename as string)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Handles the results of a file open panel.

Notes: This method is invoked when a file was selected in a file open panel.

See also:

- 11.111.4 chooseFilename(file as folderitem) 1002

11.111.6 chooseFileNames(fileNames() as string)

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Handles the results of a file open panel.

11.111. CLASS WEBOPENPANELRESULTLISTENERMBS 1003

Notes: This method is invoked when a file was selected in a file open panel.

See also:

- 11.111.7 chooseFileNames(files() as folderitem) 1003

11.111.7 chooseFileNames(files() as folderitem)

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Handles the results of a file open panel.

Notes: This method is invoked when a file was selected in a file open panel.

See also:

- 11.111.6 chooseFileNames(filename() as string) 1002

11.111.8 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

11.111.9 Properties

11.111.10 allowMultipleFiles as Boolean

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether multiple selection is allowed.

Notes: (Read only property)

11.111.11 Handle as Integer

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The handle to the internal reference.

Notes: (Read and Write property)

11.112 class WebPolicyDecisionListenerMBS

11.112.1 class WebPolicyDecisionListenerMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** This protocol is used to call back with the results of a policy decision.

Notes:

This provides the ability to make these decisions asynchronously, which means the decision can be made by prompting with a sheet, for example.

All methods in this class will catch exceptions from Cocoa and raise a `NSError` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.112.2 Methods

11.112.3 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

11.112.4 download

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Download this resource.

Notes:

Download the resource instead of displaying it.

This method is more than just a convenience because it allows an in-progress navigation to be converted to a download based on content type, without having to stop and restart the load.

11.112.5 ignore

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Ignore this resource.

Notes:

Do nothing (but the client may choose to handle the request itself)

A policy of ignore prevents WebKit from doing anything further with the load, however, the client is still free to handle the request in some other way, such as opening a new window, opening a new window behind the current one, opening the URL in an external app, revealing the location in Finder if a file URL, etc.

11.112.6 use

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Use the resource.

Notes:

If there remain more policy decisions to be made, then the next policy delegate method gets to decide. This will be either the next navigation policy delegate if there is a redirect, or the content policy delegate. If there are no more policy decisions to be made, the resource will be displayed inline if possible.

If there is no view available to display the resource inline, then `unableToImplementPolicyWithError` will be called with an appropriate error.

If a new window is going to be created for this navigation as a result of frame targetting, then it will be created once you call this method.

11.112.7 Properties

11.112.8 Handle as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal used reference to the `WebPolicyDecisionListener` object.

Notes: (Read and Write property)

11.113 class WebPolicyDelegateMBS

11.113.1 class WebPolicyDelegateMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class to decide policies for webkit.

Notes:

While loading a URL, WebKit asks the WebPolicyDelegate for policies that determine the action of what to do with the URL or the data that the URL represents. Typically, the policy handler methods are called in this order:

```
decidePolicyForNewWindowAction (at most once)
decidePolicyForNavigationAction (zero or more times)
decidePolicyForMIMEType:request (zero or more times)<BR>
```

New window policy is always checked. Navigation policy is checked for the initial load and every redirect unless blocked by an earlier policy. Content policy is checked once the content type is known, unless an earlier policy prevented it.

In rare cases, content policy might be checked more than once. This occurs when loading a "multipart/x-mixed-replace" document, also known as "server push". In this case, multiple documents come in one navigation, with each replacing the last. In this case, content policy will be checked for each one.

All methods in this class will catch exceptions from Cocoa and raise a `NSError` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Please use one delegate class per `HTMLViewer` (or `WebViewMBS`) and make sure they live about the same time. Our class keeps a reference on the `WebView`, so we can remove our delegate when the delegate is destroyed.

11.113.2 Events

11.113.3 Close

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The close event.

Notes: Called when the delegate is destroyed.

11.113.4 **decidePolicyForMimeType**(type as string,request as NSURLRequestMBS, frame as WebFrameMBS, decisionListener as WebPolicyDecisionListenerMBS) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns the policy for content which has been partially loaded.

Notes:

Sent after didStartProvisionalLoadForFrame is sent on the WebFrameLoadDelegate.

type: MIME type for the resource.

request: A NSURLRequest for the partially loaded content.

frame: The frame which is loading the URL.

decisionListener: The object to call when the decision is made

Return true to avoid the default delegate to handle this request. Call listener methods to decide what to do.

See also MimeTypeToFileExtensionMBS function.

11.113.5 **decidePolicyForNavigationAction**(request as NSURLRequestMBS, frame as WebFrameMBS, decisionListener as WebPolicyDecisionListenerMBS, NavigationType as Integer, ModifierFlags as Integer, OriginalURL as string) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This method is called to decide what to do with a proposed navigation.

Notes:

request: The request for the proposed navigation

frame: The WebFrame in which the navigation is happening

decisionListener: The object to call when the decision is made

This method will be called before loading starts, and on every redirect.

Values for NavigationType:

const WebNavigationTypeLinkClicked	= 0	A link with an href was clicked.
const WebNavigationTypeFormSubmitted	= 1	A form was submitted.
const WebNavigationTypeBackForward	= 2	The user chose back or forward.
const WebNavigationTypeReload	= 3	The User hit the reload button.
const WebNavigationTypeFormResubmitted	= 4	A form was resubmitted (by virtue of doing back, forward or reload).
const WebNavigationTypeOther	= 5	Navigation is taking place for some other reason.

Return true to avoid the default delegate to handle this request. Call listener methods to decide what to do.

11.113.6 `decidePolicyForNewWindowAction(request as NSURLRequestMBS, framename as string, decisionListener as WebPolicyDecisionListenerMBS, NavigationType as Integer, ModifierFlags as Integer, OriginalURL as string)` as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This method is called to decide what to do with an targetted nagivation that would open a new window.

Notes:

request The request for the proposed navigation
 frame The frame in which the navigation is taking place
 decisionListener The object to call when the decision is made

This method is provided so that modified clicks on a targetted link which opens a new frame can prevent the new window from being opened if they decide to do something else, like download or present the new frame in a specialized way.

If this method picks a policy of Use, the new window will be opened, and `decidePolicyForNavigationAction` will be called with a `WebNavigationType` of `WebNavigationTypeOther` in its action. This is to avoid possible confusion about the modifiers.

Values for `NavigationType`:

<code>const WebNavigationTypeLinkClicked</code>	= 0	A link with an href was clicked.
<code>const WebNavigationTypeFormSubmitted</code>	= 1	A form was submitted.
<code>const WebNavigationTypeBackForward</code>	= 2	The user chose back or forward.
<code>const WebNavigationTypeReload</code>	= 3	The User hit the reload button.
<code>const WebNavigationTypeFormResubmitted</code>	= 4	A form was resubmitted (by virtue of doing back, forward or reload).
<code>const WebNavigationTypeOther</code>	= 5	Navigation is taking place for some other reason.

Return true to avoid the default delegate to handle this request. Call listener methods to decide what to do.

11.113.7 `Open`

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The open event.

Notes:

Called just after the delegate has been installed in a `htmlviewer` control.
 This allows you to initialize your stuff before the first event is called.

11.113.8 unableToImplementPolicyWithError(errorString as string, frame as WebFrameMBS) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a WebPolicy could not be implemented.

Notes:

It is up to the client to display appropriate feedback.

errorString: The error that caused the policy to not be implemented.

frame: The frame in which the policy could not be implemented.

Return true to avoid the default delegate to handle this request.

11.114 class WebPreferencesMBS

11.114.1 class WebPreferencesMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class for handling webkit preferences.

Example:

```
MsgBox WebPreferencesMBS.standardPreferences.serifFontFamily
```

Notes: All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

11.114.2 Methods

11.114.3 Constructor(identifier as String)

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new `WebPreferences` object with loading the values stored with the given identifier.

Example:

```
dim w as new WebPreferencesMBS("de.monkeybreadsoftware.mytest")
```

Notes: On success handle is not zero.

11.114.4 standardPreferences as WebPreferencesMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the default preferences.

Example:

```
MsgBox WebPreferencesMBS.standardPreferences.identifier
```

Notes: nil on any error.

11.114.5 Properties

11.114.6 allowsAnimatedImageLooping as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether animated image files are allowed to loop.

Example:

```
HTMLViewer1.preferencesMBS.allowsAnimatedImageLooping = false
```

Notes: (Read and Write property)

11.114.7 allowsAnimatedImages as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether to allow animated images.

Example:

```
HTMLViewer1.preferencesMBS.allowsAnimatedImages = false
```

Notes:

e.g. GIF images.

(Read and Write property)

11.114.8 arePlugInsEnabled as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether plugins are enabled.

Example:

```
HTMLViewer1.preferencesMBS.arePlugInsEnabled=False
```

Notes: (Read and Write property)

11.114.9 autosaves as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether preferences are saved automatically.

Example:

```
HTMLViewer1.preferencesMBS.autosaves = false
```

Notes:

If autosave preferences is true the settings represented by WebPreferences will be stored in the user defaults database.

(Read and Write property)

11.114.10 cacheModel as Integer

Plugin Version: 9.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:**

The usage model according to which WebKit determines its caching behavior.

Example:

```
HTMLViewer1.preferencesMBS.cacheModel = WebPreferencesMBS.WebCacheModelDocumentViewer
```

Notes:

Specifies a usage model for a WebView, which WebKit will use to determine its caching behavior.

If necessary, WebKit will prune its caches to match cacheModel if you set the value.

Research indicates that users tend to browse within clusters of documents that hold resources in common, and to revisit previously visited documents. WebKit and the frameworks below it include built-in caches that take advantage of these patterns, substantially improving document load speed in browsing situations. The WebKit cache model controls the behaviors of all of these caches, including NSURLCache and the various WebCore caches.

Applications with a browsing interface can improve document load speed substantially by specifying WebCacheModelDocumentBrowser. Applications without a browsing interface can reduce memory usage substantially by specifying WebCacheModelDocumentViewer.

If cacheModel is not set, WebKit will select a cache model automatically.
(Read and Write property)

11.114.11 cursiveFontFamily as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name of the cursive font family.

Example:

```
MsgBox HTMLViewer1.preferencesMBS.cursiveFontFamily
```

Notes: (Read and Write property)

11.114.12 databasesEnabled as Boolean

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether databases are enabled.

Example:

```
dim p as WebPreferencesMBS = HTMLViewer1.preferencesMBS
```

```
MsgBox str(p.databasesEnabled)
```

Notes:

This is a property defined in WebKit, but not in Apple's headers, so please wrap in try/catch to catch NSExcptionMBS if method is not implemented in older Webkit versions.

(Read and Write property)

11.114.13 defaultFixedFontSize as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The default font size for fixed fonts.

Example:

```
MsgBox str(WebPreferencesMBS.standardPreferences.defaultFixedFontSize)
```

Notes: (Read and Write property)

11.114.14 `defaultFontSize` as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The default font size for fonts.

Example:

```
MsgBox str(HTMLViewer1.preferencesMBS.defaultFontSize)
```

Notes:

(for non fixed fonts)

(Read and Write property)

11.114.15 `defaultTextEncodingName` as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name of the default text encoding.

Example:

```
MsgBox HTMLViewer1.preferencesMBS.defaultTextEncodingName
```

Notes: (Read and Write property)

11.114.16 `fantasyFontFamily` as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name of the fantasy font family.

Example:

```
MsgBox HTMLViewer1.preferencesMBS.fantasyFontFamily
```

Notes: (Read and Write property)

11.114.17 `fixedFontFamily` as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name of the fixed font family.

Example:

MsgBox HTMLViewer1.preferencesMBS.fixedFontFamily

Notes: (Read and Write property)

11.114.18 Handle as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal used reference to the WebPreferences object.

Example:

MsgBox str(WebPreferencesMBS.standardPreferences.Handle)

Notes: (Read and Write property)

11.114.19 identifier as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The identifier for this WebPreferences.

Example:

MsgBox HTMLViewer1.preferencesMBS.identifier

Notes: (Read only property)

11.114.20 isJavaEnabled as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether java is enabled.

Example:

HTMLViewer1.preferencesMBS.isJavaEnabled = [false](#)

Notes: (Read and Write property)

11.114.21 isJavaScriptEnabled as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether Javascript is enabled.

Example:

```
HTMLViewer1.preferencesMBS.isJavaScriptEnabled = false
```

Notes: (Read and Write property)

11.114.22 javaScriptCanOpenWindowsAutomatically as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether javascript is allowed to open windows automatically.

Example:

```
HTMLViewer1.preferencesMBS.javaScriptCanOpenWindowsAutomatically = false
```

Notes: (Read and Write property)

11.114.23 loadsImagesAutomatically as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether images are loaded automatically.

Example:

```
HTMLViewer1.preferencesMBS.loadsImagesAutomatically = false
```

Notes: (Read and Write property)

11.114.24 localStorageDatabasePath as String

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The local path for local storage.

Example:

```
// create folder  
dim f as FolderItem = SpecialFolder.Desktop.Child("databases")
```



```
f.CreateAsFolder
```

```
// set it  
dim p as WebPreferencesMBS = HTMLViewer1.preferencesMBS  
p.localStorageDatabasePath = f.NativePath  
p.localStorageEnabled = true
```

Notes:

This is a property defined in WebKit, but not in Apple's headers, so please wrap in try/catch to catch NSExcptionMBS if method is not implemented in older Webkit versions.
(Read and Write property)

11.114.25 localStorageEnabled as Boolean

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether local storage is enabled.

Example:

```
dim p as WebPreferencesMBS = HTMLViewer1.preferencesMBS  
  
MsgBox str(p.localStorageEnabled)
```

Notes:

This is a property defined in WebKit, but not in Apple's headers, so please wrap in try/catch to catch NSExcptionMBS if method is not implemented in older Webkit versions.
(Read and Write property)

11.114.26 minimumFontSize as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The minimum font size.

Example:

```
MsgBox str(HTMLViewer1.preferencesMBS.minimumFontSize)
```

Notes: (Read and Write property)

11.114.27 `minimumLogicalFontSize` as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The minimum logical font size.

Example:

```
MsgBox str(HTMLViewer1.preferencesMBS.minimumLogicalFontSize)
```

Notes: (Read and Write property)

11.114.28 `privateBrowsingEnabled` as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether private browsing is enabled.

Example:

```
HTMLViewer1.preferencesMBS.privateBrowsingEnabled = false
```

Notes:

If private browsing is enabled, WebKit will not store information about sites the user visits.
(Read and Write property)

11.114.29 `sansSerifFontFamily` as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name of the sans serif font family.

Example:

```
MsgBox HTMLViewer1.preferencesMBS.sansSerifFontFamily
```

Notes: (Read and Write property)

11.114.30 `serifFontFamily` as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name of the serif font family.

Example:

MsgBox HTMLViewer1.preferencesMBS.serifFontFamily

Notes: (Read and Write property)

11.114.31 shouldPrintBackgrounds as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether webkit draws background on printing.

Example:

HTMLViewer1.preferencesMBS.shouldPrintBackgrounds = `false`

Notes: (Read and Write property)

11.114.32 standardFontFamily as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name of the standard font family.

Example:

MsgBox HTMLViewer1.preferencesMBS.standardFontFamily

Notes: (Read and Write property)

11.114.33 suppressesIncrementalRendering as boolean

Plugin Version: 12.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** True if the WebView suppresses incremental rendering.

Notes:

Available in Mac OS X 10.8 or newer.
(Read and Write property)

11.114.34 tabsToLinks as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the tab key will move focus on links.

Example:

```
HTMLViewer1.preferencesMBS.tabsToLinks = false
```

Notes:

If tabsToLinks is true, the tab key will focus links and form controls.
The option key temporarily reverses this preference.
(Read and Write property)

11.114.35 textAreasAreResizable as Boolean

Plugin Version: 14.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether text areas are resizable.

Example:

```
dim p as WebPreferencesMBS = HTMLViewer1.preferencesMBS
```

```
MsgBox str(p.textAreasAreResizable)
```

Notes:

This is a property defined in WebKit, but not in Apple's headers, so please wrap in try/catch to catch NSExcptionMBS if method is not implemented in older Webkit versions.
(Read and Write property)

11.114.36 userStyleSheetEnabled as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether an user style sheet is enabled.

Example:

```
HTMLViewer1.preferencesMBS.userStyleSheetEnabled = false
```

Notes: (Read and Write property)

11.114.37 `userStyleSheetLocation` as string

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The location of the user style sheet.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.css")
HTMLViewer1.preferencesMBS.userStyleSheetLocation = f.UnixPathMBS
```

Notes: (Read and Write property)

11.114.38 `usesPageCache` as boolean

Plugin Version: 9.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver should use the shared page cache.

Example:

```
HTMLViewer1.preferencesMBS.usesPageCache = false
```

Notes:

Pages are cached as they are added to a `WebBackForwardList`, and removed from the cache as they are removed from a `WebBackForwardList`. Because the page cache is global, caching a page in one `WebBackForwardList` may cause a page in another `WebBackForwardList` to be evicted from the cache.

(Read and Write property)

11.114.39 Constants

11.114.40 `WebCacheModelDocumentBrowser=1`

Plugin Version: 9.4. **Function:**

One of the constants for the usage model for a `WebView`, which `WebKit` will use to determine its caching behavior.

Example:

```
HTMLViewer1.preferencesMBS.cacheModel = WebPreferencesMBS.WebCacheModelDocumentBrowser
```

Notes:

Appropriate for a `WebView` displaying a browsable series of documents with a UI for navigating between

them – for example, a reference materials browser or a website designer. The WebView will cache a reasonable number of resources and previously viewed documents in memory and/or on disk.

Examples: Dictionary, Help Viewer, Coda.

11.114.41 WebCacheModelDocumentViewer=0

Plugin Version: 9.4. **Function:**

One of the constants for the usage model for a WebView, which WebKit will use to determine its caching behavior.

Example:

```
HTMLViewer1.preferencesMBS.cacheModel = WebPreferencesMBS.WebCacheModelDocumentViewer
```

Notes:

Appropriate for a WebView displaying a fixed document – like a splash screen, a chat document, or a word processing document – with no UI for navigation. The WebView will behave like any other view, releasing resources when they are no longer referenced. Remote resources, if any, will be cached to disk. This is the most memory-efficient setting.

Examples: iChat, Mail, TextMate, Growl.

11.114.42 WebCacheModelPrimaryWebBrowser=2

Plugin Version: 9.4. **Function:**

One of the constants for the usage model for a WebView, which WebKit will use to determine its caching behavior.

Example:

```
HTMLViewer1.preferencesMBS.cacheModel = WebPreferencesMBS.WebCacheModelPrimaryWebBrowser
```

Notes:

Appropriate for a WebView in the application that acts as the user's primary web browser. The WebView will cache a very large number of resources and previously viewed documents in memory and/or on disk.

Examples: Safari, OmniWeb, Shiira.

11.115 class WebPrintMBS

11.115.1 class WebPrintMBS

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class for printing webviews.

Notes:

Can be used with HTMLViewer control and the WebViewMBS class.
With the WebviewMBS class you can render to PDF even in console applications.

11.115.2 Methods

11.115.3 Constructor(view as htmlviewer)

Plugin Version: 8.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to attach this class to a htmlviewer.

See also:

- 11.115.4 Constructor(WebViewHandle as Integer) 1023

11.115.4 Constructor(WebViewHandle as Integer)

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to attach this class to a webview.

See also:

- 11.115.3 Constructor(view as htmlviewer) 1023

11.115.5 GetPageFormat as string

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The current page format settings as a string.

Notes:

Can be used to save current printer settings to a preferences file.
Value is an empty string until a page format is defined.

11.115.6 PageSetup as boolean

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Shows a page setup sheet.

Notes:

If sheetTarget is nil a modal dialog is shown and the function returns after the user clicked one of the buttons to close the dialog.

If sheetTarget is a valid window reference this window will show a sheet and the function returns while the sheet waits for mouseclicks.

Returns true on success.

11.115.7 Print as boolean

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Prints the web content without a dialog.

Notes:

If PDFFile is not nil, printing is redirected to a PDF file.

Returns true on success.

11.115.8 PrintDialog as boolean

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Show the print sheet/dialog and allows the user to print the web content.

Notes:

If sheetTarget is nil a modal dialog is shown and the function returns after the user clicked one of the buttons to close the dialog.

If sheetTarget is a valid window reference this window will show a sheet and the function returns while the sheet waits for mouseclicks.

If PDFFile is not nil, printing is redirected to a PDF file.

Returns true on success.

11.115.9 PrintingEnd

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Releases memory from the printing code.

Notes: First call PrintingStart with your page size, then call several times PrintingPage and finally call PrintingEnd.

11.115.10 PrintingPage(index as UInt32) as Memoryblock

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the given page as string.

Notes:

On any error the function returns nil.
The string contains an one page PDF document.

First call PrintingStart with your page size, then call several times PrintingPage and finally call PrintingEnd.

11.115.11 PrintingStart(width as Double, height as Double) as Integer

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Starts the printing code.

Example:

```

dim i,c as Integer
dim f as FolderItem
dim s as string
dim b as BinaryStream
dim web as new WebPrintMBS(HTMLViewer1)

c=web.PrintingStart(800,600)
i=0
while i<c
s=web.PrintingPage(i)

f=SpecialFolder.Desktop.Child("Page "+str(i+1)+".pdf")
b=f.CreateBinaryFile("")
if b<>nil then
b.Write s
b.Close
end if
i=i+1
wend

web.PrintingEnd

MsgBox str(c)+" pages printed."

```

Notes:

First call PrintingStart with your page size, then call several times PrintingPage and finally call PrintingEnd.

Only one print job can be processed at the same time as they use all the same global properties.

Returns the number of pages to be printed.

11.115.12 SetPageFormat(data as string) as boolean

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads page format settings from a string.

Notes: Returns true on success and false on failure.

11.115.13 Properties

11.115.14 DialogOpen as Boolean

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether a printing sheet is visible.

Notes:

Used with the PageSetup and the PrintDialog methods.
Returns true when a dialog is visible and false when not.
(Read and Write property)

11.115.15 HTMLViewer as HTMLViewer

Plugin Version: 8.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The htmlviewer control this webprint object is attached to.

Notes: (Read only property)

11.115.16 PageFormatHandle as Integer

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal handle for the page format.

Notes: (Read only property)

11.115.17 PDFFile as Folderitem

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The pdf file where data is written to.

Notes:

If not nil, the printing goes to this file instead of the printer.
(Read and Write property)

11.115.18 PrintSessionHandle as Integer

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal handle for the print session.

Notes: (Read only property)

11.115.19 PrintSettingsHandle as Integer

Plugin Version: 8.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal handle for the print settings.

Notes: (Read only property)

11.115.20 SheetTarget as Window

Plugin Version: 8.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The sheet parent window.

Notes:

If you set this property to a window, the dialogs will be sheets and attached to the window. If you set it to nil, the dialogs will be modal.

(Read and Write property)

11.115.21 Events

11.115.22 PageSetupDialogDone(accepted as boolean)

Plugin Version: 8.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event to notify you about the result from the page format dialog.

11.115.23 PrintDialogDone(accepted as boolean)

Plugin Version: 8.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event to notify you about the result from the print dialog.

11.116 class WebResourceLoadDelegateMBS

11.116.1 class WebResourceLoadDelegateMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class to receive informations about resource loading.

Notes:

Implementors of this protocol will receive messages indicating that a resource is about to be loaded, data has been received for a resource, an error has been received for a resource, and completion of a resource load.

Implementors are also given the opportunity to mutate requests before they are sent.

The various progress methods of this protocol all receive an identifier as the parameter. This identifier can be used to track messages associated with a single resource. For example, a single resource may generate multiple `willSendRequest` calls as it's URL is redirected.

All methods in this class will catch exceptions from Cocoa and raise a `NSError` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Please use one delegate class per `HTMLViewer` (or `WebViewMBS`) and make sure they live about the same time. Our class keeps a reference on the `WebView`, so we can remove our delegate when the delegate is destroyed.

11.116.2 Events

11.116.3 Close

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The close event.

Notes: Called when the delegate is destroyed.

11.116.4 `didCancelAuthenticationChallenge(id as Variant, challenge as NSURLAuthenticationChallengeMBS, dataSource as WebDataSourceMBS)`

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Cancel authentication for a given request.

11.116.5 `didFailLoadingWithError(id as Variant, errorString as string, dataSource as WebDataSourceMBS)`

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called after a load has failed to load due to an error.

Notes:

`id`: An identifier that can be used to track the progress of a resource load across multiple call backs.

`errorString`: The error associated with this load.

`dataSource`: The `dataSource` that initiated the load.

11.116.6 `didFinishLoadingFromDataSource(id as Variant, dataSource as WebDataSourceMBS)`

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called after a load has successfully completed.

Notes:

`id`: An identifier that can be used to track the progress of a resource load across multiple call backs.

`dataSource`: The `dataSource` that initiated the load.

11.116.7 `didReceiveAuthenticationChallenge(id as Variant, challenge as NSURLAuthenticationChallengeMBS, dataSource as WebDataSourceMBS)`

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Start authentication for the resource, providing a challenge

Notes:

Call `useCredential`, `continueWithoutCredential` or `cancel` on the challenge when done.

If you do not implement this event, WebKit will handle authentication automatically by prompting with a sheet on the window that the `WebView` is associated with.

11.116.8 `didReceiveContentLength(id as Variant, length as Integer, dataSource as WebDataSourceMBS)`

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Multiple of these messages may be sent as data arrives.

Notes:

`id`: An identifier that can be used to track the progress of a resource load across multiple events.

`length`: The amount of new data received. This is not the total amount, just the new amount received.

dataSource: The dataSource that initiated the load.

11.116.9 didReceiveResponse(id as Variant, response as NSURLResponseMBS, dataSource as WebDataSourceMBS)

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called after a response has been received for this load.

Notes:

id: An identifier that can be used to track the progress of a resource load across multiple call backs.

response: The response for the request.

dataSource: The dataSource that initiated the load.

In some rare cases, multiple responses may be received for a single load.

This occurs with multipart/x-mixed-replace, or "server push". In this case, the client should assume that each new response resets progress so far for the resource back to 0, and should check the new response for the expected content length.

11.116.10 identifierForInitialRequest(request as NSURLRequestMBS, dataSource as WebDataSourceMBS) as Variant

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** An implementor of WebResourceLoadDelegate should provide an identifier that can be used to track the load of a single resource.

Notes:

This identifier will be passed as the first argument for all of the other WebResourceLoadDelegate methods. The identifier is useful to track changes to a resources request, which will be provided by one or more calls to willSendRequest:redirectResponse.

Return an identifier that will be passed back to the implementor for each event.

11.116.11 Open

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The open event.

Notes:

Called just after the delegate has been installed in a htmlviewer control.

This allows you to initialize your stuff before the first event is called.

11.116.12 `plugInFailedWithError(errorString as string, dataSource as WebDataSourceMBS)`

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a plug-in is not found, fails to load or is not available for some reason.

Notes: `errorString` is the localized description.

11.116.13 `willSendRequest(id as Variant, request as NSURLRequestMBS, redirectResponse as NSURLResponseMBS, dataSource as WebDataSourceMBS) as NSURLRequestMBS`

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called before a load is initiated.

Notes:

The request may be modified as necessary by the receiver.

`id`: An identifier that can be used to track the progress of a resource load across multiple call backs.

`request`: The request about to be sent.

`redirectResponse`: If the request is being made in response to a redirect we received, the response that conveyed that redirect.

`dataSource`: The `dataSource` that initiated the load.

Returns the request, which may be mutated by the implementor, although typically will be `request`. You can return a new request if you like.

11.117 class WebResourceMBS

11.117.1 class WebResourceMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A WebResource represents a fully downloaded URL.

Example:

```
dim w as new WebResourceMBS("Hello World", "http://www.server.invalid", "text/plain", "ASCII", "myframe")
```

```
MsgBox w.URL+EndOfLine+w.textEncodingName+EndOfLine+w.MIMETYPE
```

Notes:

It includes the data of the resource as well as the metadata associated with the resource.

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

11.117.2 Methods

11.117.3 Constructor(data as MemoryBlock, url as string, mimeType as string, TextEncodingName as string="", frameName as string="")

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create an new WebResource.

Example:

```
dim w as new WebResourceMBS("Hello World", "http://www.server.invalid", "text/plain", "ASCII", "myframe")
```

Notes:

Handle is not 0 on success.

data: The data of the resource.

URL: The URL of the resource.

MIMETYPE: The MIME type of the resource.

textEncodingName: The text encoding name of the resource (can be empty).

frameName: The frame name of the resource if the resource represents the contents of an entire HTML frame (can be empty).

See also FileExtensionToMimeTypeMBS function.

11.117.4 data as MemoryBlock

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The data of the resource.

Example:

```
dim w as new WebResourceMBS("Hello World", "http://www.server.invalid", "text/plain", "ASCII", "myframe")
```

```
MsgBox w.data
```

11.117.5 frameName as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The frame name of the resource if the resource represents the contents of an entire HTML frame.

Example:

```
dim w as new WebResourceMBS("Hello World", "http://www.server.invalid", "text/plain", "ASCII", "myframe")
```

```
MsgBox w.frameName
```

Notes: Can be an empty string.

11.117.6 MIMETYPE as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The MIME type of the resource.

Example:

```
dim w as new WebResourceMBS("Hello World", "http://www.server.invalid", "text/plain", "ASCII", "myframe")
```

```
MsgBox w.MIMETYPE
```

Notes: See also MimeTypeToFileExtensionMBS function.

11.117.7 textEncodingName as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The text encoding name of the resource.

Example:

```
dim w as new WebResourceMBS("Hello World", "http://www.server.invalid", "text/plain", "ASCII", "myframe")
```

```
MsgBox w.textEncodingName
```

Notes: Can be an empty string.

11.117.8 URL as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The URL of the resource.

Example:

```
dim w as new WebResourceMBS("Hello World", "http://www.server.invalid", "text/plain", "ASCII", "myframe")
```

```
MsgBox w.URL
```

11.117.9 Properties

11.117.10 Handle as Integer

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The handle to the internal used webresource reference.

Example:

```
dim w as new WebResourceMBS("Hello World", "http://www.server.invalid", "text/plain", "ASCII", "myframe")
```

```
MsgBox str(w.Handle)
```

Notes: (Read and Write property)

11.118 class WebScriptCallbackMBS

11.118.1 class WebScriptCallbackMBS

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class to handle callbacks from Javascript.

11.118.2 Methods

11.118.3 ArgumentValue(index as Integer) as Variant

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The argument with the given index for the current callback.

Notes:

Index is from 0 to ArgumentCount-1.

variant can be a string, a number, a boolean or a date.

Only valid while a callback event is running.

11.118.4 Constructor

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor creating a new web script callback object.

Notes: On success the handle property is not zero.

11.118.5 Properties

11.118.6 ArgumentCount as Integer

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of arguments for the current callback.

Notes:

Only valid while a callback event is running.

(Read only property)

11.118.7 Handle as Integer

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internally used handle for the callback object.

Notes: (Read and Write property)

11.118.8 Events

11.118.9 Callback(Name as string) as Variant

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The callback event.

Notes:

Name is the name of the method which was called.

The functions ArgumentCount and ArgumentValue give you the parameters of this method call.

You can return numbers, strings, date objects or booleans.

11.118.10 Close

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The close event.

Notes: Called when the object is destroyed.

11.119 class WebScriptObjectMBS

11.119.1 class WebScriptObjectMBS

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The base object for scripting and all DOM objects.

Notes:

All methods in this class will catch exceptions from Cocoa and raise a `NSEExceptionMBS` instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

11.119.2 Methods

11.119.3 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

11.119.4 evaluateWebScript(script as String) as Variant

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Evaluates a script.

Example:

```
dim code as string
```

```
// code="1+5"  
code=""hello ""+5"
```

```
dim d as DOMDocumentMBS = HTMLViewer1.mainFrameMBS.DOMDocument
```

```
MsgBox d.evaluateWebScript(code)
```

```
// shows result of calculations
```

Notes:

The script will be executed in the target script environment. The format of the script is dependent of the target script environment.

Name: The script to execute in the target script environment.

11.119.5 `getValue(name as String) as Variant`

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Gets a value in this webscript object.

Example:

```
dim w as WebFrameMBS = HTMLViewer1.mainFrameMBS
dim d as DOMDocumentMBS = w.DOMDocument
```

```
MsgBox d.getValue("key")
```

Notes: Works for numbers, booleans, dates and strings.

11.119.6 `removeValue(name as String)`

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes a value with the given name.

11.119.7 `setValue(name as String, value as Variant)`

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets a value in this webscript object.

Example:

```
dim w as WebFrameMBS = HTMLViewer1.mainFrameMBS
dim d as DOMDocumentMBS = w.DOMDocument
```

```
d.setValue("key", "Hello")
```

Notes: Works for numbers, booleans, dates and strings.

11.119.8 `setWebScriptCallback(name as String, value as WebScriptCallbackMBS)`

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets a value in this webscript object.

Example:

```
// in the windowScriptObjectAvailable event you can register the callback object
```

Function windowScriptObjectAvailable(windowScriptObject as WebScriptObjectMBS) As boolean

```
// Install an Object called "MyBrowser" on the javascript document object
// Any function call inside will trigger callback event
dim callback as WebScriptCallbackMBS // your global callback object
windowScriptObject.setWebScriptCallback "MyBrowser", callback
```

End Function

Notes: This is the special version of SetValue to be used with the WebScriptCallbackMBS class.

11.119.9 setWebScriptValueAtIndex(index as Integer, value as Variant)

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the value of the property at the specified index.

Notes:

Index is zero based.

Works for numbers, booleans, dates and strings.

11.119.10 stringRepresentation as String

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The string representation of this object.

Notes: Returns an empty string on any error.

11.119.11 webScriptValueAtIndex(index as Integer) as Variant

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Gets the value of the property at the specified index.

Example:

```
dim d as DOMDocumentMBS = HTMLViewer1.mainFrameMBS.DOMDocument
MsgBox d.webScriptValueAtIndex(1)
```

Notes:

Index is zero based.

Works for numbers, booleans, dates and strings.

11.119.12 Properties

11.119.13 Handle as Integer

Plugin Version: 7.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The handle of the internal used reference to a WebScriptObject.

Notes: (Read and Write property)

11.120 class WebUIDelegateMBS

11.120.1 class WebUIDelegateMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class to handle user interface requests.

Notes:

The plugin is very careful on which events it registers.

All events where you don't have code inside (not even comments), is not registered with the system and you get the default behavior.

All methods in this class will catch exceptions from Cocoa and raise a NSEExceptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

Please use one delegate class per HTMLViewer (or WebViewMBS) and make sure they live about the same time. Our class keeps a reference on the WebView, so we can remove our delegate when the delegate is destroyed.

11.120.2 Methods

11.120.3 Constructor

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for this class.

11.120.4 Properties

11.120.5 DisableContextMenu as Boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the plugin should disable contextual menus completely.

Notes:

Set to true to disabled the context menu.
(Read and Write property)

11.120.6 DisableNewWindow as Boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the plugin should block new window requests.

Notes:

Set to true to block all requests.
(Read and Write property)

11.120.7 Events

11.120.8 AreToolbarsVisible as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Determine whether the window's toolbars are currently visible.

Notes:

This method should return true if the window has any toolbars that are currently on, besides the status bar. If the app has more than one toolbar per window, for example a regular command toolbar and a favorites bar, it should return true from this method if at least one is on.

If you place code in this event, return a value.
If no code is in the event, the default delegate will be called.

11.120.9 Close

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The close event.

Notes: Called when the delegate is destroyed.

11.120.10 CreateWithRequest(Request as NSURLRequestMBS) as object

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Create a new window and begin to load the specified request.

Notes:

The newly created window is hidden, and the window operations delegate on the new WebViews will get a webViewShow call.

If no value is returned or no code is in the event, the default delegate is called.

Return nil, nothing or a valid htmlviewer or WebviewMBS object.

Your application will certainly crash if you return something different.

Request may be nil. In this case WebKit later calls LoadRequest for the new webview.

11.120.11 dragDestinationActionMaskForDraggingInfo(draggingInfo as NSDraggingInfoMBS) as Integer

Plugin Version: 16.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Controls behavior when dragging to a WebView.

Notes:

draggingInfo: The dragging info of the drag

This method is called periodically as something is dragged over a WebView. The UI delegate can return a mask indicating which drag destination actions can occur, WebDragDestinationActionAny to allow any kind of action or WebDragDestinationActionNone to not accept the drag.

If you implement this, the default delegate is not called.

If you return WebDragDestinationActionAny you simply allow all kind of drag and drop including javascript using it.

11.120.12 dragSourceActionMaskForPoint(x as Double, y as Double) as Integer

Plugin Version: 16.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Controls behavior when dragging from a WebView.

Notes:

X/Y: The point where the drag started in the coordinates of the WebView.

This method is called after the user has begun a drag from a WebView. The UI delegate can return a mask indicating which drag source actions can occur, WebDragSourceActionAny to allow any kind of action or WebDragSourceActionNone to not begin a drag.

If you implement this, the default delegate is not called.

If you return WebDragDestinationActionAny you simply allow all kind of drag and drop including javascript using it.

11.120.13 GetContentRect(byref left as Double, byref top as Double, byref width as Double, byref height as Double) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Return the window's content rect.

Notes: If you want to return values, return true, else return false and the default delegate will be called for this.

11.120.14 GetFrame(byref left as Double, byref top as Double, byref width as Double, byref height as Double) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Return the window's frame rect.

Notes: If you want to return values, return true, else return false and the default delegate will be called for this.

11.120.15 GetStatusText as String

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Get the currently displayed status text.

Notes:

If you place code in this event, return a value.

If no code is in the event, the default delegate will be called.

11.120.16 IsResizable as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Determine whether the window is resizable or not.

Notes:

If there are multiple views in the same window, they have have their own separate resize controls and this may need to be handled specially.

If you place code in this event, return a value.

If no code is in the event, the default delegate will be called.

11.120.17 IsStatusBarVisible as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Determine whether the status bar is visible.

Notes:

true if the status bar is visible, otherwise false.

If you place code in this event, return a value.
If no code is in the event, the default delegate will be called.

11.120.18 MouseDidMoveOverElement(elementInformation as Dictionary, modifierFlags as Integer) as boolean

Plugin Version: 11.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Updates information about the element the user is mousing over.

Notes:

elementInformation: A dictionary that describes the element under the mouse, or nil. Keys and values:

WebKit Key	Description of value
WebElementDOMNode	DOMNodeMBS of the element
WebElementFrame	WebFrameMBS of the element
WebElementImageAltString	String of the ALT attribute of the image element
WebElementImage	NSImageMBS of the image element
WebElementImageRect	NSRectMBS of an NSRect, the rect of the image element
WebElementImageURL	String of the image element
WebElementIsSelected	Number of BOOL indicating whether the element is selected or not
WebElementLinkURL	String of the link if the element is within an anchor
WebElementLinkTargetFrame	WebFrameMBS of the target of the anchor
WebElementLinkTitle	String of the title of the anchor
WebElementLinkLabel	String of the text within the anchor

modifierFlags: An integer bit field that indicates the modifier keys in effect during the event.

11.120.19 Open

Plugin Version: 7.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The open event.

Notes:

Called just after the delegate has been installed in a htmlviewer control.
This allows you to initialize your stuff before the first event is called.

11.120.20 RunJavaScriptAlertPanelWithMessage(message as String)

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Display a JavaScript alert panel.

Notes: Clients should visually indicate that this panel comes from JavaScript. The panel should have a single OK button.

11.120.21 RunJavaScriptConfirmPanelWithMessage(message as String) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Display a JavaScript confirm panel.

Notes:

Return true if the user hit OK, false if the user chose Cancel.

Clients should visually indicate that this panel comes from JavaScript. The panel should have two buttons, e.g. "OK" and "Cancel".

If you place code in this event, return a value.

If no code is in the event, the default delegate will be called.

11.120.22 RunJavaScriptTextInputPanelWithPrompt(prompt as String, default-Text as String) as String

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Display a JavaScript text input panel.

Notes:

Return the typed text if the user hit OK, otherwise an empty string.

Clients should visually indicate that this panel comes from JavaScript. The panel should have two buttons, e.g. "OK" and "Cancel", and an area to type text.

If you place code in this event, return a value.

If no code is in the event, the default delegate will be called.

11.120.23 runOpenPanelForFileButtonWithResultListener(listener as WebOpen-PanelResultListenerMBS, allowMultipleFiles as boolean) as boolean

Plugin Version: 8.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when an open panel should be shown.

Notes:

Return true if you handled this event.

Call `chooseFilename` or `cancel` on the listener to inform about the result.

11.120.24 SetContentRect(left as Double, top as Double, width as Double, height as Double) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Set the window's content rect.

Notes:

Even though a plugin could set the frame directly using the `Window`, this method is provided so implementors of this protocol can do special things on programmatic move/resize, like avoiding autosaving of the size.

If you return true the default delegate will not be called for this.

11.120.25 SetFrame(left as Double, top as Double, width as Double, height as Double) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Set the window's frame rect.

Notes:

Even though a plugin could set the frame directly using the `Window`, this method is provided so implementors of this protocol can do special things on programmatic move/resize, like avoiding autosaving of the size.

If you return true the default delegate will not be called for this.

11.120.26 SetResizable(resizeable as boolean) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Set the window to resizable or not.

Notes:

If there are multiple views in the same window, they have have their own separate resize controls and this may need to be handled specially.

If you return true the default delegate will not be called for this.

11.120.27 SetStatusBarVisible(visible as boolean) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Set whether the status bar is currently visible.

Notes:

Setting this to true should show the status bar, setting it to false should hide it.

If you return true the default delegate will not be called for this.

11.120.28 SetStatusText(text as String) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Set the window's status display, if any, to the specified string.

Notes: If you return true the default delegate will not be called for this.

11.120.29 SetToolbarsVisible(visible as boolean) as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Set whether the window's toolbars are currently visible.

Notes:

Setting this to true should turn on all toolbars (except for a possible status bar). Setting it to false should turn off all toolbars (with the same exception).

If you return true the default delegate will not be called for this.

11.120.30 willPerformDragDestinationAction(WebDragDestinationAction as Integer, draggingInfo as NSDraggingInfoMBS)

Plugin Version: 16.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs that WebView will perform a drag destination action.

Notes:

action: The drag destination action

draggingInfo: The dragging info of the drag

This method is called after the last call to dragDestinationActionMaskForDraggingInfo after something is dropped on a WebView.

This method informs the UI delegate of the drag destination action that WebView will perform.

11.120.31 willPerformDragSourceAction(WebDragDestinationAction as Integer, X as Double, Y as Double, pasteboard as NSPasteboardMBS)

Plugin Version: 16.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs that a drag a has begun from a WebView.

Notes:

action: The drag source action

X/Y: The point where the drag started in the coordinates of the WebView

pasteboard: The drag pasteboard

This method is called after dragSourceActionMaskForPoint is called after the user has begun a drag from a WebView.

This method informs the UI delegate of the drag source action that will be performed and gives the delegate an opportunity to modify the contents of the dragging pasteboard.

11.120.32 WindowClose as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Close the current window.

Notes:

Clients showing multiple views in one window may choose to close only the one corresponding to this WebView. Other clients may choose to ignore this method entirely.

If this event returns false the control is handled to the default delegate.

11.120.33 WindowFocus as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Focus the current window.

Notes:

Clients showing multiple views in one window may want to also do something to focus the one corresponding to this WebView.

If this event returns false the control is handled to the default delegate.

11.120.34 WindowShow as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Show the window that contains the top level view of the WebView, ordering it frontmost.

Notes:

This will only be called just after `CreateWithRequest` is used to create a new window. If this event returns false the control is handled to the default delegate.

11.120.35 WindowUnfocus as boolean

Plugin Version: 7.2, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Unfocus the current window.

Notes:

Clients showing multiple views in one window may want to also do something to unfocus the one corresponding to this `WebView`.

If this event returns false the control is handled to the default delegate.

11.120.36 Constants

11.120.37 WebDragDestinationActionAny = -1

Plugin Version: 16.1. **Function:** One of the action constants that the destination object of a drag operation can perform.

Notes: Allows any defined action to occur.

11.120.38 WebDragDestinationActionDHTML = 1

Plugin Version: 16.1. **Function:** One of the action constants that the destination object of a drag operation can perform.

Notes: Allows DHTML (such as JavaScript) to handle the drag.

11.120.39 WebDragDestinationActionEdit = 2

Plugin Version: 16.1. **Function:** One of the action constants that the destination object of a drag operation can perform.

Notes: Allows editable documents to be changed by the drag operation.

11.120.40 WebDragDestinationActionLoad = 4

Plugin Version: 16.1. **Function:** One of the action constants that the destination object of a drag operation can perform.

Notes: Allows the drag operation to change the location.

11.120.41 WebDragDestinationActionNone = 0

Plugin Version: 16.1. **Function:** One of the action constants that the destination object of a drag operation can perform.

Notes: No action.

11.121 class WebViewMBS

11.121.1 class WebViewMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class to handle a webview.

Notes:

A webview is simply a content viewer for any web based content. It can render html pages, text pages and with plugins also flash or pdf files.

All methods in this class will catch exceptions from Cocoa and raise a NSExcptionMBS instead. Using the message, name and reason properties you can see what was the reason for this exception. Please report if you find a method which does not handle exceptions correct.

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard.
Subclass of the NSViewMBS class.

11.121.2 Methods

11.121.3 alignCenter

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that applies center alignment to selected content or all content if there's no selection.

Notes: Available in Mac OS X v10.3.9 and later.

11.121.4 alignJustified

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that applies full justification to selected content or all content if there's no selection.

Notes: Available in Mac OS X v10.3.9 and later.

11.121.5 alignLeft

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that applies left justification to selected content or all content if there's no selection.

Notes: Available in Mac OS X v10.3.9 and later.

11.121.6 alignRight

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that applies right justification to selected content or all content if there is no selection.

Notes: Available in Mac OS X v10.3.9 and later.

11.121.7 applyStyle(style as Variant)

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Applies the CSS typing style to the current selection.

Example:

```
dim w as WebViewMBS = HTMLViewer1.WebViewMBS
dim doc as DOMDocumentMBS = w.mainFrame.DOMDocument
dim d as DOMCSSStyleDeclarationMBS = doc.createCSSStyleDeclaration

d.fontWeight="bold"

w.applyStyle d
```

Notes:

style: The style to apply to the current selection. Must be a DOMCSSStyleDeclarationMBS object.

This method does nothing if there is no current selection or if the current selection is collapsed.

This method hides the complexities of applying styles to elements. If necessary, this method will make multiple passes over the range of the current selection to ensure that the requested style is applied to the elements in that range, and takes into account the complexities of CSS style application rules. This method also simplifies styling attributes so that the minimum number of styling directives are used to yield a given computed style.

11.121.8 backForwardList as WebBackForwardListMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the backforward list for this webView.

Notes: Nil on failure.

11.121.9 canGoBack as boolean

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the history can be used to move back one website.

11.121.10 canGoForward as boolean

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the history can be used to move forward one website.

11.121.11 canMakeTextLarger as boolean

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the text size can be increased.

11.121.12 canMakeTextSmaller as boolean

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the text size can be decreased.

11.121.13 canResetPageZoom as boolean

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether web page can be reset.

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSEExceptionMBS` about the function not being available.

11.121.14 CanShowMimeType(mime as string) as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Checks if the WebKit can show content of a certain MIME type.

Notes:

Returns false on any error and true on success.

See also `MimeTypeToFileExtensionMBS` function.

11.121.15 CanShowMimeTypeAsHTML(mime as string) as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Checks if the the MIME type is a type that the WebKit will interpret as HTML.

Notes:

Returns false on any error and true on success.
See also MimeTypeToFileExtensionMBS function.

11.121.16 canZoomPageIn as boolean

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether web page can be zoomed in.

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an NSEExceptionMBS about the function not being available.

11.121.17 canZoomPageOut as boolean

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether web page can be zoomed out.

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an NSEExceptionMBS about the function not being available.

11.121.18 capitalizeWord

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to capitalize the word or words surrounding the insertion point or selection, expanding the selection if necessary.

Notes: If either end of the selection partially covers a word, that entire word is made lowercase. The sender argument is typically the object that invoked this method.

11.121.19 centerSelectionInVisibleArea

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to scroll the selection, whatever it is, inside its visible area.

11.121.20 `changeAttributes`

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that changes the attributes of the current selection.

Notes: Available in Mac OS X v10.3.9 and later.

11.121.21 `changeCaseOfLetter`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to change the case of a letter or letters in the selection, perhaps by opening a panel with capitalization options or by cycling through possible case combinations.

11.121.22 `changeColor`

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the color of the selected content.

Notes:

This method is invoked by the `NSColorPanel` sender.

Available in Mac OS X v10.3.9 and later.

11.121.23 `changeDocumentBackgroundColor`

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the background color of the selected content.

Notes:

This method is invoked by the `NSColorPanel` sender.

Available in Mac OS X v10.3.9 and later.

11.121.24 `changeFont`

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that changes the font of the selection, or all content if there is no selection.

Notes:

If the receiver doesn't use the Fonts panel, this method does nothing.

Available in Mac OS X v10.3.9 and later.

11.121.25 checkSpelling

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that searches for a misspelled word in the receiver.

Notes:

This action method starts a search at the end of the selection and continues until it reaches a word suspected of being misspelled or the end of the content. If a word isn't recognized by the spelling server, a showGuessPanel message is sent to the receiver which opens the Guess panel and allows the user to make a correction or add the word to the local dictionary.

Available in Mac OS X v10.3.9 and later.

11.121.26 ClearFocus

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Clears the focus.

Example:

```
webview.ClearFocus
```

Notes: If the focus is on the webpage, it will be cleared so there is no focus on the window. Useful if you want to workaround a focus bug in the htmlviewer control.

11.121.27 complete

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to complete an operation in progress or a partially constructed element.

Notes: This method can be interpreted, for example, as a request to attempt expansion of a partial word, such as for expanding a glossary shortcut, or to close a graphics item being drawn.

11.121.28 Constructor

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new box view with size 100/100 and position 0/0

Example:

`dim x as new WebViewMBS`

Notes: On success the handle property is not zero.
See also:

- 11.121.29 Constructor(Handle as Integer) 1059
- 11.121.30 Constructor(left as Double, top as Double, width as Double, height as Double) 1059
- 11.121.31 Constructor(x as Double, y as Double, w as Double, h as Double, FrameName as string, GroupName as string) 1060

11.121.29 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given WebView handle.

Example:

```
dim t as new WebViewMBS(0, 0, 100, 100)
dim v as new WebViewMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a WebView and the plugin retains this handle.
See also:

- 11.121.28 Constructor 1058
- 11.121.30 Constructor(left as Double, top as Double, width as Double, height as Double) 1059
- 11.121.31 Constructor(x as Double, y as Double, w as Double, h as Double, FrameName as string, GroupName as string) 1060

11.121.30 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 8.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new button with the given size and position.

Example:

```
dim w as new WebViewMBS(0,0,800,600)
```

```
w.LoadHTMLString "Hello World", ""
```

```
// and later
```

```
dim n as NSImageMBS = w.RenderImage
Backdrop=n.CopyPicture
```

Notes: On success the handle property is not zero.
See also:

- 11.121.28 Constructor 1058
- 11.121.29 Constructor(Handle as Integer) 1059
- 11.121.31 Constructor(x as Double, y as Double, w as Double, h as Double, FrameName as string, GroupName as string) 1060

11.121.31 Constructor(x as Double, y as Double, w as Double, h as Double, FrameName as string, GroupName as string)

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a webview with a frame rectangle, a WebFrame name, and a group name.

Example:

```
dim w as webviewmbs

w=new WebViewMBS(0,0,800,600,"test","test")

w.LoadHTMLString "Hello World",""

// and later

dim n as NSImageMBS = w.RenderImage
Backdrop=n.CopyPicture
```

Notes:

The frameName should not be one of the pre-defined frame names (see the WebFrame findFrameNamed for a description of their meaning), but a custom name or a name used in HTML source. The groupName argument is an arbitrary identifier used to group related frames. For example, JavaScript running in a frame can access any other frame in the same group. It's up to the application how it chooses to scope related frames. Both frameName and groupName may be "". This method is the designated initializer for the WebView class.

On success the handle property is not zero.
See also:

- 11.121.28 Constructor 1058

11.121. CLASS WEBVIEWMBS	1061
• 11.121.29 Constructor(Handle as Integer)	1059
• 11.121.30 Constructor(left as Double, top as Double, width as Double, height as Double)	1059

11.121.32 copy

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Action method that copies the selected content to the general pasteboard.

Notes:

This action method copies the selected content onto the general pasteboard, in as many formats as the receiver supports. For example, a plain text object uses NSStringPboardType for plain text, and a rich text object also uses NSRTFPboardType.

Available in Mac OS X v10.3.9 and later.

11.121.33 copyFont

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that copies font information onto the font pasteboard.

Notes:

This action method copies the font information for the first character of the selection (or for the insertion point) onto the font pasteboard as NSFontPboardType.

Available in Mac OS X v10.3.9 and later.

11.121.34 cut

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that deletes selected content and puts it on the general pasteboard.

Notes:

This action method deletes the selected content and places it onto the general pasteboard, in as many formats as the receiver supports. For example, a plain text object uses NSStringPboardType for plain text, and a rich text object also uses NSRTFPboardType.

Available in Mac OS X v10.3.9 and later.

11.121.35 delete

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that deletes the selected content.

Notes:

The pasteboard is unaffected by invoking this method.

Available in Mac OS X v10.3.9 and later.

11.121.36 deleteBackward

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to delete the selection, if there is one, or a single element backward from the insertion point (a letter or character in text, for example).

11.121.37 deleteBackwardByDecomposingPreviousCharacter

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to delete the selection, if there is one, or a single character backward from the insertion point.

Notes: If the previous character is canonically decomposable, this method should try to delete only the last character in the grapheme cluster (for example, deleting "a" + "̂" results in "a"). NSResponder declares but does not implement this method.

11.121.38 deleteForward

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to delete the selection, if there is one, or a single element forward from the insertion point (a letter or character in text, for example).

11.121.39 deleteSelection

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Deletes the receiver's current selection unless it's collapsed.

Notes: No content is removed if the current selection is collapsed (a range is selected with the same nodes and offsets for the start and end) or if there is no current selection.

11.121.40 deleteToBeginningOfLine

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to delete the selection, if there is one, or all text from the insertion point to the beginning of a line (typically of text).

Notes: Also places the deleted text into the kill buffer.

11.121.41 deleteToBeginningOfParagraph

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to delete the selection, if there is one, or all text from the insertion point to the beginning of a paragraph of text.

Notes: Also places the deleted text into the kill buffer.

11.121.42 deleteToEndOfLine

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to delete the selection, if there is one, or all text from the insertion point to the end of a line (typically of text).

Notes: Also places the deleted text into the kill buffer.

11.121.43 deleteToEndOfParagraph

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to delete the selection, if there is one, or all text from the insertion point to the end of a paragraph of text.

Notes: Also places the deleted text into the kill buffer.

11.121.44 deleteWordBackward

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to delete the selection, if there is one, or a single word backward from the insertion point.

11.121.45 deleteWordForward

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to delete the selection, if there is one, or a single word forward from the insertion point.

11.121.46 EstimatedProgress as Double

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An estimate of the percent complete for a document load.

Example:

```
// waits till rendering is done:
dim f as FolderItem = SpecialFolder.Desktop.Child("test.html")

WebView.mainFrame.LoadURL f.URLPath

while WebView.EstimatedProgress>0
DelayMBS 0.1
wend

// this works only because EstimatedProgress is set to 0.1 by LoadURL
// and set back to zero when the load process finishes.
// If future Webkit versions change the EstimatedProgress results,
// it will break.
```

Notes: This value will range from 0 to 1.0 and, once a load completes, will remain at 1.0 until a new load starts, at which point it will be reset to 0. The value is an estimate based on the total number of bytes expected to be received for a document, including all it's possible subresources. For more accurate progress indication it is recommended that you implement a WebFrameLoadDelegate and a WebResourceLoadDelegate.

11.121.47 EvaluateJavaScript(code as string) as string

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Runs the given java script and returns the result.

Example:

```
// shows current user agent string which the control sends to website
MsgBox webView1.EvaluateJavaScript("navigator.userAgent;")

// using eval:
MsgBox webView1.EvaluateJavaScript("eval(""x=10;y=20;x*y"")")

// with function:
MsgBox webView1.EvaluateJavaScript(" test(); function test() { x = 10 ; y = 20; return x * y; } ")

// with multiline script:
dim s as string = "test();" + EndOfLine + _
"function test()" + EndOfLine + _
" { " + EndOfLine + _
" x = 10; " + EndOfLine + _
```



```
" y = 20;" +EndOfLine+_  
" return x * y;" +EndOfLine+_  
" } "
```

MsgBox webview1.EvaluateJavaScript(s)

Notes:

Returns "" on any error.

In Safari 2 we used "return 1+2;" while in Safari 3 we only need "1+2;". The return is no longer needed. Be aware that there is an implicit return now with Safari 3!

11.121.48 GoBack

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Go back to the previous URL in the backforward list.

11.121.49 GoForward

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Go forward to the next URL in the backforward list.

11.121.50 goToBackForwardItem(item as WebHistoryItemMBS) as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Moves on the history to the given item.

Notes: Returns true on success or false on failure.

11.121.51 HTMLText as string

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns HTML text for this document.

Notes: This is the text as we generate it from current DOM tree. It is not the html text we loaded from the website. To get this original html text, please use `mainFrameMBS.dataSource.data` instead.

11.121.52 indent

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to indent the selection or the insertion point if there is no selection.

11.121.53 insertBacktab

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to handle a backward tab.

Notes: A field editor might respond to this method by selecting the field before it, while a regular text object either doesn't respond to or ignores such a message.

11.121.54 insertNewline

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to insert a newline character at the insertion point or selection, deleting the selection if there is one, or to end editing if the receiver is a text field or other field editor.

11.121.55 insertParagraphSeparator

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to insert a paragraph separator at the insertion point or selection, deleting the selection if there is one.

11.121.56 insertTab

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to insert a tab character at the insertion point or selection, deleting the selection if there is one, or to end editing if the receiver is a text field or other field editor.

11.121.57 LoadHTMLString(data as memoryblock, mime as string, encoding as string, url as string)

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads data as a webpage.

Example:

```
webview.LoadHTMLString "<b>test</b>","text/plain","" // show as plain text
webview.LoadHTMLString "<b>test</b>","text/html","" // show as html
```

Notes:

data: The data to use for the main page of the document.

mime: The MIME type of the data. e.g. "text/html"

textencoding: The encoding of the data.

url: The base URL to apply to relative URLs within the document.

All parameters can be empty if needed.

Using "text/plain" mime type you can show source code of website.

Like most Webkit Methods this one can not be called from a thread.

See also:

- 11.121.58 LoadHTMLString(text as string, url as string)

1067

11.121.58 LoadHTMLString(text as string, url as string)

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads a html page from a string.

Notes:

html: The string to use for the main page of the document.

url: The base URL to apply to relative URLs within the document. (optional)

Like most Webkit Methods this one can not be called from a thread.

See also:

- 11.121.57 LoadHTMLString(data as memoryblock, mime as string, encoding as string, url as string)
1066

11.121.59 LoadRequest(request as NSURLRequestMBS)

Plugin Version: 9.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads the given url request.

Notes: Like most Webkit Methods this one can not be called from a thread.

11.121.60 LoadURL(url as string)

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads the url.

Example:

```
webview.LoadURL "http://www.monkeybreadsoftware.de"
```

Notes:

Like most Webkit Methods this one can not be called from a thread.
Internally this calls LoadRequest with a NSURLRequest based on the given URL.
See also:

- 11.121.61 LoadURL(url as string, CachePolicy as Integer, TimeOut as Double) 1068

11.121.61 LoadURL(url as string, CachePolicy as Integer, TimeOut as Double)

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads the URL.

Example:

```
webview.LoadURL "http://www.monkeybreadsoftware.de", 1, 2.0
```

Notes:

The timeout interval is in seconds.

Constants for the CachePolicy parameter:

const UseProtocolCachePolicy	= 0	Specifies that the caching logic defined in the protocol implementation, if any, is used for a particular URL load request. This is the default policy for URL load requests.
const ReloadIgnoringCacheData	= 1	Specifies that the data for the URL load should be loaded from the originating source. No existing cache data should be used to satisfy a URL load request.
const ReturnCacheDataElseLoad	= 2	Specifies that the existing cached data should be used to satisfy the request, regardless of its age or expiration date. If there is no existing data in the cache corresponding the request, the data is loaded from the originating source.
const ReturnCacheDataDontLoad	= 3	Specifies that the existing cache data should be used to satisfy a request, regardless of its age or expiration date. If there is no existing data in the cache corresponding to a URL load request, no attempt is made to load the data from the originating source, and the load is considered to have failed. This constant specifies a behavior that is similar to an "offline" mode.

Like most Webkit Methods this one can not be called from a thread.
Internally this calls LoadRequest with a NSURLRequest based on the given URL.
See also:

- 11.121.60 LoadURL(url as string) 1067

11.121.62 lowercaseWord

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to make lowercase every letter in the word or words surrounding the insertion point or selection, expanding the selection if necessary.

Notes: If either end of the selection partially covers a word, that entire word is made lowercase. NSResponder declares, but doesn't implement this method.

11.121.63 mainFrame as WebFrameMBS

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The main webframe currently displayed.

Notes: Nil if no is present.

11.121.64 makeTextLarger

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Increases the text size in the webview.

11.121.65 makeTextSmaller

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Decreases the text size in the webview.

11.121.66 mediaVolume as single

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Queries the maximum volume of all sounds generated on this webview.

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an NSEExceptionMBS about the function not being available.

11.121.67 moveBackward

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to move the selection or insertion point one element or character backward.

Notes: In text, if there is a selection it should be deselected, and the insertion point should be placed at the beginning of the former selection.

11.121.68 `moveBackwardAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to expand or reduce either end of the selection backward by one element or character.

Notes: If the end being modified is the backward end, this method expands the selection; if the end being modified is the forward end, it reduces the selection. The first `moveBackwardAndModifySelection` or `moveForwardAndModifySelection` method in a series determines the end being modified by always expanding. Hence, this method results in the backward end becoming the mobile one if invoked first. By default, `moveLeftAndModifySelection` is bound to the left arrow key.

11.121.69 `moveDown`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point one element or character down.

Notes: In text, if there is a selection it should be deselected, and the insertion point should be placed below the beginning of the former selection.

11.121.70 `moveDownAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to expand or reduce the top or bottom end of the selection downward by one element, character, or line (whichever is appropriate for text direction).

Notes: If the end being modified is the bottom, this method expands the selection; if the end being modified is the top, it reduces the selection. The first `moveDownAndModifySelection` or `moveUpAndModifySelection` method in a series determines the end being modified by always expanding. Hence, this method results in the bottom end becoming the mobile one if invoked first.

11.121.71 `moveForward`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point one element or character forward.

Notes: In text, if there is a selection it should be deselected, and the insertion point should be placed at the end of the former selection.

11.121.72 `moveForwardAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to expand or reduce either end of the selection forward by one element or character.

Notes: If the end being modified is the backward end, this method reduces the selection; if the end being modified is the forward end, it expands the selection. The first `moveBackwardAndModifySelection` or

`moveForwardAndModifySelection` method in a series determines the end being modified by always expanding. Hence, this method results in the forward end becoming the mobile one if invoked first. By default, `moveRightAndModifySelection` is bound to the right arrow key.

11.121.73 `moveLeft`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point one element or character to the left.

Notes: In text, if there is a selection it should be deselected, and the insertion point should be placed at the left end of the former selection.

11.121.74 `moveLeftAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to expand or reduce either end of the selection to the left (display order) by one element or character.

Notes:

If the end being modified is the left end, this method expands the selection; if the end being modified is the right end, it reduces the selection. The first `moveLeftAndModifySelection` or `moveRightAndModifySelection` method in a series determines the end being modified by always expanding. Hence, this method results in the left end becoming the mobile one if invoked first. By default, this method is bound to the left arrow key.

The essential difference between this method and the corresponding `moveBackwardAndModifySelection` is that the latter method moves in logical order, which can differ in bidirectional text, whereas this method moves in display order.

11.121.75 `moveRight`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point one element or character to the right.

Notes: In text, if there is a selection it should be deselected, and the insertion point should be placed at the right end of the former selection.

11.121.76 `moveRightAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to expand or reduce either end of the selection to the right (display order) by one element or character.

Notes:

If the end being modified is the left end, this method reduces the selection; if the end being modified is the right end, it expands the selection. The first `moveLeftAndModifySelection` or `moveRightAndModifySelection` method in a series determines the end being modified by always expanding. Hence, this method results in the right end becoming the mobile one if invoked first. By default, this method is bound to the right arrow key.

The essential difference between this method and the corresponding `moveForwardAndModifySelection` is that the latter method moves in logical order, which can differ in bidirectional text, whereas this method moves in display order.

11.121.77 `moveToBeginningOfDocument`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection to the first element of the document or the insertion point to the beginning.

11.121.78 `moveToBeginningOfDocumentAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point to the beginning of the document, expanding or reducing the current selection.

11.121.79 `moveToBeginningOfLine`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection to the first element of the selected line or the insertion point to the beginning of the line.

11.121.80 `moveToBeginningOfLineAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point to the beginning of the line, expanding or reducing the current selection.

11.121.81 `moveToBeginningOfParagraph`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the insertion point to the beginning of the selected paragraph.

11.121.82 moveToBeginningOfParagraphAndModifySelection

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to move the selection or insertion point to the beginning of the current paragraph, expanding or reducing the current selection.

11.121.83 moveToBeginningOfSentence

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Moves the insertion point to the beginning of the current sentence.

11.121.84 moveToBeginningOfSentenceAndModifySelection

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Moves the insertion point and extends the selection to the beginning of the current sentence.

11.121.85 moveToEndOfDocument

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to move the selection to the last element of the document or the insertion point to the end.

11.121.86 moveToEndOfDocumentAndModifySelection

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to move the selection or insertion point to the end of the document, expanding or reducing the current selection.

11.121.87 moveToEndOfLine

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to move the selection to the last element of the selected line or the insertion point to the end of the line.

11.121.88 moveToEndOfLineAndModifySelection

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to move the selection or insertion point to the end of the line, expanding or reducing the current

selection.

11.121.89 `moveToEndOfParagraph`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the insertion point to the end of the selected paragraph.

11.121.90 `moveToEndOfParagraphAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point to the end of the current paragraph, expanding or reducing the current selection.

11.121.91 `moveToEndOfSentence`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Moves the insertion point to the end of the current sentence.

11.121.92 `moveToEndOfSentenceAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Moves the insertion point and extends the selection to the end of the current sentence.

11.121.93 `moveUp`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point one element or character up.

Notes: In text, if there is a selection it should be deselected, and the insertion point should be placed above the beginning of the former selection.

11.121.94 `moveUpAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to expand or reduce the top or bottom end of the selection upward by one element, character, or line (whichever is appropriate for text direction).

Notes: If the end being modified is the bottom, this method reduces the selection; if the end being modified

is the top, it expands the selection. The first `moveDownAndModifySelection` or `moveUpAndModifySelection` method in a series determines the end being modified by always expanding. Hence, this method results in the top end becoming the mobile one if invoked first.

11.121.95 `moveWordBackward`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point one word backward.

Notes: If there is a selection it should be deselected, and the insertion point should be placed at the end of the first word preceding the former selection.

11.121.96 `moveWordBackwardAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to expand or reduce either end of the selection backward by one whole word.

Notes: If the end being modified is the backward end, this method expands the selection; if the end being modified is the forward end, it reduces the selection. The first `moveWordBackwardAndModifySelection` or `moveWordForwardAndModifySelection` method in a series determines the end being modified by always expanding. Hence, this method results in the backward end becoming the mobile one if invoked first.

11.121.97 `moveWordForward`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point one word forward, in logical order.

Notes: If there is a selection it should be deselected, and the insertion point should be placed at the beginning of the first word following the former selection.

11.121.98 `moveWordForwardAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to expand or reduce either end of the selection forward by one whole word.

Notes: If the end being modified is the backward end, this method reduces the selection; if the end being modified is the forward end, it expands the selection. The first `moveWordBackwardAndModifySelection` or `moveWordForwardAndModifySelection` method in a series determines the end being modified by always expanding. Hence, this method results in the forward end becoming the mobile one if invoked first.

11.121.99 `moveWordLeft`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point one word to the left, in display order.

Notes:

If there is a selection it should be deselected, and the insertion point should be placed at the end of the first word to the left of the former selection.

The main difference between this method and the corresponding `moveWordBackward` method is that the latter moves in logical order, which is important in bidirectional text, whereas this method moves in display order.

11.121.100 `moveWordLeftAndModifySelection`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to expand or reduce either end of the selection left by one whole word in display order.

Notes:

If the end being modified is the left end, this method expands the selection; if the end being modified is the right end, it reduces the selection. The first `moveWordLeftAndModifySelection` or `moveWordRightAndModifySelection` method in a series determines the end being modified by always expanding. Hence, this method results in the left end becoming the mobile one if invoked first.

The main difference between this method and the corresponding `moveWordBackwardAndModifySelection` method is that the latter moves in logical order, which is important in bidirectional text, whereas this method moves in display order.

11.121.101 `moveWordRight`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to move the selection or insertion point one word right.

Notes:

If there is a selection it should be deselected, and the insertion point should be placed at the beginning of the first word to the right of the former selection.

The main difference between this method and the corresponding `moveWordForward` method is that the latter moves in logical order, which is important in bidirectional text, whereas this method moves in display order.

11.121.102 moveWordRightAndModifySelection

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to expand or reduce either end of the selection to the right by one whole word.

Notes:

If the end being modified is the backward end, this method reduces the selection; if the end being modified is the forward end, it expands the selection. The first moveWordBackwardAndModifySelection or moveWordForwardAndModifySelection method in a series determines the end being modified by always expanding. Hence, this method results in the forward end becoming the mobile one if invoked first.

The main difference between this method and the corresponding moveWordForwardAndModifySelection method is that the latter moves in logical order, which is important in bidirectional text, whereas this method moves in display order.

11.121.103 NSScrollView as NSScrollViewMBS

Plugin Version: 11.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the scrollview for this webviewer.

Notes: Same as calling `WebViewMBS.mainFrame.frameView.documentView.enclosingScrollView`.

11.121.104 pageDown

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to scroll the receiver down (or back) one page in its scroll view, also moving the insertion point to the top of the newly displayed page.

11.121.105 pageSizeMultiplier as single

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Queries the page size multiplier.

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSExcptionMBS` about the function not being available.

11.121.106 pageUp

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to scroll the receiver up (or forward) one page in its scroll view, also moving the insertion point to the top of the newly displayed page.

11.121.107 paste

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that pastes content from the pasteboard at the insertion point or over the selection.

Notes: Available in Mac OS X v10.3.9 and later.

11.121.108 pasteAsPlainText

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that pastes pasteboard content as plain text.

Notes: Available in Mac OS X v10.3.9 and later.

11.121.109 pasteAsRichText

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that pastes pasteboard content into the receiver as rich text, maintaining its attributes.

Notes:

The text is inserted at the insertion point if there is one; otherwise, it replaces the selection.

Available in Mac OS X v10.3.9 and later.

11.121.110 pasteFont

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that pastes font information from the font pasteboard.

Notes:

This action method pastes font information from the font pasteboard onto the selected content or insertion point of a rich text object, or over all text of the receiver.

Available in Mac OS X v10.3.9 and later.

11.121.111 performFindPanelAction

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that opens the Find menu and Find panel.

Notes: Available in Mac OS X v10.3.9 and later.

11.121.112 PrintToPDFFile(PDFFile as folderitem, LeftMargin as Double = 50.0, TopMargin as Double = 50.0, RightMargin as Double = 50.0, BottomMargin as Double = 50.0) as boolean

Plugin Version: 11.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Prints the PDF to a file.

Example:

```
dim file as folderitem = Specialfolder.desktop.child("test.pdf")
if not myWebView.PrintToPDFFile(file) then
msgbox "Failed"
end if
```

Notes:

This uses the Cocoa printing system to format the web pages into nice pages.
Returns true on success.

11.121.113 Reload

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Reloads the current page.

11.121.114 reloadFromOrigin

Plugin Version: 12.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Action method that performs an end-to-end revalidation using cache-validating conditionals if possible.

Notes: Available in OS X v10.6 and later. So this raises exception on older OS X versions. In that case, please catch exception and call reload.

11.121.115 RenderDocumentToEPS as Memoryblock

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the content of the view as a EPS file's data.

Example:

```
dim f as FolderItem
```

```
dim b as BinaryStream
```

```
// create a new pdf with current content of view
```

```
f=SpecialFolder.Desktop.Child("test.eps")
```

```
b=f.CreateBinaryFile("")
```

```
b.Write theWebView.RenderDocumentToEPS
```

```
b.Close
```

```
f.Launch // show the pdf in preview
```

Notes:

Returns nil on any error.

Will resize the eps page to match the size of the website.

11.121.116 RenderDocumentToPDF as Memoryblock

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the content of the view as a PDF file's data.

Example:

```
dim f as FolderItem
dim b as BinaryStream

// create a new pdf with current content of view
f=SpecialFolder.Desktop.Child("test.pdf")
b=f.CreateBinaryFile("")
b.Write thewebview.RenderDocumentToPDF
b.Close

f.Launch // show the pdf in preview
```

Notes:

Returns nil on any error.

Will resize the pdf page to match the size of the website.

11.121.117 RenderWebsiteImage as NSImageMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Makes a screenshot of the current displayed content.

Example:

```
dim f as FolderItem
dim b as BinaryStream
dim i as NSImageMBS
dim p as string

i=webview.RenderWebsiteImage

p=i.PNGRepresentation

f=SpecialFolder.Desktop.Child("test.png")
b=f.CreateBinaryFile("")
b.Write p
```

Notes:

Nil on failure.

The image returned is the page completely without scrollbars, so it may be a few thousand pixels height and may not fit on a page to print.

11.121.118 `replaceSelectionWithMarkupString(html as string)`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Replaces the current selection with mixed text and markup.

Notes:

markupString: The markup string that replaces the current selection.

If the current selection is collapsed (a range is selected with the same nodes and offsets for the start and end) then no content is removed when inserting the markup, and the selection is collapsed and moved to the end of the inserted content. If no content is selected, the markup is not inserted.

11.121.119 `replaceSelectionWithText(text as string)`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Replaces the current selection with a string of text.

Notes:

text: The text that replaces the current selection.

If the current selection is collapsed (a range is selected with the same nodes and offsets for the start and end) then no content is removed when inserting the text, and the selection is collapsed and moved to the end of the inserted content. If no content is selected, the text is not inserted.

11.121.120 `resetPageZoom`

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Resets the web page zoom.

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSExcptionMBS` about the function not being available.

11.121.121 `scrollLineDown`

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by `WebView` to scroll the receiver one line down in its scroll view, without changing the selection.

11.121.122 scrollLineUp

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to scroll the receiver one line up in its scroll view, without changing the selection.

11.121.123 scrollPageDown

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to scroll the receiver one page down in its scroll view, without changing the selection.

11.121.124 scrollPageUp

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to scroll the receiver one page up in its scroll view, without changing the selection.

11.121.125 SearchFor(text as string, Forward as boolean, CaseSensitive as boolean, Wrap as Boolean) as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Searches a document view for a string and highlights the string if it is found.

Notes:

Starts the search from the current selection. Will search across all frames.

text: The string to search for.

forward: True to search forward, False to search backwards.

caseSensitive: True to for case-sensitive search, False for case-insensitive search.

Returns true if found, false if not found.

11.121.126 selectAll

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to select all selectable elements.

11.121.127 selectLine

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to select all elements in the line or lines containing the selection or insertion point.

11.121.128 selectParagraph

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to select all paragraphs containing the selection or insertion point.

11.121.129 selectSentence

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects the entire sentence around the insertion point.

11.121.130 selectWord

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to extend the selection to the nearest word boundaries outside it (up to, but not including, word delimiters).

11.121.131 setMaintainsBackForwardList(value as boolean)

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the back forward history list is created by the webview.

Notes: Default is true.

11.121.132 setMediaVolume(value as single)

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the maximum volume of all sounds generated on this webview.

Notes:

Sets a master volume control for all media elements in the WebView. Valid values are 0..1.

This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSEExceptionMBS` about the function not being available.

11.121.133 setPageSizeMultiplier(value as single)

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the page size multiplier.

Notes:

Change the zoom factor of the page in views managed by this webView.
value: A fractional percentage value, 1.0 is 100% .

This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSEExceptionMBS` about the function not being available.

11.121.134 showGuessPanel

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that shows a spelling correction panel.

Notes:

This action method opens the Spelling panel, allowing the user to make a correction during spell checking.

Available in Mac OS X v10.3.9 and later.

11.121.135 startSpeaking

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that starts speaking the selected text or all text if there's no selection.

Notes:

Speech continues asynchronously until the end of the text or until terminated by invoking the `stopSpeaking:` method.

Available in Mac OS X v10.3.9 and later.

11.121.136 StopLoading

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Stop any pending loads on the frame's data source, and its children.

11.121.137 stopSpeaking

Plugin Version: 9.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An action method that stops speaking that is in progress.

Notes:

This action method stops speech that was previously started with startSpeaking.

Available in Mac OS X v10.3.9 and later.

11.121.138 SupportsTextEncoding as boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Find out if the current web page supports text encodings.

Notes: Returns true if the document view of the current web page can support different text encodings.

11.121.139 uppercaseWord

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Implemented by WebView to make uppercase every letter in the word or words surrounding the insertion point or selection, expanding the selection if necessary.

Notes: If either end of the selection partially covers a word, that entire word is made uppercase.

11.121.140 userAgentForURL(url as string) as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The user agent used for accessing the given URL.

Example:

```
msgbox htmlviewer1.WebViewMBS.userAgentForURL("http://www.apple.com")  
// shows: Mozilla/5.0 (Macintosh; U; PPC Mac OS X; de-de) AppleWebKit/419 (KHTML, like Gecko)
```

Notes: An empty string on failure else the user-agent string for the supplied URL.

11.121.141 zoomPageIn

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Zooms web page in.

Notes: This is a new webview function which is not available on all webview versions. So be aware that

you may get an `NSEExceptionMBS` about the function not being available.

11.121.142 `zoomPageOut`

Plugin Version: 11.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Zooms web page out.

Notes: This is a new webview function which is not available on all webview versions. So be aware that you may get an `NSEExceptionMBS` about the function not being available.

11.121.143 Properties

11.121.144 `ApplicationNameForUserAgent` as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The application name.

Example:

```
webview1.ApplicationNameForUserAgent="test"  
// useragent is now "Mozilla/5.0 (Macintosh; U; PPC Mac OS X; de-de) AppleWebKit/417.9 (KHTML, like Gecko) test"
```

Notes:

This name will be used in user-agent strings that are chosen for best results in rendering web pages.
(Read and Write computed property)

11.121.145 `ContinuousSpellCheckingEnabled` as boolean

Plugin Version: 7.7, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether continuous spell checking is enabled.

Example:

```
webview1.ContinuousSpellCheckingEnabled=True
```

Notes:

True if the object should have continuous spell-checking enabled; otherwise, false.
Available in Mac OS X v10.3.9 and later.
(Read and Write computed property)

11.121.146 CustomTextEncodingName as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The custom text encoding name.

Notes:

On getting:

The custom text encoding name or "" if no custom text encoding name has been set.

On setting:

Make the page display with a different text encoding; stops any load in progress.

The text encoding passed in overrides the normal text encoding smarts including what's specified in a web page's header or HTTP response.

The text encoding automatically goes back to the default when the top level frame changes to a new location.

Setting the text encoding name to nil makes the webView use default encoding rules.

(Read and Write computed property)

11.121.147 CustomUserAgent as String

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The custom user-agent string or nil if no custom user-agent string has been set.

Example:

```
webview1.CustomUserAgent="HelloWorldBrowser"
```

Notes: (Read and Write computed property)

11.121.148 dashboardBehavior(behavior as Integer) as boolean

Plugin Version: 7.8, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Get or set the htmlviewer behavior.

Notes:

This is a private API from Apple which may break in the future.

It seems to exist for the dashboard application to switch some flags for event handling.

Behavior constants:

```
const WebDashboardBehaviorAlwaysSendMouseEventsToAllWindows = 0
```

```
const WebDashboardBehaviorAlwaysSendActiveNullEventsToPlugIns = 1
```

```
const WebDashboardBehaviorAlwaysAcceptsFirstMouse = 2
```

```
const WebDashboardBehaviorAllowWheelScrolling = 3
```

```
const WebDashboardBehaviorUseBackwardCompatibilityMode = 4
```


(Read and Write computed property)

11.121.149 DrawsBackground as Boolean

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Enable or disable the background drawing.

Notes:

Works only with Webkit on Mac OS X 10.3.9 and newer.

Returns false on unsupported Webkit versions.

If you set it to false, the background is not drawn and you can have transparent websites like the Dashboard widgets.

(Read and Write computed property)

11.121.150 Editable as boolean

Plugin Version: 9.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the user is allowed to edit the document.

Notes:

You can change the receiver's document programmatically regardless of this setting.

Available in Mac OS X v10.3.9 and later.

Normally, an HTML document is not editable unless the elements within the document are editable. This method provides a low-level way to make the contents of a WebView object editable without altering the document or DOM structure.

True if the receiver allows the user to edit the document. False if an element in the receiver's document can be edited only if the CONTENTEDITABLE attribute has been set on the element or one of its parent elements.

(Read and Write computed property)

11.121.151 GroupName as string

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The group name for this WebView.

Notes:

JavaScript may access named frames within the same group.

(Read and Write computed property)

11.121.152 `mediaStyle` as `String`

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The value to use for the CSS media property.

Example:

```
dim w as WebViewMBS // your WebView
w.mediaStyle="print"
```

Notes:

Set or get the media style for the `WebView`. The `mediaStyle` will override the normal value of the CSS media property. Setting the value to nil will restore the normal value.
(Read and Write computed property)

11.121.153 `preferences` as `WebPreferencesMBS`

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The preferences for this webview.

Notes:

Nil on failure.
(Read and Write computed property)

11.121.154 `PreferencesIdentifier` as `string`

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The string to use a prefix for storing values for this `WebView` in the user defaults database.

Notes:

If the `WebPreferences` for this `WebView` are stored in the user defaults database, the string set in this method will be used a key prefix.
(Read and Write computed property)

11.121.155 `ScrollHeight` as `single`

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The height of the scroll view.

Notes: (Read and Write computed property)

11.121.156 ScrollLeft as single

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The left position of the scroll view.

Example:

```
myWebView.ScrollLeft=myWebView.ScrollLeft+5
```

Notes:

You can set this value to scroll manually.
(Read and Write computed property)

11.121.157 ScrollTop as single

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The top position of the scroll view.

Example:

```
myWebView.ScrollTop=myWebView.ScrollTop+5
```

Notes:

You can set this value to scroll manually.
(Read and Write computed property)

11.121.158 ScrollWidth as single

Plugin Version: 7.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The width of the scroll view.

Notes: (Read and Write computed property)

11.121.159 ShouldUpdateWhileOffscreen as boolean

Plugin Version: 12.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the web view should update even when it is not in a window that is currently visible.

Notes:

If true, the web view updates regardless if it is visible. If false, it updates only if it is visible, possibly improving performance, and then updates automatically when it becomes visible. The default value is true.

Available in OS X v10.6 and later.
(Read and Write computed property)

11.121.160 `smartInsertDeleteEnabled` as boolean

Plugin Version: 9.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the receiver should insert or delete spaces around selected words to preserve proper spacing and punctuation.

Notes:

If true, the receiver performs smart insert and delete; if false, it inserts and deletes exactly what's selected.

Available in Mac OS X v10.3.9 and later.
(Read and Write computed property)

11.121.161 `TextSizeMultiplier` as single

Plugin Version: 7.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The size of the text rendering in views managed by this webView.

Notes:

A fractional percentage value, 1.0 is 100% .
(Read and Write computed property)

11.121.162 `typingStyle` as Variant

Plugin Version: 12.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The CSS typing style.

Notes:

This is a `DOMCSSStyleDeclarationMBS` object.
The typing style is reset automatically when the receiver's selection changes.
(Read and Write computed property)

Chapter 12

Menu

12.1 class Popupmenu

12.1.1 class Popupmenu

Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Gives access to the MenuMBS of the PopupMenu.

Example:

```
dim m as MenuMBS
```

```
m=popupmenu1.MenuMBS  
m.italic(1)=true  
m.bold(2)=true  
m.underline(3)=true  
m.Condense(4)=true  
m.extend(5)=true  
m.Outline(6)=true  
m.shadow(7)=true  
m.Enabled(8)=true  
m.enabled(9)=false
```

12.1.2 Methods

12.1.3 NSButtonMBS as NSButtonMBS

Plugin Version: 9.7, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSButtonMBS object for the given control.

Example:

```
MsgBox PopupMenu1.NSButtonMBS.className
```

Notes: This way you can manipulate Cocoa controls directly.

12.1.4 NSPopUpButtonMBS as NSPopUpButtonMBS

Plugin Version: 10.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Creates a NSPopUpButtonMBS object for the given control.

Example:

```
// get cocoa view for the popupmenu
dim p as NSPopUpButtonMBS = PopupMenu1.NSPopUpButtonMBS

// find a menu entry
dim it as NSMenuItemMBS = p.itemAtIndex(0)

// get a picture
dim pic as Picture = LogoMBS(500)
dim img as new NSImageMBS(pic)
img.setSize 16,16

// and assign icon
it.image = img
```

Notes: This way you can manipulate Cocoa controls directly.

Chapter 13

PDFKit

13.1 class CustomPDFViewMBS

13.1.1 class CustomPDFViewMBS

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a custom PDFView.

Notes: Subclass of the PDFViewMBS class.

13.1.2 Methods

13.1.3 Constructor

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new custom PDFView object.

See also:

- 13.1.4 Constructor(Handle as Integer) 1095
- 13.1.5 Constructor(left as Double, top as Double, width as Double, height as Double) 1096

13.1.4 Constructor(Handle as Integer)

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor.

See also:

- 13.1.3 Constructor 1095
- 13.1.5 Constructor(left as Double, top as Double, width as Double, height as Double) 1096

13.1.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new custom PDFView object.

See also:

- 13.1.3 Constructor 1095
- 13.1.4 Constructor(Handle as Integer) 1095

13.1.6 Destructor

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

13.1.7 Events

13.1.8 acceptsFirstMouse(e as NSEventMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return true if the receiver should be sent a mouseDown event for an initial mouse-down event, false if not.

Notes:

The receiver can either return a value unconditionally or use the location of event *e* to determine whether or not it wants the event. The default implementation ignores the event and returns false.

Implement this event in a subclass to allow instances to respond to click-through. This allows the user to click on a view in an inactive window, activating the view with one click, instead of clicking first to make the window active and then clicking the view. Most view objects refuse a click-through attempt, so the event simply activates the window. Many control objects, however, such as instances of NSButton and NSSlider, do accept them, so the user can immediately manipulate the control without having to release the mouse button.

13.1.9 acceptsFirstResponder as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether to accept first responder.

Notes: Return true if your control can have the focus and false if not.

13.1.10 AfterDrawPage(graphics as NSGraphicsMBS, page as PDFPageMBS)

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called after a page was drawn.

Notes:

This event may not be called on OS X 10.11 or newer.

On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.1.11 AfterDrawPagePost(graphics as NSGraphicsMBS, page as PDFPageMBS)

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called after a page annotations were drawn.

Notes:

This event may not be called on OS X 10.11 or newer.

On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.1.12 AfterDrawRect(graphics as NSGraphicsMBS, x as Double, y as Double, w as Double, h as Double)

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called after something was drawn.

Notes:

This event may not be called on OS X 10.11 or newer.

On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.1.13 becomeFirstResponder as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the object gets focus.

Notes: Return true to accept.

13.1.14 BeforeDrawPage(graphics as NSGraphicsMBS, page as PDFPageMBS) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called before a page was drawn.

Notes:

This event may not be called on OS X 10.11 or newer.

On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.1.15 BeforeDrawPagePost(graphics as NSGraphicsMBS, page as PDFPageMBS) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called before a page annotations were drawn.

Notes:

This event may not be called on OS X 10.11 or newer.

On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.1.16 BeforeDrawRect(graphics as NSGraphicsMBS, x as Double, y as Double, w as Double, h as Double) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called before a something was drawn.

Notes:

This event may not be called on OS X 10.11 or newer.

On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.1.17 beginGestureWithEvent(e as NSEventMBS) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a touch gesture.

Notes:

e: An event object representing the gesture beginning.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

13.1.18 canBecomeKeyView as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the receiver can become key view.

Notes: Returns true if the receiver can become key view, false otherwise.

13.1.19 Close

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom NSView is destroyed.

13.1.20 concludeDragOperation(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging operation is complete, signaling the receiver to perform any necessary clean-up.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

For this method to be invoked, the previous performDragOperation must have returned true.

The destination implements this method to perform any tidying up that it needs to do, such as updating its visual representation now that it has incorporated the dragged data. This message is the last message sent from sender to the destination during a dragging session.

If the sender object's animatesToDestination property was set to true in prepareForDragOperation, then the drag image is still visible. At this point you should draw the final visual representation in the view. When this method returns, the drag image is removed from the screen. If your final visual representation matches the visual representation in the drag, this is a seamless transition.

13.1.21 draggingEnded(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Implement this event to be notified when a drag operation ends in some other destination.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

This method might be used by a destination doing auto-expansion in order to collapse any auto-expands.

13.1.22 draggingEntered(sender as NSDraggingInfoMBS) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image enters destination bounds or frame; delegate returns dragging operation to perform.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in NSDragOperation in the NSDraggingInfo reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous draggingEntered message.

Invoked when a dragged image enters the destination but only if the destination has registered for the pasteboard data type involved in the drag operation. Specifically, this method is invoked when the mouse pointer enters the destination's bounds rectangle (if it is a view object) or its frame rectangle (if it is a window object).

This method must return a value that indicates which dragging operation the destination will perform when the image is released. In deciding which dragging operation to return, the method should evaluate the overlap between both the dragging operations allowed by the source (obtained from sender with the draggingSourceOperationMask method) and the dragging operations and pasteboard data types the destination itself supports.

If none of the operations is appropriate, this method should return NSDragOperationNone (this is the default response if the method is not implemented by the destination). A destination will still receive draggingUpdated and draggingExited even if NSDragOperationNone is returned by this method.

13.1.23 draggingExited(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragged image exits the destination's bounds rectangle (in the case of a view object) or its frame rectangle (in the case of a window object).

Notes: sender: The object sending the message; use it to get details about the dragging operation.

13.1.24 draggingSessionEndedAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS, operation as Integer)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging session has completed.

Notes:

session: The dragging session.

screenPoint: The point where the drag ended, in screen coordinates.

operation: The drag operation. See constants for drag operation types.

Available in OS X v10.7 and later.

13.1.25 draggingSessionMovedToPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag moves on the screen.

Notes:

session: The dragging session.

screenPoint: The point where the drag moved to, in screen coordinates.

Available in OS X v10.7 and later.

13.1.26 draggingSessionSourceOperationMaskForDraggingContext(session as NSDraggingSessionMBS, context as Integer) as Integer

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Declares the types of operations the source allows to be performed. (required)

Notes:

session: The dragging session.

context: The dragging context. See NSDraggingContext constants for the supported values.

Return the appropriate dragging operation as defined in constants.

In the future Apple may provide more specific "within" values in the future. To account for this, for unrecognized localities, return the operation mask for the most specific context that you are concerned with.

13.1.27 `draggingSessionWillBeginAtPoint(session as NSDraggingSessionMBS, screenPoint as NSPointMBS)`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the drag will begin.

Notes:

session: The dragging session.

screenPoint: The point where the drag will begin, in screen coordinates.

Available in OS X v10.7 and later.

13.1.28 `draggingSourceOperationMaskForLocal(flag as boolean) as Integer`

Plugin Version: 13.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns an integer bit mask indicating the types of dragging operations the source object will allow to be performed on the dragged image's data.

Notes:

(Deprecated in OS X v10.7. This method is informally deprecated. It is only called if the source does not implement the NSDraggingSource protocol methods. This method will be formally deprecated in a future OS release.)

isLocal: True indicates that the candidate destination object (the window or view over which the dragged image is currently poised) is in the same application as the source, while a false value indicates that the destination object is in a different application.

A mask, created by combining the dragging operations listed in the NSDragOperation section of NSDraggingInfo protocol reference using the C bitwise OR operator. If the source does not permit any dragging operations, it should return NSDragOperationNone.

If not implemented, the default value is NSDragOperationCopy | NSDragOperationLink | NSDragOperationGeneric | NSDragOperationPrivate.

Available in OS X v10.0 and later. Deprecated in OS X v10.7.

13.1.29 `draggingUpdated(sender as NSDraggingInfoMBS) as Integer`

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked periodically as the image is held within the destination area, allowing modification of the dragging operation or mouse-pointer position.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return one (and only one) of the dragging operation constants described in `NSDragOperation` in the `NSDraggingInfo` reference. The default return value (if this method is not implemented by the destination) is the value returned by the previous `draggingEntered` message.

For this to be invoked, the destination must have registered for the pasteboard data type involved in the drag operation. The messages continue until the image is either released or dragged out of the window or view.

This method provides the destination with an opportunity to modify the dragging operation depending on the position of the mouse pointer inside of the destination view or window object. For example, you may have several graphics or areas of text contained within the same view and wish to tailor the dragging operation, or to ignore the drag event completely, depending upon which object is underneath the mouse pointer at the time when the user releases the dragged image and the `performDragOperation` method is invoked.

You typically examine the contents of the pasteboard in the `draggingEntered` method, where this examination is performed only once, rather than in the `draggingUpdated` method, which is invoked multiple times.

Only one destination at a time receives a sequence of `draggingUpdated` messages. If the mouse pointer is within the bounds of two overlapping views that are both valid destinations, the uppermost view receives these messages until the image is either released or dragged out.

13.1.30 `endGestureWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has ended a touch gesture.

Notes:

e: An event object representing the gesture end.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

13.1.31 `ignoreModifierKeysForDraggingSession(session as NSDraggingSessionMBS)` as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether the modifier keys will be ignored for this dragging session.

Notes:

session: The dragging session.

Return true if the modifier keys will be ignored, false otherwise.
Available in OS X v10.7 and later.

13.1.32 `isOpaque` as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Whether this view is opaque.

13.1.33 `keyDown(e as NSEventMBS)` as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes: Return true if you handled this event.

13.1.34 `keyUp(e as NSEventMBS)` as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the key events.

Notes: Return true if you handled this event.

13.1.35 `magnifyWithEvent(e as NSEventMBS)` as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a pinch gesture.

Notes:

`e`: An event object representing the magnify gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

13.1.36 `menuForEvent(e as NSEventMBS, defaultMenu as NSMenuMBS)` as NSMenuMBS

Plugin Version: 12.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Overridden by subclasses to return a context-sensitive pop-up menu for a given mouse-down event.

Notes:

theEvent: An object representing a mouse-down event.
defaultMenu: The menu as constructed by super class.

The receiver can use information in the mouse event, such as its location over a particular element of the receiver, to determine what kind of menu to return. For example, a text object might display a text-editing menu when the cursor lies over text and a menu for changing graphics attributes when the cursor lies over an embedded image.

The default implementation returns the default menu.

13.1.37 mouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

13.1.38 mouseDownCanMoveWindow as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event is called so you can decide what happens with mouse down.

Notes:

Return true if you do not need to handle a mouse down and it can pass through to superviews; False if you need to handle the mouse down.

This allows iApp-type applications to determine the region by which a window can be moved. By default, this method returns false if the view is opaque; otherwise, it returns true. Subclasses can override this method to return a different value.

13.1.39 mouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

13.1.40 mouseEntered(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

13.1.41 mouseExited(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

13.1.42 mouseMoved(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

13.1.43 mouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

13.1.44 Open

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the custom NSView is created.

13.1.45 otherMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.

Third mouse button.

13.1.46 otherMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.

Third mouse button.

13.1.47 otherMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes:

Return true if you handled this event.

Third mouse button.

13.1.48 performDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked after the released image has been removed from the screen, signaling the receiver to import the pasteboard data.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Return if the destination accepts the data, it returns true; otherwise it returns false. The default is to return false.

For this method to be invoked, the previous prepareForDragOperation message must have returned true. The destination should implement this method to do the real work of importing the pasteboard data represented by the image.

If the sender object's animatesToDestination was set to true in prepareForDragOperation, then setup any animation to arrange space for the drag items to animate to. Also at this time, enumerate through the dragging items to set their destination frames and destination images.

13.1.49 prepareForDragOperation(sender as NSDraggingInfoMBS) as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the image is released, allowing the receiver to agree to or refuse drag operation.

Notes:

sender: The object sending the message; use it to get details about the dragging operation.

Returns true if the receiver agrees to perform the drag operation and false if not.

This method is invoked only if the most recent draggingEntered or draggingUpdated message returned an acceptable drag-operation value.

If you want the drag items to animate from their current location on screen to their final location in your view, set the sender object's animatesToDestination property to true in your implementation of this method.

13.1.50 pressureChange(e as NSEventMBS) as boolean

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Informs the current object that a pressure change occurred on a system that supports pressure sensitivity.

Notes:

This method is invoked automatically in response to user actions. event is the event that initiated the change in pressure.

Available in OS X v10.10.3 and later.

13.1.51 resignFirstResponder as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Focus is going away.

Notes: Return true to accept.

13.1.52 rightMouseDown(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

13.1.53 rightMouseDragged(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

13.1.54 rightMouseUp(e as NSEventMBS, x as Double, y as Double) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** One of the mouse events.

Notes: Return true if you handled this event.

13.1.55 rotateWithEvent(e as NSEventMBS) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a rotation gesture.

Notes:

e: An event object representing the rotate gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

13.1.56 scrollWheel(e as NSEventMBS) as boolean

Plugin Version: 12.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the subclass that the mouse's scroll wheel has moved.

Notes:

e: An object encapsulating information about the wheel-scrolling event.

The default implementation simply passes this message to the next responder.

Return true to not pass the event.

13.1.57 swipeWithEvent(e as NSEventMBS) as boolean

Plugin Version: 10.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that the user has begun a swipe gesture.

Notes:

e: An event object representing the swipe gesture.

The event will be sent to the view under the touch in the key window.

Available in Mac OS X v10.6 and later.

Return true if you handled this event.

13.1.58 updateDraggingItemsForDrag(sender as NSDraggingInfoMBS)

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Invoked when the dragging images should be changed.

Notes:

sender: The object sending the message; use this object to get details about the dragging operation.

While a destination may change the dragging images at any time, it is recommended to wait until this method is called before updating the dragging images.

This allows the system to delay changing the dragging images until it is likely that the user will drop on this destination. Otherwise, the dragging images will change too often during the drag which would be distracting to the user.

13.1.59 viewDidMoveToWindow

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Informs the receiver that it has been added to a new view hierarchy.

Notes:

The default implementation does nothing; subclasses can implement this event to perform whatever actions are necessary.

window may return nil when this method is invoked, indicating that the receiver does not currently reside in any window. This occurs when the receiver has just been removed from its superview or when the receiver has just been added to a superview that does not itself have a window. Overrides of this method may choose to ignore such cases if they are not of interest.

13.1.60 wantsPeriodicDraggingUpdates as boolean

Plugin Version: 13.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Asks the destination object whether it wants to receive periodic draggingUpdated messages.

Notes:

Return true if the destination wants to receive periodic draggingUpdated messages, false otherwise.

If the destination returns false, these messages are sent only when the mouse moves or a modifier flag changes. Otherwise the destination gets the default behavior, where it receives periodic dragging-updated messages

even if nothing changes.

13.2 class PDFActionGoToMBS

13.2.1 class PDFActionGoToMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** PDFActionGoTo, a subclass of PDFAction, defines methods for getting and setting the destination of a go-to action.

Notes:

A PDFActionGoTo object represents the action of going to a specific location within the PDF document. Subclass of the PDFActionMBS class.

13.2.2 Methods

13.2.3 Constructor(destination as PDFDestinationMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes the go-to action.

Notes:

destination: The destination with which to initialize the go-to action.
Available in Mac OS X v10.5 and later.

13.2.4 Properties

13.2.5 destination as PDFDestinationMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destination associated with the action.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.3 class PDFActionMBS

13.3.1 class PDFActionMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** PDFAction represents an action that is performed when, for example, a PDF annotation is activated or an outline item is clicked.

Notes:

A PDFAction object represents an action associated with a PDF element, such as an annotation or a link, that the viewer application can perform. See the Adobe PDF Specification for more about actions and action types.

PDFAction is an abstract superclass of the following concrete classes:

- PDFActionGoToMBS
- PDFActionNamedMBS
- PDFActionRemoteGoToMBS
- PDFActionResetFormMBS
- PDFActionURLMBS

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

13.3.2 Methods

13.3.3 Constructor

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

Notes:

This class is the base class for a number of annotations. So this constructor is private to make sure you don't create instances of PDFActionMBS. But you can still create instances of the subclasses.

This constructor is private to make sure you don't create an object from this class by error. Please use designated functions to create objects.

13.3.4 copy as PDFActionMBS

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a copy of the action object.

13.3.5 type as string

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the type of the action.

Notes:

The PDF action type returned by this method may not correspond precisely to the name of a PDFAction subclass. For example, a PDFActionURL object might return "URI" or "Launch," depending on the original action as defined by the Adobe PDF Specification. In the PDF Kit, these two actions are handled in the single PDFActionURL subclass, and the more familiar term "URL" is used instead.

Available in Mac OS X v10.5 and later.

13.3.6 Properties

13.3.7 Handle as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal reference to the PDF action object.

Notes: (Read and Write property)

13.4 class PDFActionNamedMBS

13.4.1 class PDFActionNamedMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** PDFActionNamed defines methods used to work with actions in PDF documents, some of which are named in the Adobe PDF Specification.

Notes:

A PDFActionNamed object represents an action with a defined name, such as "Go back" or "Zoom in." Subclass of the PDFActionMBS class.

13.4.2 Methods

13.4.3 Constructor(name as Integer)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes the PDFActionName object with the specified named action.

Notes: Available in Mac OS X v10.5 and later.

13.4.4 Properties

13.4.5 name as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name of the named action.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.4.6 Constants

13.4.7 kPDFActionNamedFind = 8

Plugin Version: 9.6. **Function:** One of the name constants for the action.

Notes:

The Find action.
Available in Mac OS X v10.5 and later.

13.4.8 kPDFActionNamedFirstPage = 3

Plugin Version: 9.6. **Function:** One of the name constants for the action.
Notes:

The First Page action.
Available in Mac OS X v10.5 and later.

13.4.9 kPDFActionNamedGoBack = 5

Plugin Version: 9.6. **Function:** One of the name constants for the action.
Notes:

The Go Back action.
Available in Mac OS X v10.5 and later.

13.4.10 kPDFActionNamedGoForward = 6

Plugin Version: 9.6. **Function:** One of the name constants for the action.
Notes:

The Go Forward action.
Available in Mac OS X v10.5 and later.

13.4.11 kPDFActionNamedGoToPage = 7

Plugin Version: 9.6. **Function:** One of the name constants for the action.
Notes:

The Go to Page action.
Available in Mac OS X v10.5 and later.

13.4.12 kPDFActionNamedLastPage = 4

Plugin Version: 9.6. **Function:** One of the name constants for the action.
Notes:

The Last Page action.
Available in Mac OS X v10.5 and later.

13.4.13 kPDFActionNamedNextPage = 1

Plugin Version: 9.6. **Function:** One of the name constants for the action.
Notes:

The Next Page action.
Available in Mac OS X v10.5 and later.

13.4.14 kPDFActionNamedNone = 0

Plugin Version: 9.6. **Function:** One of the name constants for the action.
Notes:

The action has no name.
Available in Mac OS X v10.5 and later.

13.4.15 kPDFActionNamedPreviousPage = 2

Plugin Version: 9.6. **Function:** One of the name constants for the action.
Notes:

The Previous Page action.
Available in Mac OS X v10.5 and later.

13.4.16 kPDFActionNamedPrint = 9

Plugin Version: 9.6. **Function:** One of the name constants for the action.
Notes:

The Print action.
Available in Mac OS X v10.5 and later.

13.4.17 kPDFActionNamedZoomIn = 10

Plugin Version: 9.6. **Function:** One of the name constants for the action.
Notes:

The Zoom In action.
Available in Mac OS X v10.5 and later.

13.4.18 kPDFActionNamedZoomOut = 11

Plugin Version: 9.6. **Function:** One of the name constants for the action.

Notes:

The Zoom Out action.

Available in Mac OS X v10.5 and later.

13.5 class PDFActionRemoteGoToMBS

13.5.1 class PDFActionRemoteGoToMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** PDFActionRemoteGoTo, a subclass of PDFAction, defines methods for getting and setting the destination of a go-to action that targets another document.

Notes:

Available in Mac OS X v10.5 and later.
Subclass of the PDFActionMBS class.

13.5.2 Methods

13.5.3 Constructor(PageIndex as Integer, atPoint as NSPointMBS, file as folderitem)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes the remote go-to action with the specified page index, point, and document URL.

Notes:

pageIndex: The page index of the remote document.
point: The point on the page in the remote document.
file: The file of the remote PDF document.

The PDFActionRemoteGoTo object uses a zero-based page index, not a PDFPage object. This simplifies the handling of remote destinations for documents that may not be instantiated yet.

Available in Mac OS X v10.5 and later.
See also:

- 13.5.4 Constructor(PageIndex as Integer, atPoint as NSPointMBS, url as string) 1119

13.5.4 Constructor(PageIndex as Integer, atPoint as NSPointMBS, url as string)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes the remote go-to action with the specified page index, point, and document URL.

Notes:

pageIndex: The page index of the remote document.
point: The point on the page in the remote document.
url: The URL of the remote PDF document.

The PDFActionRemoteGoTo object uses a zero-based page index, not a PDFPage object. This simplifies

the handling of remote destinations for documents that may not be instantiated yet.

Available in Mac OS X v10.5 and later.

See also:

- 13.5.3 Constructor(PageIndex as Integer, atPoint as NSPointMBS, file as folderitem) 1119

13.5.5 Properties

13.5.6 pageIndex as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The zero-based page index referenced by the remote go-to action.

Notes:

Available in Mac OS X v10.5 and later.

(Read and Write property)

13.5.7 point as NSPointMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The point, in page space, on the page referenced by the remote go-to action.

Notes:

The point on the page of the remote document referenced by the action. If either the x value or the y value of the point is kPDFDestinationUnspecifiedValue, no position on the page is specified.

Page space is a 72-dpi coordinate system with the origin at the lower-left corner of the current page.

Available in Mac OS X v10.5 and later.

(Read and Write property)

13.5.8 URL as string

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The URL of the document referenced by the remote go-to action.

Notes:

Available in Mac OS X v10.5 and later.

(Read and Write property)

13.6 class PDFActionResetFormMBS

13.6.1 class PDFActionResetFormMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** PDFActionResetForm, a subclass of PDFAction, defines methods for getting and clearing fields in a PDF form.

Notes:

A PDFActionResetForm object represents an action associated with a PDF form.
Subclass of the PDFActionMBS class.

13.6.2 Methods

13.6.3 Constructor

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a reset form action.

Notes:

Initially, there are no fields and fieldsIncludedAreCleared returns true.

Available in Mac OS X v10.5 and later.

13.6.4 fields as string()

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array of fields associated with the reset action.

Notes:

An array of strings that corresponds to the fieldNames property of widget annotations (such as PDFAnnotationButtonWidget) on the PDF page. This method can return an empty array.

Available in Mac OS X v10.5 and later.

13.6.5 setFields(fields() as string)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the array of fields associated with the reset action.

Notes: Available in Mac OS X v10.5 and later.

13.6.6 Properties

13.6.7 `fieldsIncludedAreCleared` as boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the fields associated with the reset action are cleared when the action is performed.

Notes:

If true, the reset action's fields are cleared when the action is performed. If false, the fields are excluded from the reset action; that is, they are not cleared, but all other fields in the document are cleared.

Available in Mac OS X v10.5 and later.

(Read and Write property)

13.7 class PDFActionURLMBS

13.7.1 class PDFActionURLMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** PDFActionURL, a subclass of PDFAction, defines methods for getting and setting the URL associated with a URL action.

Notes: Subclass of the PDFActionMBS class.

13.7.2 Methods

13.7.3 Constructor(url as string)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a URL action with the specified URL.

Notes: Available in Mac OS X v10.5 and later.

13.7.4 Properties

13.7.5 URL as string

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The URL associated with the URL action.

Notes:

Available in Mac OS X v10.5 and later.

(Read and Write property)

13.8 class PDFAnnotationButtonWidgetMBS

13.8.1 class PDFAnnotationButtonWidgetMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for an annotation button widget.

Notes: Subclass of the PDFAnnotationMBS class.

13.8.2 Methods

13.8.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor which creates a new annotation widget.

13.8.4 Properties

13.8.5 allowsToggleToOff as boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether a radio button behaves in a toggling manner.

Notes:

True if clicking a radio button control that is already in the on state toggles it to the off state; otherwise false.

Available in Mac OS X v10.5 and later.

(Read only property)

13.8.6 backgroundColor as NSColorMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The background color.

Notes: (Read and Write property)

13.8.7 caption as string

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The text of the label on a push button control.

Notes:

This method applies only to the label drawn on a control of type `kPDFWidgetPushButtonControl`. Available in Mac OS X v10.5 and later. (Read and Write property)

13.8.8 controlType as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The control type of this widget.

Notes:

Value is one of the following constants:

`kPDFWidgetUnknownControl`
`kPDFWidgetPushButtonControl`
`kPDFWidgetRadioButtonControl`
`kPDFWidgetCheckBoxControl`
(Read and Write property)

13.8.9 fieldName as string

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal name of a field (used for reset-form actions).

Notes:

Available in Mac OS X v10.5 and later. (Read and Write property)

13.8.10 font as NSFontMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The font used in the control's label.

Notes:

Available in Mac OS X v10.5 and later. (Read and Write property)

13.8.11 `fontColor` as `NSColorMBS`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The font color used in the control's label.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.8.12 `Highlighted` as `boolean`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value that indicates whether the control is highlighted when it is drawn.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.8.13 `onStateValue` as `string`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The string associated with the on state of a radio button or checkbox control.

Notes:

This is a required string for controls of types `kPDFWidgetRadioButtonControl` and `kPDFWidgetCheckBoxControl`. The off state is always labeled "Off".

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.8.14 `state` as `Integer`

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The state value.

Notes: (Read and Write property)

13.8.15 Events

13.8.16 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.8.17 Constants

13.8.18 kPDFWidgetCheckBoxControl = 2

Plugin Version: 7.6. **Function:** One of the control types for this widget.

13.8.19 kPDFWidgetPushButtonControl = 0

Plugin Version: 7.6. **Function:** One of the control types for this widget.

13.8.20 kPDFWidgetRadioButtonControl = 1

Plugin Version: 7.6. **Function:** One of the control types for this widget.

13.8.21 kPDFWidgetUnknownControl = -1

Plugin Version: 7.6. **Function:** One of the control types for this widget.

13.8.22 NSOffState = 0

Plugin Version: 12.5. **Function:** One of the state constants.

Notes: The corresponding feature is in effect nowhere.

13.8.23 NSOnState = 1

Plugin Version: 12.5. **Function:** One of the state constants.

Notes: The corresponding feature is in effect everywhere.

13.9 class PDFAnnotationChoiceWidgetMBS

13.9.1 class PDFAnnotationChoiceWidgetMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A PDFAnnotationChoiceWidget object provides user interactivity on a page of a PDF document, in the form of pop-up menus and lists.

Notes:

PDFAnnotationChoiceWidget inherits general annotation behavior from the PDFAnnotation class. If you use a PDFAnnotationChoiceWidget object, your application must handle hit testing, unless you are simply using PDFView to display content. This is because PDFView automatically handles hit testing for you. Subclass of the PDFAnnotationMBS class.

13.9.2 Methods

13.9.3 choices as string()

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array of strings that represent the items available in the list or pop-up menu of the choice widget annotation.

Notes: Available in Mac OS X v10.5 and later.

13.9.4 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a PDF annotation object.

Notes:

Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page. Available in Mac OS X v10.4 and later.

13.9.5 setChoices(choices() as string)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the items available in the list or pop-up menu of the choice widget annotation.

Notes:

choices: Send an array of strings, each of which represents an item in the list or pop-up menu of the choice annotation widget.

Available in Mac OS X v10.5 and later.

13.9.6 Properties

13.9.7 backgroundColor as NSColorMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The color of the widget annotation background.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.9.8 fieldName as string

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal field name associated with the widget annotation's value.

Notes:

If the widget annotation is backed by PDF form data, it can associate an optional field name with a value or other data.

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.9.9 font as NSFontMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The font used to display the text in the widget annotation.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.9.10 fontColor as NSColorMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The font color used to display the text in the widget annotation.

Notes:

Available in Mac OS X v10.5 and later.

(Read and Write property)

13.9.11 isListChoice as boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the widget annotation is a list.

Notes:

A choice widget annotation can be either a list or a pop-up menu.

Available in Mac OS X v10.5 and later.

(Read and Write property)

13.9.12 stringValue as string

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The selection in the widget annotation.

Notes:

If the widget annotation object is backed by PDF form data, this method returns the value associated with the appropriate field in the form object, if possible.

Available in Mac OS X v10.5 and later.

(Read and Write property)

13.9.13 Events

13.9.14 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.

Return true to disable the default drawing from PDFKit.

13.10 class PDFAnnotationCircleMBS

13.10.1 class PDFAnnotationCircleMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFKit class for an annotation circle.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationCircleMBS(100,100,100,100)

a.border.style = PDFBorderMBS.kPDFBorderStyleBeveled

page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

Notes: Subclass of the PDFAnnotationMBS class.

13.10.2 Methods

13.10.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new annotation circle.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationCircleMBS(100,100,100,100)

page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

13.10.4 Properties

13.10.5 interiorColor as NSColorMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Fill color used for drawing annotation.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

```
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationCircleMBS(100,100,100,100)
a.interiorColor = NSColorMBS.magentaColor
```

```
page.addAnnotation(a)
```

```
dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

Notes: (Read and Write property)

13.10.6 Events

13.10.7 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.11 class PDFAnnotationFreeTextMBS

13.11.1 class PDFAnnotationFreeTextMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a free text annotation.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim annotations(-1) as PDFAnnotationMBS = page.annotations

for each a as PDFAnnotationMBS in annotations
if a isa PDFAnnotationFreeTextMBS then
dim ft as PDFAnnotationFreeTextMBS = PDFAnnotationFreeTextMBS(a)
MsgBox ft.contents
end if
next
```

Notes: Subclass of the PDFAnnotationMBS class.

13.11.2 Methods

13.11.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new free text annotation.

13.11.4 Properties

13.11.5 alignment as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Alignment of text within annotation bounds.

Example:

```
dim a as PDFAnnotationFreeTextMBS // an annotation

if a.alignment=a.NSLeftTextAlignment then
```

```
// left aligned  
end if
```

Notes:

Supported: NSLeftTextAlignment, NSRightTextAlignment and NSCenterTextAlignment.
(Read and Write property)

13.11.6 font as NSFontMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Font associated with the text field.

Notes: (Read and Write property)

13.11.7 fontColor as NSColorMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The font color used in the text field of the annotation.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.11.8 Events**13.11.9 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean**

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.11.10 Constants

13.11.11 `NSCenterTextAlignment=2`

Plugin Version: 7.6. **Function:** The Cocoa text alignment constant for center.

13.11.12 `NSJustifiedTextAlignment=3`

Plugin Version: 7.6. **Function:** The Cocoa text alignment constant for justified.

13.11.13 `NSLeftTextAlignment=0`

Plugin Version: 7.6. **Function:** The Cocoa text alignment constant for left.

13.11.14 `NSNaturalTextAlignment=4`

Plugin Version: 7.6. **Function:** The Cocoa text alignment constant for natural.

13.11.15 `NSRightTextAlignment=1`

Plugin Version: 7.6. **Function:** The Cocoa text alignment constant for right.

13.12 class PDFAnnotationInkMBS

13.12.1 class PDFAnnotationInkMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFKit class for an ink annotation.

Notes: Subclass of the PDFAnnotationMBS class.

13.12.2 Methods

13.12.3 addBezierPath(path as NSBezierPathMBS)

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds a Bezier path to an annotation.

13.12.4 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new ink annotation.

13.12.5 paths as NSBezierPathMBS()

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array containing the Bezier paths that make up an annotation.

Example:

```
dim a as new PDFAnnotationInkMBS(0, 0, 100, 100)
```

```
dim b1 as NSBezierPathMBS = NSBezierPathMBS.bezierPathWithRect(NSMakeRectMBS(10, 10, 10, 10))  
a.addBezierPath b1
```

```
dim b2 as NSBezierPathMBS = NSBezierPathMBS.bezierPathWithRect(NSMakeRectMBS(50, 50, 20, 30))  
a.addBezierPath b2
```

```
dim paths() as NSBezierPathMBS = a.paths  
break
```

13.12.6 removeBezierPath(path as NSBezierPathMBS)

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes a Bezier path from an annotation.

13.12.7 Events**13.12.8 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean**

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.13 class PDFAnnotationLineMBS

13.13.1 class PDFAnnotationLineMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFKit class for a line annotation.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim annotations(-1) as PDFAnnotationMBS = page.annotations

// show lines on first page
for each a as PDFAnnotationMBS in annotations
if a isa PDFAnnotationLineMBS then
dim l as PDFAnnotationLineMBS = PDFAnnotationLineMBS(a)
MsgBox "Line from "+l.startPoint.String+" to "+l.endPoint.String
end if
next
```

Notes: Subclass of the PDFAnnotationMBS class.

13.13.2 Methods

13.13.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new annotation line.

Example:

```
dim a as new PDFAnnotationLineMBS(100,100,100,100)
```

13.13.4 Properties

13.13.5 endLineStyle as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Style used for ornaments at the line end.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationLineMBS(100,100,100,100)

a.colorValue = NSColorMBS.redColor
a.endLineStyle = a.kPDFLineStyleOpenArrow

page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)

```

Notes: (Read and Write property)

13.13.6 endPoint as NSPointMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A point specifying the end point for line annotation.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim annotations(-1) as PDFAnnotationMBS = page.annotations

// show lines on first page
for each a as PDFAnnotationMBS in annotations
if a isa PDFAnnotationLineMBS then
dim l as PDFAnnotationLineMBS = PDFAnnotationLineMBS(a)
MsgBox "Line from "+l.startPoint.String+" to "+l.endPoint.String
end if
next

```

Notes: (Read and Write property)

13.13.7 interiorColor as NSColorMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The color used to fill the ornament at the ends of the line.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.13.8 startLineStyle as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Style used for ornaments at the line start.

Example:

```
dim a as new PDFAnnotationLineMBS(100,100,100,100)
a.startLineStyle = a.kPDFLineStyleSquare
```

Notes: (Read and Write property)

13.13.9 startPoint as NSPointMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A point specifying the start point for line annotation.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim annotations(-1) as PDFAnnotationMBS = page.annotations

// show lines on first page
for each a as PDFAnnotationMBS in annotations
if a isa PDFAnnotationLineMBS then
dim l as PDFAnnotationLineMBS = PDFAnnotationLineMBS(a)
MsgBox "Line from " + l.startPoint.String + " to " + l.endPoint.String
end if
next
```

Notes: (Read and Write property)

13.13.10 Events

13.13.11 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.13.12 Constants

13.13.13 kPDFLineStyleCircle=2

Plugin Version: 7.6. **Function:** On of the constants for the styles used for line end caps.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

```
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationLineMBS(100,100,100,100)
```

```
a.endLineStyle = a.kPDFLineStyleCircle
```

```
page.addAnnotation(a)
```

```
dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
```

```
o.Launch
```

13.13.14 kPDFLineStyleClosedArrow=5

Plugin Version: 7.6. **Function:** On of the constants for the styles used for line end caps.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

```
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationLineMBS(100,100,100,100)
```

```
a.endLineStyle = a.kPDFLineStyleClosedArrow  
page.addAnnotation(a)  
  
dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")  
call doc.write(o)  
  
o.Launch
```

13.13.15 kPDFLineStyleDiamond=3

Plugin Version: 7.6. **Function:** On of the constants for the styles used for line end caps.

Example:

```
dim a as new PDFAnnotationLineMBS(100,100,100,100)  
a.startLineStyle = a.kPDFLineStyleDiamond
```

13.13.16 kPDFLineStyleNone=0

Plugin Version: 7.6. **Function:** On of the constants for the styles used for line end caps.

13.13.17 kPDFLineStyleOpenArrow=4

Plugin Version: 7.6. **Function:** On of the constants for the styles used for line end caps.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")  
dim doc as new PDFDocumentMBS(f)  
  
dim page as PDFPageMBS = doc.pageAtIndex(0)  
dim a as new PDFAnnotationLineMBS(100,100,100,100)  
  
a.endLineStyle = a.kPDFLineStyleOpenArrow  
  
page.addAnnotation(a)  
  
dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")  
call doc.write(o)  
  
o.Launch
```

13.13.18 kPDFLineStyleSquare=1

Plugin Version: 7.6. **Function:** One of the constants for the styles used for line end caps.

Example:

```
dim a as new PDFAnnotationLineMBS(100,100,100,100)
a.endLineStyle = a.kPDFLineStyleSquare
```


13.14 class PDFAnnotationLinkMBS

13.14.1 class PDFAnnotationLinkMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFKit class for a link annotation.

Example:

```
// load a PDF
dim sourceFile as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim p as new PDFDocumentMBS(sourceFile)

// get 4th page
dim page as PDFPageMBS = p.pageAtIndex(3)
// create a destination
dim dest as new PDFDestinationMBS(page, NSMakePointMBS(0,0))

// create the link annotation
dim LinkAnnotation as new PDFAnnotationLinkMBS(100,100,100,100)
LinkAnnotation.destination = dest

// add a color rect so we see the link
dim SquareAnnotation as new PDFAnnotationSquareMBS(100,100,100,100)
SquareAnnotation.colorValue = NSColorMBS.redColor

// add to the first page
p.pageAtIndex(0).addAnnotation(SquareAnnotation)
p.pageAtIndex(0).addAnnotation(LinkAnnotation)

// and write new PDF.
dim destfile as FolderItem = SpecialFolder.Desktop.Child("output.pdf")
call p.write(destfile)
```

Notes: Subclass of the PDFAnnotationMBS class.

13.14.2 Methods

13.14.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor for a new annotation link.

13.14.4 setHighlighted(value as boolean)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The highlight state dictates how the annotation is drawn.

Notes: If a user has clicked on a "Link" annotation, you should set highlighted to true and redraw it. When the user lets up, set highlighted to false and redraw again.

13.14.5 Properties

13.14.6 destination as PDFDestinationMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Destination for the link.

Notes: (Read and Write property)

13.14.7 URL as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** URL for the link.

Notes: (Read and Write property)

13.14.8 Events

13.14.9 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.15 class PDFAnnotationMarkupMBS

13.15.1 class PDFAnnotationMarkupMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a markup annotation.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

```
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationMarkupMBS(100,100,100,100)
```

```
page.addAnnotation(a)
```

```
dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

Notes: Subclass of the PDFAnnotationMBS class.

13.15.2 Methods

13.15.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new markup annotation.

Example:

```
dim a as new PDFAnnotationMarkupMBS(100,100,100,100)
```

13.15.4 quadrilateralPoints as NSPointMBS()

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Get the quadrilateral points.

Example:

```
dim m as new PDFAnnotationMarkupMBS(10, 20, 30, 40)
dim points() as NSPointMBS = m.quadrilateralPoints
```

break // see points in debugger

Notes:

Array of (n * 4) NSPoints defining n quadrilaterals in page space where n is the number of quad points. The points for each quad are ordered in a 'Z' pattern. That is, the first point should represent the upper left point representing the start of the marked-up text, the next point will be the upper right, the third point will represent the lower left of the text and the last point the lower right. Points are specified relative to the annotation's bound's origin.

13.15.5 setQuadrilateralPoints(points() as NSPointMBS)

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: Yes, Linux: Yes. **Function:** Set the quadrilateral points.

Notes:

Array of (n * 4) NSPoints defining n quadrilaterals in page space where n is the number of quad points. The points for each quad are ordered in a 'Z' pattern. That is, the first point should represent the upper left point representing the start of the marked-up text, the next point will be the upper right, the third point will represent the lower left of the text and the last point the lower right. Points are specified relative to the annotation's bound's origin.

13.15.6 Properties

13.15.7 markupType as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Type of mark-up (highlight, strike-out or underline).

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationMarkupMBS(100,100,100,100)
a.markupType = PDFAnnotationMarkupMBS.kPDFMarkupTypeUnderline
page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

Notes:

Changing the markup type also changes the annotations type to one of: "Highlight", "Strikeout", or "Underline" (these are three separate annotation types treated here as three separate flavors of the one PDFAnnotationMarkup class).

(Read and Write property)

13.15.8 Events**13.15.9 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean**

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.15.10 Constants**13.15.11 kPDFMarkupTypeHighlight=0**

Plugin Version: 7.6. **Function:** A constant for the markup type.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationMarkupMBS(100,100,100,100)
a.markupType = PDFAnnotationMarkupMBS.kPDFMarkupTypeHighlight
page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

13.15.12 kPDFMarkupTypeStrikeOut=1

Plugin Version: 7.6. **Function:** A constant for the markup type.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationMarkupMBS(100,100,100,100)
a.markupType = PDFAnnotationMarkupMBS.kPDFMarkupTypeStrikeOut
page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

13.15.13 kPDFMarkupTypeUnderline=2

Plugin Version: 7.6. **Function:** A constant for the markup type.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationMarkupMBS(100,100,100,100)
a.markupType = PDFAnnotationMarkupMBS.kPDFMarkupTypeUnderline
page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

13.16 class PDFAnnotationMBS

13.16.1 class PDFAnnotationMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** This is the base class for all annotations.

Notes:

A PDFAnnotation object by itself is not useful, only the subclasses (like PDFAnnotationCircle, PDFAnnotationText) are interesting. In parsing a PDF however, any unknown or unsupported annotations will be represented as this base class. Its drawRect method merely frames the bounds of the annotation and prints the annotation type (like "TrapNet") within the box.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

13.16.2 Methods

13.16.3 Constructor

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

Notes:

This class is the base class for a number of annotations. So this constructor is private to make sure you don't create instances of PDFAnnotationMBS. But you can still create instances of the subclasses.

This constructor is private to make sure you don't create an object from this class by error. Please use designated functions to create objects.

13.16.4 copy as PDFAnnotationMBS

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a copy of the annotation object.

Notes:

For Mac OS X 10.7 and newer this function uses the framework function.

For Mac OS X 10.6 and older this function uses our own copy function to duplicate the annotation.

13.16.5 Destructor

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

13.16.6 drawWithBox(box as Integer)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Draws the annotation on its associated page.

Notes:

The annotation is drawn relative to the origin of box in page space.

Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page.

For additional information see the "Constants" section in the PDFPage class.

Available in Mac OS X v10.4 and later.

13.16.7 removeAllAppearanceStreams

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** All appearance streams for the target annotation are removed.

Notes:

Without an appearance stream, annotations are drawn strictly according to their parameters (color, border, font, etc.). When a PDF is saved, PDF Kit will always write out an appearance stream(s) for each annotation. If the PDF is reloaded, you will need to remove the appearance streams in order to continue to edit the annotations parameters.

Requires Mac OS X 10.5.

13.16.8 Properties

13.16.9 border as PDFBorderMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Optional border or border style that describes how to draw the annotation border (if any).

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

```
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationSquareMBS(100,100,100,100)
```

```
a.interiorColor = NSColorMBS.greenColor
```



```
a.colorValue = NSColorMBS.redColor
a.border.lineWidth=5
```

```
page.addAnnotation(a)
```

```
dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

Notes: (Read and Write property)

13.16.10 bounds as NSRectMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The bounding box for the annotation in page space.

Notes:

Page space is a 72-dpi coordinate system with the origin at the lower-left corner of the current page.

Available in Mac OS X v10.4 and later.
(Read and Write property)

13.16.11 colorValue as NSColorMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** For many annotations ("Circle", "Square") the stroke color.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

```
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationLineMBS(100,100,100,100)
```

```
a.colorValue = NSColorMBS.redColor
a.endLineStyle = a.kPDFLineStyleOpenArrow
```

```
page.addAnnotation(a)
```

```
dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
```

Notes:

Used for other annotations as well.
(Read and Write property)

13.16.12 contents as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A string of text associated with an annotation.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationTextMBS(100,100,100,100)

a.contents="Hello"
a.colorValue = NSColorMBS.redColor

page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

Notes:

Often to be displayed in a pop-up when the annotation is clicked on ("FreeText" and "Text" especially).
(Read and Write property)

13.16.13 Handle as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The handle used internally for the object reference.

Notes: (Read and Write property)

13.16.14 hasAppearanceStream as boolean

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true if the annotation has an appearance stream.

Notes:

Annotations with appearance streams are drawn using their stream. As a result, setting many parameters (like 'setColor' above), will have no visible effect.
(Read only property)

13.16.15 modificationDate as date

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The modification date of the annotation.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.16.16 mouseUpAction as PDFActionMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The action performed when a user releases the mouse button within an annotation.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.16.17 page as PDFPageMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the page the annotation is associated with.

Notes: (Read only property)

13.16.18 popup as Variant

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The pop-up annotation associated with an annotation.

Notes:

The variant is a PDFAnnotationPopupMBS.

Pop-up annotations are not used with links or widgets. The bounds and open state of the pop-up annotation indicate the placement and open state of the pop-up window.

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.16.19 shouldDisplay as boolean

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Specifies whether it should be drawn to the display or not.

Notes: (Read and Write property)

13.16.20 shouldPrint as boolean

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Specifies whether it should be printed or not.

Notes: (Read and Write property)

13.16.21 toolTip as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String used for tooltips.

Notes:

The base class returns contents, sub-classes may override as appropriate.
(Read only property)

13.16.22 type as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the annotation type (called "Subtype" in the PDF specification since "Annot" is the type).

Example:

```
dim a as new PDFAnnotationTextMBS(100,100,100,100)
MsgBox a.type // Text
```

Notes:

Examples include: "Text", "Link", "Line", etc.
(Read only property)

13.16.23 userName as string

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name of the user who created the annotation.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.17 class PDFAnnotationPopupMBS

13.17.1 class PDFAnnotationPopupMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A PDFAnnotation-Popup object provides user interactivity on a PDF page in the form of a pop-up menu.

Notes: Subclass of the PDFAnnotationMBS class.

13.17.2 Methods

13.17.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new annotation popup annotation with the given size.

13.17.4 Properties

13.17.5 isOpen as boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the pop-up is open.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.17.6 Events

13.17.7 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.18 class PDFAnnotationSquareMBS

13.18.1 class PDFAnnotationSquareMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a square annotation.

Example:

```
// load a PDF
dim sourceFile as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim p as new PDFDocumentMBS(sourceFile)

// get 4th page
dim page as PDFPageMBS = p.pageAtIndex(3)
// create a destination
dim dest as new PDFDestinationMBS(page, NSMakePointMBS(0,0))

// create the link annotation
dim LinkAnnotation as new PDFAnnotationLinkMBS(100,100,100,100)
LinkAnnotation.destination = dest

// add a color rect so we see the link
dim SquareAnnotation as new PDFAnnotationSquareMBS(100,100,100,100)
SquareAnnotation.colorValue = NSColorMBS.redColor

// add to the first page
p.pageAtIndex(0).addAnnotation(SquareAnnotation)
p.pageAtIndex(0).addAnnotation(LinkAnnotation)

// and write new PDF.
dim destfile as FolderItem = SpecialFolder.Desktop.Child("output.pdf")
call p.write(destfile)
```

Notes: Subclass of the PDFAnnotationMBS class.

13.18.2 Methods

13.18.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a square annotation.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationSquareMBS(100,100,100,100)

a.interiorColor = NSColorMBS.greenColor
a.colorValue = NSColorMBS.redColor
a.border.lineWidth=5

page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

13.18.4 Properties

13.18.5 interiorColor as NSColorMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Fill color used for drawing annotation.

Example:

```
dim a as new PDFAnnotationSquareMBS(100,100,100,100)
a.interiorColor = NSColorMBS.greenColor
```

Notes: (Read and Write property)

13.18.6 Events

13.18.7 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.19 class PDFAnnotationStampMBS

13.19.1 class PDFAnnotationStampMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A PDFAnnotationStamp object allows you to display a word or phrase, such as "Confidential," in a PDF page.

Notes:

A PDFAnnotationStamp object should have an appearance stream associated with it; otherwise, nothing useful is rendered.

Subclass of the PDFAnnotationMBS class.

13.19.2 Methods

13.19.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new annotation stamp with the given size.

13.19.4 Properties

13.19.5 name as string

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name associated with the stamp annotation.

Notes:

The name must be representable in ASCII. You can set a stamp annotation's name to help you identify it, but that name is not displayed on the PDF page. You must provide the string you want displayed on the page, such as "Draft" or "Top Secret", in the appearance stream for the annotation.

Note that the name value of the stamp annotation is not necessarily identical to the user-visible appearance of the stamp annotation. For example, a stamp annotation that displays "Confidential" on a PDF page may not have a name value of "Confidential".

Available in Mac OS X v10.5 and later.

(Read and Write property)

13.19.6 Events

13.19.7 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.20 class PDFAnnotationTextMBS

13.20.1 class PDFAnnotationTextMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFKit class for an annotation text.

Notes: Subclass of the PDFAnnotationMBS class.

13.20.2 Methods

13.20.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new annotation text.

13.20.4 Properties

13.20.5 iconType as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The type of icon displayed in the PDF.

Notes:

Supported icons: "Comment", "Key", "Note", "Help", "NewParagraph", "Paragraph" and "Insert".
(Read and Write property)

13.20.6 Events

13.20.7 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.20.8 Constants

13.20.9 `kPDFTextAnnotationIconComment=0`

Plugin Version: 7.6. **Function:** One of the constants for use with the `icontype` property.

13.20.10 `kPDFTextAnnotationIconHelp=3`

Plugin Version: 7.6. **Function:** One of the constants for use with the `icontype` property.

13.20.11 `kPDFTextAnnotationIconInsert=6`

Plugin Version: 7.6. **Function:** One of the constants for use with the `icontype` property.

13.20.12 `kPDFTextAnnotationIconKey=1`

Plugin Version: 7.6. **Function:** One of the constants for use with the `icontype` property.

13.20.13 `kPDFTextAnnotationIconNewParagraph=4`

Plugin Version: 7.6. **Function:** One of the constants for use with the `icontype` property.

13.20.14 `kPDFTextAnnotationIconNote=2`

Plugin Version: 7.6. **Function:** One of the constants for use with the `icontype` property.

13.20.15 `kPDFTextAnnotationIconParagraph=5`

Plugin Version: 7.6. **Function:** One of the constants for use with the `icontype` property.

13.21 class PDFAnnotationTextWidgetMBS

13.21.1 class PDFAnnotationTextWidgetMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFKit class for a text widget annotation.

Notes: Subclass of the PDFAnnotationMBS class.

13.21.2 Methods

13.21.3 Constructor(left as single, top as single, width as single, height as single)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new annotation.

13.21.4 Properties

13.21.5 alignment as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Alignment of text.

Notes:

Supported: NSLeftTextAlignment, NSRightTextAlignment and NSCenterTextAlignment.

(Read and Write property)

13.21.6 attributedStringValue as NSAttributedStringMBS

Plugin Version: 12.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Attributed string associated with text field (font / fontColor).

Notes:

Available on Mac OS X 10.8 or newer.

(Read and Write property)

13.21.7 backgroundColor as NSColorMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The background color of the annotation text field.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.21.8 fieldName as string

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal name for the annotation text field.

Notes:

Field names are optional, internal names that identify text fields in a PDF form. You use field names with the PDFActionResetForm action.

Note that multiple PDFAnnotationTextWidget objects with the same field name always have the same text associated with that field name. When text is entered into one of the objects, the text associated with that field name is changed in all objects. If you need to ensure unique text for a PDFAnnotationTextWidget object, you must give it a unique field name.

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.21.9 font as NSFontMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Font associated with the text field.

Notes: (Read and Write property)

13.21.10 fontColor as NSColorMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The font color used for the annotation's text field.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.21.11 maximumLength as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum number of characters allowed in the annotations string.

Notes:

A value of 0 means that there is no specified maximum.
Available in Mac OS X v10.5 and later.
(Read and Write property)

13.21.12 rotation as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The rotation angle of the annotation text field in degrees.

Notes:

The rotation angle to be applied to the annotation text field, in degrees. The rotation angle must be a positive or negative multiple of 90 (negative angles are converted to their positive equivalents; for example -90 is changed to 270).

Available in Mac OS X v10.5 and later.
(Read and Write property)

13.21.13 stringValue as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String value associated with text field.

Notes: (Read and Write property)

13.21.14 Events

13.21.15 drawWithBox(box as Integer, g as NSGraphicsMBS) as boolean

Plugin Version: 12.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called for a custom drawing.

Notes:

You can draw here what the annotation should show.
Return true to disable the default drawing from PDFKit.

13.21.16 Constants

13.21.17 NSCenterTextAlignment=2

Plugin Version: 7.6. **Function:** The Cocoa text alignment constant for center.

13.21.18 NSJustifiedTextAlignment=3

Plugin Version: 7.6. **Function:** The Cocoa text alignment constant for justified.

13.21.19 NSLeftTextAlignment=0

Plugin Version: 7.6. **Function:** The Cocoa text alignment constant for left.

13.21.20 NSNaturalTextAlignment=4

Plugin Version: 7.6. **Function:** The Cocoa text alignment constant for natural.

13.21.21 NSRightTextAlignment=1

Plugin Version: 7.6. **Function:** The Cocoa text alignment constant for right.

13.22 class PDFBorderMBS

13.22.1 class PDFBorderMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for PDFKit borders.

Notes: This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

13.22.2 Methods

13.22.3 Constructor

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

13.22.4 copy as PDFBorderMBS

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a copy of the border object.

Notes: Not available in Mac OS X 10.6.

13.22.5 dashPattern as Double()

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Gets the dash pattern for the border.

Notes: Refer to the description for NSBezierPath for more information.

13.22.6 setDashPattern(values() as Double)

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the dash pattern for the border.

Notes: Refer to the description for NSBezierPath for more information.

13.22.7 Properties

13.22.8 horizontalCornerRadius as single

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** For rounded-rect borders, the corner radius.

Notes:

Deprecated in Mac OS X 10.7.
(Read and Write computed property)

13.22.9 lineWidth as single

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Width of line used to strok border.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationSquareMBS(100,100,100,100)

a.interiorColor = NSColorMBS.greenColor
a.colorValue = NSColorMBS.redColor
a.border.lineWidth=5

page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

Notes: (Read and Write computed property)

13.22.10 style as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether border is drawn solid, dashed etc.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

```

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationSquareMBS(100,100,100,100)

a.border.style = PDFBorderMBS.kPDFBorderStyleDashed

page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch

```

Notes:

Use this constants:

kPDFBorderStyleSolid	= 0
kPDFBorderStyleDashed	= 1
kPDFBorderStyleBeveled	= 2
kPDFBorderStyleInset	= 3
kPDFBorderStyleUnderline	= 4

(Read and Write computed property)

13.22.11 verticalCornerRadius as single

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** For rounded-rect borders, the corner radius.

Notes:

Deprecated in Mac OS X 10.7.

(Read and Write computed property)

13.22.12 Constants**13.22.13 kPDFBorderStyleBeveled = 2**

Plugin Version: 7.6. **Function:** One of the constants for the border style.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

```

```
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationSquareMBS(100,100,100,100)

a.border.style = PDFBorderMBS.kPDFBorderStyleBeveled

page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

13.22.14 kPDFBorderStyleDashed = 1

Plugin Version: 7.6. **Function:** One of the constants for the border style.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim page as PDFPageMBS = doc.pageAtIndex(0)
dim a as new PDFAnnotationSquareMBS(100,100,100,100)

a.border.style = PDFBorderMBS.kPDFBorderStyleDashed

page.addAnnotation(a)

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
o.Launch
```

13.22.15 kPDFBorderStyleInset = 3

Plugin Version: 7.6. **Function:** One of the constants for the border style.

13.22.16 kPDFBorderStyleSolid = 0

Plugin Version: 7.6. **Function:** One of the constants for the border style.

13.22.17 kPDFBorderStyleUnderline = 4

Plugin Version: 7.6. **Function:** One of the constants for the border style.

13.23 class PDFDestinationMBS

13.23.1 class PDFDestinationMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a pdf destination.

13.23.2 Methods

13.23.3 compare(dest as PDFDestinationMBS) as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a comparison result that indicates the location of the destination in the document, relative to the current position.

Notes:

A comparison result, indicating the position of the passed-in destination relative to the current position.

If destination is between the receiver's position and the end of the document, compare returns NSOrderedAscending; if it is between the receiver's position and the beginning of the document, compare returns NSOrderedDescending. Otherwise, if destination matches the receiver's position, compare returns NSOrderedSame.

This method ignores the horizontal component of the destination point (the x value). If the destination's vertical component (or y value) is kPDFDestinationUnspecifiedValue, compare treats the destination as if its y value is the top point on the destination page.

An exception is raised if destination does not have a page associated with it or if its page is associated with a document other than the receiver's document.

Available in Mac OS X v10.5 and later.

13.23.4 Constructor(page as PDFPageMBS, point as NSPointMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes the destination.

Notes:

page: The page of the destination.

point: The point of the destination, in page space.

Specify point in page space. Typically, there's no need to initialize destinations. Instead, you get them from

PDFAnnotationLink, PDFOutline, or PDFView objects.

Page space is a 72-dpi coordinate system with the origin at the lower-left corner of the current page.

Available in Mac OS X v10.4 and later.

13.23.5 copy as PDFDestinationMBS

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a copy of the destination object.

13.23.6 kPDFDestinationUnspecifiedValue as single

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Value used for unspecified destination.

Example:

```
MsgBox str(PDFDestinationMBS.kPDFDestinationUnspecifiedValue)
```

Notes:

Unspecified value used when a destination's actual x or y value is unimportant.
Available in Mac OS X v10.5 and later.

13.23.7 page as PDFPageMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Page the destination refers to (destination page).

13.23.8 point as NSPointMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the point, in page space, that the destination refers to.

Notes:

Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page.

Available in Mac OS X v10.4 and later.

13.23.9 Properties

13.23.10 Zoom as Double

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Specify the scale factor the PDF viewer should assume for this destination.

Notes:

kPDFDestinationUnspecifiedValue indicates the scale factor is unaffected.

Available in Mac OS X 10.7 and later.

(Read and Write computed property)

13.24 class PDFDocumentDelegateMBS

13.24.1 class PDFDocumentDelegateMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A class for a document delegate.

Notes: Subclass this class to handle document events.

13.24.2 Events

13.24.3 Close

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the delegate is destroyed.

13.24.4 didMatchString(selection as PDFSelectionMBS)

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event for an item found.

Notes: If implemented by the delegate, called for every search instance found during a find. PDFDocument's implementation accumulates each PDFSelection in an array.

13.24.5 documentDidBeginDocumentFind

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The search started on the document.

13.24.6 documentDidBeginPageFind(PageIndex as Integer)

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The page search started on this page.

Notes: PageIndex is zero based.

13.24.7 documentDidEndDocumentFind

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The search finished on this document.

13.24.8 documentDidEndPageFind(PageIndex as Integer)

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The page search finished on this page.

Notes: PageIndex is zero based.

13.24.9 documentDidFindMatch(selection as PDFSelectionMBS)

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The search found an item.

13.24.10 documentDidUnlock

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The document has been unlocked.

13.24.11 Open

Plugin Version: 7.6, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when the delegate is installed.

13.25 class PDFDocumentMBS

13.25.1 class PDFDocumentMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFKit class for a PDF document.

Notes:

Basicly this is the code used by Preview.app by Apple.

Destructor is dispatched to main thread to avoid bugs in OS X 10.12.

13.25.2 Methods

13.25.3 appendPage(page as PDFPageMBS)

Plugin Version: 14.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Appends a page to the document.

13.25.4 beginFindString(text as string, options as Integer)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Begins a find, searching the document for string.

Notes: Search results are handled via a DidFindMatch event in the delegate. Supported options are: NSCaseInsensitiveSearch, NSLiteralSearch, and NSBackwardsSearch.

13.25.5 cancelFindString

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Method to cancel a search.

Notes: Can be called from a user method being serviced by a find notification.

13.25.6 Constructor

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new pdf document in memory.

Example:

```

dim doc as new PDFDocumentMBS // new empty document
dim page as new PDFPageMBS // new empty page

doc.Creator="Realbasic"
doc.Title="Test file"

doc.insertPage page,0

dim f as FolderItem=SpecialFolder.Desktop.Child("test.pdf")

if doc.write(f) then
f.launch
end if

```

See also:

- 13.25.7 Constructor(data as memoryblock) 1180
- 13.25.8 Constructor(file as folderitem) 1180

13.25.7 Constructor(data as memoryblock)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new pdf document based on a string.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim b as BinaryStream = f.OpenAsBinaryFile(false)
dim s as string = b.Read(b.Length)

dim doc as new PDFDocumentMBS(s)

MsgBox doc.Title

```

See also:

- 13.25.6 Constructor 1179
- 13.25.8 Constructor(file as folderitem) 1180

13.25.8 Constructor(file as folderitem)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a new pdf document based on a file.

Example:

```

dim p as PDFDocumentMBS
dim f as FolderItem

f=SpecialFolder.Desktop.Child("test.pdf")
p=new PDFDocumentMBS(f)

MsgBox "Text from first page:"+EndOfLine+EndOfLine+p.pageAtIndex(0).stringValue

```

See also:

- 13.25.6 Constructor 1179
- 13.25.7 Constructor(data as memoryblock) 1180

13.25.9 copy as PDFDocumentMBS

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a copy of the document object.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim p as new PDFDocumentMBS(f)

// make a copy
dim c as PDFDocumentMBS = p.copy

// remove second page
c.removePageAtIndex 1

// c has one page less
MsgBox str(p.pageCount)+" " +str(c.pageCount)

```

Notes:

For Mac OS X 10.7 and newer this function uses the framework function.
 For Mac OS X 10.6 and older this function uses our own copy function to duplicate the document.

13.25.10 dataRepresentation(QuartzFilter as Variant = nil) as memoryblock

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Methods to record the current state of the PDFDocument as data string.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

dim o as FolderItem = SpecialFolder.Desktop.Child("out.pdf")
dim b as BinaryStream = o.CreateBinaryFile("")

b.Write doc.dataRepresentation

```

Notes: Optional for Mac OS X 10.6, you can pass a QuartzFilterMBS object to use that filter here.

13.25.11 documentRef as Integer

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a CGPDFDocumentRef value for this document.

Notes:

This is the CGPDFDocument associated with the PDFDocument object. With this object you can call many CoreGraphics API. May return 0 if the document was not created from an existing PDF file or data.

Use CGPDFDocumentMBS with Constructor taking a handle to call functions on this CGPDFDocument object.

13.25.12 exchangePageAtIndexWithPageAtIndex(indexA as Integer, indexB as Integer)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Exchanges the two pages with the given index.

Notes: Index is zero based.

13.25.13 findString(text as string, options as Integer) as PDFSelectionMBS()

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Searches entire document for string and returns an array of PDFSelections representing all instances found.

Example:

```

dim p as PDFDocumentMBS
dim f as FolderItem
dim sa() as PDFSelectionMBS
dim i,c as Integer

```

```

dim s as PDFSelectionMBS

const NSCaseInsensitiveSearch=1

f=SpecialFolder.Desktop.Child("test.pdf")
p=new PDFDocumentMBS(f)

if p.pageCount=0 then
  MsgBox "Failed to load the PDF."
  Return
end if

sa=p.findString("Plugin",NSCaseInsensitiveSearch)

if ubound(sa)<0 then
  MsgBox "no item found."
else
  MsgBox str(ubound(sa)+1)+" items found."
end if

s=sa(0)
s.extendSelectionAtEnd(50)
s.extendSelectionAtStart(50)

MsgBox s.stringValue // shows a bit more text before and after the location found

```

Notes:

May return an empty array if nothing is found.
Returns nil on any error.

Supported options are:

NSCaseInsensitiveSearch, NSLiteralSearch, and NSBackwardsSearch.

13.25.14 findStringFromSelection(text as string, selection as PDFSelectionMBS, options as Integer) as PDFSelectionMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Searches for only the next instance of string beginning after the last character of selection with options (or preceding the first character of the selection if NSBackwardsSearch is specified as a search option).

Notes: Returns next instance as a PDFSelection or nil if the end of the document is reached. Supported options are: NSCaseInsensitiveSearch, NSLiteralSearch, and NSBackwardsSearch. Passing in nil for selection will start the search from the beginning of the document (or end if NSBackwardsSearch is specified).

13.25.15 indexForPage(page as PDFPageMBS) as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Given a PDFPage, returns the pages index within the document.

Notes: Indices are zero-based.

13.25.16 insertPage(page as PDFPageMBS, index as Integer)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Inserts a page in the pdf on the given index.

Example:

```

dim file1,file2,file3,destfile as FolderItem
dim page1,page2,page3 as PDFPageMBS
dim doc1,doc2 as PDFDocumentMBS
dim img as NSImageMBS
dim doc as PDFDocumentMBS

file1=SpecialFolder.Desktop.Child("test1.pdf")
file2=SpecialFolder.Desktop.Child("test2.pdf")
file3=SpecialFolder.Desktop.Child("logo.jpg")

doc1=new PDFDocumentMBS(file1)
doc2=new PDFDocumentMBS(file2)

MsgBox str(doc1.pageCount)

img=new NSImageMBS(file3)

Backdrop=img.CopyPicture

page1=new PDFPageMBS(img)
page2=doc1.pageAtIndex(0)
page3=doc2.pageAtIndex(0)

doc=new PDFDocumentMBS
doc.insertPage page1,0
doc.insertPage page2,1
doc.insertPage page3,2

destfile=SpecialFolder.Desktop.Child("test.pdf")
call doc.write(destfile)

```

Notes: Index is zero based.

13.25.17 Keywords as string()

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Array of Strings containing document keywords.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox join(doc.Keywords)
```

13.25.18 outlineItemForSelection(selection as PDFSelectionMBS) as PDFOutlineMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Given a PDFSelection, this method returns the child outline item the selection most closely falls beneath.

Notes:

Since a selection may span multiple outline items, only the point representing the first character of the PDFSelection is considered. Typically, outline's indicate things like chapters for the PDF. Therefore, this method would help you identify the chapter the selection falls within.

For some PDFs this method returns nil.

13.25.19 pageAtIndex(index as Integer) as PDFPageMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a PDFPage object representing the page at index.

Example:

```
dim p as PDFDocumentMBS
dim f as FolderItem

f=SpecialFolder.Desktop.Child("test.pdf")
p=new PDFDocumentMBS(f)

MsgBox "Text from first page:"+EndOfLine+EndOfLine+p.pageAtIndex(0).stringValue
```

Notes: Will raise an exception if index is out of bounds. Indices are zero-based.

13.25.20 PrintOperation(PrintInfo as Variant, AutoRotate as boolean = true, scalingMode as Integer = 0) as Variant

Plugin Version: 14.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates print operation for PDF document.

Example:

```
// select a PDF
dim f as FolderItem = GetOpenFolderItem("")
if f = nil then Return

// open PDF
dim doc as new PDFDocumentMBS(f)

// define some print setting via PrintInfo
dim PrintInfo as new NSPrintInfoMBS

// start print operation
dim printOperation as NSPrintOperationMBS = doc.PrintOperation(printinfo)

printOperation.showsPrintPanel = true
printOperation.showsProgressPanel = true

call printOperation.runOperation
```

Notes: Returns NSPrintOperationMBS object.

13.25.21 removePageAtIndex(index as Integer)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes a page in the pdf on the given index.

Notes: Index is zero based.

13.25.22 selectionForEntireDocument as PDFSelectionMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a selection representing text for the entire document.

13.25.23 selectionFromPage(StartPage as PDFPageMBS, StartCharacterIndex as Integer, EndPage as PDFPageMBS, EndCharacterIndex as Integer) as PDFSelectionMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a selection representing text from page startPage and point StartCharacterIndex to page endPage and to point EndCharacterIndex on that page.

Notes: Start and end page can be the same.

See also:

- 13.25.24 selectionFromPage(StartPage as PDFPageMBS, StartPointX as single, StartPointY as single, EndPage as PDFPageMBS, EndPointX as single, EndPointY as single) as PDFSelectionMBS 1187

13.25.24 selectionFromPage(StartPage as PDFPageMBS, StartPointX as single, StartPointY as single, EndPage as PDFPageMBS, EndPointX as single, EndPointY as single) as PDFSelectionMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a selection representing text from page startPage and point startPt to page endPage and to point endPt on that page.

Notes: Points are in page-space and relative to their respective pages. Start and end page can be the same (and are then equivalent to calling selectionFromPointToPoint).

See also:

- 13.25.23 selectionFromPage(StartPage as PDFPageMBS, StartCharacterIndex as Integer, EndPage as PDFPageMBS, EndCharacterIndex as Integer) as PDFSelectionMBS 1187

13.25.25 SetDelegate(d as PDFDocumentDelegateMBS)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** If a PDFDocument has a delegate, delegate methods may be called for this document.

13.25.26 SetKeywords(keywords() as string)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the array of strings containing document keywords.

13.25.27 unlockWithPassword(password as string) as boolean

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Unlocks an encrypted PDF with the given password.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

if doc.unlockWithPassword("mypassword") then
  MsgBox "OK"
end if
```

Notes: Means of passing in a password to unlock encrypted PDF's. Calling `unlockWithPassword` will attempt to unlock the PDF. If successful, a `DidUnlockDocument` event is sent to the delegate. You cannot "re-lock" a PDF by passing in a bogus password. Returns true if the document is now unlocked, false otherwise (`isLocked = false`).

13.25.28 `write(file as folderitem, QuartzFilter as Variant = nil)` as boolean

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Methods to record the current state of the `PDFDocument` as a file.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

// modify here

dim o as FolderItem = SpecialFolder.Desktop.Child("testout.pdf")
call doc.write(o)
```

Notes:

Returns true on success and false on failure.

There is a bug known in Mac OS X 10.4 that this function may return true even if the saving failed. So you may prefer to check the file whether it exists after write.

Optional for Mac OS X 10.6, you can pass a `QuartzFilterMBS` object to use that filter here.

13.25.29 Properties

13.25.30 allowsCopying as boolean

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether copying is allowed.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox str(doc.allowsCopying)
```

Notes:

Even unlocked, encrypted PDF's may have certain restrictions regarding copying or printing placed upon them.

(Read only property)

13.25.31 allowsPrinting as boolean

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether printing is allowed.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox str(doc.allowsPrinting)
```

Notes:

Even unlocked, encrypted PDF's may have certain restrictions regarding copying or printing placed upon them.

(Read only property)

13.25.32 Author as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String containing document author.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

MsgBox doc.Author

Notes: (Read and Write property)

13.25.33 CreationDate as Date

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Date representing document creation date.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox doc.CreationDate.LongDate
```

Notes: (Read and Write property)

13.25.34 Creator as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String containing name of app that created document content.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox doc.Creator
```

Notes: (Read and Write property)

13.25.35 documentURL as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The document location.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox doc.documentURL
```

Notes:

May return nil if the document was created from data.
(Read only property)

13.25.36 Handle as Integer

Plugin Version: 10.4, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal reference to the PDF Document.

Notes: (Read and Write property)

13.25.37 isEncrypted as boolean

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the PDF is encrypted.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox str(doc.isEncrypted)
```

Notes:

With the right password, a PDF can be unlocked - nonetheless, the PDF still indicates that it is encrypted - just no longer locked. Some PDF's may be encrypted but can be unlocked with the empty string.

These are unlocked automatically.

(Read only property)

13.25.38 isFinding as boolean

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns true if document is currently searching for a string.

Notes: (Read only property)

13.25.39 isLocked as boolean

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the PDF is locked.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox str(doc.isLocked)
```

Notes:

With the right password, a PDF can be unlocked - nonetheless, the PDF still indicates that it is encrypted - just no longer locked. Some PDF's may be encrypted but can be unlocked with the empty string.

These are unlocked automatically.

(Read only property)

13.25.40 majorVersion as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** PDF version of the PDF file (example: major version = 1, minor = 4; PDF v1.4).

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox str(doc.majorVersion)+ "." +str(Doc.minorVersion)
```

Notes: (Read only property)

13.25.41 minorVersion as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** PDF version of the PDF file (example: major version = 1, minor = 4; PDF v1.4).

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox str(doc.majorVersion)+ "." +str(Doc.minorVersion)
```

Notes: (Read only property)

13.25.42 ModificationDate as Date

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Date representing last document modification date.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox doc.ModificationDate.LongDate
```

Notes: (Read and Write property)

13.25.43 outlineRoot as PDFOutlineMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the root outline object for the PDF (or nil if none).

Notes: (Read and Write property)

13.25.44 pageCount as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The number of pages in the document.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox str(Doc.pageCount)
```

Notes: (Read only property)

13.25.45 permissionsStatus as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the permissions status of the PDF document.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

```
Select case doc.permissionsStatus
```

```

case doc.kPDFDocumentPermissionsNone
MsgBox "None"
case doc.kPDFDocumentPermissionsOwner
MsgBox "Owner or no password"
case doc.kPDFDocumentPermissionsUser
MsgBox "User"
end Select

```

Notes:

You have kPDFDocumentPermissionsNone status for an encrypted document that you have not supplied either a valid user or owner password. For a document with no encryption, you automatically have kPDFDocumentPermissionsOwner status.

Requires Mac OS X 10.6.
(Read only property)

13.25.46 Producer as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String containing name of app that produced PDF data.

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox doc.Producer

```

Notes: (Read and Write property)

13.25.47 stringValue as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The text of the document.

Example:

```

dim p as PDFDocumentMBS
dim f as FolderItem

f=SpecialFolder.Desktop.Child("test.pdf")
p=new PDFDocumentMBS(f)

```

MsgBox "Text from PDF Document:" +EndOfLine+EndOfLine+p.stringValue

Notes:

Convenience method. Returns a string representing the entire document (each page's string concatenated with line feeds between pages).

If you need to extract the text of a PDF document cross platform or with more options, you may want to look on the DynaPDF plugin.

It seems like this string value is not always available. It works for PDF Documents created from a disc file, but not for files our test app created on runtime in memory by using PDFDocument constructor and insertpage.

(Read only property)

13.25.48 Subject as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String containing document subject.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox doc.Subject
```

Notes: (Read and Write property)

13.25.49 Title as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String containing document title.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
MsgBox doc.Title
```

Notes: (Read and Write property)

13.25.50 documentAttributes as Dictionary

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDF meta data as a Real Studio Dictionary object.

Notes:

Returns a dictionary with PDF metadata. Metadata is optional for PDF's and so some of the keys may be missing or the entire dictionary may be empty.
(Read and Write computed property)

13.25.51 Constants

13.25.52 kPDFDocumentPermissionsNone=0

Plugin Version: 9.6. **Function:** One of the permission status constants.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

```
Select case doc.permissionsStatus
case doc.kPDFDocumentPermissionsNone
MsgBox "None"
case doc.kPDFDocumentPermissionsOwner
MsgBox "Owner or no password"
case doc.kPDFDocumentPermissionsUser
MsgBox "User"
end Select
```

Notes: Document permissions status. For encrypted PDF's, supplying the owner password will enable owner permission status.

13.25.53 kPDFDocumentPermissionsOwner=2

Plugin Version: 9.6. **Function:** One of the permission status constants.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
```

```
Select case doc.permissionsStatus
case doc.kPDFDocumentPermissionsNone
MsgBox "None"
```

```
case doc.kPDFDocumentPermissionsOwner
MsgBox "Owner or no password"
case doc.kPDFDocumentPermissionsUser
MsgBox "User"
end Select
```

13.25.54 kPDFDocumentPermissionsUser=1

Plugin Version: 9.6. **Function:** One of the permission status constants.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)

Select case doc.permissionsStatus
case doc.kPDFDocumentPermissionsNone
MsgBox "None"
case doc.kPDFDocumentPermissionsOwner
MsgBox "Owner or no password"
case doc.kPDFDocumentPermissionsUser
MsgBox "User"
end Select
```

13.25.55 kPDFPrintPageScaleDownToFit=2

Plugin Version: 9.6. **Function:** One of the constants for printing page-scaling modes.

13.25.56 kPDFPrintPageScaleNone=0

Plugin Version: 9.6. **Function:** One of the constants for printing page-scaling modes.

13.25.57 kPDFPrintPageScaleToFit=1

Plugin Version: 9.6. **Function:** One of the constants for printing page-scaling modes.

13.25.58 NSBackwardsSearch=4

Plugin Version: 7.6. **Function:** One of the Cocoa search modes.

Notes: Performs searching from the end of the range toward the beginning.

13.25.59 NSCaseInsensitiveSearch=1

Plugin Version: 7.6. **Function:** One of the Cocoa search modes.

Notes: Ignores case distinctions among characters.

13.25.60 NSLiteralSearch=2

Plugin Version: 7.6. **Function:** One of the Cocoa search modes.

Notes: Performs a byte-for-byte comparison. Differing literal sequences (such as composed character sequences) that would otherwise be considered equivalent are considered not to match. Using this option can speed some operations dramatically.

13.26 class PDFOutlineMBS

13.26.1 class PDFOutlineMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The class for a pdf outline object.

13.26.2 Methods

13.26.3 childAtIndex(index as Integer) as PDFOutlineMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** PDFOutline child at index.

Notes: Will throw exception if index is out of range.

13.26.4 Constructor

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Initializes a PDFOutline object.

Notes:

If you want the PDFOutline object returned by this method to be the outline root, you must add additional PDFOutline objects to create the outline hierarchy you desire. Then, you must add the root outline object to your PDF document by assigning it to the PDFDocument OutlineRoot.

If you want the PDFOutline object returned by this method to be a child of an existing outline, you must use setLabel: to give it a label and give it either a destination or action using setDestination: or setAction:, respectively. In addition, you must add this outline object to the existing PDFOutline object as a new child, using insertChild.

Available in Mac OS X v10.4 and later.

13.26.5 document as PDFDocumentMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFDocument the outline is associated with.

13.26.6 index as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the outline.

Notes:

The index of the outline object is relative to its siblings and from the perspective of the parent of the outline object. The root outline object, and any outline object without a parent, has an index value of 0.

Available in Mac OS X v10.5 and later.

13.26.7 insertChild(child as PDFOutlineMBS, index as Integer)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Inserts the specified outline object at the specified index.

Notes:

To build a PDF outline hierarchy, use this method to add child outline objects. Before you call this method on a PDFOutline object that already has a parent, you should retain the object and call removeFromParent on it first.

Available in Mac OS X v10.5 and later.

13.26.8 numberOfChildren as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Number of PDFOutline children this PDFOutline has.

13.26.9 parent as PDFOutlineMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The parent outline object of the outline.

Notes:

Can be nil for the root object.

Available in Mac OS X v10.5 and later.

13.26.10 removeFromParent

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Removes the outline object from its parent (does nothing if outline object is the root outline object).

Notes: Available in Mac OS X v10.5 and later.

13.26.11 Properties

13.26.12 action as PDFActionMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The action performed when users click the outline.

Notes:

The root outline serves only as a container for the outlines it owns; it does not have an action. Note that a PDFOutline object can have either an action or a destination, not both.

If the PDFOutline object has a destination, instead of an action, action returns a PDFActionGoTo object (this is equivalent to calling destination on the PDFOutline object). For other action types, action returns the appropriate PDF Kit action type object, such as PDFActionURL.

Available in Mac OS X v10.5 and later.
(Read and Write computed property)

13.26.13 destination as PDFDestinationMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destination associated with the outline item.

Notes:

The root PDFOutline has no destination.
(Read and Write computed property)

13.26.14 isOpen as boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the outline object is initially disclosed.

Notes:

Calling isOpen on an outline object that has no children always returns false. Calling isOpen on the root outline object always returns true.

Available in Mac OS X v10.5 and later.
(Read and Write computed property)

13.26.15 label as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The label for the outline.

Notes:

The root PDFOutline has no label and is only a container for children PDFOutlines.
(Read and Write computed property)

13.27 class PDFPageMBS

13.27.1 class PDFPageMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFKit class for a page in a pdf document.

Example:

```
dim file1,file2,file3,destfile as FolderItem
dim page1,page2,page3 as PDFPageMBS
dim doc1,doc2 as PDFDocumentMBS
dim img as NSImageMBS
dim doc as PDFDocumentMBS

file1=SpecialFolder.Desktop.Child("test1.pdf")
file2=SpecialFolder.Desktop.Child("test2.pdf")
file3=SpecialFolder.Desktop.Child("logo.jpg")

doc1=new PDFDocumentMBS(file1)
doc2=new PDFDocumentMBS(file2)

MsgBox str(doc1.pageCount)

img=new NSImageMBS(file3)

Backdrop=img.CopyPicture

page1=new PDFPageMBS(img)
page2=doc1.pageAtIndex(0)
page3=doc2.pageAtIndex(0)

doc=new PDFDocumentMBS
doc.insertPage page1,0
doc.insertPage page2,1
doc.insertPage page3,2

destfile=SpecialFolder.Desktop.Child("test.pdf")
call doc.write(destfile)
```

13.27.2 Methods

13.27.3 addAnnotation(annotation as PDFAnnotationMBS)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Methods allowing annotations to be added.

13.27.4 annotationAtPoint(x as single, y as single) as PDFAnnotationMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Hit-testing method returns the annotation at point (or nil if none).

Notes: The point is in page-space.

13.27.5 annotations as PDFAnnotationMBS()

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array containing the page's annotations.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim doc as new PDFDocumentMBS(f)
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim annotations(-1) as PDFAnnotationMBS = page.annotations
```

```
// show a msgbox with the types of all annotations
dim types(-1) as string
```

```
for each a as PDFAnnotationMBS in annotations
types.Append a.type
next
```

```
MsgBox Join(types)
```

Notes:

The elements of the array will most likely be typed to subclasses of the PDFAnnotation class.

Available in Mac OS X v10.4 and later.

13.27.6 CalcTransformForBox(box as Integer) as Variant

Plugin Version: 12.5, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** An utility function to calculate the transform needed to draw into a page.

Notes: Returns NSAffineTransformMBS object.

13.27.7 CGPDFPageHandle as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The CoreGraphics PDFPage handle.

13.27.8 characterBoundsAtIndex(index as Integer) as NSRectMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the bounds in page-space of the character at index.

Notes: In the unlikely event that more than one character are at the specified point, only the first character encountered is returned.

13.27.9 characterIndexAtPoint(x as single, y as single) as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the index of the character at point (in page space).

Notes: Returns -1 if no character at point.

13.27.10 Constructor

Plugin Version: 8.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The constructor to create a custom PDF page.

Example:

```
dim doc as new PDFDocumentMBS
dim page as PDFPageMBS
dim f as FolderItem
```

```
page=new MyPDFPageMBS
```

```
doc.Creator="Realbasic"
doc.Title="Test file"
```

```
doc.insertPage page,0
```

```
f=SpecialFolder.Desktop.Child("test.pdf")
```

```
if doc.write(f) then
f.launch
end if
```

Notes: You draw the content using drawRect event.
See also:

- 13.27.11 Constructor(image as NSImageMBS) 1206

13.27.11 Constructor(image as NSImageMBS)

Plugin Version: 8.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a PDFPage for the NSImage passed in.

Notes:

An easy way to create a PDFPage from an image to add to a PDFDocument.

Mac OS X 10.5 only.

See also:

- 13.27.10 Constructor 1205

13.27.12 copy as PDFPageMBS

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a copy of the page object.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim p as new PDFDocumentMBS(f)
```

```
// make a new PDF
dim c as new PDFDocumentMBS
```

```
// get first page
dim page as PDFPageMBS = p.pageAtIndex(0)
```

```
// add copy of page to new pdf
c.insertPage page.copy, 0
```

```
// c now has one page
```

```
MsgBox str(p.pageCount)+" " +str(c.pageCount)
```

13.27.13 Destructor

Plugin Version: 15.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The destructor.

13.27.14 Draw(g as NSGraphicsMBS, box as Integer = 0)

Plugin Version: 12.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Draws PDF page into graphics environment.

Notes: Use kPDFDisplay*Box constants for box parameter.

13.27.15 drawWithBox(box as Integer)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Draws the page within the specified box.

Notes: This method takes into account the page rotation and draws clipped to the specified box. If the page is set to display annotations, this method also draws them. This method does not clear the background. To clear the background before drawing, use NSRectFill with NSColor set (typically) to white.

13.27.16 removeAnnotation(annotation as PDFAnnotationMBS)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Methods allowing annotations to be removed.

13.27.17 Render(dpi as Double = 72.0, box as Integer = 0, background as NSColorMBS = nil) as NSImageMBS

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Renders a PDF Page into an image.

Example:

```
dim f as FolderItem = GetFolderItem("Castles.pdf")
dim doc as new PDFDocumentMBS(f)
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim image as NSImageMBS = page.Render
```

```
Backdrop = image.CopyPicture
```

Notes:

dpi: The resolution you want to have on the image. Default 72.0. To get a scaled image with factor x, pass 72.0*x.

box: The display box. Use one of the kPDFDisplayBox* constants.

background: optional NSColorMBS object to fill the background before drawing the PDF. This will affect only PDFs with transparent background.

Returns nil on any error.

Version 11.1pr8 adds code here to handle rotation better.

13.27.18 selectionForLineAtPoint(left as single, top as single) as PDFSelectionMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Given a point in page-space, returns a selection representing a whole line at that point.

Notes: May return nil if no character (and by extension no line) under point.

13.27.19 selectionForRange(position as Integer, length as Integer) as PDFSelectionMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Given a range, returns a selection representing text within that range.

Example:

```
dim MyPDFView as PDFViewMBS // your view

dim doc as PDFDocumentMBS = MyPDFView.document
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim sel as PDFSelectionMBS = page.selectionForRange(0,5)
MyPDFView.currentSelection = sel
```

Notes: Will raise an exception if the range length is zero or if the range is outside the range of the characters on the page.

13.27.20 selectionForRect(left as single, top as single, width as single, height as single) as PDFSelectionMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Given a rect in page-space, returns a selection representing enclosed text on page.

13.27.21 selectionForWordAtPoint(left as single, top as single) as PDFSelectionMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Given a point in page-space, returns a selection representing a whole word at that point.

Notes: May return nil if no character (and by extension no word) under point.

13.27.22 selectionFromPointToPoint(startleft as single, starttop as single, endleft as single, endtop as single) as PDFSelectionMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a selection representing text between startPt and endPt.

Notes: Point are sorted first top to bottom, left to right.

13.27.23 transformContextForBox(box as Integer)

Plugin Version: 8.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Given a display box, will transform the current context to take into account the rotation of the page as well as the origin of the box with respect to the page's base coordinates system.

Notes:

This is a convenient method to call from within drawPage or from within the draw method a PDFAnnotation subclass.

Mac OS X 10.5 only.

13.27.24 Properties**13.27.25 attributedString as NSAttributedStringMBS**

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String (with linefeeds and in some cases spaces inserted) representing the text on the page.

Notes: (Read only property)

13.27.26 dataRepresentation as memoryblock

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns PDF data (a proper PDF document) consisting of a single page (this page).

Notes:

Note, external page links are not preserved.
(Read only property)

13.27.27 displaysAnnotations as boolean

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Method to turn on or off the display of annotations when the page is drawn.

Notes: (Read and Write property)

13.27.28 document as PDFDocumentMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFDocument the page is associated with.

Notes: (Read only property)

13.27.29 label as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The page label. Usually "1" for the first page, "2" for the second, etc.

Notes: (Read only property)

13.27.30 numberOfCharacters as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Number of characters on the page (including linefeeds and spaces inserted).

Notes: (Read only property)

13.27.31 rotation as Integer

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Rotation on a page.
Notes:

Must be 0, 90, 180 or 270 (negative rotations will be "normalized" to one of 0, 90, 180 or 270).
Some PDF's have an inherent rotation and so rotation may be non-zero when a PDF is first opened.
(Read and Write property)

13.27.32 stringValue as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String (with linefeeds and in some cases spaces inserted) representing the text on the page.

Example:

```
dim p as PDFDocumentMBS
dim f as FolderItem
```

```
f=SpecialFolder.Desktop.Child("test.pdf")
p=new PDFDocumentMBS(f)
```

```
MsgBox "Text from first page:"+EndOfLine+EndOfLine+p.pageAtIndex(0).stringValue
```

Notes:

If you need to extract the text of a PDF document page cross platform or with more options, you may want to look on the DynaPDF plugin.

It seems like this string value is not always available. It works for PDF Documents created from a disc file, but not for files our test app created on runtime in memory by using PDFDocument constructor and insertpage.

(Read only property)

13.27.33 boundsForBox(box as Integer) as NSRectMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the bounds for the specified PDF display box.

Notes:

The PDFDisplayBox enumeration defines the various box types.

Note that only the media box is required for a PDF. If you request the bounds for the crop box, but the PDF

does not include a crop box, the bounds for the media box are returned instead. If you request the bounds for other box types, and the PDF does not include these types, the bounds for the crop box are returned instead.

The coordinates for the box are in page space, so you might need to transform the points if the page has a rotation on it. Also, note that the bounds `boundsForBox` returns are intersected with the page's media box.

`boundsForBox` throws a range exception if box is not in range.
(Read and Write computed property)

13.27.34 Events

13.27.35 `drawRect(box as Integer, g as NSGraphicsMBS)`

Plugin Version: 8.0, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the PDFPage needs to be drawn.

Example:

```
Sub drawRect(box as Integer, g as NSGraphicsMBS)
```

```
  if g.Valid then
    System.DebugLog "is valid"
  else
    System.DebugLog "not valid"
  end if
```

```
  g.SetColorRGB 0,1,0
```

```
  g.drawRect 200,200,200,200
```

```
  g.SetColorRGB 1,0,0
```

```
  g.fillRect 100,100,100,100
```

```
End Sub
```

Notes:

Do not store the graphics reference as it is only valid in this event.

Use the `kPDFDisplayBox*` constants for the box value.

You can draw another PDF page here with Draw command.

13.27.36 Constants

13.27.37 kPDFDisplayBoxArtBox=4

Plugin Version: 7.6. **Function:** One of the constants to use for page boxes.

13.27.38 kPDFDisplayBoxBleedBox=2

Plugin Version: 7.6. **Function:** One of the constants to use for page boxes.

13.27.39 kPDFDisplayBoxCropBox=1

Plugin Version: 7.6. **Function:** One of the constants to use for page boxes.

13.27.40 kPDFDisplayBoxMediaBox=0

Plugin Version: 7.6. **Function:** One of the constants to use for page boxes.

13.27.41 kPDFDisplayBoxTrimBox=3

Plugin Version: 7.6. **Function:** One of the constants to use for page boxes.

13.28 class PDFSelectionMBS

13.28.1 class PDFSelectionMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFKit class for selections.

Example:

```
dim MyPDFView as PDFViewMBS // your view

dim doc as PDFDocumentMBS = MyPDFView.document
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim sel as PDFSelectionMBS = page.selectionForRange(0,5)
MyPDFView.currentSelection = sel
```

13.28.2 Methods

13.28.3 addSelection(selection as PDFSelectionMBS)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Add a selection to this selection.

Notes: Selections do not have to be contiguous. If the selection added overlaps with this selection, overlaps are removed.

13.28.4 addSelections(selection() as PDFSelectionMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Adds the specified array of selections to the receiving selection.

Notes:

This method provides better performance than multiple calls to addSelection if you need to add several selections to an existing selection. This is because the normalization of the selection (the removal of any overlaps between selections) occurs only once, after all selections have been added.

Available in Mac OS X v10.5 and later.

13.28.5 attributedString as NSAttributedStringMBS

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String representing the text covered by the selection.

Notes: May contain line-feeds.

13.28.6 boundsForPage(page as PDFPageMBS) as NSRectMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the bounds of the selection on the specified page.

Notes:

The selection rectangle is given in page space.

Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page.

13.28.7 Constructor(doc as PDFDocumentMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an empty PDFSelection object.

Notes:

Typically, you don't need to create a PDFSelection object, but you can use an empty PDFSelection object as a container into which you can place selections, using addSelection: and addSelections.

Available in Mac OS X v10.5 and later.

13.28.8 copy as PDFSelectionMBS

Plugin Version: 13.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a copy of the selection object.

13.28.9 drawForPage(page as PDFPageMBS, active as boolean)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Calls drawForPage with a default value for box parameter.

Notes: The default value is kPDFDisplayBoxCropBox. If active is true, drawing uses selectedTextBackgroundColor. If false, it uses secondarySelectedControlColor.

See also:

- 13.28.10 drawForPage(page as PDFPageMBS, box as Integer, active as boolean) 1215

13.28.10 drawForPage(page as PDFPageMBS, box as Integer, active as boolean)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Draws the selection relative to the origin of the specified box in page space.

Notes:

The selection is drawn using the current highlight color. If active is true, drawing uses selectedTextBackgroundColor. If false, it uses secondarySelectedControlColor. Refer to the PDFPage class for the list of

available box types.

Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page.
See also:

- 13.28.9 drawForPage(page as PDFPageMBS, active as boolean) 1215

13.28.11 extendSelectionAtEnd(chars as Integer)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Extends the selection at either end.

Example:

```
dim s as PDFSelectionMBS // your selection  
s.extendSelectionAtEnd(50)
```

Notes: Selections can be extended right off onto neighboring pages even to include the entire PDF document.

13.28.12 extendSelectionAtStart(chars as Integer)

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Extends the selection at either end.

Example:

```
dim s as PDFSelectionMBS // your selection  
s.extendSelectionAtStart(50)
```

Notes: Selections can be extended right off onto neighboring pages even to include the entire PDF document.

13.28.13 numberOfTextRangesOnPage(page as PDFPageMBS) as UInt32

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the number of contiguous ranges of text on the specified page.

Notes:

Returns zero if page is not in selection.

A typical, simple selection will contain a single range of text.

Available in Mac OS X 10.7 and later.

13.28.14 pages as PDFPageMBS()

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Array of pages covered by the selection.

Notes:

These are sorted by page index.

Returns nil on any error.

13.28.15 rangeAtIndex(page as PDFPageMBS, index as Integer) as NSRangeMBS

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a range of contiguous text at index on the specified page.

Notes:

A simple selection. A typical, simple selection will contain a single range of text.

Available in Mac OS X 10.7 and later.

13.28.16 selectionsByLine as PDFSelectionMBS()

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array of selections, one for each line of text covered by the receiver.

Notes:

If you call this method on a PDFSelection object that represents a paragraph, for example, selectionsByLine returns an array that contains one PDFSelection object for each line of text in the paragraph.

Available in Mac OS X v10.5 and later.

13.28.17 stringValue as string

Plugin Version: 7.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** String representing the text covered by the selection.

Notes: May contain line-feeds.

13.28.18 Properties

13.28.19 Handle as Integer

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The handle used internally for the object reference.

Notes: (Read and Write property)

13.28.20 colorValue as NSColorMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The color used to draw the selection.

Notes:

Note that when no color has been specified for the PDFSelection objects in a document, the selections are drawn using NSColorMBS.selectedTextBackgroundColor for the active state and NSColorMBS.secondarySelectedControlColor for the inactive state.

(Read and Write computed property)

13.29 control PDFThumbnailViewControlMBS

13.29.1 control PDFThumbnailViewControlMBS

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The Xojo control for a PDFThumbnailView.

Notes:

This control embeds a special PDFThumbnailView subclass.
Designed for Xojo 2013r1 and newer. May work on Real Studio 2012, but not perfectly.
Please use view property to access the underlying object and set properties.

13.29.2 Properties

13.29.3 View as PDFThumbnailViewMBS

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The view used in the control.

Notes:

Use this object to set more options on the control.
(Read only property)

13.29.4 Events

13.29.5 BoundsChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the bounds, but not the frame, changed.

13.29.6 EnableMenuItems

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** The event where you can enable menu items.

13.29.7 FrameChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the frame changed.

13.29.8 GotFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control itself got focus.

Notes: This only fires if the control itself got focus and not a sub control.

13.29.9 LostFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control lost focus.

Notes: This only fires if the control itself lost focus and not a sub control.

13.29.10 MenuAction(HitItem as MenuItem) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a menuitem is choosen.

Notes: This allows the control to react on its relevant menu items. Please return true if you handled it or false to give others a chance.

13.29.11 MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was pressed inside the controls region at the location passed in to x, y.

Notes:

The coordinates x and y are local to the control, i.e. they represent the position of the mouse click relative to the upper-left corner of the Control.

Return True if you are going to handle the MouseDown. In such a case:

- The Action event, if any, will not execute and the state of the object will not change.
- You will receive the MouseDrag and MouseUp events.

If you return False, the system handles the MouseDown so the above event handlers do not get called.

13.29.12 MouseDrag(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event fires continuously after the mouse button was pressed inside the Control.

Notes:

Mouse location is local to the control passed in to x, y.

As this event is fired continuously (hundreds of time per second), it is your responsibility to determine if the mouse has really moved.

13.29.13 MouseUp(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was released.

Notes: Use the x and y parameters to determine if the mouse button was released within the control's boundaries.

13.29.14 ScaleFactorChanged(NewFactor as Double)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backing store scale factor has changed.

Notes: Please invalidate any cached bitmaps or other relevant state.

13.30 class PDFThumbnailViewMBS

13.30.1 class PDFThumbnailViewMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A PDFThumbnailView object contains a set of thumbnails, each of which represents a page in a PDF document.

Notes:

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard. Subclass of the NSViewMBS class.

13.30.2 Methods

13.30.3 Constructor

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new PDF thumbnail view with size 100/100 and position 0/0

Example:

```
dim t as new PDFThumbnailViewMBS
```

Notes: On success the handle property is not zero.

See also:

- 13.30.4 Constructor(Handle as Integer) 1222
- 13.30.5 Constructor(left as Double, top as Double, width as Double, height as Double) 1223

13.30.4 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given PDFThumbnailView handle.

Example:

```
dim t as new PDFThumbnailViewMBS(0, 0, 100, 100)
```

```
dim v as new PDFThumbnailViewMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a PDFThumbnailView and the plugin retains this handle.

See also:

13.30. CLASS PDFTHUMBNAILVIEWMBS	1223
• 13.30.3 Constructor	1222
• 13.30.5 Constructor(left as Double, top as Double, width as Double, height as Double)	1223

13.30.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new PDF thumbnail view with the given size and position.

Example:

```
dim x as new PDFThumbnailViewMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.
See also:

• 13.30.3 Constructor	1222
• 13.30.4 Constructor(Handle as Integer)	1222

13.30.6 selectedPages as PDFPageMBS()

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array of PDF pages that correspond to the selected thumbnails in the thumbnail view.

Notes:

If the thumbnail view allows multiple selections (if allowsMultipleSelection returns true), you can use this method to get the PDF pages that correspond to the selected thumbnails.
Available in Mac OS X v10.5 and later.

13.30.7 Properties

13.30.8 allowsDragging as boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether users can drag thumbnails within the thumbnail view; that is, re-order pages in the document.

Notes:

Available in Mac OS X v10.5 and later.
(Read and Write computed property)

13.30.9 allowsMultipleSelection as boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the thumbnail view allows users to select more than one thumbnail at a time.

Notes:

By default, PDFThumbnailView allows only a single thumbnail to be selected at one time. When this is the case, you can get the PDF page that corresponds to the selected thumbnail using the PDFView method `currentPage`.

If you use `setAllowsMultipleSelection` to enable multiple selections, however, you must use `selectedPages` to get the pages that correspond to the set of selected thumbnails.

Available in Mac OS X v10.5 and later.

(Read and Write computed property)

13.30.10 backgroundColor as NSColorMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The color used in the background of the thumbnail view.

Notes:

Available in Mac OS X v10.5 and later.

(Read and Write computed property)

13.30.11 labelFont as NSFontMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The font used to label the thumbnails.

Notes:

Typically, the label of a thumbnail is the page number of the page it represents.

Available in Mac OS X v10.5 and later.

(Read and Write computed property)

13.30.12 maximumNumberOfColumns as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the maximum number of columns of thumbnails the thumbnail view can display.

Notes:

The thumbnail displays as many columns of thumbnails as fit in its size.

Available in Mac OS X v10.5 and later.

(Read and Write computed property)

13.30.13 PDFView as PDFViewMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The PDFView object associated with the thumbnail view.

Notes:

Available in Mac OS X v10.5 and later.

(Read and Write computed property)

13.30.14 thumbnailSize as NSSizeMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum width and height of the thumbnails in the thumbnail view.

Notes:

Available in Mac OS X v10.5 and later.

(Read and Write computed property)

13.31 control PDFViewControlMBS

13.31.1 control PDFViewControlMBS

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The Xojo control for a PDFView.

Notes:

This control embeds a special PDFView subclass.

Designed for Xojo 2013r1 and newer. May work on Real Studio 2012, but not perfectly.

Please use view property to access the underlying object and set properties.

13.31.2 Properties

13.31.3 View as PDFViewMBS

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The view used in the control.

Notes:

Use this object to set more options on the control.

(Read only property)

13.31.4 Events

13.31.5 AfterDrawPage(graphics as NSGraphicsMBS, page as PDFPageMBS)

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called after something was drawn.

Notes: On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.31.6 AfterDrawPagePost(graphics as NSGraphicsMBS, page as PDFPageMBS)

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called after a page annotations were drawn.

Notes: On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.31.7 AfterDrawRect(graphics as NSGraphicsMBS, x as Double, y as Double, w as Double, h as Double)

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called after a page was drawn.

Notes: On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.31.8 BeforeDrawPage(graphics as NSGraphicsMBS, page as PDFPageMBS) as boolean

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called before a page was drawn.

Notes: On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.31.9 BeforeDrawPagePost(graphics as NSGraphicsMBS, page as PDFPageMBS) as boolean

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called before a page annotations were drawn.

Notes: On macOS 10.12.2 or later, this event is called on a non-main thread. In that case the plugin will not call this event.

13.31.10 BeforeDrawRect(graphics as NSGraphicsMBS, x as Double, y as Double, w as Double, h as Double) as boolean

Plugin Version: 13.4, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The draw event called before a something was drawn.

13.31.11 BoundsChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the bounds, but not the frame, changed.

13.31.12 EnableMenuItems

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** The event where you can enable menu items.

13.31.13 FrameChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the frame changed.

13.31.14 GotFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control itself got focus.

Notes: This only fires if the control itself got focus and not a sub control.

13.31.15 LostFocus

Plugin Version: 16.5, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control lost focus.

Notes: This only fires if the control itself lost focus and not a sub control.

13.31.16 MenuAction(HitItem as MenuItem) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a menuitem is choosen.

Notes: This allows the control to react on its relevant menu items. Please return true if you handled it or false to give others a chance.

13.31.17MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was pressed inside the controls region at the location passed in to x, y.

Notes:

The coordinates x and y are local to the control, i.e. they represent the position of the mouse click relative to the upper-left corner of the Control.

Return True if you are going to handle the MouseDown. In such a case:

- The Action event, if any, will not execute and the state of the object will not change.
- You will receive the MouseDrag and MouseUp events.

If you return False, the system handles the MouseDown so the above event handlers do not get called.

13.31.18 MouseDrag(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event fires continuously after the mouse button was pressed inside the Control.

Notes:

Mouse location is local to the control passed in to x, y.

As this event is fired continuously (hundreds of time per second), it is your responsibility to determine if the mouse has really moved.

13.31.19 MouseUp(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was released.

Notes: Use the x and y parameters to determine if the mouse button was released within the control's boundaries.

13.31.20 ScaleFactorChanged(NewFactor as Double)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backing store scale factor has changed.

Notes: Please invalidate any cached bitmaps or other relevant state.

13.32 class PDFViewMBS

13.32.1 class PDFViewMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A PDFView object encapsulates the functionality of PDF Kit into a single widget that you can add to your application.

Notes:

PDFView may be the only class you need to deal with for adding PDF functionality to your application. It lets you display PDF data and allows users to select content, navigate through a document, set zoom level, and copy textual content to the Pasteboard. PDFView also keeps track of page history.

You can subclass PDFView to create a custom PDF viewer or better use our CustomPDFViewMBS class.

You can also create a custom PDF viewer by using the PDF Kit utility classes directly and not using PDFView at all.

You can embed this view in a CustomNSViewMBS to get more events for mouse and keyboard. Subclass of the NSViewMBS class.

13.32.2 Methods

13.32.3 annotationsChangedOnPage(page as PDFPageMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Tells the PDF view that an annotation on the specified page has changed.

Notes:

When the PDFView object receives this message, it rescans for tool tips and pop-ups and informs the PDFThumbnailView objects so the thumbnail images can be redrawn.

Available in Mac OS X v10.5 and later.

13.32.4 areaOfInterestForMouse(e as NSEventMBS) as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the type of area the mouse cursor is over.

Notes: The PDFAreaOfInterest enumeration defines the various area types. This method is for custom subclasses of the PDFView class. Use it if you override the NSResponder class's mouseMoved: method or related methods.

13.32.5 canGoBack as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the user can navigate to the previous page in the page history.

Notes: The page history gets built as your application calls navigation methods such as `goToDestination` and `goToLastPage`.

13.32.6 canGoForward as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the user can navigate to the next page in the page history.

Notes: The page history gets built as your application calls navigation methods such as `goToDestination` and `goToLastPage`.

13.32.7 canGoToFirstPage as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the user can navigate to the first page of the document.

Notes: The return value will be true unless the view is already displaying the first page.

13.32.8 canGoToLastPage as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the user can navigate to the last page of the document.

Notes: The return value will be true unless the view is already displaying the last page.

13.32.9 canGoToNextPage as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the user can navigate to the next page of the document.

Notes: The return value will be true unless the view is displaying the last page.

13.32.10 canGoToPreviousPage as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the user can navigate to the previous page of the document.

Notes: The return value will be true unless the view is displaying the first page.

13.32.11 canZoomIn as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the user can magnify the view that is, zoom in.

13.32.12 canZoomOut as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a Boolean value indicating whether the user can view an expanded area that is, zoom out.

13.32.13 clearSelection

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Clears the selection. **Notes:** The view redraws as necessary but does not scroll. This call is equivalent to setting `CurrentSelection=nil`.

13.32.14 Constructor

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new PDF view with size 100/100 and position 0/0

Example:

```
dim t as new PDFViewMBS
```

Notes: On success the handle property is not zero.
See also:

- 13.32.15 Constructor(Handle as Integer) 1232
- 13.32.16 Constructor(left as Double, top as Double, width as Double, height as Double) 1233

13.32.15 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given PDFView handle.

Example:

```
dim t as new PDFViewMBS(0, 0, 100, 100)
dim v as new PDFViewMBS(t.handle)
```


13.32. CLASS PDFVIEWMBS

1233

MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)

Notes: The handle is casted to a NSButton and the plugin retains this handle.
See also:

- 13.32.14 Constructor 1232
- 13.32.16 Constructor(left as Double, top as Double, width as Double, height as Double) 1233

13.32.16 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new PDF view with the given size and position.

Example:

```
dim x as new PDFViewMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.
See also:

- 13.32.14 Constructor 1232
- 13.32.15 Constructor(Handle as Integer) 1232

13.32.17 convertPointFromPage(point as NSPointMBS, page as PDFPageMBS) as NSPointMBS

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Converts a point from page space to view space.

Notes: Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page. View space is a coordinate system with the origin at the lower-left corner of the current PDF view.

13.32.18 convertPointToPage(point as NSPointMBS, page as PDFPageMBS) as NSPointMBS

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Converts a point from view space to page space.

Notes: Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page. View space is a coordinate system with the origin at the lower-left corner of the current PDF view.

13.32.19 `convertRectFromPage(rect as NSRectMBS, page as PDFPageMBS) as NSRectMBS`

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Converts a rectangle from page space to view space.

Notes: Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page. View space is a coordinate system with the origin at the lower-left corner of the current PDF view.

13.32.20 `convertRectToPage(rect as NSRectMBS, page as PDFPageMBS) as NSRectMBS`

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Converts a rectangle from view space to page space.

Notes: Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page. View space is a coordinate system with the origin at the lower-left corner of the current PDF view.

13.32.21 `copy`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Copies the text in the selection, if any, to the Pasteboard.

13.32.22 `currentDestination as PDFDestinationMBS`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a PDFDestination object representing the current page and the current point in the view specified in page space.

Notes: Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page.

13.32.23 `currentPage as PDFPageMBS`

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the current page.

Notes: When there are two pages in the view in a two-up mode, "current page" is the left page. For continuous modes, returns the page crossing a horizontal line halfway between the view's top and bottom bounds.

13.32.24 documentView as NSViewMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the innermost view used by PDFView or by your PDFView subclass.

Notes: The innermost view is the one displaying the visible document pages. This method is useful when converting coordinates from one view to another.

13.32.25 drawPage(page as PDFPageMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** For use by subclasses of PDFView for custom rendering of pages.

Notes:

Do not invoke this method, except by invoking it on super from a subclass.

The PDFView class calls drawPage: as necessary for each visible page that requires rendering. In the PDFView class, this method erases page to white, calls page.drawInRect(pageRect,self.displayBox), and then draws the selection, if any.

You can override this method to draw on top of a PDF page or to control how pages are drawn. In these cases, invoke this method on super and then perform custom drawing on top of the PDF page.

13.32.26 drawPagePost(page as PDFPageMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** For use by subclasses of PDFView for post-page rendering.

Notes:

The default implementation of this method draws the text highlighting (if any) for the page. This method does not apply scaling or rotating to the current context to map to page space; instead, the context is in view-space coordinates (in which the origin is at the lower-left corner of the current PDF view).

Available in Mac OS X v10.5 and later.

13.32.27 goBack

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Navigates back one step in the page history.

Notes: The page history gets built as your application calls navigation methods such as goToDestination and goToLastPage.

13.32.28 goForward

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Navigates forward one step in the page history.

Notes: The page history gets built as your application calls navigation methods such as goToDestination and goToLastPage.

13.32.29 goToDestination(page as PDFDestinationMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Navigates to the specified destination.

Notes:

Destinations include a page and a point on the page specified in page space.

Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page.

13.32.30 goToFirstPage

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Navigates to the first page of the document.

Notes: PDF Kit records the move in its page history.

13.32.31 goToLastPage

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Navigates to the last page of the document.

Notes: PDF Kit records the move in its page history.

13.32.32 goToNextPage

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Navigates to the next page of the document.

Notes: PDF Kit records the move in its page history.

13.32.33 goToPage(page as PDFPageMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Scrolls to the specified page.

Notes: PDF Kit records the move in its page history.

13.32.34 goToPreviousPage

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Navigates to the previous page of the document.

Notes: PDF Kit records the move in its page history.

13.32.35 goToRect(rect as NSRectMBS, page as PDFPageMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Navigates to the specified rectangle on the specified page.

Notes:

If the specified rectangle is already visible, this method does nothing. This allows you to scroll the PDFView object to a specific PDFAnnotation or PDFSelection object, because both of these objects have bounds methods that return an annotation or selection position in page space.

Note that rect is specified in page-space coordinates. Page space is a 72 dpi coordinate system with the origin at the lower-left corner of the current page.

Available in Mac OS X v10.5 and later.

13.32.36 goToSelection(page as PDFSelectionMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Scrolls to the first character of the specified selection.

Notes: PDF Kit records the move in its page history.

13.32.37 layoutDocumentView

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Performs layout of the inner views.

Notes:

The PDFView actually contains several subviews, such as the document view (where the PDF is actually drawn) and a "matte view" (which may appear as a gray area around the PDF content, depending on the scaling). Changes to the PDF content may require changes to these inner views, so you must call this method explicitly if you use PDF Kit utility classes to add or remove a page, rotate a page, or perform other operations affecting visible layout.

This method is called automatically from PDFView methods that affect the visible layout (such as setDocument, setDisplayBox or zoomIn).

13.32.38 pageForPoint(point as NSPointMBS, nearest as boolean) as PDFPageMBS

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the page containing a point specified in view coordinates.

Notes: Returns nil if there's no page at the specified point and nearest is set to false.

13.32.39 PDFViewAnnotationHitNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes:

Posted when the user clicks on an annotation.

Use the "PDFAnnotationHit" key to obtain userinfo of type PDFAnnotation.

13.32.40 PDFViewAnnotationWillHitNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes:

Posted before the user clicks an annotation.

Available in Mac OS X v10.5 and later.

13.32.41 PDFViewChangedHistoryNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes: Posted when the page history changes.

13.32.42 PDFViewCopyPermissionNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes: Posted when the user attempts to copy to the pasteboard without the appropriate permissions.

13.32.43 PDFViewDisplayBoxChangedNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes:

Posted when the display box has changed.

Available in Mac OS X v10.5 and later.

13.32.44 PDFViewDisplayModeChangedNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes:

Posted when the display mode has changed.

Available in Mac OS X v10.5 and later.

13.32.45 PDFViewDocumentChangedNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes: Posted when a new document is associated with the view.

13.32.46 PDFViewPageChangedNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes: Posted when a new page becomes the current page.

13.32.47 PDFViewPrintPermissionNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes: Posted when the user attempts to print without the appropriate permissions.

13.32.48 PDFViewScaleChangedNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes: Posted when the scale factor changes.

13.32.49 PDFViewSelectionChangedNotification as string

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the notification names used with the PDF view.

Notes:

Posted when the current selection has changed.

Available in Mac OS X v10.5 and later.

13.32.50 performAction(action as PDFActionMBS)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Performs the specified action.

Notes: Available in Mac OS X v10.5 and later.

13.32.51 rowSizeForPage(page as PDFPageMBS) as NSSizeMBS

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the size needed to display a row of the current document page.

Notes: The size is dependent on the current scale factor and display attributes.

13.32.52 scrollSelectionToVisible

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Scrolls the view until the selection is visible.

13.32.53 selectAll

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Selects all text in the document.

13.32.54 setCurrentSelection(selection as PDFSelectionMBS, animate as boolean)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the selection, in an animated way, if desired.

Notes:

This method behaves as `setCurrentSelection`, but with the addition of animation, if `animate` is true. The animation serves to draw the user's attention to the new selection, which can be useful when implementing search.

Available in Mac OS X v10.5 and later.

13.32.55 setCursorForAreaOfInterest(area as Integer)

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the type of mouse cursor according to the type of area the mouse cursor is over.

Notes: This method is especially useful for custom subclasses of the `PDFView` class.

13.32.56 visiblePages as PDFPageMBS()

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array of `PDFPageMBS` objects that represent the currently visible pages.

Notes: Available in Mac OS X v10.5 and later.

13.32.57 zoomIn

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Zooms in by increasing the scaling factor.

Notes:

Each invocation of `zoomIn` multiplies the scaling factor by the square root of 2.

Available in Mac OS X v10.4 and later.

13.32.58 zoomOut

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Zooms out by decreasing the scaling factor.

Notes:

Each invocation of zoomOut divides the scaling factor by the square root of 2.
Available in Mac OS X v10.4 and later.

13.32.59 Properties

13.32.60 allowsDragging as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Determines whether the view can accept new PDF documents dragged into it by the user.

Notes: (Read and Write computed property)

13.32.61 autoScales as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether autoscaling is set.

Notes: (Read and Write computed property)

13.32.62 backgroundColor as NSColorMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the view's background color.

Notes:

A view's background is the area displayed to either side of a PDF document's pages. The background also appears between pages when page breaks are enabled. The default color is a 50% gray.

(Read and Write computed property)

13.32.63 currentSelection as PDFSelectionMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the current selection.

Example:

```
dim MyPDFView as PDFViewMBS // your view
```

```
dim doc as PDFDocumentMBS = MyPDFView.document
dim page as PDFPageMBS = doc.pageAtIndex(0)
dim sel as PDFSelectionMBS = page.selectionForRange(0,5)
MyPDFView.currentSelection = sel
```

Notes:

Returns NULL if no selection exists.

Note that this method returns the actual instance of the current PDFSelectionMBS object. Therefore, if you want to modify it, you should make a copy of the returned selection and modify that, instead.
(Read and Write computed property)

13.32.64 displayBox as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The current style of display box.

Notes:

The available values for display boxes are defined in the Constants section in the PDFPageMBS class.
(Read and Write computed property)

13.32.65 displayMode as Integer

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The current display mode.

Notes:

Value can be kPDFDisplaySinglePage, kPDFDisplaySinglePageContinuous, kPDFDisplayTwoUp and kPDFDisplayTwoUpContinuous.
(Read and Write computed property)

13.32.66 displaysAsBook as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the view will display the first page as a book cover (meaningful only when the document is in two-up or two-up continuous display mode).

Notes: (Read and Write computed property)

13.32.67 displaysPageBreaks as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** A Boolean value indicating whether the view is displaying page breaks.

Notes: (Read and Write computed property)

13.32.68 document as PDFDocumentMBS

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the document associated with a PDFView object.

Notes: (Read and Write computed property)

13.32.69 enableDataDetectors as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether data detection is enabled.

Notes:

If enabled, page text will be scanned for URL's as the page becomes visible. Where // URL's are found, Link annotations are created in place. These are temporary annotations and are not saved.

Requires Mac OS X 10.6.
(Read and Write computed property)

13.32.70 greekingThreshold as Double

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The greeking threshold to use for displaying text.

Notes:

The default threshold is 3.0.
(Read and Write computed property)

13.32.71 interpolationQuality as Integer

Plugin Version: 11.2, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The interpolation quality for images drawn into the PDFView context.

Notes:

Available in Mac OS X 10.7 or later.
(Read and Write computed property)

13.32.72 scaleFactor as Double

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The scale factor for the view.

Notes:

The default value is 1.0, corresponding to actual size.
(Read and Write computed property)

13.32.73 shouldAntiAlias as Boolean

Plugin Version: 9.6, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether to use anti-aliasing in the view.

Notes: (Read and Write computed property)

13.32.74 Constants

13.32.75 kPDFAnnotationArea=4

Plugin Version: 9.6. **Function:** One of the constants to apply mouse position over PDF view areas.

Notes: The mouse is over an annotation.

13.32.76 kPDFControlArea=16

Plugin Version: 9.6. **Function:** One of the constants to apply mouse position over PDF view areas.

Notes: The mouse is over a control.

13.32.77 kPDFDisplaySinglePage=0

Plugin Version: 9.6. **Function:** One of the PDF view display mode constants.

Notes: The document displays one page at a time horizontally and vertically. Vertical and horizontal scrolling apply only to the current page.

13.32.78 kPDFDisplaySinglePageContinuous=1

Plugin Version: 9.6. **Function:** One of the PDF view display mode constants.

Notes: The document displays in continuous mode vertically, with single-page width horizontally. Vertical scrolling applies to the entire document.

13.32.79 kPDFDisplayTwoUp=2

Plugin Version: 9.6. **Function:** One of the PDF view display mode constants.

Notes: The document displays two pages side-by-side. Vertical and horizontal scrolling apply only to the pair of displayed pages.

13.32.80 kPDFDisplayTwoUpContinuous=3

Plugin Version: 9.6. **Function:** One of the PDF view display mode constants.

Notes: The document displays in continuous mode vertically and displays two pages side-by-side horizontally. Vertical scrolling applies to the entire document.

13.32.81 kPDFIconArea=64

Plugin Version: 9.6. **Function:** One of the constants to apply mouse position over PDF view areas.

Notes:

The mouse is over an icon.

Available in Mac OS X v10.5 and later.

13.32.82 kPDFInterpolationQualityHigh = 2

Plugin Version: 11.2. **Function:** One of the interpolation quality constants.

Notes: high

13.32.83 kPDFInterpolationQualityLow = 1

Plugin Version: 11.2. **Function:** One of the interpolation quality constants.

Notes: low

13.32.84 kPDFInterpolationQualityNone = 0

Plugin Version: 11.2. **Function:** One of the interpolation quality constants.

13.32.85 kPDFLinkArea=8

Plugin Version: 9.6. **Function:** One of the constants to apply mouse position over PDF view areas.
Notes: The mouse is over a link.

13.32.86 kPDFNoArea=0

Plugin Version: 9.6. **Function:** One of the constants to apply mouse position over PDF view areas.
Notes: The mouse is over an undefined area.

13.32.87 kPDFPageArea=1

Plugin Version: 9.6. **Function:** One of the constants to apply mouse position over PDF view areas.
Notes: The mouse is over a page.

13.32.88 kPDFPopupArea=128

Plugin Version: 9.6. **Function:** One of the constants to apply mouse position over PDF view areas.
Notes: The mouse is over a popup menu.

13.32.89 kPDFTextArea=2

Plugin Version: 9.6. **Function:** One of the constants to apply mouse position over PDF view areas.
Notes: The mouse is over text.

13.32.90 kPDFTextFieldArea=32

Plugin Version: 9.6. **Function:** One of the constants to apply mouse position over PDF view areas.
Notes: The mouse is over a text field.

Chapter 14

Quartz Composer

14.1 class QCCompositionMBS

14.1.1 class QCCompositionMBS

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The composition class.

Notes:

The QCComposition class represents a Quartz Composer composition that either:

- comes from the system-wide composition repository (/Library/Compositions and textasciitilde /Library/Compositions) where it can be accessed by any application through the methods of the QCCompositionRepository class
- is created from an arbitrary source (typically a file on disk) using one of its methods

This class cannot be subclassed.

A QCComposition object has the following information associated with it and that you can obtain by using the appropriate method of the QCComposition class:

- Attributes include the name and description of the composition, copyright information, and whether or not its provided by OS X (built-in).
- The protocols that the composition conforms to. A composition protocol defines a set of required and optional input parameters and output results.

Many methods of the QCRenderer, QCCompositionLayer, and QCView classes take a QCComposition object as a parameter.

This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

14.1.2 Methods

14.1.3 `compositionWithData(data as MemoryBlock) as QCCompositionMBS`

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a composition object initialized with the contents of a Quartz Composer composition file.

Example:

```
dim data as MemoryBlock // composition file content in MemoryBlock variable
dim q as QCCompositionMBS = QCCompositionMBS.compositionWithData(data)
```

Notes:

data: The contents of a file created with the Quartz Composer developer tool.

Returns a Quartz Composer composition object or nil if there is an error.

See also:

- 14.1.4 `compositionWithData(data as string) as QCCompositionMBS` 1250

14.1.4 `compositionWithData(data as string) as QCCompositionMBS`

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a composition object initialized with the contents of a Quartz Composer composition file.

Example:

```
dim data as string // composition file content in string variable
dim q as QCCompositionMBS = QCCompositionMBS.compositionWithData(data)
```

Notes:

data: The contents of a file created with the Quartz Composer developer tool.

Returns a Quartz Composer composition object or nil if there is an error.

See also:

- 14.1.3 `compositionWithData(data as MemoryBlock) as QCCompositionMBS` 1250

14.1.5 compositionWithFile(file as folderitem) as QCCompositionMBS

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a composition object initialized with a Quartz Composer composition file.

Example:

```
dim file as folderitem // your folderitem
dim q as QCCompositionMBS = QCCompositionMBS.compositionWithFile(file)
```

Notes:

file: A path to a file created with the Quartz Composer developer tool (.qtz extension).

Returns a Quartz Composer composition object or nil if there is an error.

See also:

- 14.1.6 compositionWithFile(path as string) as QCCompositionMBS 1251

14.1.6 compositionWithFile(path as string) as QCCompositionMBS

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns a composition object initialized with a Quartz Composer composition file.

Example:

```
dim path as string = "/System/Library/Compositions/Rollercoaster.qtz" // your path
dim q as QCCompositionMBS = QCCompositionMBS.compositionWithFile(path)
```

Notes:

file: A path to a file created with the Quartz Composer developer tool (.qtz extension).

Returns a Quartz Composer composition object or nil if there is an error.

See also:

- 14.1.5 compositionWithFile(file as folderitem) as QCCompositionMBS 1251

14.1.7 Constructor

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

14.1.8 copy as QCCompositionMBS

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a copy of the composition.

14.1.9 getAttributes as dictionary

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the attributes of the composition.

14.1.10 inputKeys as string()

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array listing the keys that identify the input ports of the root patch of the composition.

14.1.11 outputKeys as string()

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array listing the keys that identify the output ports of the root patch of the composition.

14.1.12 protocols as string()

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the list of protocols to which the composition conforms.

14.1.13 QCCompositionAttributeBuiltInKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard attribute names.

Example:

```
dim c as QCCompositionMBS = QCCompositionMBS.compositionWithFile("/System/Library/Composi-
tions/Rollercoaster.qtz")
dim d as Dictionary = c.getattributes
dim b as Boolean = d.Value(c.QCCompositionAttributeBuiltInKey)
MsgBox str(b)
```

Notes:

The key for the composition origin. The associated value is a Boolean value. True indicates the composition is built-in (provided by OS X).

14.1.14 QCCompositionAttributeCategoryKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard attribute names.

Example:

```
dim c as QCCompositionMBS = QCCompositionMBS.compositionWithFile("/System/Library/Compositions/Rollercoaster.qtz")
dim d as Dictionary = c.getattributes
dim b as string = d.Lookup(c.QCCompositionAttributeCategoryKey, "?")
MsgBox b
```

Notes: The composition category. The associated value is a category constant. See Categories.

14.1.15 QCCompositionAttributeCopyrightKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard attribute names.

Example:

```
dim c as QCCompositionMBS = QCCompositionMBS.compositionWithFile("/System/Library/Compositions/Rollercoaster.qtz")
dim d as Dictionary = c.getattributes
dim b as string = d.Value(c.QCCompositionAttributeCopyrightKey)
MsgBox b
```

Notes:

The key for composition copyright information.
The associated value is a string.

14.1.16 QCCompositionAttributeDescriptionKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard attribute names.

Notes:

The key for the composition description.
The associated value is a string.

14.1.17 QCCompositionAttributeHasConsumersKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard attribute names.

Notes:

The key for a composition that has consumer patches. The associated value is a Boolean value. True indicates that the composition has consumers.

14.1.18 QCCompositionAttributeIsTimeDependentKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard attribute names.

Notes: The key for the composition time dependency. The associated value is a Boolean value. True indicates that the composition is time dependent.

14.1.19 QCCompositionAttributeNameKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard attribute names.

Example:

```
dim c as QCCompositionMBS = QCCompositionMBS.compositionWithFile("/System/Library/Composi-
tions/Rollercoaster.qtz")
dim d as Dictionary = c.getattributes
MsgBox d.Value(c.QCCompositionAttributeNameKey)
```

Notes:

The key for the composition name.
The associated value is a string.

14.1.20 QCCompositionCategoryDistortion as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the category names.

Notes: A composition that produces a distortion effect.

14.1.21 QCCompositionCategoryStylize as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the category names.

Notes: A composition that produces a stylize effect.

14.1.22 QCCompositionCategoryUtility as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the category names.

Notes: A utility composition.

14.1.23 QCCompositionInputAudioPeakKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A number input port whose key is inputAudioPeak. The value must be in the [0,1] range as a mono signal with no decay applied.

14.1.24 QCCompositionInputAudioSpectrumKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A structure input port whose key is inputAudioSpectrum. The structure must contain 16 values in the [0,1] range representing 16 spectrum bands of the mono signal from low to high frequencies with no decay applied.

14.1.25 QCCompositionInputDestinationImageKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: An image input port whose key is `inputDestinationImage`.

14.1.26 `QCCompositionInputImageKey` as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: An image input port whose key is `inputImage`.

14.1.27 `QCCompositionInputPaceKey` as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A number input port whose key is `inputPace`. The value must be in the `[0,1]` range.

14.1.28 `QCCompositionInputPreviewModeKey` as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A Boolean input port whose key is `inputPreviewMode`. When the value of this input port is set to `TRUE`, the composition that provides this port must be able to run in a low-quality mode that produces a preview of the composition.

14.1.29 `QCCompositionInputPrimaryColorKey` as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A color input port whose key is `inputPrimaryColor`.

14.1.30 `QCCompositionInputRSSArticleDurationKey` as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A number input port whose key is `inputRSSArticleDuration`. The value must be expressed in seconds.

14.1.31 QCCompositionInputRSSFeedURLKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A string input port whose key is inputRSSFeedURL. This port must be passed an http or feed scheme URL.

14.1.32 QCCompositionInputScreenImageKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: An image input port whose key is inputScreenImage.

14.1.33 QCCompositionInputSecondaryColorKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A color input port whose key is inputSecondaryColor.

14.1.34 QCCompositionInputSourceImageKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: An image input port whose key is inputSourceImage.

14.1.35 QCCompositionInputTrackInfoKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A structure input port whose key is inputTrackInfo. The structure contains optional entries, such as "name", "artist", "album", "duration", "artwork", and so on.

14.1.36 QCCompositionInputTrackPositionKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A number input port whose key is inputTrackPosition. The value must be expressed in seconds.

14.1.37 QCCompositionInputTrackSignalKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A Boolean input port whose key is inputTrackSignal.

14.1.38 QCCompositionInputXKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A number input port whose key is inputX. The value must be normalized to the image width with the origin on the left.

14.1.39 QCCompositionInputYKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard input key names.

Notes: A number input port whose key is inputY. The value must be normalized to the image height with the origin at the bottom.

14.1.40 QCCompositionOutputImageKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard output key names.

Notes: An image output port whose key is outputImage.

14.1.41 QCCompositionOutputWebPageURLKey as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard output key names.

Notes: A string output port whose key is outputWebPageURL.

14.1.42 QCCompositionProtocolGraphicAnimation as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard protocol names.

Notes:

A composition that renders a generic graphical animation. It has the option to use `QCCompositionInputPrimaryColorKey` for the primary color of the animation, `QCCompositionInputSecondaryColorKey` for the secondary color of the animation, `QCCompositionInputPaceKey` for the global pace of the animation, and `QCCompositionInputPreviewModeKey` to indicate if the animation should run in lower-quality for preview purposes.

Available in OS X v10.5 and later.

14.1.43 `QCCompositionProtocolGraphicTransition` as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard protocol names.

Notes: A composition that performs a transition between two images, using a transition time in range of 0 to 1. A conforming composition must use the input keys `QCCompositionInputSourceImageKey` for the starting image and `QCCompositionInputDestinationImageKey` for the image to transition to. The composition can optionally use `QCCompositionInputPreviewModeKey` to indicate if the animation should run in lower-quality for preview purposes.

14.1.44 `QCCompositionProtocolImageFilter` as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard protocol names.

Notes: A composition that applies an effect to a source image. A conforming composition must use the input key `QCCompositionInputImageKey` for the source image and `QCCompositionOutputImageKey` for the output image. The composition can optionally use `QCCompositionInputXKey` to specify the X position of the center point of the effect, `QCCompositionInputYKey` to specify the Y position of the center point of the effect, and `QCCompositionInputPreviewModeKey` to indicate if the animation should run in lower-quality for preview purposes.

14.1.45 `QCCompositionProtocolMusicVisualizer` as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard protocol names.

Notes:

A composition that acts as a visualizer for music. A conforming composition must use the input key `QCCompositionInputAudioPeakKey` for the instantaneous audio peak and the `QCCompositionInputAudioSpectrumKey` for the instantaneous audio spectrum. It can optionally use the `QCCompositionInputTrackInfoKey` to indicate it receives information about the current track and the `QCCompositionInputTrackSignalKey` to indicate the start of a new track.

Available in OS X v10.5 and later.

14.1.46 `QCCompositionProtocolRSSVisualizer` as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard protocol names.

Notes:

A composition that acts as a visualizer for an RSS feed. A conforming composition must use the input key `QCCompositionInputRSSFeedURLKey` for the URL to use for the RSS feed. It can optionally use `QCCompositionInputRSSArticleDurationKey` to specify the duration of each feed article.

Available in OS X v10.5 and later.

14.1.47 `QCCompositionProtocolScreenSaver` as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** One of the standard protocol names.

Notes:

A composition that can be used as a screen saver. The composition has the option to use `QCCompositionInputScreenImageKey` for a screenshot image of the screen that the screen saver runs on, `QCCompositionInputPreviewModeKey` to indicate if the animation should run in lower-quality for preview purposes, and `QCCompositionOutputWebPageURLKey` for a URL to open in the default web browser when screen saver exits (only allowed if screen saver password is disabled).

Available in OS X v10.5 and later.

14.1.48 `Properties`

14.1.49 `Description as String`

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The description for the composition.

Notes: (Read only property)

14.1.50 Handle as Integer

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal object reference.

Notes: (Read and Write property)

14.1.51 identifier as String

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The identifier for the composition.

Example:

```
dim r as QCCompositionRepositoryMBS = QCCompositionRepositoryMBS.sharedCompositionRepository
dim a() As QCCompositionMBS = r.allCompositions
MsgBox a(0).identifier
```

Notes:

The unique identifier for the composition if it comes from the composition repository; "" otherwise.
(Read only property)

14.1.52 Name as String

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The name for the composition.

Example:

```
dim c as QCCompositionMBS = QCCompositionMBS.compositionWithFile("/System/Library/Composi-
tions/Rollercoaster.qtz")
MsgBox c.name
```

Notes: (Read only property)

14.2 class QCCompositionRepositoryMBS

14.2.1 class QCCompositionRepositoryMBS

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The system-wide Quartz Composer composition repository.

Example:

```
dim r as QCCompositionRepositoryMBS = QCCompositionRepositoryMBS.sharedCompositionRepository
dim a() As QCCompositionMBS = r.allCompositions
MsgBox str(a.Ubound+1)+" compositions installed"
```

Notes:

The QCCompositionRepository class represents a system-wide centralized repository of built-in and installed Quartz Composer compositions (/Library/Compositions and textasciitilde /Library/Compositions). The QCCompositionRepository class cannot be subclassed.

Compositions in the repository are represented by the QCComposition class. You can use the methods of the QCCompositionRepository class to fetch all compositions or only those that meet specific criteria. This is an abstract class. You can't create an instance, but you can get one from various plugin functions.

14.2.2 Methods

14.2.3 allCompositions as QCCompositionMBS()

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array that contains all compositions currently in the composition repository.

Example:

```
dim r as QCCompositionRepositoryMBS = QCCompositionRepositoryMBS.sharedCompositionRepository
dim a() As QCCompositionMBS = r.allCompositions
MsgBox str(a.Ubound+1)+" compositions installed"
```

14.2.4 Compositions(protocols() as String = nil, attributes as Dictionary = nil) as QCCompositionMBS()

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array of compositions that match a set of criteria.

Example:

```

dim r as QCCompositionRepositoryMBS = QCCompositionRepositoryMBS.sharedCompositionRepository
dim a() As QCCompositionMBS = r.Compositions( array( QCCompositionMBS.QCCompositionProtocol-
ImageFilter))
MsgBox str(a.Ubound+1)+” compositions found”

```

Notes:

protocols: The protocols that you want compositions to conform to. Pass nil if you dont want to filter based on the protocol. You can pass any of these protocols: QCCompositionProtocolAnimation, QCCompositionProtocolImageProducer, QCCompositionProtocolImageFilter, QCCompositionProtocolImageCompositor, QCCompositionProtocolImageTransition, and QCCompositionProtocolScreenSaverRSS.

attributes: A dictionary that contains the attributes, and their associated values, that you want compositions to match. Pass nil if you dont want to filter based on the attributes. For example, you can pass any of these attributes: QCCompositionAttributeNameKey, QCCompositionAttributeDescriptionKey, QCCompositionAttributeCopyrightKey, QCCompositionAttributeBuiltInKey, and QCCompositionAttributeTimeDependentKey.

Returns an array of QCComposition objects that meet the supplied criteria.

14.2.5 compositionWithIdentifier(identifier as string) as QCCompositionMBS

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the composition that corresponds to the identifier.

Example:

```

dim r as QCCompositionRepositoryMBS = QCCompositionRepositoryMBS.sharedCompositionRepository
dim c as QCCompositionMBS = r.compositionWithIdentifier(”/swing”)
MsgBox c.Name

```

Notes:

identifier: A string that uniquely identifies the composition to retrieve.

Returns the composition identified by the provided string, or nil if there is no composition with that identifier in the composition repository.

14.2.6 Constructor

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The private constructor.

14.2.7 loadPlugIn(file as folderitem) as Boolean

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Attempts to load a Quartz Composer plug-in from a .plugin bundle at the specified path and returns true on success.

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.plugin")
dim r as Boolean = QCCompositionRepositoryMBS.loadPlugIn(f)

if r then
  MsgBox "OK"
else
  MsgBox "Failed"
end if
```

Notes: This method will do nothing if the plug-in was already loaded.
See also:

- 14.2.8 loadPlugIn(path as string) as Boolean 1264

14.2.8 loadPlugIn(path as string) as Boolean

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Attempts to load a Quartz Composer plug-in from a .plugin bundle at the specified path and returns true on success.

Notes: This method will do nothing if the plug-in was already loaded.

See also:

- 14.2.7 loadPlugIn(file as folderitem) as Boolean 1264

14.2.9 QCCompositionRepositoryDidUpdateNotification as string

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The new of the notification which is posted whenever the list of compositions in the composition repository is updated.

14.2.10 sharedCompositionRepository as QCCompositionRepositoryMBS

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the shared instance of the composition repository.

14.2.11 Properties

14.2.12 Handle as Integer

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The internal object reference.

Notes: (Read and Write property)

14.3 control `QCViewControlMBS`

14.3.1 control `QCViewControlMBS`

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control to host a `QCView` properly.

14.3.2 Properties

14.3.3 View as `QCViewMBS`

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The `QCView` in use by this control.

Notes:

Please use this property to access the actual view and make your settings and load the data to render. (Read only property)

14.3.4 Events

14.3.5 `BoundsChanged`

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the bounds, but not the frame, changed.

14.3.6 `DidStartRendering`

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Rendering did start notification.

14.3.7 `DidStopRendering`

Plugin Version: 15.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Rendering did stop notification.

14.3.8 EnableMenuItems

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Function:** The event where you can enable menu items.

14.3.9 FrameChanged

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The event called when the frame changed.

14.3.10 GotFocus

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control itself got focus.

Notes: This only fires if the control itself got focus and not a sub control.

14.3.11 LostFocus

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The control lost focus.

Notes: This only fires if the control itself lost focus and not a sub control.

14.3.12 MenuAction(HitItem as MenuItem) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Called when a menuitem is choosen.

Notes: This allows the control to react on its relevant menu items. Please return true if you handled it or false to give others a chance.

14.3.13 MouseDown(x as Integer, y as Integer, Modifiers as Integer) As Boolean

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was pressed inside the controls region at the location passed in to x, y.

Notes:

The coordinates x and y are local to the control, i.e. they represent the position of the mouse click relative to the upper-left corner of the Control.

Return True if you are going to handle the MouseDown. In such a case:

- The Action event, if any, will not execute and the state of the object will not change.
- You will receive the MouseDrag and MouseUp events.

If you return False, the system handles the MouseDown so the above event handlers do not get called.

14.3.14 MouseDrag(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** This event fires continuously after the mouse button was pressed inside the Control.

Notes:

Mouse location is local to the control passed in to x, y.

As this event is fired continuously (hundreds of time per second), it is your responsibility to determine if the mouse has really moved.

14.3.15 MouseUp(x as Integer, y as Integer)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The mouse button was released.

Notes: Use the x and y parameters to determine if the mouse button was released within the control's boundaries.

14.3.16 ScaleFactorChanged(NewFactor as Double)

Plugin Version: 17.1, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The backing store scale factor has changed.

Notes: Please invalidate any cached bitmaps or other relevant state.

14.4 class QCVIEWMBS

14.4.1 class QCVIEWMBS

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The QCVIEW class is a custom NSVIEW class that loads, plays, and controls Quartz Composer compositions.

Notes:

It is an autonomous view that is driven by an internal timer running on the main thread.

The view can be set to render a composition automatically when it is placed onscreen. The view stops rendering when it is placed offscreen. When not rendering, the view is filled with the current erase color. The rendered composition automatically synchronizes to the vertical retrace of the monitor.

You can embed this view in a CustomNSVIEWMBS to get more events for mouse and keyboard. Subclass of the NSVIEWMBS class.

14.4.2 Methods

14.4.3 Constructor

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new Quartz composer view with size 100/100 and position 0/0

Example:

```
dim t as new QCVIEWMBS
```

Notes: On success the handle property is not zero.

See also:

- 14.4.4 Constructor(Handle as Integer) 1269
- 14.4.5 Constructor(left as Double, top as Double, width as Double, height as Double) 1270

14.4.4 Constructor(Handle as Integer)

Plugin Version: 10.3, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates an object based on the given QCVIEW handle.

Example:

```
dim t as new QCVIEWMBS(0, 0, 100, 100)
dim v as new QCVIEWMBS(t.handle)
```

```
MsgBox str(v.Bounds.Width)+" x "+str(v.Bounds.Height)
```

Notes: The handle is casted to a QCVView and the plugin retains this handle.
See also:

- 14.4.3 Constructor 1269
- 14.4.5 Constructor(left as Double, top as Double, width as Double, height as Double) 1270

14.4.5 Constructor(left as Double, top as Double, width as Double, height as Double)

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Creates a new Quartz composer view with the given size and position.

Example:

```
dim x as new QCVViewMBS(0, 0, 100, 100)
```

Notes: On success the handle property is not zero.
See also:

- 14.4.3 Constructor 1269
- 14.4.4 Constructor(Handle as Integer) 1269

14.4.6 erase

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Clears the view using the current erase color.

14.4.7 getAttributes as dictionary

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the attributes of the composition associated with the renderer.

Notes:

Returns a dictionary that contains the attributes that describe the composition, including the input and output ports of the root patch.

The dictionary can define any of the attributes that are specified by the composition attribute keys. See `QCCompositionAttributeNameKey`, `QCCompositionAttributeDescriptionKey`, and `QCCompositionAttributeCopyrightKey`.

The dictionary can also contain dictionaries that correspond to the keys that identify the input and output ports of the root patch of the composition. See `QCPortAttributeTypeKey`, `QCPortAttributeNameKey`, `QCPortAttributeMinimumValueKey`, `QCPortAttributeMaximumValueKey`, and `QCPortAttributeMenuItemsKey`.

Available in Mac OS X v10.4 and later.

14.4.8 `inputKeys` as `string()`

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array that contains the keys that identify the input ports of the root patch of the composition.

14.4.9 `loadComposition(composition as QCCompositionMBS)` as `boolean`

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads a `QCComposition` object into the view.

Notes:

Returns true if successful; otherwise false.

If unsuccessful, any composition that's already loaded in the view remains loaded.

14.4.10 `loadCompositionFromData(data as MemoryBlock)` as `boolean`

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads the composition from memoryblock.

Notes:

If unsuccessful, returns false; any composition that's already loaded in the view remains loaded.

Available in Mac OS X v10.4 and later.

See also:

- 14.4.11 `loadCompositionFromData(data as string)` as `boolean`

1271

14.4.11 `loadCompositionFromData(data as string)` as `boolean`

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads the composition from data string.

Notes:

If unsuccessful, returns false; any composition that's already loaded in the view remains loaded.
 Available in Mac OS X v10.4 and later.
 See also:

- 14.4.10 `loadCompositionFromData(data as MemoryBlock)` as boolean 1271

14.4.12 `loadCompositionFromFile(file as folderitem)` as boolean

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads the composition file located at the specified path.

Notes:

file: A folderitem that specifies the location of a Quartz Composer composition file.

If unsuccessful, returns false; any composition that's already loaded in the view remains loaded.

Available in Mac OS X v10.4 and later.
 See also:

- 14.4.13 `loadCompositionFromFile(filepath as string)` as boolean 1272

14.4.13 `loadCompositionFromFile(filepath as string)` as boolean

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Loads the composition file located at the specified path.

Notes:

filepath: A string that specifies the location of a Quartz Composer composition file.

If unsuccessful, returns false; any composition that's already loaded in the view remains loaded.

Available in Mac OS X v10.4 and later.
 See also:

- 14.4.12 `loadCompositionFromFile(file as folderitem)` as boolean 1272

14.4.14 `outputKeys` as string()

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an array that contains the keys that identify the output ports of the root patch of the composition.

14.4.15 pauseRendering

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Pauses rendering in the view.

Notes:

You can nest calls to this method.

Available in Mac OS X v10.5 and later.

14.4.16 resumeRendering

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Resumes rendering a paused composition.

Notes:

You can nest calls to this method.

Available in Mac OS X v10.5 and later.

14.4.17 setValueForInputKey(value as Variant, key as string) as boolean

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Sets the value for an input port of a composition.

Notes:

value: The value to set for the input port. The input port must be at the root patch of the composition. The data type of the value argument must match the input port.

key: The key associated with the input port of the composition. This method throws an exception if key is invalid.

Returns false if it cannot set the value.

Available in Mac OS X v10.4 and later.

14.4.18 startRendering as boolean

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Starts rendering the composition that is in the view.

Notes:

Returns false if the composition fails to start rendering; true otherwise.

Available in Mac OS X v10.4 and later.

14.4.19 stopRendering

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Stops rendering the composition that is in the view.

Notes: Available in Mac OS X v10.4 and later.

14.4.20 unloadComposition

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Unloads the composition from the view.

Notes:

If necessary, this method calls stopRendering prior to unloading the composition.

Available in Mac OS X v10.5 and later.

14.4.21 valueForKey(key as string) as Variant

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the value for an input port of a composition.

Notes:

key: The key associated with an input port for the root patch of a composition. This method throws an exception if key is invalid.

Returns the value. The data type of returned value depends on the type of the input port.

Available in Mac OS X v10.4 and later.

14.4.22 valueForOutputKey(key as string) as Variant

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the value for an output port of a composition.

Notes:

key

The key associated with an output port for the root patch of a composition. This method throws an exception if key is invalid.

Returns the value as REALbasic variant. The data type of returned value depends on the type of the output port.

14.4.23 Properties

14.4.24 autostartsRendering as boolean

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether the composition that is in the view starts rendering automatically when the view is put on the screen.

Notes:

Available in Mac OS X v10.4 and later.
(Read and Write property)

14.4.25 eraseColor as NSColorMBS

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The color used to erase the view.

Notes:

Available in Mac OS X v10.4 and later.
(Read and Write property)

14.4.26 eventForwardingMask as Integer

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The mask used to filter which types of events are forwarded from the view to the composition during rendering.

Notes:

mask: An event filtering mask. The mask can be a combination of any of the mask constants listed in Table below (defined in NSEventMBS) or the constant NSAnyEventMask.

(Read and Write property)

14.4.27 isPausedRendering as boolean

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns whether or not the rendering in the view is paused.

Notes:

True if the rendering is paused; otherwise false.
Available in Mac OS X v10.5 and later.
(Read only property)

Constant	Description
<code>NSLeftMouseDownMask</code>	The user pressed the left button.
<code>NSLeftMouseDownMask</code>	The user moved the mouse with the left button down.
<code>NSLeftMouseUpMask</code>	The user released the left button.
<code>NSRightMouseDownMask</code>	The user pressed the right button.
<code>NSRightMouseDownMask</code>	The user moved the mouse with the right button down.
<code>NSRightMouseUpMask</code>	The user released the right button.
<code>NSOtherMouseDownMask</code>	The user pressed the middle button, or some button other than the left or right button.
<code>NSOtherMouseDownMask</code>	The user moved the mouse with the middle button down, or some button other than the left or right button.
<code>NSOtherMouseUpMask</code>	The user released the middle button, or some button other than the left or right button.
<code>NSMouseMovedMask</code>	The user moved the mouse without holding down a mouse button.
<code>NSScrollWheelMask</code>	The user moved the mouse scroll wheel.
<code>NSKeyDownMask</code>	The user generated a character or characters by pressing a key.
<code>NSKeyUpMask</code>	The user released a key.
<code>NSFlagsChangedMask</code>	The user pressed or released a modifier key, or toggled the Caps Lock key.

14.4.28 `isRendering` as `boolean`

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Checks whether a composition is rendering in the view.

Notes:

Returns true if a composition is rendering in the view; false otherwise.

Available in Mac OS X v10.5 and later.

(Read only property)

14.4.29 `loadedComposition` as `QCCompositionMBS`

Plugin Version: 15.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns the composition loaded in the view.

Notes: (Read only property)

14.4.30 `maxRenderingFrameRate` as `Double`

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** The maximum rendering frame rate.

Notes:

Pass 0.0 to specify that there is no limit.

Available in Mac OS X v10.4 and later.

(Read and Write property)

14.4.31 snapshotImage as NSImageMBS

Plugin Version: 10.1, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Returns an NSImage object of the current image in the view.

Notes:

Available in Mac OS X v10.5 and later.
(Read only property)

Chapter 15

Statusitem

15.1 class NSStatusBarButtonMBS

15.1.1 class NSStatusBarButtonMBS

Plugin Version: 15.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** StatusBarButtons are the visual representation of NSStatusItems, and are primarily displayed on the right side of the menu bar.

Notes:

When a template image is set as the \c image property of the status bar button, it is rendered with the correct menu bar style. This guarantees that the button will look correct in various button states and appearances (such as dark menu bar).

Available on Mac OS X 10.10 and newer.

Subclass of the NSButtonMBS class.

15.1.2 Methods

15.1.3 Available as boolean

Plugin Version: 15.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether this class is available.

Notes: Returns true on OS X 10.10.

15.1.4 Properties

15.1.5 `appearsDisabled` as Boolean

Plugin Version: 15.0, Console & Web: Yes, Mac: Yes, Win: No, Linux: No. **Function:** Whether icon appears disabled.

Notes:

When true the status bar icon has a disabled/off appearance while still being functional, such as allowing selection and actions. Defaults to false.

(Read and Write property)

Chapter 16

Window

16.1 class Window

16.1.1 class Window

Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** Extends Realbasic's Window Class.

Example:

```
window1.HasNoTitleBarMBS = true
```

Notes: In Realbasic 2005 and newer you need to use self. in front of the method as the propertyname alone is not accepted.

16.1.2 Methods

16.1.3 NSToolbarMBS as NSToolbarMBS

Plugin Version: 11.3, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Function:** The window's toolbar.

Notes:

So you can get the toolbar without going over NSWindowMBS.
But there you can assign a new toolbar...

Chapter 17

List of Questions in the FAQ

- 18.0.1 Can anyone help me convert seconds to time in this format hh:mm:ss? 1293
- 18.0.2 How do I get the proper highlight color on Mac OS X for active/inactive selection? 1294
- 18.0.3 How to catch delete key? 1295
- 18.0.4 How to convert cmyk to rgb? 1295
- 18.0.5 How to delete a folder? 1297
- 18.0.6 How to detect if CPU is 64bit processor? 1298
- 18.0.7 How to refresh a htmlviewer on Windows? 1298
- 18.0.8 Is there an example for vector graphics in REALbasic? 1299
- 18.0.9 Picture functions do not preserve resolution values? 1299
- 18.0.10 A toolbox call needs a rect - how do I give it one? 1300
- 18.0.11 API client not supported? 1300
- 18.0.12 Can I access Access Database with Java classes? 1301
- 18.0.13 Can I create PDF from Real Studio Report using DynaPDF? 1302
- 18.0.14 Can I use AppleScripts in a web application? 1302
- 18.0.15 Can I use graphics class with DynaPDF? 1303
- 18.0.16 Can I use OGG with REALbasic? 1303
- 18.0.17 Can I use sockets on a web application? 1303
- 18.0.18 Can I use your ChartDirector plugin on a web application? 1303
- 18.0.19 Can I use your DynaPDF plugin on a web application? 1305

- 18.0.20 Can I use your plugin controls on a web application? 1305
- 18.0.21 Can you get an unique machine ID? 1305
- 18.0.22 ChartDirector: Alignment Specification 1306
- 18.0.23 ChartDirector: Color Specification 1306
- 18.0.24 ChartDirector: Font Specification 1310
- 18.0.25 ChartDirector: Mark Up Language 1313
- 18.0.26 ChartDirector: Parameter Substitution and Formatting 1317
- 18.0.27 ChartDirector: Shape Specification 1322
- 18.0.28 Copy styled text? 1323
- 18.0.29 Do you have code to validate a credit card number? 1323
- 18.0.30 Do you have plugins for X-Rite EyeOne, eXact or i1Pro? 1324
- 18.0.31 Does SQL Plugin handle stored procedures with multiple result sets? 1324
- 18.0.32 Does the plugin home home? 1325
- 18.0.33 folderitem.absolutePath is limited to 255 chars. How can I get longer ones? 1325
- 18.0.34 Future of editablemovie class? 1326
- 18.0.35 Has anyone played round with using CoreImage to do things like add dissolve transitions say when changing from one tab to another within a window? 1326
- 18.0.36 How about Plugin support for older OS X? 1327
- 18.0.37 How can I detect whether an Intel CPU is a 64bit CPU? 1328
- 18.0.38 How can I disable the close box of a window on Windows? 1329
- 18.0.39 How can I get all the environment variables from Windows? 1329
- 18.0.40 How can i get similar behavior to Roxio Toast or iTunes where clicking a 'burn' button allows the next inserted blank CD-R to bypass the Finder and be accepted by my application? 1330
- 18.0.41 How can I get text from a PDF? 1330
- 18.0.42 How can I get text from a Word Document? 1330
- 18.0.43 How can I get the item string for a given file creator? 1331
- 18.0.44 How can I launch an app using it's creator code? 1332
- 18.0.45 How can I learn what shared libraries are required by a plugin on Linux? 1332
- 18.0.46 How can I validate an email address? 1333
- 18.0.47 How do I check if the QuickTime component for the JPEG exporting is available? 1334

	1285
• 18.0.48 How do I check if the QuickTime component for the JPEG importing is available?	1335
• 18.0.49 How do I check if the QuickTime component for the Sequence grabber is available?	1336
• 18.0.50 How do I decode correctly an email subject?	1336
• 18.0.51 How do I enable/disable a single tab in a tabpanel?	1337
• 18.0.52 How do I find the root volume for a file?	1338
• 18.0.53 How do I get the current languages list?	1338
• 18.0.54 How do I get the Mac OS Version?	1339
• 18.0.55 How do I get the printer name?	1340
• 18.0.56 How do I make a metal window if RB does not allow me this?	1340
• 18.0.57 How do I make a smooth color transition?	1341
• 18.0.58 How do I read the applications in the dock app?	1342
• 18.0.59 How do I truncate a file?	1343
• 18.0.60 How do update a Finder's windows after changing some files?	1343
• 18.0.61 How to access a USB device directly?	1343
• 18.0.62 How to add icon to file on Mac?	1344
• 18.0.63 How to ask the Mac for the Name of the Machine?	1344
• 18.0.64 How to automatically enable retina in my apps?	1345
• 18.0.65 How to avoid leaks with Cocoa functions?	1345
• 18.0.66 How to avoid trouble connecting to oracle database with SQL Plugin?	1346
• 18.0.67 How to avoid _NSAutoreleaseNoPool console messages in threads?	1346
• 18.0.68 How to bring app to front?	1347
• 18.0.69 How to bring my application to front?	1347
• 18.0.70 How to catch Control-C on Mac or Linux in a console app?	1347
• 18.0.71 How to change name of application menu?	1348
• 18.0.72 How to change the name in the menubar of my app on Mac OS X?	1348
• 18.0.73 How to check if a folder/directory has subfolders?	1349
• 18.0.74 How to check if Macbook runs on battery or AC power?	1350
• 18.0.75 How to check if Microsoft Outlook is installed?	1350
• 18.0.76 How to check on Mac OS which country or language is currently selected?	1351

- 18.0.77 How to code sign my app with plugins? 1352
- 18.0.78 How to collapse a window? 1352
- 18.0.79 How to compare two pictures? 1353
- 18.0.80 How to compile PHP library? 1354
- 18.0.81 How to convert a `BrowserType` to a `String` with `WebSession.Browser`? 1356
- 18.0.82 How to convert a `EngineType` to a `String` with `WebSession.Engine`? 1356
- 18.0.83 How to convert a `PlatformType` to a `String` with `WebSession.Platform`? 1357
- 18.0.84 How to convert a text to iso-8859-1 using the `TextEncoder`? 1358
- 18.0.85 How to convert `ChartTime` back to Xojo date? 1358
- 18.0.86 How to convert line endings in text files? 1359
- 18.0.87 How to convert picture to string and back? 1359
- 18.0.88 How to copy an array? 1360
- 18.0.89 How to copy an dictionary? 1361
- 18.0.90 How to copy parts of a movie to another one? 1361
- 18.0.91 How to create a birthday like calendar event? 1362
- 18.0.92 How to create a GUID? 1363
- 18.0.93 How to create a Mac picture clip file? 1363
- 18.0.94 How to create a PDF file in REALbasic? 1364
- 18.0.95 How to create `EmailAttachment` for PDF Data in memory? 1364
- 18.0.96 How to create PDF for image files? 1365
- 18.0.97 How to CURL Options translate to Plugin Calls? 1366
- 18.0.98 How to delete file with ftp and curl plugin? 1367
- 18.0.99 How to detect display resolution changed? 1367
- 18.0.100 How to detect retina? 1367
- 18.0.101 How to disable force quit? 1367
- 18.0.102 How to disable the error dialogs from Internet Explorer on javascript errors? 1368
- 18.0.103 How to display a PDF file in REALbasic? 1368
- 18.0.104 How to do a lottery in RB? 1368
- 18.0.105 How to do an asycron DNS lookup? 1369

	1287
• 18.0.106 How to draw a dashed pattern line?	1370
• 18.0.107 How to draw a nice antialiased line?	1371
• 18.0.108 How to draw with CGContextMBS using my own handle?	1372
• 18.0.109 How to dump java class interface?	1372
• 18.0.110 How to duplicate a picture with mask or alpha channel?	1373
• 18.0.111 How to enable assistive devices?	1374
• 18.0.112 How to encrypt a file with Blowfish?	1374
• 18.0.113 How to extract text from HTML?	1375
• 18.0.114 How to find empty folders in a folder?	1375
• 18.0.115 How to find iTunes on a Mac OS X machine fast?	1376
• 18.0.116 How to find network interface for a socket by it's name?	1376
• 18.0.117 How to find version of Microsoft Word?	1377
• 18.0.118 How to fix CURL error 60/53 on connecting to server?	1378
• 18.0.119 How to format double with n digits?	1378
• 18.0.120 How to get a time converted to user time zone in a web app?	1379
• 18.0.121 How to get an handle to the foremost window on Windows?	1379
• 18.0.122 How to get CFAbsoluteTime from date?	1380
• 18.0.123 How to get client IP address on web app?	1380
• 18.0.124 How to get fonts to load in charts on Linux?	1381
• 18.0.125 How to get fonts to load in DynaPDF on Linux?	1381
• 18.0.126 How to get GMT time and back?	1382
• 18.0.127 How to get good crash reports?	1382
• 18.0.128 How to get list of all threads?	1382
• 18.0.129 How to get parameters from webpage URL in Real Studio Web Edition?	1383
• 18.0.130 How to get Real Studio apps running Linux?	1383
• 18.0.131 How to get the color for disabled textcolor?	1384
• 18.0.132 How to get the current free stack space?	1384
• 18.0.133 How to get the current timezone?	1385
• 18.0.134 How to get the current window title?	1386

- 18.0.135 How to get the cursor blink interval time? 1387
- 18.0.136 How to get the list of the current selected files in the Finder? 1388
- 18.0.137 How to get the Mac OS system version? 1389
- 18.0.138 How to get the Mac OS Version using System.Gestalt? 1389
- 18.0.139 How to get the screensize excluding the task bar? 1390
- 18.0.140 How to get the size of the frontmost window on Windows? 1390
- 18.0.141 How to get the source code of a HTMLViewer? 1391
- 18.0.142 How to handle really huge images with GraphicsMagick or ImageMagick? 1391
- 18.0.143 How to handle tab key for editable cells in listbox? 1391
- 18.0.144 How to hard link MapKit framework? 1393
- 18.0.145 How to have a PDF downloaded to the user in a web application? 1393
- 18.0.146 How to hide all applications except mine? 1394
- 18.0.147 How to hide script errors in HTMLViewer on Windows? 1394
- 18.0.148 How to hide the grid/background/border in ChartDirector? 1395
- 18.0.149 How to hide the mouse cursor on Mac? 1395
- 18.0.150 How to insert image to NSTextView or TextArea? 1395
- 18.0.151 How to jump to an anchor in a htmlviewer? 1396
- 18.0.152 How to keep a movieplayer unclickable? 1396
- 18.0.153 How to keep my web app from using 100% CPU time? 1396
- 18.0.154 How to kill a process by name? 1397
- 18.0.155 How to know how many CPUs are present? 1397
- 18.0.156 How to know if a movie is finished? 1398
- 18.0.157 How to know if QuickTime is installed on any target and can play MPEG 4 movies? 1398
- 18.0.158 How to know if QuickTime is installed on any target? 1399
- 18.0.159 How to know the calling function? 1399
- 18.0.160 How to launch an app using it's creator code? 1400
- 18.0.161 How to launch disc utility? 1400
- 18.0.162 How to make a lot of changes to a REAL SQL Database faster? 1401
- 18.0.163 How to make a NSImage object for my retina enabled app? 1401

	1289
• 18.0.164 How to make a window borderless on Windows?	1401
• 18.0.165 How to make an alias using AppleEvents?	1402
• 18.0.166 How to make an application smaller?	1403
• 18.0.167 How to make AppleScripts much faster?	1403
• 18.0.168 How to make double clicks on a canvas?	1403
• 18.0.169 How to make my Mac not sleeping?	1405
• 18.0.170 How to make my own registration code scheme?	1406
• 18.0.171 How to make small controls on Mac OS X?	1406
• 18.0.172 How to mark my Mac app as background only?	1407
• 18.0.173 How to move a file or folder to trash?	1408
• 18.0.174 How to move an application to the front using the creator code?	1409
• 18.0.175 How to move file with ftp and curl plugin?	1409
• 18.0.176 How to normalize string on Mac?	1409
• 18.0.177 How to obscure the mouse cursor on Mac?	1410
• 18.0.178 How to open icon file on Mac?	1410
• 18.0.179 How to open PDF in acrobat reader?	1411
• 18.0.180 How to open printer preferences on Mac?	1411
• 18.0.181 How to open special characters panel on Mac?	1412
• 18.0.182 How to optimize picture loading in Web Edition?	1412
• 18.0.183 How to parse XML?	1413
• 18.0.184 How to play audio in a web app?	1413
• 18.0.185 How to pretty print xml?	1414
• 18.0.186 How to print to PDF?	1415
• 18.0.187 How to query Spotlight's Last Open Date for a file?	1415
• 18.0.188 How to quit windows?	1416
• 18.0.189 How to read a CSV file correctly?	1416
• 18.0.190 How to read the command line on windows?	1417
• 18.0.191 How to render PDF pages with PDF Kit?	1418
• 18.0.192 How to restart a Mac?	1418

- 18.0.193 How to resume ftp upload with curl plugin? 1419
- 18.0.194 How to rotate a PDF page with CoreGraphics? 1419
- 18.0.195 How to rotate image with CoreImage? 1420
- 18.0.196 How to run a 32 bit application on a 64 bit Linux? 1421
- 18.0.197 How to save a quicktime movie as a reference movie? 1421
- 18.0.198 How to save HTMLViewer to PDF with landscape orientation? 1421
- 18.0.199 How to save RTFD? 1422
- 18.0.200 How to scale a picture proportionally with mask? 1422
- 18.0.201 How to scale a picture proportionally? 1423
- 18.0.202 How to scale/resize a picture? 1424
- 18.0.203 How to search with regex and use unicode codepoints? 1425
- 18.0.204 How to see if a file is invisible for Mac OS X? 1425
- 18.0.205 How to set cache size for SQLite or REALSQLDatabase? 1426
- 18.0.206 How to set the modified dot in the window? 1427
- 18.0.207 How to show a PDF file to the user in a Web Application? 1427
- 18.0.208 How to show Keyboard Viewer programmatically? 1427
- 18.0.209 How to show the mouse cursor on Mac? 1428
- 18.0.210 How to shutdown a Mac? 1429
- 18.0.211 How to sleep a Mac? 1429
- 18.0.212 How to speed up rasterizer for displaying PDFs with DynaPDF? 1430
- 18.0.213 How to use PDFLib in my RB application? 1430
- 18.0.214 How to use quotes in a string? 1430
- 18.0.215 How to use Sybase in Web App? 1430
- 18.0.216 How to use the Application Support folder? 1431
- 18.0.217 How to use the IOPMCopyScheduledPowerEvents function in Realbasic? 1431
- 18.0.218 How to validate a GUID? 1434
- 18.0.219 How to walk a folder hierarchie non recursively? 1434
- 18.0.220 I got this error: PropVal, QDPictMBS.Name (property value), Type mismatch error. Expected CGDataProviderMBS, but got Variant, Name:QDPictMBS 1435

- 18.0.221 I registered the MBS Plugins in my application, but later the registration dialog is shown. 1436
- 18.0.222 I want to accept Drag & Drop from iTunes 1436
- 18.0.223 I'm drawing into a listbox but don't see something. 1438
- 18.0.224 I'm searching for a method or so to move a window from position x.y to somewhere else on the screen. 1438
- 18.0.225 If I use one of your plug-ins under windows, would this then impose the use of dll after compilation or my would my compiled soft still be a stand-alone single file software? 1439
- 18.0.226 Is the fn key on a powerbook keyboard down? 1439
- 18.0.227 Is there a case sensitive Dictionary? 1439
- 18.0.228 Is there a way to use the MBS plugin to get only the visible item and folder count on a volume? 1440
- 18.0.229 Is there an easy way I can launch the Displays preferences panel? 1440
- 18.0.230 Is there an easy way I can launch the Quicktime preferences panel? 1441
- 18.0.231 List of Windows Error codes? 1441
- 18.0.232 Midi latency on Windows problem? 1441
- 18.0.233 My Xojo Web App does not launch. Why? 1442
- 18.0.234 Pictures are not shown in my application. Why? 1443
- 18.0.235 Realbasic doesn't work with your plugins on Windows 98. 1443
- 18.0.236 REALbasic or my RB application itself crashes on launch on Mac OS Classic. Why? 1443
- 18.0.237 SQLDatabase not initialized error? 1443
- 18.0.238 Textconverter returns only the first x characters. Why? 1443
- 18.0.239 The type translation between CoreFoundation/Foundation and Realbasic data types. 1444
- 18.0.240 Uploaded my web app with FTP, but it does not run on the server! 1446
- 18.0.241 What classes to use for hotkeys? 1446
- 18.0.242 What do I need for Linux to get picture functions working? 1447
- 18.0.243 What does the NAN code mean? 1447
- 18.0.244 What font is used as a 'small font' in typical Mac OS X apps? 1448
- 18.0.245 What is last plugin version to run on Mac OS X 10.4? 1448
- 18.0.246 What is last plugin version to run on PPC? 1449
- 18.0.247 What is the difference between Timer and WebTimer? 1449

- 18.0.248 What is the list of Excel functions? 1449
- 18.0.249 What is the replacement for PluginMBS? 1450
- 18.0.250 What to do on Realbasic reporting a conflict? 1450
- 18.0.251 What to do with a NSImageCacheException? 1451
- 18.0.252 What to do with MySQL Error 2014? 1451
- 18.0.253 What ways do I have to ping? 1451
- 18.0.254 Where is CGGetActiveDisplayListMBS? 1452
- 18.0.255 Where is CGGetDisplaysWithPointMBS? 1452
- 18.0.256 Where is CGGetDisplaysWithRectMBS? 1452
- 18.0.257 Where is CGGetOnlineDisplayListMBS? 1452
- 18.0.258 Where is GetObjectClassNameMBS? 1452
- 18.0.259 Where is NetworkAvailableMBS? 1453
- 18.0.260 Where is StringHeight function in DynaPDF? 1453
- 18.0.261 Where is XLSDocumentMBS class? 1453
- 18.0.262 Where to get information about file formats? 1454
- 18.0.263 Where to register creator code for my application? 1454
- 18.0.264 Which Mac OS X frameworks are 64bit only? 1454
- 18.0.265 Which plugins are 64bit only? 1455
- 18.0.266 Why application doesn't launch because of a missing ddraw.dll!? 1455
- 18.0.267 Why application doesn't launch because of a missing shlwapi.dll!? 1455
- 18.0.268 Why do I hear a beep on keydown? 1455
- 18.0.269 Why does folderitem.item return nil? 1455
- 18.0.270 Why doesn't showurl work? 1456
- 18.0.271 Why have I no values in my chart? 1456
- 18.0.272 Will application size increase with using plugins? 1456
- 18.0.273 XLS: Custom format string guidelines 1456

Chapter 18

The FAQ

18.0.1 Can anyone help me convert seconds to time in this format hh:mm:ss?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Sure, here's a routine I use (which has an advantage over the previously-posted Date-based solution in that you don't have to rely on the creation of an object – all that happens is some division and string concatenation):

Example:

```
Function SecsToTimeString(timeInSecs as Integer, padHours as boolean, padMinutes as boolean) as string
// Given an amount time (in seconds), generates a string representing that amount
// of time. The padHours and padMinutes parameters determine whether to display
// hours and minutes if their values are zero.
```

```
// Examples:
// timeInSecs = 90, padHours = true; returns "00:01:30"
// timeInSecs = 1, padHours = false, padMinutes = true; returns "00:01"
// timeInSecs = 3601, padMinutes = false; returns "01:00:01"
```

```
dim hours, minutes, seconds as Integer
dim hoursString, minutesString as string
```

```
hours = timeInSecs / 3600
minutes = (timeInSecs mod 3600) / 60
seconds = timeInSecs mod 60
```

```
if hours = 0 then
if padHours then
hoursString = "00:"
else
hoursString = ""
end if
else
```

```

hoursString = Format(hours, "# # \:")
end if
if minutes = 0 then
if hours <>0 or padMinutes then
minutesString = "00:"
else
minutesString = ""
end if
else
minutesString = Format(minutes, "00\:")
end if

return hoursString + minutesString + Format(seconds, "00")
End Function

```

Notes: (from the rb mailinglist)

18.0.2 How do I get the proper highlight color on Mac OS X for active/inactive selection?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use functions from NSColor to get proper highlight color in RGB:

Example:

```

Function ProperHighlightColor(active as Boolean) As Color
# if TargetCocoa
Dim theColor As NSColorMBS
If active Then
theColor = NSColorMBS.alternateSelectedControlColor
Else
theColor = NSColorMBS.secondarySelectedControlColor
End If

```

```

Dim rgbColor As NSColorMBS = theColor.colorUsingColorSpaceName(NSColorSpaceMBS.NSCalibratedRGBColorSpace)
If rgbColor <>Nil Then
Dim red as Integer = rgbColor.redComponent * 255.0
Dim green as Integer = rgbColor.greenComponent * 255.0
Dim blue as Integer = rgbColor.blueComponent * 255.0
Return RGB(red, green, blue)
Else
Return HighlightColor
End If
# else

```

```
return HighlightColor
# endif
End Function
```

Notes: As you see we convert color to Calibrated RGB for best results.
See also:

- 18.0.3 How to catch delete key? 1295
- 18.0.4 How to convert cmyk to rgb? 1295
- 18.0.5 How to delete a folder? 1297
- 18.0.6 How to detect if CPU if 64bit processor? 1298
- 18.0.7 How to refresh a htmlviewer on Windows? 1298

18.0.3 How to catch delete key?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** The following is the code in keydown event catches delete or backspace keys.

Example:

```
Function KeyDown(Key As String) As Boolean
if asc(key) = 8 or asc(key) = 127 then
MsgBox "Delete"
Return true
end if
End Function
```

See also:

- 18.0.2 How do I get the proper highlight color on Mac OS X for active/inactive selection? 1294
- 18.0.4 How to convert cmyk to rgb? 1295
- 18.0.5 How to delete a folder? 1297
- 18.0.6 How to detect if CPU if 64bit processor? 1298
- 18.0.7 How to refresh a htmlviewer on Windows? 1298

18.0.4 How to convert cmyk to rgb?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:**

The following is the code to convert cmyk values to an RGB color datatype.

It's just a basic estimate of the color values. If you are looking for completely color accurate solution, this is not it. It should work for most people. :)

Example:

```
Function CMYKToRGB(c as Integer, m as Integer, y as Integer, k as Integer) As color
// converts c,m,y,k values (0-100) to color data type RGB
// place this in a method. Supply C,M,Y,K values-
// it returns color datatype

dim color_RGB as color
dim r, g, b as Integer

r=255-round(2.55*(c+k))
if r<0 then
r=0
end if
g=255-round(2.55*(m+k))
if g<0 then
g=0
end if
b=255-round(2.55*(y+k))
if b<0 then
b=0
end if

color_RGB=RGB(r,g,b)

return color_RGB

End Function
```

Notes: (from the rb mailinglist)

See also:

- 18.0.2 How do I get the proper highlight color on Mac OS X for active/inactive selection? 1294
- 18.0.3 How to catch delete key? 1295
- 18.0.5 How to delete a folder? 1297
- 18.0.6 How to detect if CPU is 64bit processor? 1298
- 18.0.7 How to refresh a htmlviewer on Windows? 1298

18.0.5 How to delete a folder?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** The following is the code deletes a folder recursively.

Example:

```
Sub deletefolder(f as folderitem)
dim files(-1) as FolderItem
```

```
if f=nil then Return
```

```
// delete single file
if f.Directory=false then
f.Delete
Return
end if
```

```
// get a list of all items in that folder
dim i,c as Integer
c=F.Count
for i=1 to c
files.Append f.TrueItem(i)
next
```

```
// delete each item
for each fo as FolderItem in files
if fo=nil then
' ignore
elseif fo.Directory then
deletefolder fo
else ' file
fo.Delete
end if
next
```

```
f.Delete
End Sub
```

See also:

- 18.0.2 How do I get the proper highlight color on Mac OS X for active/inactive selection? 1294
- 18.0.3 How to catch delete key? 1295
- 18.0.4 How to convert cmyk to rgb? 1295
- 18.0.6 How to detect if CPU if 64bit processor? 1298
- 18.0.7 How to refresh a htmlviewer on Windows? 1298

18.0.6 How to detect if CPU is 64bit processor?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Via CPUID you can ask CPU:

Example:

```
dim c as new CPUIDMBS

if c.Flags(CPUIDMBS.kFeatureLM) then
  MsgBox "64-bit CPU"
else
  MsgBox "32-bit CPU"
end if
```

Notes: Should work on all intel compatible CPUs.

See also:

- 18.0.2 How do I get the proper highlight color on Mac OS X for active/inactive selection? 1294
- 18.0.3 How to catch delete key? 1295
- 18.0.4 How to convert cmyk to rgb? 1295
- 18.0.5 How to delete a folder? 1297
- 18.0.7 How to refresh a htmlviewer on Windows? 1298

18.0.7 How to refresh a htmlviewer on Windows?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can ask the browser to reload the website with this code line:

Example:

```
call htmlViewer1.IERunJavaScriptMBS("javascript:document.location.reload()")
```

See also:

- 18.0.2 How do I get the proper highlight color on Mac OS X for active/inactive selection? 1294
- 18.0.3 How to catch delete key? 1295
- 18.0.4 How to convert cmyk to rgb? 1295
- 18.0.5 How to delete a folder? 1297
- 18.0.6 How to detect if CPU is 64bit processor? 1298

18.0.8 Is there an example for vector graphics in REALbasic?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Try this example inside the paint event of a window:

Example:

```

dim v as Group2D
dim r as RectShape
dim s as StringShape

const pi=3.14

s=new StringShape
s.Text="Hello World!"
s.TextFont="Geneva"
s.TextSize=24
s.FillColor=rgb(0,0,255)
s.Italic=true
s.y=5
s.x=0

r=new RectShape

r.X=0
r.y=0
r.Height=100
r.Width=180
r.BorderColor=rgb(255,0,0)
r.FillColor=rgb(0,255,0)
r.BorderWidth=5
r.Border=50

v=new Group2d
v.Append r
v.Append s
v.Rotation=pi*-20.0/180.0
v.x=150
v.y=150

g.DrawObject v

```

18.0.9 Picture functions do not preserve resolution values?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Yes, the picture functions return pictures with no/default resolution values.

Example:

```
dim l as Picture = LogoMBS(500)
```

```
l.HorizontalResolution = 300
```

```
l.VerticalResolution = 300
```

```
dim r as Picture = l.Rotate90MBS
```

```
MsgBox str(r.HorizontalResolution)+" x "+str(r.VerticalResolution)
```

```
r.HorizontalResolution = l.HorizontalResolution
```

```
r.VerticalResolution = l.VerticalResolution
```

```
MsgBox str(r.HorizontalResolution)+" x "+str(r.VerticalResolution)
```

Notes:

So please fix them yourself after calling a function.

Maybe in the future this changes, but currently you can't really set this easily from plugin code.

18.0.10 A toolbox call needs a rect - how do I give it one?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** Fill a memoryblock like this:

Example:

```
Dim MB As Memoryblock
```

```
MB = NewMemoryBlock(8)
```

```
MB.Short(0) = window1.Top
```

```
MB.Short(2) = window1.Left
```

```
MB.Short(4) = window1.Height+window1.Top // bottom
```

```
MB.Short(6) = window1.Width+window1.Left // right
```

18.0.11 API client not supported?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** If you get this exception message on `SQLConnectionMBS.Connect`, we may have a problem.

Notes:

First case is that the given thing is not supported (e.g. MS SQL directly on Mac).

Second case is that the plugin compilation went wrong and the support for the database was not linked into the plugin. Like MySQL missing or MS SQL on Windows missing. In that case please contact us to fix the plugin.

18.0.12 Can I access Access Database with Java classes?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** You can use ucanaccess to access databases created with Microsoft

Example:

```

dim options(-1) as string

// load all the jar files we have in a folder called java:

dim appFolder as FolderItem = GetFolderItem("")

Dim count as Integer = appFolder.Parent.Child("java").Count
dim libjs() as string
For i as Integer = 1 to count
Dim f As FolderItem = appFolder.Parent.Child("java").item(i)
If f <> Nil and f.Exists Then
libjs.append f.NativePath+";"
End If
Next

// now init virtual machine
dim librery as string = Join(libjs, "")
dim vm as new JavaVMMBS(librery

if vm.Handle = 0 then
MsgBox "Failed to initialize virtual machine"
else
// now make a new database connection with ucanaccess
dim d as new JavaDatabaseMBS(vm,"net.ucanaccess.jdbc.UcanaccessDriver")
Dim DbFile as FolderItem = appFolder.Parent.Child("Database11.accdb")
dim j as JavaConnectionMBS = d.getConnection("jdbc:ucanaccess://" + DbFile.NativePath)

// select and show values
dim r as JavaResultSetMBS = j.MySelectSQL("Select * From test")
while r.NextRecord
MsgBox r.getString("FirstName") + " " + r.getString("LastName")
wend

end if

Exception e as JavaExceptionMBS

```

```
MsgBox e.message+" errorCode: "+str(e.ErrorNumber)
```

Notes:

see website:

<http://ucanaccess.sourceforge.net/site.html>

18.0.13 Can I create PDF from Real Studio Report using DynaPDF?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Sorry, no. We can't provide a graphics subclass from plugin.

Notes:

This is a feature request to allow graphics subclasses:

Feedback case 11391: feedback://showreport?report_id=11391

18.0.14 Can I use AppleScripts in a web application?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Yes, but they run on the server, not on the client.

Example:

```
dim a as new AppleScriptMBS
```

```
// query my application name
```

```
a.Compile "tell application ""System Events"" to return name of current application"
```

```
// run
```

```
a.Execute
```

```
// show result
```

```
label1.text = a.Result
```

```
// shows something like "My Application.fcgi.debug"
```

Notes: This can be useful to control the server from remote, if and only if the your sever is running Mac OS X.

18.0.15 Can I use graphics class with DynaPDF?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Sorry, no. We can't provide a graphics subclass from plugin.

Notes:

The is a feature request to allow graphics subclasses:
Feedback case 11391: [feedback://showreport?report_id=11391](https://feedback.adobe.com/showreport?report_id=11391)

18.0.16 Can I use OGG with REALbasic?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** There is a QuickTime plugin for OGG which works with REALbasic.

Notes: That should be a solution for playback and recording on Mac and Windows.

18.0.17 Can I use sockets on a web application?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Yes, but they run on the server, not on the client.

Notes:

You can use HTTPSocket, SMTPSocket, POP3Socket, SMTPSecureSocket, SecurePOP3Socket, EasyTCP-Socket, EasyUDPSocket, AutoDiscovery, our Bonjour classes or our CURL* classes. But all of them work on the server, not on the client.

This means if you search for a printer with Bonjour, you can find the printers in the local network on your server hosting site. Using SMTPSocket may be a good idea for sending emails from the server like notifications.

18.0.18 Can I use your ChartDirector plugin on a web application?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Yes, our ChartDirector plugin works just fine on the Real Studio Web Edition.

Example:

```
// The data for the pie chart
dim data(-1) as Double=array(55.0, 18.0, 25.0, 22.0, 18.0, 30.0, 35.0)

// The labels for the pie chart, Words are choosen random to check font!
dim labels(-1) as string=array("Germany", "Italy", "France", "Spain", "UK", "Poland", "Russia")

// The colors to use for the sectors
```

```

dim colors(-1) as Integer

colors.Append & h66aaee
colors.Append & heebb22
colors.Append & hbbbbbb
colors.Append & h8844ff

if TargetLinux then
CDBaseChartMBS.SetFontSearchPath "/usr/share/fonts/truetype/msttcorefonts"
end if

// Create a PieChart object of size 360 x 300 pixels
dim c as new CDPieChartMBS(700, 600)

c.setBackground(c.linearGradientColor(0, 0, 0, c.getHeight(), & h0000cc, & h000044))
c.setRoundedFrame(& hffffff, 16)
dim tt as CDTextBoxMBS = c.addTitle("ChartDirector Demonstration", "timesbi.ttf", 18)
tt.setMargin(0, 0, 16, 0)
tt.setFontColor(& hFFFFFFF)

// Set the center of the pie at (180, 140) and the radius to 100 pixels
c.setPieSize 350,300,150
// Set the sector colors
c.setColors(c.kDataColor, colors)

// Draw the pie in 3D with a pie thickness of 20 pixels
c.set3D(20)

dim t as CDTextBoxMBS = c.setLabelStyle("arialbd.ttf", 10, & h000000)
t.setBackground(CDPieChartMBS.kSameAsMainColor, CDPieChartMBS.kTransparent, CDPieChartMBS.soft-
Lighting(CDPieChartMBS.kRight, 0))
t.setRoundedCorners(8)

// Use local gradient shading for the sectors, with 5 pixels wide
// semi-transparent white (bbffffff) borders
c.setSectorStyle(CDPieChartMBS.kLocalGradientShading, & hbbffffff, 0)

// Set the pie data and the pie labels
c.setData data,labels
call c.setLabelStyle "arialbd.ttf",18

dim pic as picture = c.makeChartPicture
dim wp as new WebPicture(pic, Picture.FormatJPEG) // JPEG makes it smaller and faster

ImageView1.Picture=wp

```


Notes:

Be aware that our plugin produces pictures for you, which you assign to ImageViews. Transferring those pictures takes time, so you can optimize that with using WebPicture class. There you can decide between different compressions to improve speed (use JPEG instead of PNG).

e.g. if you use ubuntu, you can install the ttf-mscorefonts-installer package and call this method with `"/usr/share/fonts/truetype/msttcorefonts"` as the path. No backslash on the end of a path, please.

18.0.19 Can I use your DynaPDF plugin on a web application?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Yes, our DynaPDF plugin works just fine on the Real Studio Web Edition.

Notes:

PDF files are created on the server. You may want to offer a preview to the user which uses reduced resolution images to reduce the time to download the PDF.

See our Create PDF example for the Real Studio Web Edition.
<http://www.monkeybreadsoftware.de/realbasic/webapps.shtml>

18.0.20 Can I use your plugin controls on a web application?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** No.

18.0.21 Can you get an unique machine ID?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** There is nothing like an unique machine ID.

Notes:

1:

You can use the MAC IDs of the network interfaces.

This can be changed by the user with software tools.

And the list of network interfaces changes if user reorder the interfaces.

2:

You can use the system folder creation date/time.

This may stay equal after cloning machines or after migration to new PC.

3:

You can use the Mac Serialnumber.
Mac only and it can happen that a Mac does not have a serial number.

4:

You can use the x86 CPU ID.
This is x86 CPU only and does not avoid running on the same CPU in different PCs.

18.0.22 ChartDirector: Alignment Specification

Plugin Version: 8.2, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** ChartDirector: Alignment Specification

Notes:

In many ChartDirector objects, you may specify the alignment of the object's content relative to its boundary. For example, for a TextBox object, you may specify the text's alignment relative to the box boundary by using `TextBox.setAlignment`.

The ChartDirector API defines several constants for the alignment options.

ConstantValueDescription

18.0.23 ChartDirector: Color Specification

Plugin Version: 8.2, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** ChartDirector: Color Specification

Notes:

Many functions in the ChartDirector API accept colors as parameters. ChartDirector supports colors specified in web and HTML compatible ARGB format, in which ARGB refers to the Alpha transparency, Red, Green and Blue components of the color.

In addition to ARGB colors, ChartDirector supports "dynamic" colors. A dynamic color is a color that changes depending on the position of the pixels. The "dynamic" colors that ChartDirector supports include "pattern colors", "metal colors", "gradient colors", "zone colors" and "dash line colors".

ChartDirector supports specifying colors indirectly using "palette colors". When a "palette color" is used, the color is specified as an index to a palette. The actual color is looked up from the palette. ARGB Color ARGB color consists of 4 components - alpha transparency, red, green and blue. The four components are encoded as a 32-bit number, with each component occupying 8 bits. In hexadecimal notation, it is AAR-

BottomLeft	1	The leftmost point on the bottom line.
BottomCenter	2	The center point on the bottom line.
BottomRight	3	The rightmost point on the bottom line.
Left	4	The leftmost point on the middle horizontal line.
Center	5	The center point on the middle horizontal line.
Right	6	The rightmost point on the middle horizontal line.
TopLeft	7	The leftmost point on the top line.
TopCenter	8	The center point on the top line.
TopRight	9	The rightmost point on the top line.
Bottom	2	The center point on the bottom line. Same as BottomCenter.
Top	8	The center point on the top line. Same as TopCenter.
TopLeft2	10	An alternative top-left position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, TopLeft2 refers to refers to the left of the top side, while TopLeft refers to the top of the left side. The reverse applies for a horizontal axis.
TopRight2	11	An alternative top-right position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, TopRight2 refers to refers to the right of the top side, while TopRight refers to the top of the right side. The reverse applies for a horizontal axis.
BottomLeft2	12	An alternative bottom-left position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, BottomLeft2 refers to refers to the left of the bottom side, while BottomLeft refers to the bottom of the left side. The reverse applies for a horizontal axis.
BottomRight2	13	An alternative bottom-right position used in Axis.setTitlePos for axis title positioning only. For a vertical axis, BottomRight2 refers to refers to the right of the bottom side, while BottomRight refers to the bottom of the right side. The reverse applies for a horizontal axis.

RRGGBB, where AA, RR, GG and BB are the alpha transparency, red, green and blue components.

Each component ranges from 00 - FF (0 - 255), representing its intensity. For example, pure red color is 00FF0000, pure green color is 0000FF00, and pure blue color is 000000FF. White color is 00FFFFFF, and black color is 00000000.

Most programming language requires you to put special prefix in front of hexadecimal characters. For C++, the prefix is "0x". For example, the syntax for the hexadecimal number 00FFFFFF is 0x00FFFFFF, or simply 0xFFFFFF.

For the alpha transparency component, a zero value means the color is not transparent at all. This is equivalent to traditional RGB colors. A non-zero alpha transparency means the the color is partially transparent. The larger the alpha transparency, the more transparent the color will be. If a partially transparent color is used to draw something, the underlying background can still be seen.

For example, 80FF0000 is a partially transparent red color, while 00FF0000 is a non-transparent red color.

Note that `ChartDirector`'s ARGB color is web and HTML compatible. For example, red is `FF0000`, the same as in HTML. There are many resources on the web that provide tables in which you can click a color and it will show its HTML color code. These color codes can be used in `ChartDirector`.

If alpha transparency is `FF` (255), the color is totally transparent. That means the color is invisible. It does not matter what the RGB components are. So in `ChartDirector`, only one totally transparent color is used - `FF000000`. All other colors of the form `FFnnnnnn` are reserved to represent palette colors and dynamic colors, and should not be interpreted as the normal ARGB colors.

The totally transparent color `FF000000` is often used in `ChartDirector` to disable drawing something. For example, if you want to disable drawing the border of a rectangle, you can set the border color to totally transparent.

For convenience, `ChartDirector` defines a constant called `Transparent`, which is equivalent to `FF000000.Pattern Color`

A pattern color is a dynamic color that changes according to a 2D periodic pattern. When it is used to fill an area, the area will look like being tiled with a wallpaper pattern.

Pattern colors are created using `BaseChart.patternColor`, `BaseChart.patternColor2`, `DrawArea.patternColor` and `DrawArea.patternColor2`. The `patternColor` method creates pattern colors using an array of colors as a bitmap. The `patternColor2` method creates pattern colors by loading the patterns from image files.

These methods return a 32-bit integer acting as a handle to the pattern color. The handle can be used in any `ChartDirector` API that expects a color as its input.`Metal Color`

A metal color is a color of which the brightness varies smoothly across the chart surface as to make the surface look shiny and metallic. `ChartDirector` supports using any color as the base color of the metal color. In particular, using yellow and grey as the base colors will result in metal colors that look gold and silver.

Metal colors are most often used as background colors of charts. They are created using `CDBaseChartMBS.metalColor`, `CDBaseChartMBS.goldColor` and `CDBaseChartMBS.silverColor`. The first method allows you to specify an arbitrary base color. The second and third methods use yellow and grey as the base colors, resulting in gold and silver metal colors.

These methods return a 32-bit integer acting as a handle to the gradient color. The handle can be used in any `ChartDirector` API that expects a color as its input.`Gradient Color`

A gradient color is a color that changes progressively across a direction.

Gradient colors are created using `BaseChart.gradientColor`, `BaseChart.gradientColor2`, `DrawArea.gradientColor` and `DrawArea.gradientColor2`. The `gradientColor` method creates a 2-point gradient color that changes from color A to color B. The `gradientColor2` method creates a multi-point gradient colors that changes from color A to B to C

These methods return a 32-bit integer acting as a handle to the gradient color. The handle can be used in any `ChartDirector` API that expects a color as its input.

One common use of multi-point gradient colors is to define colors that have metallic look and feel. Please refer to `DrawArea.gradientColor2` for details.

Dash Line Colors
A dash line color is a color that switches on and off periodically. When used to draw a line, the line will appear as a dash line.

Dash line colors are created using `BaseChart.dashLineColor` and `DrawArea.dashLineColor`. They accept a line color and a dash pattern code as arguments, and return a 32-bit integer acting as a handle to the dash line color. The handle can be used in any `ChartDirector` API that expects a color as its input.

Zone Colors
A zone color is for XY charts only. It is a color that automatically changes upon reaching a data threshold value along the x-axis or y-axis. Zone colors are created using `Layer.xZoneColor`, `Layer.yZoneColor`, `XYChart.xZoneColor` or `XYChart.yZoneColor`.

Palette Colors
Palette colors are colors of the format `FFFFnnnn`, where the least significant 16 bits (`nnnn`) are the index to the palette. A palette is simply an array of colors. For a palette color, the actual color is obtained by looking up the palette using the index. For example, the color `FFFF0001` is the second color in the palette (first color is index 0).

The colors in the palette can be ARGB colors or "dynamic" colors (pattern, gradient and dash line colors).

The first eight palette colors have special significance. The first three palette colors are the background color, default line color, and default text color of the chart. The 4th to 7th palette colors are reserved for future use. The 8th color is a special dynamic color that is equal to the data color of the "current data set".

The 9th color (index = 8) onwards are used for automatic data colors. For example, in a pie chart, if the sector colors are not specified, `ChartDirector` will automatically use the 9th color for the first sector, the 10th color for the second sector, and so on. Similarly, for a multi-line chart, if the line colors are not specified, `ChartDirector` will use the 9th color for the first line, the 10th color for the second line, and so on.

The `ChartDirector` API defines several constants to facilitate using palette colors.

ConstantValueDescription

When a chart is created, it has a default palette. You may modify the palette using `BaseChart.setColor`, `BaseChart.setColors`, or `BaseChart.setColors2`.

The advantages of using palette colors are that you can change the color schemes of the chart in one place. `ChartDirector` comes with several built-in palettes represented by the following predefined constants.

Palette	FFFF0000	The starting point of the palette. The first palette color is (Palette + 0). The nth palette color is (Palette + n - 1).
BackgroundColor	FFFF0000	The background color.
LineColor	FFFF0001	The default line color.
TextColor	FFFF0002	The default text color.
[Reserved]	FFFF0003 - FFFF0006	These palette positions are reserved. Future versions of ChartDirector may use these palette positions for colors that have special significance.
SameAsMainColor	FFFF0007	A dynamic color that is equal to the data color of the current data set. This color is useful for objects that are associated with data sets. For example, in a pie chart, if the sector label background color is SameAsMainColor, its color will be the same as the corresponding sector color.
DataColor	FFFF0008	The starting point for the automatic data color allocation.

ConstantDescription

defaultPalette	An array of colors representing the default palette. This palette is designed for drawing charts on white backgrounds (or lightly colored backgrounds).
whiteOnBlackPalette	An array of colors useful for drawing charts on black backgrounds (or darkly colored backgrounds).
transparentPalette	An array of colors useful drawing charts on white backgrounds (or lightly colored backgrounds). The data colors in this palette are all semi-transparent.

18.0.24 ChartDirector: Font Specification

Plugin Version: 8.2, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** ChartDirector: Font Specification

Notes:

Font Name

In ChartDirector, the font name is simply the file name that contains the font. For example, under the Windows platform, the "Arial" font is "arial.ttf", while the "Arial Bold" font is "arialbd.ttf".

NOTE: Mac OS X Specific Information

In Mac OS X, in addition to ".ttf", ChartDirector also supports Mac OS X font file formats, such as Font Suitcase files and Datafork files (.dfont). These files often contain multiple fonts. For example, the "GillSans.dfont" file contains 6 fonts.

So in addition to the file name, an index is needed to determine the font. The index is specified by appending a "|" character to the font name, followed by the index number. For example, the third font in "GillSans.dfont" is denoted as "GillSans.dfont | 2". (Note: The first font starts at 0.) If no index number is provided, the first font is assumed.

ChartDirector also supports using Mac OS X Font Manager names. For example, one may use "Gill Sans Light Italic" instead of using "GillSans.dfont | 1" as the font name. However, the Mac OS X Font Manager

is active only if someone has logged into the Mac GUI console, so this method is only recommended for developing applications that run on the GUI console.

The sample programs that come with ChartDirector are designed to run on all operating systems, so they use generic font file names (eg. "arial.ttf") instead of Mac OS X specific names. To allow them to run on Mac OS X, ChartDirector on Mac OS X has a built-in table to map common font file names to Mac OS X font names:

"arial.ttf", "arialbd.ttf", "ariali.ttf" and "arialbi.ttf" are mapped to "Arial | 0" (Arial), "Arial | 1" (Arial Bold), "Arial | 2" (Arial Italic) and "Arial | 3" (Arial Bold Italic)

"times.ttf", "timesbd.ttf", "timesi.ttf" and "timesbi.ttf" are mapped to "Times New Roman | 0" (Times New Roman), "Times New Roman | 1" (Times New Roman Bold), "Times New Roman | 2" (Times New Roman Italic) and "Times New Roman | 3" (Times New Roman Bold Italic)

"cour.ttf", "courbd.ttf", "couri.ttf" and "courbi.ttf" are mapped to "Courier New | 0" (Courier New), "Courier New | 1" (Courier New Bold), "Courier New | 2" (Courier New Italic) and "Courier New | 3" (Courier New Bold Italic)

Font Location

ChartDirector on Windows does not come with any font files. It relies on the operating system's font files in the "[windows] \Fonts" directory. To see what fonts are installed in your operating system and their file names, use the File Explorer to view that directory.

ChartDirector on Windows will also search for the font files in the "fonts" subdirectory (if it exists) under the directory where the ChartDirector DLL "chartdir.dll" is installed. This is useful for private fonts. Also, for some especially secure web servers, the web anonymous user may not have access to the "[windows] \Fonts" directory. In this case, you may copy the font files to the above subdirectory.

ChartDirector on Mac OS X relies on operating system font files in "/Library/Fonts" and "/System/Library/Fonts".

ChartDirector on Linux, FreeBSD and Solaris assume the fonts files are in the "fonts" subdirectory under the directory where the ChartDirector shared object "libchartdir.so" is installed. ChartDirector on Linux, FreeBSD and Solaris come with a number of font files in the "fonts" subdirectory.

To keep the download size small, ChartDirector on Linux, FreeBSD and Solaris only come with some commonly used fonts. You may download additional fonts from the Internet. In particular, the Microsoft fonts at

http://sourceforge.net/project/showfiles.php?group_id=34153&release_id=105355

is highly recommended. Please refer to

<http://www.microsoft.com/typography/faq/faq8.htm>

on how you could use the fonts legally in your system.

ChartDirector supports True Type fonts (.ttf), Type 1 fonts (.pfa and .pfb) and Windows bitmap fonts (.fon). On Mac OS X, ChartDirector also supports Font Suitcase and Datafork (.dfont) files. On Linux, FreeBSD and Solaris, ChartDirector also supports Portable Compiled Fonts (.pcf fonts).

If you want ChartDirector to search other directories for the font files, you may list the directories in an environment variable called "FONTPATH".

If you specify an absolute path name for the font file, ChartDirector will use the absolute path name and will not search other directories.

Artificial Boldening and Italicizing
Whereas most popular font comes with different styles for "normal", "bold", "italic" and "bold italic", some fonts only come with one style (the normal style). For example, the Monotype Corsiva font that comes with MS Office only has the normal style (mtcorsva.ttf). For these cases, you may append the "Bold" and/or "Italic" words after the font file name (separated with a space) to ask ChartDirector to artificially bolden and/or italicize the font. For example, you may specify the font name as "mtcorsva.ttf Bold".

Font List
Instead of specifying a single font file as the font name, you may specify a list of font files as the font name, separated by semi-colons. This is useful when using international characters that are only available in some fonts.

For example, if you would like to use the Arial font ("arial.ttf") for western characters, and the MingLiu font "mingliu.ttc" for Chinese characters (since the Arial font does not have Chinese characters), you may specify the font name as "arial.ttf;mingliu.ttc". In this case, ChartDirector will try the Arial font first. If it cannot find a certain character there, it will try the MingLiu font.

Indirect Font Names
ChartDirector supports several special keywords for specifying the font name indirectly. When these keywords are used as font names, ChartDirector will look up the actual font names from a font table. The keywords are as follows:

KeywordsDescription

"normal"	This default normal font, which is the first font in the font table. This is initially mapped to "arial.ttf" (Arial).
"bold"	The default bold font, which is the second font in the font table. This is initially mapped to "arialbd.ttf" (Arial Bold).
"italic"	The default italic font, which is the third font in the font table. This is initially mapped to "ariali.ttf" (Arial Italic).
"boldItalic"	The default bold-italic font, which is the fourth font in the font table. This is initially mapped to "arialbi.ttf" (Arial Bold Italic).
"fontN"	The (N + 1)th font in the font table (the first font is "font0").

The font table can be modified using BaseChart.setFontTable or DrawArea.setFontTable.

The advantage of using indirect font names is that you can change the fonts in your charts in one place.

Font Index

Most font files contain one font. However, it is possible a font file contains multiple fonts (that is, a font collection). For example, in True Type fonts, font files with extension ".ttc" may represent a font collection.

If a font file contains multiple font, the font index can be used to specify which font to use. By default, the font index is 0, which means the first font in the font file will be used.

Font Size

The font size decides how big a font will appear in the image. The font size is expressed in a font unit called points. This is the same unit used in common word processors.

Instead of specifying font size, some ChartDirector API (eg. `TextBox.setFontSize`) allow you to specify font height and font width separately. You may use different point sizes for font height and font width to create special effects.

Font Color

This is the color to draw the font. (See Color Specification on how colors are represented in ChartDirector.)

Font Angle

This is the angle in degrees by which the font should be rotated anti-clockwise.

Vertical Layout

By default, text are laid out horizontally, with characters being drawn from left to right.

ChartDirector also supports vertical layout, with characters being drawn from top to bottom. For example, you may use `BaseChart.addText` to add text that are laid out vertically. Vertical layout is common for oriental languages such as Chinese, Japanese and Korean.

18.0.25 ChartDirector: Mark Up Language

Plugin Version: 8.2, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** ChartDirector: Mark Up Language

Notes:

ChartDirector Mark Up Language (CDML) is a language for including formatting information in text strings by marking up the text with tags.

CDML allows a single text string to be rendered using multiple fonts, with different colors, and even embed images in the text.

Font Styles

You can change the style of the text by using CDML tags. For example, the line:

```
<*font=timesi.ttf,size=16,color=FF0000>Hello <*font=arial.ttf,size=12,color=8000*>world!
```

will result in the following text rendered:

In general, all tags in CDML are enclosed by `<*` and `*>`. Attributes within the tags determine the styles of the text following the tags within the same block.

If you want to include `<*` in text without being interpreted as CDML tags, use `<<*` as the escape sequence.

The following table describes the supported font style attributes in CDML. See Font Specification for details on various font attributes.

AttributeDescription

font	Starts a new style section, and sets the font name. You may use this attribute without a value (that is, use "font" instead of "font=arial.ttf") to create a new style section without modifying the font name.
size	The font size.
width	The font width. This attribute is used to set the font width and height to different values. If the width and height are the same, use the size attribute.
height	The font height. This attribute is used to set the font width and height to different values. If the width and height are the same, use the size attribute.
color	The text color in hex format.
bgColor	The background color of the text in hex format.
underline	The line width of the line used to underline the following characters. Set to 0 to disable underline.
sub	Set the following text to be in subscript style. This attribute does not need to have a value. (You may use "sub" as the attribute instead of "sub=1".)
super	Set the following text to be in superscript style.

Set the following text to be in superscript style. This attribute does not need to have a value. (You may use "super" as the attribute instead of "super=1".)

xoffset	Draw the following the text by shifting the text horizontally from the original position by the specified offset in pixels.
yoffset	Draw the following the text by shifting the text vertically from the original position by the specified offset in pixels.
advance	Move the cursor forward (to the right) by the number of pixels as specified by the value this attribute.
advanceTo	Move the cursor forward (to the right) to the position as specified by the value this attribute. The position is specified as the number of pixels to the right of the left border of the block. If the cursor has already passed through the specified position, the cursor is not moved.

Note that unlike HTML tags, no double or single quotes are used in the tags. It is because CDML tags are often embedded as string literals in source code. The double or single quotes, if used, will conflict with the string literal quotes in the source code. Therefore in CDML, no quotes are necessary and they must not be

used.

Also, unlike HTML tags, CDML uses the comma character as the delimiter between attributes. It is because certain attributes may contain embed spaces (such as the font file name). So space is not used as the delimiter and the comma character is used instead.

Note the font attribute above starts a new style section, while other attributes just modify the current style section. You may use `<*/font*>` to terminate a style section, which will restore the font styles to the state before the style section.

Blocks and Lines
In CDML, a text string may contain multiple blocks. A block may contain multiple lines of text by separating them with new line characters (`"\n"`) or with `<*br*>`. The latter is useful for programming languages that cannot represent new line characters easily.

For example, the line:

```
<*size=15*><*block*><*color=FF*>BLOCK<*br*>ONE<*/*>and <*block*><*color=FF00*>BLOCK<*br*>TWO
```

will result in the following text rendered:

The above example contains a line of text. The line contains two blocks with the characters " and " in between. Each block in turn contains two lines. The blocks are defined using `<*block*>` as the start tag and `<*/*>` as the end tag.

When a block ends, font styles will be restored to the state before entering the block.

Embedding Images
CDML supports embedding images in text using the following syntax:

```
<*img=my_image_file.png*>
```

where `my_image_file.png` is the path name of the image file.

For example, the line:

```
<*size=20*>A <*img=sun.png*>day
```

will result in the following text rendered:

ChartDirector will automatically detect the image file format using the file extension, which must either `png`, `jpg`, `jpeg`, `gif`, `wbmp` or `wmp` (case insensitive).

Please refer to `BaseChart.setSearchPath` or `DrawArea.setSearchPath` on the directory that ChartDirector will search for the file.

The `<*img*>` tag may optionally contain width and height attributes to specify its pixel width and height. In this case, ChartDirector will stretch or compress the image if necessary to the required width and

height.Blocks Attributes

CDML supports nesting blocks, that is, a block can contain other sub-blocks. Attributes are supported in the `<*block*>tag` to control the alignment and orientation of the sub-blocks. The `<*img=my_image_file.png*>` is treated as a block for layout purposes.

For example, the line:

```
<*block,valign=absmiddle*><*img=molecule.png*><*block*>Hydrazino\nMolecule<*/*><*/*>
```

will result in the following text rendered:

The the above starts `<*block,valign=absmiddle*>` which specifies its content should align with each others in the vertical direction using the absolute middle alignment. The block contains an image, followed by a space characters, and then another block which has two lines of text.

The following table describes the supported attributes inside `<*block*>tag`:

AttributeDescription

width	The width of the block in pixels. By default, the width is automatically determined to be the width necessary for the contents of the block. If the width attribute is specified, it will be used as the width of the block. If the width is insufficient for the contents, the contents will be wrapped into multiple lines.
height	The height of the block in pixels. By default, the height is automatically determined to be the height necessary for the contents of the block. If the height attribute is specified, it will be used as the height of the block.
maxwidth	The maximum width of the block in pixels. If the content is wider than maximum width, it will be wrapped into multiple lines.
truncate	The maximum number of lines of the block. If the content requires more than the maximum number of lines, it will be truncated. In particular, if truncate is 1, the content will be truncated if it exceeds the maximum width (as specified by maxwidth or width) without wrapping. The last few characters at the truncation point will be replaced with "...".
linespacing	The spacing between lines as a ratio to the default line spacing. For example, a line spacing of 2 means the line spacing is two times the default line spacing. The default line spacing is the line spacing as specified in the font used.
bgColor	The background color of the block in hex format.
valign	The vertical alignment of sub-blocks. This is for blocks that contain sub-blocks. Supported values are baseline, top, bottom, middle and absmiddle.

The value baseline means the baseline of sub-blocks should align with the baseline of the block. The baseline

is the underline position of text. This is normal method of aligning text, and is the default in CDML. For images or blocks that are rotated, the baseline is the same as the bottom.

The value top means the top line of sub-blocks should align with the top line of the block.

The value bottom means the bottom line of sub-blocks should align with the bottom line of the block.

The value middle means the middle line of sub-blocks should align with the the middle line of the block. The middle line is the middle position between the top line and the baseline.

The value absmiddle means the absolute middle line of sub-blocks should align with the absolute middle line of the block. The absolute middle line is the middle position between the top line and the bottom line.

halign The horizontal alignment of lines. This is for blocks that contain multiple lines. Supported values are left, center and right.

The value left means the left border of each line should align with the left border of the block. This is the default.

The value center means the horizontal center of each line should align with the horizontal center of the block.

The value right means the right border of each line should align with the right border of the block.

angle Rotate the content of the block by an angle. The angle is specified in degrees in counter-clockwise direction.

18.0.26 ChartDirector: Parameter Substitution and Formatting

Plugin Version: 8.2, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** ChartDirector: Parameter Substitution and Formatting

Notes:

ChartDirector charts often contain a lot of text strings. For example, sector labels in pie charts, axis labels for x and y axes, data labels for the data points, HTML image maps, etc, are all text strings.

ChartDirector uses parameter substitution to allow you to configure precisely the information contained in the text and their format.

Format Strings

In parameter substitution, format strings are used to specify the entities to be include into labels and how to format numbers and dates.

For example, when drawing a pie chart with side label layout, the default sector label format string is:

```
" { label } ( { percent } % )"
```

When the sector label is actually drawn, ChartDirector will replace " { label } " with the sector name, and " { percent } " with the sector percentage. So the above label format will result is a sector label similar to "ABC (34.56%)".

You may change the sector label format by changing the format string. For example, you may change it to:

```
" { label } : US$ { value | 2 } K ( { percent } % )"
```

The sector label will then become something like "ABC: US\$ 123.00 (34.56%)".

In general, in ChartDirector parameter substitution, parameters enclosed by curly brackets will be substituted with their actual values when creating the texts.

For parameters that are numbers or dates/times, ChartDirector supports a special syntax in parameter substitution to allow formatting for these values. Please refer to the Number Formatting and Date/Time Formatting sections below for details.

Parameter Expressions

ChartDirector supports numeric expressions in format strings. They are denoted by enclosing the expression with curly brackets and using "=" as the first character. For example:

```
"USD { value } (Euro { = { value } *0.9 } )"
```

In the above, " { value } " will be substituted with the actual value of the sector. The expression " { = { value } *0.9 } " will be substituted with the actual value of the sector multiplied by 0.9.

ChartDirector parameter expressions support operators "+", "-", "*", "/", "% " (modulo) and "^" (exponentiation). Operators "*", "/", "% ", "^" is computed first, followed by "+" and "-". Operators of the same precedence are computed from left to right). Parenthesis "(" and ")" can be used to change the computation order.

Parameters for Pie Charts

The following table describes the parameters available for pie charts.

Parameters for All XY Chart Layers

The followings are parameters that are apply to all XY Chart layers in general. Some layer types may have

Parameter	Description
sector	The sector number. The first sector is 0, while the nth sector is (n-1).
dataSet	Same as { sector } . See above.
label	The text label of the sector.
dataSetName	Same as { label } . See above.
value	The data value of the sector.
percent	The percentage value of the sector.
fieldN	The (N + 1)th extra field. For example, { field0 } means the first extra field. An extra field is an array of custom elements added using <code>BaseChart.addExtraField</code> or <code>BaseChart.addExtraField2</code> .

additional parameters (see below).

Note that certain parameters are inapplicable in some context. For example, when specifying the aggregate label of a stacked bar chart, the { dataSetName } parameter is inapplicable. It is because a stacked bar is composed of multiple data sets. It does not belong to any particular data set and hence does not have a data set name.

{ fieldN } means the extra field is indexed by the data point number. The Pth data point corresponds to the Pth element of the extra field.

Additional Parameters for Line Layers

The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for Trend Layers

The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for Box-Whisker Layers

The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for HLOC and CandleStick Layers

The followings are parameters that are in additional to the parameters for all XY Chart layers.

Additional Parameters for Vector Layers

The followings are parameters that are in additional to the parameters for all XY Chart layers.

Parameters for All Polar Layers

The followings are parameters that are apply to all Polar Chart layers in general. Some layer types may have additional parameters (see below).

{ fieldN } means the extra field is indexed by the data point number. The Pth data point corresponds to the Pth element of the extra field.

Additional Parameters for PolarVector Layers

The followings are parameters that are in additional to the parameters for all Polar Chart layers.

Parameters for Axis

The following table describes the parameters available for pie charts.

Number Formatting

For parameters that are numbers, ChartDirector supports a number of formatting options in parameter substitution.

For example, if you want a numeric field { value } to have a precision of two digits to the right of the decimal point, use ',' (comma) as the thousand separator, and use '.' (dot) as the decimal point, and you may use { value | 2,. } . The number 123456.789 will then be displayed as 123,456.79.

For numbers, the formatting options are specified using the following syntax:

```
{ [ param ] | [ a ] [ b ] [ c ] [ d ] }
```

where:

If this field starts with "E" or "e", followed by a number, it means formatting the value using scientific notation with the specified number of decimal places. If the "E" or "e" is not followed by a number, 3 is assumed.

For example, { value | E4 } will format the value 10.3 to 1.0300E+1, and { value | e4 } will format the same value to 1.0300e+1.

If this field starts with "G" or "g", followed by a number, it means formatting the value using the scientific notation only if the value is large and requires more than the specified number of digits, or the value is less than 0.001. If scientific notation is used, the number following "G" or "g" also specifies the number of significant digits to use. If the "G" or "g" is not followed by a number, 4 is assumed.

For example, consider the format string { value | G4 } . The value 10 will be formatted to 10. The value 100000 will be formatted to 1.000E+5. Similarly, for { value | g4 } , the value 10 will be formatted to 10, while the value 100000 will be formatted to 1.000e+5.

If you skip this argument, ChartDirector will display the exact value using at most 6 decimal places.

You may skip [b] [c] [d] . In this case, the default will be used.

Date/Time Formatting

For parameters that are dates/times, the formatting options can be specified using the following syntax:

```
{ [ param ] | [ datetime_format_string ] }
```

where [datetime_format_string] must start with an english character (A-Z or a-z) that is not "G", "g", "E" or "e", and may contain any characters except ' ' . (If it starts with "G", "g", "E" or "e", it will be considered as a number format string.)

Certain characters are substituted according to the following table. Characters that are not substituted will be copied to the output.

For example, a parameter substitution format of { value | mm-dd-yyyy } will display a date as something similar to 09-15-2002. A format of { value | dd/mm/yy hh:nn:ss a } will display a date as something similar to 15/09/02 03:04:05 pm.

If you want to include characters in the format string without substitution, you may enclose the characters in single or double quotes.

For example, the format { value | mmm '<*color=dd0000*>'yyyy } will display a date as something like Jan <*color=dd0000*>2005 (the <*color=dd0000*> is a CDML tag to specify red text color). Note that the <*color=dd0000*> tag is copied directly without substitution, even it contains "dd" which normally will be substituted with the day of month.

Escaping URL/HTML/CDML characters

Parameter substitution is often used to create HTML image maps. In HTML, some characters has special meanings and cannot be used reliably. For example, the '>' is used to represent the end of an HTML tag.

Furthermore, if the field happens to be used as an URL, characters such as '?', '&' and '+' also have special meanings.

By default, ChartDirector will escape template fields used in URL and query parameters when generating image maps. It will modify URL special characters to the URL escape format "% XX" (eg. "?" will become "% 3F"). After that, it will modify HTML special characters to the HTML escape format "& amps;# nn;" (eg. ">" will become "& amps;# 62;".). Similarly, it will escape other attributes in the image map using HTML escape format (but not URL escape format).

In addition to escaping HTML and URL special characters, ChartDirector will also remove CDML fields in creating image maps. It is because CDML is only interpreted in ChartDirector, should not be useful outside of ChartDirector (such as in browser tool tips).

In some cases, you may not want ChartDirector to escape the special characters. For example, if the parameters have already been escaped before passing to ChartDirector, you may want to disable ChartDirector from escaping them again.

ChartDirector supports the following special fields to control the escape methods - " { escape_url } ", " { noescape_url } ", " { escape_html } ", " { noescape_html } ", " { escape_cdml } " and " { noescape_cdml } ". These fields enable/disable the escape methods used in the template fields that follow them.

18.0.27 ChartDirector: Shape Specification

Plugin Version: 8.2, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** ChartDirector: Shape Specification

Notes:

Several ChartDirector API accept shape specification as arguments. For example, BarLayer.setBarShape and BarLayer.setBarShape2 can be used to specify shapes of bars in bar charts, while DataSet.setDataSymbol, DataSet.setDataSymbol4, PolarLayer.setDataSymbol and PolarLayer.setDataSymbol4 can be used to specify shapes for data symbols.

Note that in addition to shapes, in many cases ChartDirector also accepts images or custom draw objects for data representation. For example, see DataSet.setDataSymbol2, DataSet.setDataSymbol3, PolarLayer.setDataSymbol2 and PolarLayer.setDataSymbol3.

Built-In Shapes

Built-in shapes are specified as integers. The integers can be explicit constants, or can be generated by a ChartDirector method for parameterized shapes. For example, a circle is represented by an explicit constant CircleShape (=7). On the other hand, the number representing a polygon depends on the number of sides the polygon has, so it is generated by using the PolygonShape method, passing in the number of sides as argument.

The following table illustrates the various ChartDirector shapes:

Custom Shapes

In ChartDirector, custom shapes are specified as an array of integers x0, y0, x1, y1, x2, y2 ... representing the coordinates of the vertices of the custom polygonal shape.

The polygon should be defined with a bounding square of 1000 x 1000 units, in which the x-axis is from -500 to 500 going from left to right, and the y-axis is from 0 to 1000 going from bottom to top.

ChartDirector will automatically scale the polygon so that 1000 units will become to the pixel size as requested by the various ChartDirector API.

As an example, the shape of the standard diamond shape in ChartDirector is represented as an array with 8 numbers:

```
0, 0, 500, 500, 0, 1000, -500, 500
```

18.0.28 Copy styled text?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** How to quickly copy styled text from one textarea to another?

Example:

```
# if TargetWin32 then
TextArea1.WinRTFDataMBS = TextArea2.WinRTFDataMBS
# elseif TargetMacOS then
TextArea1.NSTextViewMBS.textStorage.setAttributedString TextArea2.NSTextViewMBS.textStorage
# else
TextArea1.StyledText = TextArea2.StyledText
# endif
```

Notes: The code above uses special plugin functions on Mac and Windows and falls back to framework for Linux.

18.0.29 Do you have code to validate a credit card number?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can check the checksum to tell if a credit card number is not valid.

Example:

```
Dim strNumber As String
Dim nLength as Integer
Dim nValue as Integer
Dim nChecksum as Integer
Dim nIndex as Integer

strNumber = EditField1.Text
nLength = Len(strNumber)
nChecksum = 0

For nIndex = 0 To nLength - 2
```

```

nValue = Val(Mid(strNumber, nLength - (nIndex + 1), 1)) * (2 - (nIndex Mod 2))
If nValue < 10 Then
nChecksum = nChecksum + nValue
Else
nChecksum = nChecksum + (nValue - 9)
End If
Next

If Val(Mid(strNumber, Len(strNumber), 1)) = (10 - (nChecksum Mod 10)) Mod 10 Then
MsgBox("The credit card number looks valid")
Else
MsgBox("The credit card number is invalid")
End If

```

Notes:

Here's some code that will validate the checksum for a credit card. It works for Visa, MasterCard, American Express and Discover. Not sure about others, but I imagine they use the same basic algorithm. Of course, this doesn't actually mean that the credit card is valid, it's only useful for helping the user catch typos.

The above code doesn't have any error checking and it expects that the credit card number will be entered without spaces, dashes or any other non-numeric characters. Addressing those issues will be an exercise left to the reader. :)

(From Mike Stefanik)

18.0.30 Do you have plugins for X-Rite EyeOne, eXact or i1Pro?

Plugin Version: all, Console & Web: No. **Answer:** Our EyeOne plugin is available on request for licensees of the X-Rite SDKs.

Notes:

Please first go to X-Rite and get a SDK license. Then we can talk about the plugin.

18.0.31 Does SQL Plugin handle stored procedures with multiple result sets?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Yes, the plugin can work with multiple recordsets.

Notes:

You need to use SQLCommandMBS class. When you get back results, you use FetchNext to walk over all

records in the first result set. Then you simply start again with FetchNext to get the second record set. Even the RecordSet functions should work, just use them twice to get all records from both record sets.

18.0.32 Does the plugin home home?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Yes, we like to know who is using the plugin, so the plugin may contact our server.

Example:

none.

Notes:

Please note that this does not affect your users as the plugin will only do this in the IDE and the relevant plugin part is never included in your applications.

The plugin if used for some hours, does contact our server to provide statistical data about Xojo version and OS versions. This way we know what versions are used. We can return the version number of the current plugin which may be visible in future versions somehow. And we transmit partial licenses data so we can track use of illegal license keys.

If you do not like to have this, you can block Xojo IDE from contacting our website via your Firewall. Blocking the transfer will not disable the plugin or change the features.
Or contact us for a plugin version which explicitly does not contain this feature.

18.0.33 folderitem.absolutePath is limited to 255 chars. How can I get longer ones?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Paths on a Mac are not unique, so use them only to display them to the user.

Example:

```
Function AbsolutePath(f as FolderItem) As String
Dim s as string
Dim nf as FolderItem
nf = f
s = ""
while nf<>nil
s = nf.name + ":" + s
nf = nf.parent
wend
Return s
```

[End Function](#)

18.0.34 Future of editablemovie class?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** In short, it will go away, so switch to plugin functions soon.

Notes:

The editableMovie class has been deprecated.

Deprecated means that Real Software will remove it someday, but as of today (and probably a few more years) the class will be available and running. Just not forever. The reason is that Apple deprecated the old QuickTime APIs and they are not available for 64 bit.

For 64 bit, you can move to our QTKit plugin.

We expect the old QuickTime classes in Real Studio and our plugins will continue to work in 32 bit applications. Even if editableMovie class is removed next year from Real Studio, our plugin still provides movie class extensions to do similar functions.

18.0.35 Has anyone played round with using CoreImage to do things like add dissolve transitions say when changing from one tab to another within a window?

Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** This code implements animations for a tabpanel change:

Example:

// in a tabpanel.change event:

```

dim r as CGSTransitionRequestMBS
dim co as new CGSConnectionMBS
dim cw as CGSWindowMBS
dim ct as CGSTransitionMBS
static OldTab as Integer

cw=co.CGSWindow(window1)
If cw = Nil Then
return // 10.3...
End If
r=new CGSTransitionRequestMBS
r.TransitionType=r.CGSFlip
r.HasBackGround=false
r.HasBackColor=false
r.Win=cw
// watch the value of the clicked tab versus the last tab

```

```

if tabpanel1.Value=0 or tabpanel1.Value <OldTab then
r.TransitionOption=r.CGSLeft
ct=co.NewTransition(r)
if ct<>Nil then
Refresh
ct.Invoke(1)
ct.Wait(1)
ct.Release
else
MsgBox "Error creating the transition."
end if
else
r.TransitionOption=r.CGSRight
ct=co.NewTransition(r)
if ct<>Nil then
Refresh
ct.Invoke(1)
ct.Wait(1)
ct.Release
else
MsgBox "Error creating the transition."
end if
end if
// Keep track of the last tab clicked
OldTab = tabpanel1.Value

```

Notes: See CGS* classes for more details.

18.0.36 How about Plugin support for older OS X?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** We support in general Mac OS X 10.5 and newer.

Notes:

All the 64-bit plugins on Mac require OS X 10.7.
Intel 32-bit plugins on Mac require OS X 10.5 or newer.

Currently the ChartDirector 6, GraphicsMagick and GameKit plugins requires Mac OS X 10.6.
Also for SQL Plugin the built in SQLite library requires 10.6.

18.0.37 How can I detect whether an Intel CPU is a 64bit CPU?

Plugin Version: all, Console & Web: No. **Answer:** Look on the CPU family returned by sysctl:

Example:

Function is64bit() As Boolean

```
# if TargetLittleEndian
```

```
dim m as MemoryBlock = NewMemoryBlock(8)
```

```
dim family as Integer
```

```
dim s as string
```

```
m=SystemControlNameToMIBMBS("hw.cpufamily")
```

```
m=SystemControlMBS(m)
```

```
if m<>nil then
```

```
m.LittleEndian=True
```

```
family=m.Long(0)
```

```
const CPUFAMILY_INTEL_6_14 = & h73d67300 /* "Intel Core Solo" and "Intel Core Duo" (32-bit Pentium-M with SSE3) */
```

```
const CPUFAMILY_INTEL_6_15 = & h426f69ef /* "Intel Core 2 Duo" */
```

```
const CPUFAMILY_INTEL_6_23 = & h78ea4fbc /* Penryn */
```

```
const CPUFAMILY_INTEL_6_26 = & h6b5a4cd2 /* Nehalem */
```

```
Select case family
```

```
case CPUFAMILY_INTEL_6_14
```

```
Return false
```

```
case CPUFAMILY_INTEL_6_15
```

```
Return true
```

```
case CPUFAMILY_INTEL_6_23
```

```
Return true
```

```
case CPUFAMILY_INTEL_6_26
```

```
Return true
```

```
// newer CPUs may be missing here
```

```
end Select
```

```
end if
```

```
# endif
```

```
Return false
```

```
Exception
```

```
Return false
```

```
End Function
```


Notes: This code is written for Mac OS X where you only have a limited number of possible CPUs.

18.0.38 How can I disable the close box of a window on Windows?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** The following code will remove the close item from the system menu of the window.

Example:

```
# if TargetWin32 then
Declare Function GetSystemMenu Lib "user32" (hwnd as Integer, bRevert as Integer) as Integer
Declare Function RemoveMenu Lib "user32" (hMenu as Integer, nPosition as Integer, wFlags as Integer) as Integer
Dim hSysMenu as Integer
hSysMenu = GetSystemMenu(me.WinHWND, 0)
RemoveMenu hSysMenu, & HF060, & H0
# endif
```

Notes: The window may not be updated directly.

18.0.39 How can I get all the environment variables from Windows?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Try this code:

Example:

```
# if targetWin32
declare function GetEnvironmentStrings Lib "kernel32" () as ptr
dim m as memoryBlock
dim n as Integer

m=GetEnvironmentStrings()

n=0
do
msgBox m.cstring(n)
while m.byte(n)<>0
n=n+1
wend
n=n+1
loop until m.byte(n)=0
# endif
```

Notes: The MBS Plugin has an EnvironmentMBS class for this.

18.0.40 How can i get similar behavior to Roxio Toast or iTunes where clicking a 'burn' button allows the next inserted blank CD-R to bypass the Finder and be accepted by my application?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You need to get a media reservation.

Example:

```
dim d as DRDeviceMBS // get a device
d.AcquireMediaReservation
```

Notes:

Use the plugin function AcquireMediaReservation and later release it using ReleaseMediaReservation. See plugin examples on how to use it and check Apples DiscRecording framework documentation for more details.

18.0.41 How can I get text from a PDF?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Crossplatform you can use DynaPDF Pro.

Notes:

On Mac OS X you can also use PDFKit for the same job.

While DynaPDF Pro gives you each bit of text with rotation, font information and encoding details, PDFKit gives you only the text string for a PDF page.

18.0.42 How can I get text from a Word Document?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** to get the text string from a doc file, use the NSAttributedStringMBS class.

Notes:

The NSAttributedStringMBS class is Mac OS X only and we have currently no solution for Windows or Linux.

Use the NSAttributedStringMBS.initWithDocFormat(data as string) as boolean method.

18.0.43 How can I get the item string for a given file creator?

Plugin Version: all, Console & Web: No. **Answer:** Try this function:

Example:

```

Sub pullNativeDocs(aCREA As string)
Dim result as Integer
Dim m, k as memoryBlock
Dim f as folderItem
Dim newType as string
Dim anIcon As picture
Dim ofs as Integer

Declare Function GetFileTypesThatAppCanNativelyOpen Lib "Carbon" (appVRefNumHint as Short, appSignature as OSType, nativeTypes as Ptr) as Short Inline68K("701CABFC")
Declare Function GetDocumentKindString Lib "Carbon" (docVRefNum as Short, docType as OSType, docCreator as OSType, kindString as ptr) as Short Inline68K("7016ABFC")

listBox1.deleteAllRows

m = newMemoryBlock(1024)
result = GetFileTypesThatAppCanNativelyOpen(Volume(0).MacVRefNum, aCREA, m)
if result <> 0 then
listBox1.addRow "<Not found.>"
return
end if

do
if m.byte(ofs*4) = 0 then
exit
else
newType = m.OSTypeMBS(ofs*4)
listBox1.addRow newType
k = newMemoryBlock(64)
result = GetDocumentKindString(Volume(0).MacVRefNum, newType, aCREA, k)
if result = 0 then
listBox1.cell(ofs,1) = k.pString(0)
ofs = ofs + 1
else
listBox1.cell(ofs,1) = "(unknown)"
end if

end if
loop

End Sub

```

Notes: Change "Translation" to "CarbonLib" for Mac OS X.

18.0.44 How can I launch an app using it's creator code?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Send an AppleEvent "odoc" with the creator code to the Finder ("MACS"):

Example:

```
Function LaunchByCreator(C As String) As Boolean
Dim A As AppleEvent
A = NewAppleEvent("aevt","odoc","MACS")
A.ObjectSpecifierParam("—") = GetUniqueIDObjectDescriptor("appf",nil,C)
return A.Send
End Function
```

18.0.45 How can I learn what shared libraries are required by a plugin on Linux?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Please use the ldd command in the terminal.

Notes:

You build an app on any platform, but for Linux.

For the resulting .so files in the libs folder, you can run the ldd command with the library path as parameter. It shows you references lib files and you can make sure you have those installed.

This is a sample run of our graphicsmagick plugin:

```
cs@Ubuntu32:
textasciitilde /MeinProgramm/MeinProgramm Libs$ ldd libMBSGraphicsMagickPlugin17744.so
linux-gate.so.1 =>(0xb76ee000)
libdl.so.2 =>/lib/i386-linux-gnu/libdl.so.2 (0xb6f0e000)
libgtk-x11-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgtk-x11-2.0.so.0 (0xb6aa6000)
libpthread.so.0 =>/lib/i386-linux-gnu/libpthread.so.0 (0xb6a8a000)
libstdc++.so.6 =>/usr/lib/i386-linux-gnu/libstdc++.so.6 (0xb69a5000)
libm.so.6 =>/lib/i386-linux-gnu/libm.so.6 (0xb6979000)
libgcc_s.so.1 =>/lib/i386-linux-gnu/libgcc_s.so.1 (0xb695b000)
libc.so.6 =>/lib/i386-linux-gnu/libc.so.6 (0xb67b1000)
/lib/ld-linux.so.2 (0xb76ef000)
libgdk-x11-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgdk-x11-2.0.so.0 (0xb6701000)
libpangocairo-1.0.so.0 =>/usr/lib/i386-linux-gnu/libpangocairo-1.0.so.0 (0xb66f4000)
libX11.so.6 =>/usr/lib/i386-linux-gnu/libX11.so.6 (0xb65c0000)
```

```

libXfixes.so.3 =>/usr/lib/i386-linux-gnu/libXfixes.so.3 (0xb65ba000)
libatk-1.0.so.0 =>/usr/lib/i386-linux-gnu/libatk-1.0.so.0 (0xb659a000)
libcairo.so.2 =>/usr/lib/i386-linux-gnu/libcairo.so.2 (0xb64ce000)
libgdk_pixbuf-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgdk_pixbuf-2.0.so.0 (0xb64ad000)
libgio-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgio-2.0.so.0 (0xb6356000)
libpangoft2-1.0.so.0 =>/usr/lib/i386-linux-gnu/libpangoft2-1.0.so.0 (0xb632a000)
libpango-1.0.so.0 =>/usr/lib/i386-linux-gnu/libpango-1.0.so.0 (0xb62e0000)
libfontconfig.so.1 =>/usr/lib/i386-linux-gnu/libfontconfig.so.1 (0xb62ab000)
libgobject-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgobject-2.0.so.0 (0xb625c000)
libglib-2.0.so.0 =>/lib/i386-linux-gnu/libglib-2.0.so.0 (0xb6163000)
libXext.so.6 =>/usr/lib/i386-linux-gnu/libXext.so.6 (0xb6151000)
libXrender.so.1 =>/usr/lib/i386-linux-gnu/libXrender.so.1 (0xb6147000)
libXinerama.so.1 =>/usr/lib/i386-linux-gnu/libXinerama.so.1 (0xb6142000)
libXi.so.6 =>/usr/lib/i386-linux-gnu/libXi.so.6 (0xb6132000)
libXrandr.so.2 =>/usr/lib/i386-linux-gnu/libXrandr.so.2 (0xb6129000)
libXcursor.so.1 =>/usr/lib/i386-linux-gnu/libXcursor.so.1 (0xb611e000)
libXcomposite.so.1 =>/usr/lib/i386-linux-gnu/libXcomposite.so.1 (0xb611a000)
libXdamage.so.1 =>/usr/lib/i386-linux-gnu/libXdamage.so.1 (0xb6115000)
libfreetype.so.6 =>/usr/lib/i386-linux-gnu/libfreetype.so.6 (0xb607b000)
libxcb.so.1 =>/usr/lib/i386-linux-gnu/libxcb.so.1 (0xb605a000)
libpixman-1.so.0 =>/usr/lib/i386-linux-gnu/libpixman-1.so.0 (0xb5fc2000)
libpng12.so.0 =>/lib/i386-linux-gnu/libpng12.so.0 (0xb5f98000)
libxcb-shm.so.0 =>/usr/lib/i386-linux-gnu/libxcb-shm.so.0 (0xb5f93000)
libxcb-render.so.0 =>/usr/lib/i386-linux-gnu/libxcb-render.so.0 (0xb5f89000)
libz.so.1 =>/lib/i386-linux-gnu/libz.so.1 (0xb5f73000)
libgmodule-2.0.so.0 =>/usr/lib/i386-linux-gnu/libgmodule-2.0.so.0 (0xb5f6e000)
libselinux.so.1 =>/lib/i386-linux-gnu/libselinux.so.1 (0xb5f4f000)
libresolv.so.2 =>/lib/i386-linux-gnu/libresolv.so.2 (0xb5f36000)
libexpat.so.1 =>/lib/i386-linux-gnu/libexpat.so.1 (0xb5f0c000)
libffi.so.6 =>/usr/lib/i386-linux-gnu/libffi.so.6 (0xb5f05000)
libpcre.so.3 =>/lib/i386-linux-gnu/libpcre.so.3 (0xb5ec9000)
librt.so.1 =>/lib/i386-linux-gnu/librt.so.1 (0xb5ec0000)
libXau.so.6 =>/usr/lib/i386-linux-gnu/libXau.so.6 (0xb5ebb000)
libXdmcp.so.6 =>/usr/lib/i386-linux-gnu/libXdmcp.so.6 (0xb5eb4000)
cs@Ubuntu32:
textasciitilde /MeinProgramm/MeinProgramm Libs$

```

As you see all library have been found and their load address is printed behind the na,e.
If a library is missing, you usually see the address missing there or being zero.

18.0.46 How can I validate an email address?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can try this code:
Example:

```

Dim re As RegEx
re = New RegEx
Dim rm As RegExMatch

re.SearchPattern = " [a-z0-9!# $ % & '*+/=/?^_ ' { | }
textasciitilde - ] +(?:\. [a-z0-9!# $ % & '*+/=/?^_ ' { | }
textasciitilde - ] +)*@(?: [a-z0-9] (?: [a-z0-9- ] * [a-z0-9] )?)\.)+ [a-z0-9] (?: [a-z0-9- ] * [a-z0-9] )?)"
rm = re.Search(editField1.Text)

if rm = Nil Then
StaticText2.text = editField1.Text + " not valid email"
Else
StaticText2.Text = editField1.Text + " is valid"
End if

```

Notes:

Adapted from:
<http://www.regular-expressions.info/email.html>

18.0.47 How do I check if the QuickTime component for the JPEG exporting is available?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** If you want to know if the PictureToString functions will work, you may try this function:

Example:

```

Function IsQTJPEGExporterAvailable() As boolean
dim q as QTComponentInformationMBS

// search for QuickTime JPEG exporter codec
q=new QTComponentInformationMBS

while q.NextComponent
if q.Type="imco" and q.SubType="jpeg" then
Return true
end if
wend

Return false // not found
End Function

```

Notes:

It should work like this for other types like:

```
"tiff" ->TIFF
"PNTG" ->Mac Paint
"gif " ->GIF
"WRLE" ->Windows BMP
"tga " ->Targa
"png " ->PNG
etc.
```

18.0.48 How do I check if the QuickTime component for the JPEG importing is available?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** If you want to know if the StringToPicture functions will work, you may try this function:

Example:

```
Function IsQTJPEGImporterAvailable() As boolean
dim q as QTComponentInformationMBS
```

```
// search for QuickTime JPEG importer codec
q=new QTComponentInformationMBS
```

```
while q.NextComponent
if q.Type="imdc" and q.SubType="jpeg" then
Return true
end if
wend
```

```
Return false // not found
End Function
```

Notes:

It should work like this for other types like:

```
"tiff" ->TIFF
"PNTG" ->Mac Paint
"gif " ->GIF
"WRLE" ->Windows BMP
"tga " ->Targa
"png " ->PNG
etc.
```

18.0.49 How do I check if the QuickTime component for the Sequence grabber is available?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** If you want to know if the QTGrabberClass will work, you can use this code:

Example:

```
Function IsQTGrabberAvailable() As boolean
dim q as QTComponentInformationMBS

q=new QTComponentInformationMBS

while q.NextComponent
if q.Type="barg" then
Return true
end if
wend

Return false // not found
End Function
```

Notes: Don't forget that you need to check for each other component you use like the compression functions.

18.0.50 How do I decode correctly an email subject?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** The following code can be used to decode an email subject including several encodings including Base 64.

Example:

```
dim src as string // input

dim theRegex as Regex
dim theRegexMatch as RegexMatch
dim result, infoCharset, encodedPart as string
dim theStart as Integer

if instr(src, "=?") >0 then
theRegex = new Regex
theRegex.Options.Greedy = false
theRegex.searchPattern = "(.*)=?(.+)\?(Q | B)\?(.+)\?="
theRegexMatch = theRegex.search(src)
while theRegexMatch <>nil
theStart = theRegexMatch.subExpressionStartB(0) + len(theRegexMatch.subExpressionString(0))

result = result + theRegexMatch.subExpressionString(1)
```



```

infoCharset = theRegexMatch.subExpressionString(2)
encodedPart = theRegexMatch.subExpressionString(4)
if theRegexMatch.subExpressionString(3) = "B" then
encodedPart = DecodeBase64(encodedPart)
elseif theRegexMatch.subExpressionString(3) = "Q" then
encodedPart = DecodeQuotedPrintable(encodedPart)
end if
if right(result, 1) = " " then
result = mid(result, 1, len(result)-1)
end if
encodedPart = encodedPart.DefineEncoding(GetInternetTextEncoding(infoCharset))
result = result + encodedPart

theRegex.SearchStartPosition = theStart
theRegexMatch = theRegex.search()
wend

result = result + mid(src, theStart+1)

else
result = src
end if
// theRegexMatch = theRegex.search

msgbox result

```

Notes: May not look nice depending on the controls used.

18.0.51 How do I enable/disable a single tab in a tabpanel?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Use the TabpanelEnabledMBS method.

Example:

```
TabpanelEnabledMBS(tabpanel1, 1, false)
```

Notes:

Use Carbon for MachO and CarbonLib for Mac Carbon and AppearanceLib for Mac OS Classic as library. For Cocoa, please use enabled property of NSTabViewItemMBS class.

18.0.52 How do I find the root volume for a file?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Try this function:

Example:

```
Function GetRootVolume(f as FolderItem) as FolderItem
dim root, dum as folderItem
if f <> nil then
root = f // f might be the volume
do
dum = root.parent
if dum <> nil then
root = dum
end if
loop until dum = nil
return root
end if
End Function
```

18.0.53 How do I get the current languages list?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this code:

Example:

```
dim p as new CFPreferencesMBS
dim a as CFArrayMBS
dim s as CFStringMBS
dim o as CFObjectMBS
dim sa(-1) as string

o=p.CopyAppValue("AppleLanguages", ".GlobalPreferences")

if o<>Nil then
a=CFArrayMBS(o)

dim i,c as Integer

c=a.Count-1
for i=0 to c
o=a.Item(i)

if o isa CFStringMBS then
s=CFStringMBS(o)
sa.Append s.str
end if
```

```
next
end if
```

```
MsgBox Join(sa,EndOfLine)
```

Notes:

On Mac OS X you can get the list of current languages like this list:

```
de
en
ja
fr
es
it
pt
pt-PT
nl
sv
nb
da
fi
ru
pl
zh-Hans
zh-Hant
ko
```

Which has German (de) on the top for a German user.

This code has been tested on Mac OS X 10.5 only.

18.0.54 How do I get the Mac OS Version?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this code:

Example:

```
dim i as Integer
if system.gestalt("sysv", i) then
//do this in an 'If' in case you don't get any value back at all and system.gestalt returns boolean
if i = & h750 then //If OS is 7.5
//do stuff
elseif i = & h761 then //If OS is 7.6.1
//do stuff
end if
```

end if

Notes: The MBS Plugin has a function `SystemInformationMBS.OSVersionString` for this.

18.0.55 How do I get the printer name?

Plugin Version: all, Console & Web: No. **Answer:** For Mac OS Classic see the code below and for Mac OS X use the Carbon Print Manager Classes from the MBS Plugin.

Example:

```
dim s as String
dim i as Integer

s=app.ResourceFork.GetResource("STR ",-8192)
if s<>"" then
i=ascb(leftb(s,1))
s=mid(s,2,i)

MsgBox s
end if
```

Notes:

A note from Craig Hoyt:

After looking at your example I had a little deja-vu experience. Several years ago I played around with this same code in FutureBasic. I discovered that it did not and still doesn't provide the 'Printer Name', it does return the print driver name. If it returns 'LaserWriter 8' as the print driver you can look into this file and get the 'PAPA' resource # -8192 to get the actual Printer Name. Unfortunately this does not hold true for other printers. My Epson and HP Printers (the Epson has an Ethernet Card and the HP is USB) do not provide this info in their drivers. As far as I can tell it only returns the name by polling the printer itself.

18.0.56 How do I make a metal window if RB does not allow me this?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** The following declare turns any window on Mac OS X 10.2 or newer into a metal one.

Example:

```
declare sub ChangeWindowAttributes lib "Carbon" (win as windowptr, a as Integer, b as Integer)
```

```
ChangeWindowAttributes window1,256,0
```

Notes: May not look nice depending on the controls used.

18.0.57 How do I make a smooth color transition?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:**

I'd like to show in a report some bars, which start with color A and end with color B.

The color change should be very smooth.

My problem: If I would start from 255,0,0 and end by 0,0,0, I would have 255 different colors. If the bars are longer than 255 pixels, would this look nice?

Example:

```
// Window.Paint:
Sub Paint(g As Graphics)
dim w,w1,x,p as Integer
dim c1,c2,c as color
dim p1,p2 as Double

c1=rgb(255,0,0) // start color
c2=rgb(0,255,0) // end color

w=g.Width
w1=w-1

for x=0 to w1
p1=x/w1
p2=1.0-p1

c=rgb(c1.red*p1+c2.red*p2, c1.green*p1+c2.green*p2, c1.blue*p1+c2.blue*p2)

g.ForeColor=c
g.DrawLine x,0,x,g.Height

next
End Sub
```

Notes: Try the code above in a window paint event handler.

18.0.58 How do I read the applications in the dock app?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Use CFPREFERENCESMBS class like in this example:

Example:

```
// Reads file names from persistent dock applications and puts them into the list

dim pref as new CFPREFERENCESMBS

dim persistentapps as CFStringMBS = NewCFStringMBS("persistent-apps")
dim ApplicationID as CFStringMBS = NewCFStringMBS("com.apple.dock")
dim tiledata as CFStringMBS = NewCFStringMBS("tile-data")
dim filelabel as CFStringMBS = NewCFStringMBS("file-label")

// get the array of persistent applications from dock preferences
dim o as CFOBJECTMBS = pref.CopyValue(persistentapps, ApplicationID, pref.kCFPreferencesCurrentUser,
pref.kCFPreferencesAnyHost)

if o isa CFArrayMBS then
dim a as CFArrayMBS = CFArrayMBS(o)

// walk over all items in array
dim c as Integer = a.Count-1
for i as Integer = 0 to c

// get dictionary describing item
o = a.Item(i)

if o isa CFDictionaryMBS then
dim d as CFDictionaryMBS = CFDictionaryMBS(o)

// and pick tile data dictionary
o = d.Value(tiledata)
if o isa CFDictionaryMBS then
d = CFDictionaryMBS(o)

// and pick there the file label
o = d.Value(filelabel)
if o isa CFStringMBS then
// and display it
dim name as string = CFStringMBS(o).str
List.AddRow name
```

```

end if
end if
end if

next

else
MsgBox "Failed to read dock preferences."
end if

```

Notes: You can use the `CFPreferencesMBS.SetValue` to change a value and `CFPreferencesMBS.Synchronize` to write the values to disc. You may need to restart the `Dock.app` if you modified things.

18.0.59 How do I truncate a file?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** In a `binarystream` you can set the `length` property to truncate.

18.0.60 How do update a Finder's windows after changing some files?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this code:

Example:

```

dim f as folderitem // some file
dim ae as appleevent
ae=newappleevent("fndr", "fupd", "MACS")
ae.folderitemparam("—")=f
if not ae.send then
//something went wrong
end if

```

Notes: The `folderitem.finderupdate` from the MBS Plugin does something like this.

18.0.61 How to access a USB device directly?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** First, it depends on the device.

Notes:

Some devices can be talked directly from user mode code, but some require a kernel driver.

For some devices you can use plugins to access them like:

- Audio and Video sources using the QTGrabberClassMBS
- Mass storage devices using the folderitem class.
- Serial devices using the System.SerialPort function.
- HID USB devices can be used with MacHIDMBS, WinHIDMBS or LinuxHIDInterface class.
- Any USB device may be used with MacUSBMBS or WinUSBMBS classes.

In general it is always the best to take the most high level access to have others do the work for the details.

18.0.62 How to add icon to file on Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use Folderitem.AddCustomIcon or NSWorkspaceMBS.setIcon functions.

Notes: Please close any open stream for the file you want to add an icon.

18.0.63 How to ask the Mac for the Name of the Machine?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Using Apple Events you can use this code:

Example:

Function Computername() *As string*

```
dim theEvent as AppleEvent
dim err as boolean
```

```
theEvent = newAppleEvent("mchn", "getd", "MACS")
```

```
err = theEvent.send
```

```
return theevent.ReplyString
```

End Function

Notes:

Code above is for Mac OS 9!

Also the MBS Plugin has a function for this which may be faster and work also on Macs without Filesharing (which handles this event).

18.0.64 How to automatically enable retina in my apps?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can run a build script on each build with this code:

Example:

```
Dim App As String = CurrentBuildLocation + "/" + CurrentBuildAppName + ".app"
Call DoShellCommand("/usr/bin/defaults write " + App + "/Contents/Info ""NSHighResolutionCapable"" YES")
```

Notes: This will set the NSHighResolutionCapable flag to YES.

18.0.65 How to avoid leaks with Cocoa functions?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can try this code on Mac OS X:

Example:

```
// in a Timer Action event:
Sub Action()
static LastPool as NSAutoreleasePoolMBS = nil
static CurrentPool as NSAutoreleasePoolMBS = nil

LastPool = CurrentPool
CurrentPool = new NSAutoreleasePoolMBS
End Sub
```

Notes:

With REALbasic 2009r4 the code above should not be needed as REALbasic runtime does automatically handle the NSAutoreleasePools for you. For older REALbasic versions you need to use code with a timer with the action event above to avoid memory leaks.

Please do not use REALbasic 2009r4 and newer with plugins before version 9.5. You can get crashes there which typically show a line with a objc_msgSend call.

18.0.66 How to avoid trouble connecting to oracle database with SQL Plugin?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** For oracle the most important thing is to point the plugin to the libraries from oracle.

Notes:

In environment variables, the paths like ORACLE_HOME must be defined.

On Mac OS X you also need to define DYLD_LIBRARY_PATH to point to the dylib files from oracle.

For that you need to modify /etc/launchd.conf for Mac OS X 10.8 and newer.

In older versions those variables in .MacOSX/environment.plist file in user's home.

Another way for the case you bundle things inside your app is to use the LSEnvironment key in info.plist. In info.plist it looks like this:

```
<key>LSEnvironment</key>
<dict>
<key>test</key>
<string>Hello World</string>
</dict>
```

18.0.67 How to avoid __NSAutoreleaseNoPool console messages in threads?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You need to use your own NSAutoreleasePool on a thread like this:

Example:

```
sub MyThread.run
dim pool as new NSAutoreleasePoolMBS
// do work here

pool=nil
end sub
```

Notes:

For more details read here:

http://developer.apple.com/mac/library/documentation/Cocoa/Reference/Foundation/Classes/NSAutoreleasePool_Class/Reference/Reference.html

18.0.68 How to bring app to front?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** On Mac you can use this code:

Example:

```
// First way:
app.FrontMostMBS = true

// second way:
dim p as new ProcessMBS
p.GetCurrentProcess
p.FrontProcess = true

// third way:
NSApplicationMBS.sharedApplication.activateIgnoringOtherApps(true)

// for Windows:
RemoteControlMBS.WinBringWindowToTop
```

Notes: This will bring a Mac app to the front layer.

18.0.69 How to bring my application to front?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** This makes SimpleText (Code txt) to the frontmost application:

Example:

```
Dim A As AppleEvent
A = NewAppleEvent("misc", "actv", "")
If Not A.Send then
Beep
end if
```

Notes: (Code is Mac only)

18.0.70 How to catch Control-C on Mac or Linux in a console app?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use SignalHandlerMBS class for this.

Example:

```
// watch for Control-C on Mac
call SignalHandlerMBS.SetFlagHandler(2)

dim ende as boolean = false
do
if SignalHandlerMBS.IsFlagSet(2) then
Print "Flag 2 set. Existing..."
ende = true
end if

DoEvents 1
loop until ende
```

Notes: The signal is caught, a flag is set and you can ask later in your normal application flow for the result.

18.0.71 How to change name of application menu?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** Use this code to change the application menu name on Mac OS X:

Example:

```
dim mb as new MenubarMBS
dim m as MenuMBS = mb.item(1) // 1 is in my tests the app menu
if m<>Nil then
m.MenuTitle = "Hello World"
end if
```

Notes: This code is for Carbon only.

18.0.72 How to change the name in the menubar of my app on Mac OS X?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:**

You mean it screws up if the file name of the bundle itself is different than the name of the executable file in the MacOS folder within the bundle? If so, you should find something like this within your Info.plist file (or the 'plst' resource that the RB IDE builds for you):

```
<key>CFBundleExecutable</key>
<string>Executable file name here</string>
```

Just make sure that file name matches.

However, if your question involves how you can change the name of the app that appears in the menu and the dock, that's different. You can make this name different from the file name by changing the CFBundleName key:

```
<key>CFBundleName</key>
<string>Name for menu here</string>
```

Note that if you use my free AppBundler program, this second part is taken care of for you – just fill in a custom name in the right field. You can find AppBundler (from Thomas Reed) at <http://www.bitjuggler.com/products/appbundler/> .

18.0.73 How to check if a folder/directory has subfolders?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use code like this to check all items in a folder:

Example:

```
Function HasSubFolder(folder as FolderItem) As Boolean
dim c as Integer = folder.Count
```

```
for i as Integer = 1 to c
dim item as FolderItem = folder.TrueItem(i)
```

```
if item<>Nil and item.Directory then
Return true
end if
next
```

```
End Function
```

Notes:

We use trueitem() here to avoid resolving alias/link files. Also we check for nil as we may not have permission to see all items. And if one is a directory, we return without checking the rest.

18.0.74 How to check if Macbook runs on battery or AC power?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Please use our IOPowerSourcesMBS class like this:

Example:

```
Function PowerSourceState() as Integer
dim p as new IOPowerSourcesMBS

// check all power sources
dim u as Integer = p.Count-1
for i as Integer = 0 to u
dim d as CFDictionaryMBS = p.Item(i)
if d<>nil then
// check if they have a power source state key:
dim o as CFObjectMBS = d.Value(NewCFStringMBS("Power Source State"))
if o isa CFStringMBS then
dim s as string = CFStringMBS(o).str

'MsgBox s

if s = "AC Power" then
Return 1
elseif s = "Battery Power" then
Return 2
end if
end if
end if
next
Return 0 // unknown
End Function
```

Notes: If you want to check the CFDictionaryMBS content, simply use a line like "dim x as dictionary = d.dictionary" and check the contents in the debugger.

18.0.75 How to check if Microsoft Outlook is installed?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** If you need Outlook for Scripting, you should simply check registry for the required Outlook.Application class:

Example:

```
Function OutlookInstalled() As Boolean
# if TargetWin32 then

try
```

```

dim r as new RegistryItem("HKEY_CLASSES_ROOT\Outlook.Application\CLSID", false)

Return true

catch r as RegistryAccessErrorException
// not installed
Return false

end try

# else

// Windows only, so false on other platforms
Return false

# endif

End Function

```

18.0.76 How to check on Mac OS which country or language is currently selected?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** The code below returns a country value.

Example:

```

dim result as Integer

IF TargetMacOS THEN

CONST smScriptLang = 28
CONST smSystemScript = -1

DECLARE FUNCTION GetScriptManagerVariable LIB "Carbon" ( selector as Integer) as Integer
DECLARE FUNCTION GetScriptVariable LIB "Carbon" ( script as Integer, selector as Integer) as Integer

result=GetScriptVariable(smSystemScript, smScriptLang)

END IF

```

Notes:

Returns values like:

For more values, check "Script.h" in the frameworks.

18.0.77 How to code sign my app with plugins?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** When you try to code sign the application with plugin dylibs on Mac OS X, you may see error message that there is actually a signature included.

Notes:

Please use the -f command line parameter with codesign utility to overwrite our MBS signature. We sign our plugins for Mac and Windows to make sure they have not been modified.

In terminal, you do like this:

```
cd <Path to folder of app>
```

```
codesign -f -s "Developer ID Application: <Your Name>" "<Appname>.app/Contents/Frameworks/*.dylib"
codesign -f -s "Developer ID Application: <Your Name>" "<Appname>.app/Contents/Frameworks/*.framework"
codesign -f -s "Developer ID Application: <Your Name>" "<Appname>.app"
```

Please use the name of your certificate (See keychain), the name of your app and the path to the app folder. If you have helper apps you need to sign them first. You can use a build step to automatically sign your app on build.

18.0.78 How to collapse a window?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Use this function (Mac only):

Example:

```
Sub CollapseRBwindow(w as window, CollapseStatus as boolean)
dim state, err as Integer
dim wh as MemoryBlock
```

```
Declare Function CollapseWindow Lib "Carbon" (window as Integer, collapse as Integer) as Integer
```

```
IF CollapseStatus THEN
state = 1
ELSE
state = 0
END IF
```



```
err = CollapseWindow(w.MacWindowPtr, state)
```

```
End Sub
```

Notes:

Also the MBS Plugin has a `window.collapsedmbs` property you can set.
For Windows the MBS Plugin has a `window.isiconicmbs` property.

18.0.79 How to compare two pictures?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can try this code:

Example:

```
Function ComparePictures(p as picture,q as picture) as Integer
```

```
dim r,u as RGBSurface
```

```
dim x,y,n,m,h,w as Integer
```

```
dim w1,w2,h1,h2,d1,d2 as Integer
```

```
dim c1,c2 as color
```

```
h1=p.Height
```

```
h2=q.Height
```

```
w1=p.Width
```

```
w2=q.Width
```

```
d1=p.Depth
```

```
d2=q.Depth
```

```
if d1<>d2 then
```

```
Return 1
```

```
elseif w1<>w2 then
```

```
return 2
```

```
elseif h1<>h2 then
```

```
Return 3
```

```
else
```

```
r=p.RGBSurface
```

```
u=q.RGBSurface
```

```
if r=nil or u=nil then
```

```
Return -1
```

```
else
```

```
h=h1-1
```

```
w=w1-1
```

```
m=min(w,h)
```

```

for n=0 to m
c1=r.Pixel(n,n)
c2=u.Pixel(n,n)
if c1<>c2 then
Return 4
end if
next

```

```

for y=0 to h
for x=0 to w
c1=r.Pixel(x,y)
c2=u.Pixel(x,y)
if c1<>c2 then
Return 5
end if
next
next

```

```

// 0 for equal
// -1 for error (no RGBsurface)
// 1 for different depth
// 2 for different width
// 3 for different height
// 4 for different pixels (fast test)
// 5 for different pixels (slow test)
end if
end if

```

```

Exception
Return -1
End Function

```

Notes: Remember that this only works on bitmap pictures, so the `picture.BitmapMBS` function may be useful.

18.0.80 How to compile PHP library?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You have to download the source code and compile a static version of the library.

Notes:

This instructions were written based on PHP 5.2.6 on Mac OS X:

- Best take a new Mac with current Xcode version installed.

- Download the source code archive. e.g. "php-5.2.6.tar.bz2"
- Expand that archive on your harddisc.
- Open terminal window
- change directory to the php directory. e.g. "cd /php-5.2.6"
- execute this two lines to define the supported CPU types and the minimum Mac OS X version:
- export CFLAGS="-arch ppc -arch i386 -mmacosx-version-min=10.3"
- export CXXFLAGS="-arch ppc -arch i386 -mmacosx-version-min=10.3"
- the command "./configure help" does show the configure options.
- use configure with a line like this:
- ./configure --enable-embed --with-curl --enable-ftp --enable-zip --enable-sockets --enable-static --enable-soap --with-zlib --with-bz2 --enable-exif --enable-bcmath --enable-calendar
- start the compilation with "make all"
- other option is to use "make install" which first does the same as "make all" and than does some installation scripts.
- you may get an error about a duplicate symbole _yytext. Search the file "zend_ini_scanner.c", search a line with "char *yytext;" and change it to "extern char *yytext;".
- On the end you get a lot of error messages, but you have a working library (named libphp5.so) file in the invisible ".libs" folder inside your php source folder.

Possible problems and solutions:

- If the path to your files has spaces, you can get into trouble. e.g. "/RB Plugins/PHP" is bad as files will be searched sometimes in "/RB".
- If you have in /usr/local/lib libraries which conflict with the default libraries, you can get into trouble.
- If you installed some open source tools which compiled their own libraries, you can get into conflicts.
- if you have to reconfigure or after a problem, you may need to use "make clean" before you start "make all" again.

Feel free to install additional libraries and add more packages to the configure line.

18.0.81 How to convert a `BrowserType` to a `String` with `WebSession.Browser`?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use code like this:

Example:

```
Function GetBrowserName(s as WebSession.BrowserType) As string
Select case s
case WebSession.BrowserType.Android
Return "Andriod"
case WebSession.BrowserType.Blackberry
Return "Blackberry"
case WebSession.BrowserType.Chrome
Return "Chrome"
case WebSession.BrowserType.ChromeOS
Return "ChromeOS"
case WebSession.BrowserType.Firefox
Return "Firefox"
case WebSession.BrowserType.InternetExplorer
Return "InternetExplorer"
case WebSession.BrowserType.Opera
Return "Opera"
case WebSession.BrowserType.Safari
Return "Safari"
case WebSession.BrowserType.SafariMobile
Return "SafariMobile"
case WebSession.BrowserType.Unknown
Return "Unknown"
else
Return "Unkown: " +str(integer(s))
end Select

End Function
```

18.0.82 How to convert a `EngineType` to a `String` with `WebSession.Engine`?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use code like this:

Example:

```
Function GetRenderingEngineName(s as WebSession.EngineType) As string
Select case s
case WebSession.EngineType.Gecko
Return "Gecko"
case WebSession.EngineType.Presto
Return "Presto"
case WebSession.EngineType.Trident
```

```

Return "Trident"
case WebSession.EngineType.Unknown
Return "Unknown"
case WebSession.EngineType.WebKit
Return "WebKit"
else
Return "Unkown: " +str(integer(s))
end Select

End Function

```

18.0.83 How to convert a PlatformType to a String with WebSession.Platform?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use code like this:

Example:

```

Function GetPlatformName(s as WebSession.PlatformType) As string
Select case s
case WebSession.PlatformType.Blackberry
Return "Blackberry"
case WebSession.PlatformType.iPad
Return "iPad"
case WebSession.PlatformType.iPhone
Return "iPhone"
case WebSession.PlatformType.iPodTouch
Return "iPodTouch"
case WebSession.PlatformType.Linux
Return "Linux"
case WebSession.PlatformType.Macintosh
Return "Macintosh"
case WebSession.PlatformType.PS3
Return "PS3"
case WebSession.PlatformType.Unknown
Return "Unknown"
case WebSession.PlatformType.WebOS
Return "WebOS"
case WebSession.PlatformType.Wii
Return "Wii"
case WebSession.PlatformType.Windows
Return "Windows"
else
Return "Unkown: " +str(integer(s))
end Select

End Function

```

18.0.84 How to convert a text to iso-8859-1 using the TextEncoder?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:**

This code can help you although it's not perfect.

You need to set lc to the current color you use.

Example:

```
dim outstring as string
dim theMac, thePC as textencoding
dim Mac2PC as textconverter

theMac = getTextEncoding(0) // MacRoman
thePC = getTextEncoding(& h0201) // ISOLatin1

Mac2PC = getTextConverter(theMac, thePC)
// if you wanted to do the opposite just create a converter
// PC2Mac = getTextConverter(thePC, theMac)

outstring = Mac2PC.convert("Bjrn, this text should be converted")
Mac2PC.clear
```

Notes: You have to call Mac2PC.clear after every conversion to reset the encoding engine.

18.0.85 How to convert ChartTime back to Xojo date?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** We have this example code:

Example:

```
Function ChartTimeToDate(ChartTime as Double) As date
static diff as Double = 0.0

if diff = 0.0 then
dim d2 as Double = CDBaseChartMBS.chartTime(2015, 1, 1)
dim da as new date(2015, 1, 1)
dim ts as Double = da.TotalSeconds

diff = ts - d2
end if
```

```
dim d as new date
d.TotalSeconds = diff + ChartTime
```

```
Return d
End Function
```

Notes: As you see we calculate the difference in base date from Date and ChartTime and later use difference to convert.

18.0.86 How to convert line endings in text files?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can simply read file with `TextInputStream` and write with new line endings using `TextOutputStream` class.

Example:

```
dim inputfile as FolderItem = SpecialFolder.Desktop.Child("test.txt")
dim outputfile as FolderItem = SpecialFolder.Desktop.Child("output.txt")
dim it as TextInputStream = TextInputStream.Open(inputfile)
dim ot as TextOutputStream = TextOutputStream.Create(outputfile)
```

```
ot.Delimiter = EndOfLine.Windows // new line ending
while not it.EOF
ot.WriteLine it.ReadLine
wend
```

Notes: `TextInputStream` will read any input line endings and with `delimiter` property in `TextOutputStream` you can easily define your new delimiter.

18.0.87 How to convert picture to string and back?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use this plugin functions:

Notes:

JPEG:

```
JPEGStringToPictureMBS(buf as string) as picture
JPEGStringToPictureMBS(buf as string,allowdamaged as Boolean) as picture
PictureToJPEGStringMBS(pic as picture,quality as Integer) as string
```

PNG:

```
PictureToPNGStringMBS(pic as picture, gamma as single) as string
PictureToPNGStringMBS(pic as picture, mask as picture, gamma as single) as string
PictureToPNGStringMBS(pic as picture, gamma as single, Interlace as Boolean, FilterType as Integer) as string
PictureToPNGStringMBS(pic as picture, mask as picture, gamma as single, Interlace as Boolean, FilterType as Integer) as string
PNGStringToPictureMBS(data as string, gamma as single) as picture
PNGStringToPNGPictureMBS(data as string, gamma as single) as PNGpictureMBS
```

Tiff:

```
TIFFStringToPictureMBS(data as string) as picture
TIFFStringToTiffPictureMBS(data as string) as TiffPictureMBS
```

BMP:

```
BMPStringtoPictureMBS(data as string) as picture
Picture.BMPDataMBS(ResolutionValueDPI as Integer=72) as string
```

GIF:

```
GifStringToGifMBS(data as string) as GIFMBS
GifStringToPictureMBS(data as string) as Picture
```

18.0.88 How to copy an array?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use a function like this to copy an array:

Example:

```
Function CopyArray(a() as Double) as Double()
dim r() as Double
for each v as Double in a
r.Append v
next
Return r
End Function
```


Notes:

If needed make several copies of this method with different data types, not just double.
For a deep copy of an array of objects, you need to change code to also make a copy of those objects.

18.0.89 How to copy an dictionary?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use a function like this to copy a dictionary:

Example:

```
Function CopyDictionary(d as Dictionary) As Dictionary
dim r as new Dictionary
for each key as Variant in d.keys
r.Value(key) = d.Value(key)
next
Return r
End Function
```

Notes:

If needed make several copies of this method with different data types, not just double.
For a deep copy of an dictionary of objects, you need to change code to also make a copy of those objects.

18.0.90 How to copy parts of a movie to another one?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** The code below copies ten seconds of the snowman movie to the dummy movie starting at the 5th second.

Example:

```
dim f as FolderItem
dim md as EditableMovie
dim ms as EditableMovie

f=SpecialFolder.Desktop.Child("Our First Snowman.mov")
ms=f.OpenEditableMovie

ms.SelectionStartMBS=5
ms.SelectionLengthMBS=10

f=SpecialFolder.Desktop.Child("dummy.mov")
md=f.CreateMovie

msgbox str(md.AddMovieSelectionMBS(ms))
```

Notes: If result is not 0, the method fails.

18.0.91 How to create a birthday like calendar event?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this code:

Example:

```
// start a connection to the calendar database
dim s as new CalCalendarStoreMBS

// needed for the error details
dim e as NSErrorMBS

dim r as CalRecurrenceRuleMBS = CalRecurrenceRuleMBS.initYearlyRecurrence(1, nil) // repeat every
year without end

dim a as new CalAlarmMBS // add alarm
a.action = a.CalAlarmActionDisplay
a.relativeTrigger = -3600*24 // 24 Hours before

// create a new calendar
dim c as new CalEventMBS

dim d as new date(2011, 04, 20) // the date

dim calendars() as CalCalendarMBS = s.calendars

// set properties
c.Title="Test Birthday"
c.startDate=d
c.recurrenceRule = r
c.calendar=calendars(0) // add to first calendar
c.addAlarm(a)
c.endDate = d
c.isAllDay = true

// save event
call s.saveEvent(c,s.CalSpanAllEvents, e)
if e<>nil then
MsgBox e.localizedDescription
else
MsgBox "New event was created."
end if
```

Notes: This adds an event to iCal for the given date with alarm to remember you and repeats it every year.

18.0.92 How to create a GUID?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use the UUIDMBS class for this.

18.0.93 How to create a Mac picture clip file?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** You can use code like this one.

Example:

```
dim f As FolderItem
dim p As Picture

f=SpecialFolder.Desktop.Child("Test.pictClipping")
if f=nil then Return

p=new Picture(300,200,32) 'Make a sample picture
p.Graphics.ForeColor=RGB(0,255,255)
p.Graphics.FillOval 0,0,99,99
p.Graphics.ForeColor=RGB(255,0,0)
p.Graphics.DrawOval 0,0,99,99

dim r As ResourceFork 'ResourceFork is needed for a clip file

// Please define a file type Any
r=f.CreateResourceFork("Any")

// get PICT data using plugin function
dim pictdata as string = p.PicHandleDataMBS
r.AddResource(pictdata,"PICT",256,"Picture")

dim m as new MemoryBlock(8)

m.LittleEndian = false
m.Int16Value(0) = 0
m.Int16Value(2) = 0
m.Int16Value(4) = p.Width
m.Int16Value(6) = p.Height
```

```
r.AddResource(m,"RECT",256,"")
```

'Values taken from a sample file and irrelevant to the problem

```
dim data as string = DecodeBase64("AQAAAAAAAAAAAAAAAAACAFRDRVIAAABAAAAAAAAAABUQ0IQAAAAA")
r.AddResource(data,"drag",128,"") 'ditto
r.Close
```

Notes: In general Apple has deprecated this, but a few application still support clippings.

18.0.94 How to create a PDF file in REALbasic?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Check our DynaPDF plugin and the examples.

Notes:

An alternative can be to use the CoreGraphics and Cocoa functions on Mac OS X.
For Windows, we can only suggest our DynaPDF plugin.

18.0.95 How to create EmailAttachment for PDF Data in memory?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use code like the one below:

Example:

```
Function EmailAttachmentFromPDFData(PDFData as string, filename as string) As EmailAttachment
dim a as new EmailAttachment
```

```
a.data = EncodeBase64(PDFData, 76)
a.ContentEncoding = "base64"
a.MIMEType = "application/pdf"
a.MacType = "PDF "
a.MacCreator = "prvw"
a.Name = filename
```

Return a

End Function

Notes:

Compared to sample code from Xojo documentation, we set the mime type correct for PDF.
The MacType/MacCreator codes are deprecated, but you can still include them for older Mac email clients.
"prvw" is the creator code for Apple's preview app.

18.0.96 How to create PDF for image files?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use DynaPDF like this:

Example:

```
Function CreatePrintPDF(jpgFiles() as folderitem, pdfFile as FolderItem, PageWidth as Integer, PageHeight
as Integer) As Boolean
// have files?
If pdfFile = Nil Then Return False
If jpgFiles = Nil Then Return False

If jpgFiles.Ubound <0 Then Return False

// new DynaPDF
Dim pdf As New MyDynapdfMBS

// page width/height in MilliMeter
Dim pdfWidth as Integer = PageWidth * 72 / 25.4
Dim pdfHeight as Integer = PageHeight * 72 / 25.4

// put your license here
Call pdf.SetLicenseKey "Starter"

// create pdf
Call pdf.CreateNewPDF pdfFile

// set a couple of options
Call pdf.SetPageCoords(MyDynaPDFMBS.kpcTopDown)
Call pdf.SetResolution(300)
Call pdf.SetUseTransparency(False)
Call pdf.SetSaveNewImageFormat(False)
Call pdf.SetGStateFlags(MyDynaPDFMBS.kgfUseImageColorSpace, False)
Call pdf.SetJPEGQuality(100)

// set page size
Call pdf.SetBBox(MyDynaPDFMBS.kpbMediaBox, 0, 0, pdfWidth, pdfHeight)
Call pdf.SetPageWidth(pdfWidth)
Call pdf.SetPageHeight(pdfHeight)

// append pages with one image per page
For i as Integer = 0 To jpgFiles.Ubound
Call pdf.Append
Call pdf.InsertImageEx(0, 0, pdfWidth, pdfHeight, jpgFiles(i), 1)
Call pdf.EndPage
```

[Next](#)

```
// close
Call pdf.CloseFile
```

```
Return True
End Function
```

Notes:

This is to join image files in paper size to a new PDF.
e.g. scans in A4 into an A4 PDF.

18.0.97 How to CURL Options translate to Plugin Calls?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Below a few tips on how to translate command line CURL calls to plugin calls.

Notes:

```
curl -vX PUT http://localhost:5984/appserials/78569238475/DocumentRegister.docx?rev=3-25634563456
-data-binary @DocumentRegister.docx -H "Content-Type: application/msword"
```

- The option -v means verbose. You can use OptionVerbose and listen for messages in the DebugMessage event.
- The option -X PUT means we want to do a HTTP PUT Request. So set OptionPut to true. Also you will want to set OptionUpload to true as you upload data.
- We have the URL which you put into OptionURL property.
- The -data-binary option tells CURL to pass the given data. With the @ before the data, it is interpreted as a file name, so the data is read from the given file. You'll need to open this file and pass data with the Read event as needed. (See CURLS ftp file upload example project)
- The last option -H specifies an additional header for the upload. Pas this additional header with the SetOptionHTTPHeader method.

```
curl -X PUT http://127.0.0.1:5984/appserials/f2f4e540bf8bb60f61cfd4328001c59 -d '{ "type": "Product", "description": "Application Serial", "acronym": "AppSerial", "dateAdded": "2011-03-21 14:57:36" } '
```

- Option -X PUT like above.
- Pass the URL again in OptionURL
- This time data is passed in command line for CURL. You'd put this data in the quotes into a string and make it available in the Read event. (See CURLS ftp upload example project)

18.0.98 How to delete file with ftp and curl plugin?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can set post/pre quotes to have ftp commands executed before or after the download/upload.

Example:

```
dim d as CURLMBS // your curl object
```

```
// delete file
```

```
dim ws() As String
```

```
ws.Append "DELE Temp.txt"
```

```
d.SetOptionPostQuote(ws)
```

Notes:

Use SetOptionPostQuote, SetOptionPreQuote or SetOptionQuote.

The ftp commands you pass here are native ftp commands and not the commands you use with ftp applications. To delete use DELE and the file path.

18.0.99 How to detect display resolution changed?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** On Mac OS X simply listen for display changed notifications.

Notes: Use the "Distribution Notification Center.rbp" example project as a base and use it to listen to notifications with the name "O3DeviceChanged".

18.0.100 How to detect retina?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Please use Window.BackingScaleFactorMBS to query the factor.

Example:

```
msgbox str(window1.BackingScaleFactorMBS)
```

18.0.101 How to disable force quit?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:**

Please visit this website and get the control panel for Mac OS 9 there:

<http://www3.sk.sympatico.ca/tinyjohn/DFQ.html>

For Mac OS X use the MBS Plugin with the SetSystemUIModeMBS method.

Notes: Please use presentationOptions in NSApplicationMBS for Cocoa applications.

18.0.102 How to disable the error dialogs from Internet Explorer on javascript errors?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** You can use this code in the htmlviewer open event:

Example:

```
if targetwin32 then
htmlviewer1..ole.Content.value("Silent") = True
end if
```

Notes: This disables the error dialogs from Internet Explorer.

18.0.103 How to display a PDF file in REALbasic?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** On Mac OS X you can use CoreGraphics or PDFKit to display a PDF.

Notes:

An alternative can be to load the PDF into a htmlviewer so the PDF plugin can display it. On Windows you may need to use the Acrobat ActiveX control from Adobe or launch Acrobat Reader.

18.0.104 How to do a lottery in RB?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Try this function:

Example:

```
Sub Lotto(max as Integer,count as Integer,z() as Integer)
// Lotto count numbers of max put into the array z beginning at index 0
dim n(0) as Integer ' all the numbers
dim m as Integer ' the highest field in the current array
dim i,a,b,d as Integer ' working variables

'fill the array with the numbers
m=max-1
redim n(m)
```


You can use `DNSLookupThreadMBS` class for doing them asynchron.

18.0.106 How to draw a dashed pattern line?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can try this code:

Example:

// call like this: DrawDashedPatternLine g,0,0,width,height,10

```
Sub DrawDashedPatternLine(g as graphics,x1 as Integer,y1 as Integer,x2 as Integer,y2 as Integer, partlen
as Integer)
dim x,y,ox,oy as Double
dim dx,dy as Double
dim w,h,d as Double
dim b as Boolean

w=x2-x1
h=y2-y1

d=sqrt(w*w+h*h)

dx=w/d*partlen
dy=h/d*partlen

b=true
x=x1
while (x<x2) and (y<y2)
ox=x
oy=y

x=x+dx
y=y+dy

if b then
g.DrawLine ox,oy,x,y
end if

b=not b
wend

End Sub
```

Notes: It would be possible to add this to the plugin, but I think it's better if you do it in plain Realbasic code, so it even works on Windows.

18.0.107 How to draw a nice antialiased line?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:**

This code can help you although it's not perfect.

You need to set lc to the current color you use.

Example:

```
Sub drawLine(xs as Integer, ys as Integer, xe as Integer, ye as Integer, face as RGBSurface, lineColor as
color)
dim intX, intY, count, n, xDiff, yDiff as Integer
dim v, v1, floatX, floatY, xx, yy, xStep, yStep as Double
dim c as color

const st=1.0

xDiff=xe-xs
yDiff=ye-ys
count=max(abs(xDiff), abs(yDiff))
xStep=xDiff/count
yStep=yDiff/count
xx=xs
yy=ys
for n=1 to count
intX=xx
intY=yy
floatX=xx-intX
floatY=yy-intY

v=(1-floatX)*(1-floatY)*st
v1=1-v
c=face.pixel(intX, intY)
face.pixel(intX, intY)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)
v=floatX*(1-floatY)*st
v1=1-v
c=face.pixel(intX+1, intY)
face.pixel(intX+1, intY)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)
v=(1-floatX)*floatY*st
v1=1-v
c=face.pixel(intX, intY+1)
face.pixel(intX, intY+1)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)
v=floatX*floatY*st
v1=1-v
c=face.pixel(intX+1, intY+1)
face.pixel(intX+1, intY+1)=rgb(v*lineColor.red+v1*c.red, v*lineColor.green+v1*c.green, v*lineColor.blue+v1*c.blue)
```

```
xx=xx+xStep
yy=yy+yStep
next
```

End Sub

Notes: PS: st should be 1 and face should be a RGBSurface or a Graphics object.

18.0.108 How to draw with CGContextMBS using my own handle?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can try this code:

Example:

```
Soft Declare Function QDBeginCGContext Lib "Carbon" (port as Integer, ByRef contextHandle as Integer)
as Integer
dim contextRef as Integer
call QDBeginCGContext(g.handle(graphics.HandleTypeCGrafPtr), contextRef)
dim c as new CGContextMBS(contextRef)
```

```
c.BeginPath
c.SetLineWidth(3)
c.SetRGBFillColor(1,0,0,0.5)
c.FillRect(CGMakeRectMBS(0,0,100,100))
c.DrawPath(c.kCGPathFillStroke)
c.Flush // and so on
```

```
Soft Declare Function QDEndCGContext Lib "Carbon" (port as Integer, ByRef contextHandle as Integer)
as Integer
dim h as Integer = c.Handle
call QDEndCGContext(g.handle(graphics.HandleTypeCGrafPtr), h)
c.Handle=0
```

Notes: Basicly you can provide your own handle to CGContextMBS. But if you do not set it back to 0 the CGContextMBS destructor will release the handle which can result into a crash. (if the reference count is wrong)

18.0.109 How to dump java class interface?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** In terminal you can use "javap -s <classname>" to display the class with the method names and parameters.

Notes: For example show ResultSet class: javap -s java.sql.ResultSet

18.0.110 How to duplicate a picture with mask or alpha channel?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use code like this function:

Example:

```
Function Duplicate(extends p as Picture) As Picture
# if RBVersion >= 2011.04 then
if p.HasAlphaChannel then

// create nw picture and copy content:
dim q as new Picture(p.Width, p.Height)
q.Graphics.DrawPicture p,0,0

Return q

end if
# endif

// create new picture
dim q as new Picture(p.Width, p.Height, 32)

// get mask
dim oldMask as Picture = p.mask(false)
if oldMask = nil then
// no mask, so simple copy
q.Graphics.DrawPicture p,0,0
Return q
end if

// remove mask
p.mask = nil

// copy picture and mask
q.Graphics.DrawPicture p, 0, 0
q.mask.Graphics.DrawPicture oldMask,0,0

// restore mask
p.mask = oldmask

Return q
End Function
```

Notes:

Simply copy it to a module and call it like this: `q = p.duplicate`.

The code above works with old Real Studio versions because of the `#` if even if your RS version does not support alpha channel pictures. This way it's future proof.

18.0.111 How to enable assistive devices?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use AppleScript code like below:

Notes:

```
tell application "System Events"
activate
```

```
set UI elements enabled to true
```

```
return UI elements enabled
end tell
```

You can run this with AppleScriptMBS class.

18.0.112 How to encrypt a file with Blowfish?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use code like this:

Example:

```
dim fi as FolderItem = SpecialFolder.Desktop.Child("test.xojo_binary_project")
dim fo as FolderItem = SpecialFolder.Desktop.Child("test.encrypted")
```

```
// read input
dim bi as BinaryStream = BinaryStream.Open(fi)
dim si as string = bi.Read(bi.Length)
bi.Close
```

```
// encrypt
dim so as string = BlowfishMBS.Encrypt("MyKey",si)
```

```
// write output
dim bo as BinaryStream = BinaryStream.Create(fo)
bo.Write so
bo.Close
```

Notes: Of course you can decrypt same way, just use Decrypt function and of course swap files.

18.0.113 How to extract text from HTML?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use both RemoveHTMLTagsMBS and DecodingFromHTMLMBS like this:

Example:

```
dim html as string = "<p><B>Gr&uuml;&szlig;e</B></P>"
dim htmltext as string = RemoveHTMLTagsMBS(html)
dim text as string = DecodingFromHTMLMBS(htmltext)
```

MsgBox text // shows: Gre

Notes:

You can use it together with RemoveHTMLTagsMBS to remove html tags. What you get will be the text without tags.

DecodingFromHTMLMBS turns HTML escapes back to unicode characters. Like ä to .

18.0.114 How to find empty folders in a folder?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Try this code:

Example:

```
dim folder as folderitem // your folder

dim c as Integer = folder.count
for i as Integer = 1 to c
dim item as folderitem = folder.trueitem(i)
if item = nil then
// ignore
elseif item.directory then
// folder
if item.count = 0 then
// found empty folder
end if
end if
next
```

18.0.115 How to find iTunes on a Mac OS X machine fast?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can try Launch Services.

Example:

```
dim f as FolderItem
```

```
f=LaunchServicesFindApplicationForInfoMBS("hook","com.apple.iTunes","iTunes.app")
```

```
MsgBox f.AbsolutePath
```

18.0.116 How to find network interface for a socket by it's name?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use our plugin to build a lookup table.

Example:

```
Function FindNetworkInterface(name as string) As NetworkInterface
name = name.trim
```

```
if name.len = 0 then Return nil
```

```
// search by IP/MAC
```

```
dim u as Integer = System.NetworkInterfaceCount-1
for i as Integer = 0 to u
dim n as NetworkInterface = System.GetNetworkInterface(i)
if n.IPAddress = name or n.MACAddress = name then
Return n
end if
next
```

```
// use MBS Plugin to build a mapping
```

```
dim interfaces() as NetworkInterfaceMBS = NetworkInterfaceMBS.AllInterfaces
dim map as new Dictionary
```

```
for each n as NetworkInterfaceMBS in interfaces
```

```
dim IPv4s() as string = n.IPv4s
```

```
dim IPv6s() as string = n.IPv6s
```

```
for each IPv4 as string in IPv4s
```

```
map.Value(IPv4) = n.Name
```

```
next
```

```
for each IPv6 as string in IPv6s
```

```
map.Value(IPv6) = n.Name
```



```

next
if n.MAC<>>" then
map.Value(n.MAC) = n.Name
end if
next

// now search interfaces by name, IPv4 or IPv6
for i as Integer = 0 to u
dim n as NetworkInterface = System.GetNetworkInterface(i)
if map.Lookup(n.IPAddress, "") = name then
Return n
end if

if map.Lookup(n.MACAddress, "") = name then
Return n
end if
next

End Function

```

Notes: The code above uses a lookup table build using NetworkInterfaceMBS class to find the network interface by name.

18.0.117 How to find version of Microsoft Word?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use code like this:

Example:

```

// find Word
dim f as FolderItem = LaunchServicesFindApplicationForInfoMBS("", "com.microsoft.Word", "")

// open bundle
dim c as new NSBundleMBS(f)

// read info
dim d as Dictionary = c.infoDictionary

// show version
MsgBox d.Lookup("CFBundleVersion", "")

```

Notes: Older versions of Word can be found with creator code "MSWD".

18.0.118 How to fix CURL error 60/53 on connecting to server?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You probably connect with SSL and you have no valid certificate.

Example:

```
dim d as new CURLSMBS

// Disable SSL verification
d.OptionSSLVerifyHost = 0 // don't verify server
d.OptionSSLVerifyPeer = 0 // don't proofs certificate is authentic

// With SSL Verification:
dim cacert as FolderItem = Getfolderitem("cacert.pem")
d.OptionCAInfo = cacert.UnixpathMBS
d.OptionSSLVerifyHost = 2 // verify server
d.OptionSSLVerifyPeer = 1 // proofs certificate is authentic
```

Notes:

You can either use the code above to disable the SSL verification and have no security. Or you use the cacert file and enable the verification. Than you only get a connection if the server has a valid certificate.

see also:

<http://curl.haxx.se/ca/>

18.0.119 How to format double with n digits?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use the FormatMBS function for this.

Example:

```
dim d as Double = 123.4567890
listbox1.AddRow FormatMBS("% f", d)
listbox1.AddRow FormatMBS("% e", d)
listbox1.AddRow FormatMBS("% g", d)

listbox1.AddRow FormatMBS("% 5.5f", d)
listbox1.AddRow FormatMBS("% 5.5e", d)
listbox1.AddRow FormatMBS("% 5.5g", d)

d = 0.000000123456
listbox1.AddRow FormatMBS("% f", d)
listbox1.AddRow FormatMBS("% e", d)
```

```
listbox1.AddRow FormatMBS("% g", d)

listbox1.AddRow FormatMBS("% 5.5f", d)
listbox1.AddRow FormatMBS("% 5.5e", d)
listbox1.AddRow FormatMBS("% 5.5g", d)
```

Notes:

see FormatMBS for details.

In general % f is normal style, % e is scientific and % g is whichever gives best result for given space.

18.0.120 How to get a time converted to user time zone in a web app?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use the WebSession.GMTOffset property.

Example:

```
Sub Open()
// current date on server
dim d as new date
dim s as string = d.LongTime

// adjust to client GMT offset
d.GMTOffset = d.GMTOffset + Session.GMTOffset

dim t as string = D.LongTime

MsgBox s+EndOfLine+t
End Sub
```

18.0.121 How to get an handle to the frontmost window on Windows?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** This function returns a handle for the frontmost window:

Example:

```
Function GetForegroundWindowHandle() as Integer
# if targetwin32 then
declare function GetForegroundWindow Lib "user32.dll" as Integer
Return GetForegroundWindow()
# endif
End Function
```

18.0.122 How to get CFAbsoluteTime from date?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** Use code like this:

Example:

```
dim d as new date
dim t as CFTimeZoneMBS = SystemCFTimeZoneMBS
dim g as new CFGregorianCalendarMBS
g.Day = d.Day
g.Month = d.Month
g.Year = d.Year
g.Minute = d.Minute
g.Hour = d.Hour
g.Second = d.Second

dim at as CFAbsoluteTimeMBS = g.AbsoluteTime(t)
dim x as Double = at.Value
```

```
MsgBox str(x)
```

Notes:

As you see we need a timezone and put the date values in a gregorian date record. Now we can query absolute time for the given timezone.

18.0.123 How to get client IP address on web app?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use the `WebSession.RemoteAddress` property.

Example:

```
Sub Open()
Title = Session.RemoteAddress
End Sub
```

18.0.124 How to get fonts to load in charts on Linux?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Please use the SetFontSearchPath method in the CDBaseChartMBS class to specify where your fonts are.

Example:

```
if TargetLinux then
CDBaseChartMBS.SetFontSearchPath "/usr/share/fonts/truetype"
else
// on Mac and Windows we use system fonts.
end if
```

Notes:

On Mac OS X and Windows, the fonts are loaded from the system's font folder.

e.g. if you use ubuntu, you can install the ttf-mscorefonts-installer package and call this method with "/usr/share/fonts/truetype/msttcorefonts" as the path. No backslash on the end of a path, please.

18.0.125 How to get fonts to load in DynaPDF on Linux?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Please use the AddFontSearchPath method in the DynaPDFMBS class to specify where your fonts are.

Example:

```
dim d as new DynaPDFMBS
if TargetLinux then
call d.AddFontSearchPath "/usr/share/fonts/truetype", true
else
// on Mac and Windows we use system fonts.
end if
```

Notes:

On Mac OS X and Windows, the fonts are loaded from the system's font folder.

e.g. if you use ubuntu, you can install the ttf-mscorefonts-installer package and call this method with "/usr/share/fonts/truetype/msttcorefonts" as the path. No backslash on the end of a path, please.

18.0.126 How to get GMT time and back?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use the date class and the GMTOffset property.

Example:

```
// now
dim d as new date

// now in GMT
dim e as new date
e.GMTOffset = 0

// show
MsgBox str(d.TotalSeconds,"0.0")+ " " +str(e.TotalSeconds, "0.0")

dim GMTTimeStamp as Double = e.TotalSeconds

// restore
dim f as new date

// add GMT offset here
f.TotalSeconds = GMTTimeStamp + f.GMTOffset*3600
// because here it's removed
f.GMTOffset = f.GMTOffset

MsgBox d.ShortTime+ " (" +str(d.GMTOffset)+") " +str(d.TotalSeconds,"0.0")+EndOfLine+_
e.ShortTime+ " (" +str(e.GMTOffset)+") " +str(e.TotalSeconds,"0.0")+EndOfLine+_
f.ShortTime+ " (" +str(f.GMTOffset)+") " +str(f.TotalSeconds,"0.0")
```

Notes: It's sometimes a bit tricky with the date class as setting one property often changes the others.

18.0.127 How to get good crash reports?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Check this website from the webkit website:

Notes: <http://webkit.org/quality/crashlogs.html>

18.0.128 How to get list of all threads?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use the runtime module like in this function:

Example:

```

Function Threads() As Thread()
# pragma DisableBackgroundTasks
dim t() as Thread

Dim o as Runtime.ObjectIterator=Runtime.IterateObjects
While o.MoveNext
if o.Current isa Thread then
t.Append thread(o.current)
end if
Wend

Return t
End Function

```

Notes:

This returns an array of all thread objects currently in memory.
The pragma is important here as it avoids thread switches which may cause a thread to be created or deleted.

18.0.129 How to get parameters from webpage URL in Real Studio Web Edition?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use the Webpage.ParametersReceived event.

Example:

```

Sub ParametersReceived(Variables As Dictionary)
for each key as Variant in Variables.keys
MsgBox key+" ->" +Variables.Value(key)
next
End Sub

```

Notes: The text encodings of this strings is not defined in Real Studio 2010r5. Please use DefineEncoding.

18.0.130 How to get Real Studio apps running Linux?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You need to install some require packages.

Notes:

You need CUPS as well as GTK packages. On 64 bit systems also the ia32-libs package.

Please note that you need a x86 compatible Linux. So no PPC, Power, ARM or other CPUs.

18.0.131 How to get the color for disabled textcolor?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Ask the appearance manager:

Example:

```
Function GetThemeTextColor(inColor as Integer, inDepth as Integer, inColorDev as Boolean) As Color
declare function GetThemeTextColor lib "Carbon" (inColor as Integer, inDepth as Integer, inColorDev as Boolean, outColor as Ptr) as Integer
```

```
dim i as Integer
dim col as MemoryBlock
```

```
col = newMemoryBlock(6)
```

```
i = GetThemeTextColor(inColor, inDepth, inColorDev, col)
```

```
return RGB(col.UShort(0)\256, col.UShort(2)\256, col.UShort(4)\256)
End Function
```

Notes:

The color for this is:

```
const kThemeTextColorDialogInactive = 2.
```

```
c = GetThemeTextColor(kThemeTextColorDialogInactive, Screen(0).Depth, true)
```

For Mac OS X you should use "CarbonLib" instead of "AppearanceLib" ...

18.0.132 How to get the current free stack space?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can something like the code below:

Example:


```

Sub ShowStackSize()
dim threadid as Integer
dim size as Integer

declare function GetCurrentThread lib "Carbon" (byref threadid as Integer) as short
declare function ThreadCurrentStackSize lib "Carbon" (threadid as Integer, byref size as Integer) as short

if GetCurrentThread(threadid)=0 then
if 0=ThreadCurrentStackSize(threadid,size) then
MsgBox str(size)
end if
end if
End Sub

```

Notes: For Mac OS 9, use "ThreadLib" instead of "CarbonLib". You can use # if you like for that.

18.0.133 How to get the current timezone?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:**

You can use the TimeZoneMBS class or the CTimeZoneMBS class.

Or code like below:

Example:

```

Function GMTOffsetInMinutes() as Integer
// Returns the offset of the current time to GMT in minutes.
// supports Mac OS and Windows, but not Linux yet (let me know if
// you have code for that, please)
//
// Note that the offset is not always an even multiple of 60, but
// there are also half hour offsets, even one 5:45h offset

// This version by Thomas Tempelmann (rb@tempel.org) on 25 Nov 2005
// with a fix that should also make it work with future Intel Mac targets.
//
// Using code from various authors found on the RB NUG mailing list

dim result, bias, dayLightbias as Integer
dim info as memoryBlock
dim offset as Integer

# if targetMacOS then

Declare Sub ReadLocation lib "Carbon" (location As ptr)

```

```

info = NewMemoryBlock(12)
ReadLocation info
if false then
// bad, because it does not work on Intel Macs:
`offset = info.short(9) * 256 + info.byte(11)
else
offset = BitwiseAnd (info.long(8), & hFFFFFF)
end

offset = info.short(9) * 256 + info.byte(11)
offset = offset \60
return offset

# endif

# if targetWin32 then

Declare Function GetTimeZoneInformation Lib "Kernel32" ( tzInfoPointer as Ptr ) as Integer
// returns one of
// TIME_ZONE_ID_UNKNOWN 0
// - Note: e.g. New Delhi (GMT+5:30) and Newfoundland (-3:30) return this value 0
// TIME_ZONE_ID_STANDARD 1
// TIME_ZONE_ID_DAYLIGHT 2

info = new MemoryBlock(172)
result = GetTimeZoneInformation(info)

bias = info.Long(0)
// note: the original code I found in the NUG archives used Long(84) and switched to Long(0)
// only for result=1 and result=2, but my tests found that Long(0) is also the right value for result=0

if result = 2 then
daylightBias = info.long(168)
end if
offset = - (bias + dayLightbias)
return offset

# endif

End Function

```

18.0.134 How to get the current window title?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** The code below returns the current window title for the frontmost window on Mac OS X if Accessibility services are

Example:

```

Function CurrentWindowTitle() As string
dim SystemWideElement,FocusedApplicationElement,FocusedWindowElement as AXUIElementMBS
dim FocusedApplication,FocusedWindow,Title as AXValueMBS
dim s as String
dim cs as CFStringMBS

SystemWideElement=AccessibilityMBS.SystemWideAXUIElement
if SystemWideElement<>nil then
FocusedApplication=SystemWideElement.AttributeValue(AccessibilityMBS.kAXFocusedApplicationAttribute)
if FocusedApplication.Type=AccessibilityMBS.kAXUIElementMBSTypeID then
FocusedApplicationElement=new AXUIElementMBS
FocusedApplicationElement.Handle=FocusedApplication.Handle
FocusedApplicationElement.RetainObject

FocusedWindow=FocusedApplicationElement.AttributeValue(AccessibilityMBS.kAXFocusedWindowAttribute)

if FocusedWindow<>nil and AccessibilityMBS.kAXUIElementMBSTypeID=FocusedWindow.Type then

FocusedWindowElement=new AXUIElementMBS
FocusedWindowElement.Handle=FocusedWindow.Handle
FocusedWindowElement.RetainObject

Title=FocusedWindowElement.AttributeValue(AccessibilityMBS.kAXTitleAttribute)
if Title<>nil and Title.Type=kCFStringMBSTypeID then
cs=new CFStringMBS
cs.handle=Title.Handle
cs.RetainObject
Return cs.str
end if
end if
end if
end if
End Function

```

18.0.135 How to get the cursor blink interval time?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** On Mac OS you can use GetCaretTime from the toolbox.

Example:

```

declare function GetCaretTime lib "Carbon" () as Integer

MsgBox str(GetCaretTime())+" ticks"

```

Notes: 60 ticks make one second.

18.0.136 How to get the list of the current selected files in the Finder?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:**

Use the AppleScript like this one:

```
tell application "finder"
return selection
end tell
```

Which translates into this AppleEvent:

```
Process("Finder").SendAE "core,getd,'—':obj { form:prop, want:type(prop), seld:type(sele), from:'null'() }
"
```

and as Realbasic code it looks like this:

Example:

```
dim ae as appleevent
dim o1 as appleeventObjectSpecifier
dim f as folderItem
dim alist as appleeventdescList
dim i as Integer
dim dateiname as string

// setup the AppleEvent
o1=getpropertyObjectDescriptor( nil, "sele")
ae= newappleEvent("core", "getd", "MACS")
ae.objectSpecifierParam("—")=o1

// send it
if ae.send then
// got the list
alist=ae.replyDescList

// now show the list of filename into an editfield:

for i=1 to alist.count
f=alist.folderItem(i)

dateiname=f.name
```

```
// editfield1 with property "multiline=true"!
editfield1.text=editfield1.text + dateiname + chr(13)
next
end if
```

18.0.137 How to get the Mac OS system version?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** The following code queries the value and displays the version number:

Example:

```
dim first as Integer
dim second as Integer
dim third as Integer
dim l as Integer

if System.Gestalt("sysv",l) then

Third=Bitwiseand(l,15)
second=Bitwiseand(l\16,15)
first=Bitwiseand(l\256,15)+10*Bitwiseand(l\256\16,15)
end if

if First>=10 then
msgbox "Mac OS X "+str(First)+". "+str(Second)+". "+str(third)
else
msgbox "Mac OS "+str(First)+". "+str(Second)+". "+str(third)
end if
```

18.0.138 How to get the Mac OS Version using System.Gestalt?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this code:

Example:

```
Dim s As String
Dim b As Boolean
Dim i, resp as Integer

// Systemversion
b = System.Gestalt("sysv", resp)
If b then
s = Hex(resp)
```

```

For i =Len(s)-1 DownTo 1
s=Left(s,i)+". "+Mid(s,i+1)
Next
MsgBox "Systemversion: Mac OS " + s
end if

```

Notes: The MBS Plugin has a SystemInformationMBS.OSVersionString function for this.

18.0.139 How to get the screensize excluding the task bar?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Try this code:

Notes: Use the Screen class with the available* properties.

18.0.140 How to get the size of the frontmost window on Windows?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Try this code:

Notes:

Make yourself a class for the WindowRect with four properties:

```

Bottom as Integer
Left as Integer
Right as Integer
Top as Integer

```

Add the following method to your class:

```

Sub GetWindowRect(windowhandle as Integer)
dim err as Integer
dim mem as memoryBlock
# if targetwin32 then
Declare Function GetWindowRect Lib "user32.dll" (hwnd as Integer, ipRect As Ptr) as Integer

mem = newmemoryBlock(16)
err = GetWindowRect(windowhandle, mem)
Left = mem.long(0)
Top = mem.Long(4)
Right = mem.Long(8)
Bottom = mem.Long(12)
# endif

```

End Sub

Good to use for the MDI Master Window!

18.0.141 How to get the source code of a HTMLViewer?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this code:

Example:

// for Windows:

```
msgbox HTMLViewer1.IEHTMLTextMBS
```

// for Mac OS X:

```
msgbox HTMLViewer1.mainFrameMBS.dataSource.data
```

18.0.142 How to handle really huge images with GraphicsMagick or ImageMagick?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Sometimes it may be better to use an extra application to process images.

Notes:

A typical 32 bit app made with Xojo (Real Studio) can use around 1.8 GB on Windows and 3 GB on Mac OS X. Some images may be huge, so that processing them causes several copies of the image to be in memory. With a 500 MB image in memory, doing a scale or rotation may require a temp image. So with source, temp and dest images with each 500 MB plus your normal app memory usage, you may hit the limit of Windows with 1.8 GB.

In that case it may be worth running a tool like gm in the shell class. gm is the command line version of GraphicsMagick. There you can run the 64 bit version which is not limited in memory like your own application. Also you can monitor progress and keep your app responsive.

18.0.143 How to handle tab key for editable cells in listbox?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use code like this function:

Example:

```
Function HandleTabInList(list as listbox, row as Integer, column as Integer, key as String) As Boolean
// Handle tab character in Listbox.CellKeyDown event
```

```
Select case asc(key)
case 9
if Keyboard.AsyncShiftKey then
// back

// look for column left
for i as Integer = column-1 downto 0
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next

// not found, so look in row before
row = row - 1
if row >= 0 then
for i as Integer = list.ColumnCount-1 downto 0
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next
end if
else
// forward

// look for column right
for i as Integer = column+1 to list.ColumnCount-1
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next

// not found, so look in row below
row = row + 1
if row <list.ListCount then
for i as Integer = 0 to list.ColumnCount-1
if list.ColumnType(i) >= list.TypeEditable then
list.EditCell(row, i)
Return true
end if
next
end if
end if
```



```
end Select
End Function
```

Notes:

You call it from CellKeyDown event like this:

```
EventHandler Function CellKeyDown(row as Integer, column as Integer, key as String) As Boolean
if HandleTabInList(me, row, column, key) then Return true
End EventHandler
```

As you see in the code, we handle tab and shift + tab for moving back and forward. Also we wrap to previous/next row if needed. Feel free to extend this to wrap from last to first row or create a new row for editing.

18.0.144 How to hard link MapKit framework?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Our MapKit classes weak link the framework. If you need hard linking it for the App Store, you can add this method to a class:

Example:

```
Sub ReferenceMapKit()
// just put this in window or app class

# if TargetMachO and Target64Bit then
Declare sub testing Lib "MapKit" Selector "test" (id as ptr)
testing(nil)
# endif

End Sub
```

Notes:

No need to call the method.

Just having it in a window or app, will cause the compiler to hard link the framework.

18.0.145 How to have a PDF downloaded to the user in a web application?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use a WebHTMLViewer control and load the PDF file with the PDF plugin from the browser.

Example:

```

dim CurrentFile as WebFile // a property of the WebPage

// define the PDF file
CurrentFile = new WebFile
CurrentFile.Filename = "test.pdf"
CurrentFile.MIMEType = "application/pdf"
CurrentFile.Data = "some pdf data" // MyDynaPDF.GetBuffer
CurrentFile.ForceDownload = true

// start the download
showurl(CurrentFile.url)

```

Notes: See our Create PDF example for the Real Studio Web Edition.

18.0.146 How to hide all applications except mine?

Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** The code below will on Mac OS hide all applications except your one:

Example:

```

dim p as new ProcessMBS

p.GetFirstProcess
do
if not p.FrontProcess then
p.Visible=false
end if
loop until not p.GetNextProcess

```

18.0.147 How to hide script errors in HTMLViewer on Windows?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Set Internet Explorer to silent mode with code like this:

Example:

```

htmlviewer1..ole.Content.value("Silent") = True

```

Notes: Simply put this code in the open event of your htmlviewer control (using me instead of htmlviewer1).

18.0.148 How to hide the grid/background/border in ChartDirector?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** If you want to hide something in a chart, simply assign the kTransparent constant as color.

18.0.149 How to hide the mouse cursor on Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this declare:

Example:

```
Declare Sub HideCursor Lib "Carbon" () Inline68K("A852")
```

```
HideCursor
```

Notes: The MBS Plugin has this function and supports it on Windows, too.

18.0.150 How to insert image to NSTextView or TextArea?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** With NSTextViewMBS you can use this code to insert file:

Example:

```
// insert a file to textview
```

```
Public Sub InsertFile(textview as NSTextViewMBS, f as FolderItem)
```

```
// read to file
```

```
dim b as BinaryStream = BinaryStream.Open(f)
```

```
dim s as string = b.Read(b.Length)
```

```
// build wrapper
```

```
dim fileWrapper as NSFileWrapperMBS = NSFileWrapperMBS.initRegularFileWithContents(s)
```

```
fileWrapper.preferredFilename = f.name
```

```
// make attachment
```

```
dim fileAttachment as new NSTextAttachmentMBS(fileWrapper)
```

```
dim attributedString as NSAttributedStringMBS = NSAttributedStringMBS.attributedStringWithAttachment(fileAttachment)
```

```
// add to a NSTextViewMBS
```

```
textview.insertText attributedString
```

```
End Sub
```

Notes: For TextArea you can query the underlying NSTextViewMBS object via TextArea.NSTextViewMBS method.

18.0.151 How to jump to an anchor in a htmlviewer?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** You can use javascript to change the current window's location.

Example:

```
// load website
htmlviewer1.LoadURL "http://www.monkeybreadsoftware.net/addressbook-abpersonmbs.shtml"

// later jump to anchor named "16":

if TargetWin32 then
call HTMLViewer1.IERunJavaScriptMBS "window.location = ""# 16""
elseif TargetMacOS then
call HTMLViewer1.EvaluateJavaScriptMBS "window.location = ""# 16""
else
// not supported
end if
```

18.0.152 How to keep a movieplayer unclickable?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** To keep the user away from clicking on a playing Movie you can just drop a Canvas in front of the Movieplayer and take the clicks there.

Example:

```
Function Canvas1.MouseDown(X as Integer, Y as Integer) as boolean
return true // take it and do nothing
End Function
```

18.0.153 How to keep my web app from using 100% CPU time?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** On Linux and Mac OS X you can use renice command in the terminal. On Windows use the task manager to reduce priority.

Notes:

If you launch your app with nohup on Linux or Mac OS X like this from the terminal or a script:

```
nohup /webapps/MyApp/MyApp &
```

you can simply have a second line saying this:

```
renice 20 $ !
```

which tells the system to lower priority to lowest value for the latest background process.

18.0.154 How to kill a process by name?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can kill a process (or application) by name if you loop over all the processes and kill the one you need.

Example:

```
dim p as new ProcessMBS
p.GetfirstProcess ' get first
do
if p.name = "TextEdit" then
call p.KillProcess
Return
end if
loop until not p.GetNextProcess
```

Notes: You may want to check the result of killProcess function. Not every user is allowed to kill every application.

18.0.155 How to know how many CPUs are present?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this function:

Example:

```
Function GetCPUCount() as Integer
Declare Function MPProcessors Lib "Carbon" () as Integer

Return MPProcessors()
End Function
```

Notes: Your app will then need that library to launch on Classic. To avoid this the MBS plugin checks if this library is available and return 1 if it's not available.

18.0.156 How to know if a movie is finished?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** This code can help you although it's not perfect:

Example:

```
Declare Function IsMovieDone Lib "QuickTime" (theMovie as Integer) as Integer
```

```
if IsMovieDone(moviePlayer1.movie.handle) <>0 then
//movie is finished
end if
```

Notes: But be carefull! It crashes sometimes for an unknown reason!?

18.0.157 How to know if QuickTime is installed on any target and can play MPEG 4 movies?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** Try this code:

Example:

```
dim q as QTComponentInformationMBS

q=new QTComponentInformationMBS

// "eat " = Movie importers
while q.NextComponentOfType("eat ")
if q.SubType="MP4 " then
MsgBox "found: "+q.Name+ " codec"
end if
wend
```

Notes: If you find a MP4 movie importing codec you can be sure that a MP4 movie can be opened.

18.0.158 How to know if QuickTime is installed on any target?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** Try this function:

Example:

```
Dim theEffect as QTEffect

theEffect=GetQTCrossFadeEffect

if theEffect = nil then
msgBox "QuickTime is not installed."
else
msgBox "Quicktime is installed."
end if
```

Notes: The problem with this code is that it checks only if the QuickTime part of the cross fade effect is available. Use the QTComponentInformationMBS to check for the features you really need.

18.0.159 How to know the calling function?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** On Mac you can use a helper function like this this code:

Example:

```
Public Function CallingFunction() as string
// Query name of calling function of a function

# Pragma BreakOnExceptions false

try

// raise a dummy exception
dim r as new NilObjectException
raise r

catch x as NilObjectException

// get stack
dim stack() as string = x.Stack

// pick function name and return
dim name as string = stack(2)
Return name

end try
```

End Function

Notes: You need to include function names in your application.

18.0.160 How to launch an app using it's creator code?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Send an AppleEvent "oapp" with the creator code to the Finder ("MACS"):

Example:

```
Dim a as AppleEvent
dim creator as string

creator = "MSIE" ' here the Internet Explorer

a = NewAppleEvent("aevt", "odoc", "MACS")
a.Timeout = -1

a.ObjectSpecifierParam("—") = GetUniqueIDObjectDescriptor("appf", nil, creator)

if not a.send then
msgBox "An error has occured"
else

end if
```

18.0.161 How to launch disc utility?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use this code:

Example:

```
dim f as FolderItem = LaunchServicesFindApplicationForInfoMBS("", "com.apple.DiskUtility", "")

if f<>Nil then
f.Launch
end if
```

Notes: This works even if people renamed the disc utility or moved it to another folder.

18.0.162 How to make a lot of changes to a REAL SQL Database faster?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You may try to embed your changes to the database between two transaction calls.

Example:

```
dim db as Database // some database

db.SQLExecute "BEGIN TRANSACTION"
// Do some Stuff
db.SQLExecute "END TRANSACTION"
```

Notes: This can increase speed by some factors.

18.0.163 How to make a NSImage object for my retina enabled app?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use code like this:

Example:

```
Function NewRetinaImage(pic as Picture, mask as Picture = nil) As NSImageMBS
// first make a NSImageMBS from it
dim n as new NSImageMBS(pic, mask)

// now set to half the size, so we have 2x pixels for the image
n.size = new NSSizeMBS(n.width/2, n.height/2)

// and return
Return n
End Function
```

Notes:

The thing to do is to have 2x the pixels, but assign a size to the image which gives it the right size in points. You can pass the NSImageMBS from here to NSMenuItemMBS. For Retina displays, the full resolution is used. For others it will be reduced.

18.0.164 How to make a window borderless on Windows?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Try this declares:

Example:

```

// Sets window to borderless popup type, and sets its initial dimensions.
// Call this method, then Win32SetBorderlessPos, and then RB's Show
// method. Use RB Frame type 7 (Global Floating Window).

Const SWP_NOMOVE = & H2
Const SWP_FRAMECHANGED = & H20
Const HWND_TOPMOST = -1
Const GWL_STYLE = -16
Const WS_POPUPWINDOW = & H80880000

Dim styleFlags as Integer

# If TargetWin32 Then

Declare Function SetWindowLong Lib "user32" Alias "SetWindowLongA" (hwnd as Integer, nIndex as Integer, dwNewLong as Integer) as Integer
Declare Function SetWindowPos Lib "user32" (hwnd as Integer, hWndInstertAfter as Integer, x as Integer, y as Integer, cx as Integer, cy as Integer, flags as Integer) as Integer

styleFlags = SetWindowLong( w.WinHWND, GWL_STYLE, WS_POPUPWINDOW )
styleFlags = BitwiseOr( SWP_FRAMECHANGED, SWP_NOMOVE )
styleFlags = SetWindowPos( w.WinHWND, HWND_TOPMOST, 0, 0, wd, ht, styleFlags )

# EndIf

```

18.0.165 How to make an alias using AppleEvents?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this code:

Example:

```

Sub MakeAlias(folder as folderitem, target as folderitem, aliasname as string)
dim ev as AppleEvent
dim myResult as boolean
dim properties as AppleEventRecord

ev = NewAppleEvent("core", "crel", "MACS")
ev.MacTypeParam("kocl") = "alis"
ev.FolderItemParam("to ") = target
ev.FolderItemParam("insh") = folder

properties=new AppleEventRecord
properties.StringParam("pnam")=aliasname

ev.RecordParam("prdt")=properties

```

```
myResult = ev.send
// true on success, false on error
End Sub
```

Notes:

Call it like this:

```
MakeAlias SpecialFolder.Desktop, SpecialFolder.Desktop.Child("Gif Copy.rb"), "test.rb alias"
```

Seems to not work on Mac OS X 10.6

18.0.166 How to make an application smaller?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:**

If you use an older copy of REALbasic, you should try to compile for 68k only instead of PPC. It's a little bit slower, but code is much smaller.

On any Mac OS target you can save your images as JPEG and drop the into your application. REALbasic will include them as JPEGs into the Mac applications (convert to BMP for Windows). This will make the resources of your application smaller, but requires that the user has QuickTime 2.5 or newer installed.

18.0.167 How to make AppleScripts much faster?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** use "ignoring application responses" like in this example:

Notes:

```
on run { fn, fpx, fpy }
ignoring application responses
tell app "Finder" to set the position of folder fn to fpx, fpy
end ignoring
end run
```

18.0.168 How to make double clicks on a canvas?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:**

Update: Newer Xojo versions support DoubleClick event, so you don't need this code.

Here's my tip from the tips list on how to add a double-click event to the Canvas control. The technique could easily be used for a window or any Rectcontrol:

Because of its built-in drawing methods, the Canvas control is often used to create custom interface controls. But while the Canvas control has event handlers for most mouse events, it doesn't have an event handler for DoubleClick events. Fortunately, you can add a double-click event handler to a Canvas control easily. Basically, you're going to create a new class based on Canvas and add a double-click event to that. You can then use the new class anytime you need a Canvas with a double-click event.

To create a new Canvas class with a DoubleClick event handler, do this:

1. Add a new class to your project.
2. Set the Super property of the new class to "Canvas".
3. Change the name of this new class to "DoubleClickCanvas".

A double-click occurs when two clicks occur within the users double-click time (set in the Mouse control panel on both Macintosh and Windows) and within five pixels of each other. So, you'll need a few properties to store when and where the last click occurred.

4. Add a new property with the following declaration and mark it as private: lastClickTicks as Integer
5. Add a new property with the following declaration and mark it as private: lastClickX as Integer
6. Add a new property with the following declaration and mark it as private: lastClickY as Integer

Since the Canvas control doesn't have a DoubleClick event, you will need to add one.

7. Add a new event to your class by choosing New Event from the Edit menu and enter "DoubleClick" as the event name.

Double-clicks occur on MouseUp. In order for the mouseUp event to fire, you must return True in the MouseDown event.

8. In the MouseDown event, add the following code:
Return True

In the MouseUp event, you will need to determine what the users double-click time is. This value is represented on both the Mac and Windows in ticks. A tick is 1/60th of a second. Since there isn't a built-in function for this, you'll need to make a toolbox call. The mouseUp event code below makes the appropriate toolbox call for both Macintosh and Windows. It then compares the time of the users last click to the time of the current click and compares the location of the users last click to the location of the current click.

9. Add the following code to the MouseUp event:

```

dim doubleClickTime, currentClickTicks as Integer

# if targetMacOS then
Declare Function GetDbfTime Lib "Carbon" () as Integer
doubleClickTime = GetDbfTime()
# endif

# if targetWin32 then
Declare Function GetDoubleClickTime Lib "User32.DLL" () as Integer
doubleClickTime = GetDoubleClickTime()/60 // convert to ticks from milliseconds
# endif

currentClickTicks = ticks
//if the two clicks happened close enough together in time
if (currentClickTicks - lastClickTicks) <= doubleClickTime then
//if the two clicks occurred close enough together in space
if abs(X - lastClickX) <= 5 and abs(Y - LastClickY) <= 5 then
DoubleClick //a double click has occurred so call the event
end if
end if
lastClickTicks = currentClickTicks
lastClickX = X
lastClickY = Y

```

10. Now to test out your new DoubleClickCanvas, drag the class from the Project window to a window in your project to create an instance of it.

11. Double-click on the canvas you just added to your window to open the Code Editor. Notice that the canvas has a DoubleClick event handler. In this event handler, add the following code:
BEEP

18.0.169 How to make my Mac not sleeping?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Just inform the Mac OS about some system activity with code like this:

Example:

```

Sub UpdateSystemActivity()

# if TargetCarbon
declare function myUpdateSystemActivity lib "Carbon" alias "UpdateSystemActivity" (activity as Integer)
as short

```

```

const OverallAct = 0 // Delays idle sleep by small amount */
const UsrActivity = 1 // Delays idle sleep and dimming by timeout time */
const NetActivity = 2 // Delays idle sleep and power cycling by small amount */
const HDActivity = 3 // Delays hard drive spindown and idle sleep by small amount */
const IdleActivity = 4 // Delays idle sleep by timeout time */

dim e as Integer

e=myUpdateSystemActivity(UsrActivity)

// you may react on an error if e is not 0 after the call.

# endif
End Sub

```

Notes:

You may use another constant if you prefer some different behavior. Call it maybe every second.

18.0.170 How to make my own registration code scheme?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** There are excellent articles about how to make a registratin code scheme, but you can also simply use our RegistrationEngineMBS class.

Notes: If you need a license text, why not use the one from Real Studio as a starting point?

18.0.171 How to make small controls on Mac OS X?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can try this code on Mac OS X:

Example:

```

'/*
'* Use the control's default drawing variant. This does not apply to
'* Scroll Bars, for which Normal is Large.
'*/
const kControlSizeNormal = 0

'/*
'* Use the control's small drawing variant. Currently supported by
'* the Check Box, Combo Box, Radio Button, Scroll Bar, Slider and Tab
'* controls.

```

```

*/
const kControlSizeSmall = 1

*/
/* Use the control's small drawing variant. Currently supported by
/* the Indeterminate Progress Bar, Progress Bar and Round Button
/* controls.
*/
const kControlSizeLarge = 2

*/
/* Control drawing variant determined by the control's bounds. This
/* ControlSize is only available with Scroll Bars to support their
/* legacy behavior of drawing differently within different bounds.
*/
const kControlSizeAuto = & hFFFF

const kControlSizeTag = "size"

declare function SetControlData lib "Carbon" (controlhandle as Integer, part as short, tagname as OS-
Type, size as Integer, data as ptr) as short

dim m as MemoryBlock

m=NewMemoryBlock(2)
m.UShort(0)=kControlSizeSmall

Title=str(SetControlData(CheckBox1.Handle, 0, kControlSizeTag, 2, m))

```

18.0.172 How to mark my Mac app as background only?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can run a build script on each build with this code:

Example:

```

Dim App As String = CurrentBuildLocation + "/" + CurrentBuildAppName + ".app"
Call DoShellCommand("/usr/bin/defaults write " + App + "/Contents/Info ""NSUIElement"" YES")

```

Notes: This will set the NSUIElement flag to YES.

18.0.173 How to move a file or folder to trash?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use code like below:
Example:

```
Function MoveToTrash(f as FolderItem) As Boolean
# if TargetMacOS then
dim r as FolderItem
dim e as Integer = MacFileOperationMBS.MoveObjectToTrashSync(f, r, MacFileOperationMBS.kFSFile-
OperationDefaultOptions)

if e = 0 then
Return true // Ok
end if

# elseif TargetWin32 then
dim w as new WindowsFileCopyMBS

dim flags as Integer = w.FileOperationAllowUndo + w.FileOperationNoErrorUI + w.FileOperationSilent
+ w.FileOperationNoConfirmation
if w.FileOperationDelete(f, flags) then
Return true // OK
end if

flags = w.FileOperationNoErrorUI + w.FileOperationSilent + w.FileOperationNoConfirmation
if w.FileOperationDelete(f, flags) then
Return true // OK
end if
# else
// Target not supported
break
Return false
# endif
End Function
```

Notes:

If you want to move a file to trash, you could use `f.movefileto f.trashfolder`, but that will overwrite existing files in the trash. You can use our `MacFileOperationMBS` class to move a file on Mac to the trash. And it uses the same code as the Finder, so files are renamed when the same name is already in use in the trash:

On Windows we use `WindowsFileCopyMBS` class.
Requires Mac OS X 10.5.

18.0.174 How to move an application to the front using the creator code?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** This makes SimpleText (Code ttxt) to the frontmost application:

Example:

```
dim a as appleevent

a=newappleEvent("misc","actv","ttxt")

if a.send then
end if
```

Notes: (Code is Mac only)

18.0.175 How to move file with ftp and curl plugin?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can set post/pre quotes to have ftp commands executed before or after the download/upload.

Example:

```
dim d as CURLMBS // your curl object

// rename/move file
dim ws() As String
ws.Append "RNFR Temp.txt"
ws.append "RNTD MyFile.txt"

d.SetOptionPostQuote(ws)
```

Notes:

Use SetOptionPostQuote, SetOptionPreQuote or SetOptionQuote.

The ftp commands you pass here are native ftp commands and not the commands you use with ftp applications. So rename is two commands. First RNFR to tell where to rename from and second RNTD with the new file name. To delete use DELE and the file path.

18.0.176 How to normalize string on Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use code like below:

Example:

```

Function Normalize(t as string) As string
const kCFStringNormalizationFormD = 0 // Canonical Decomposition
const kCFStringNormalizationFormKD = 1 // Compatibility Decomposition
const kCFStringNormalizationFormC = 2 // Canonical Decomposition followed by Canonical Composition
const kCFStringNormalizationFormKC = 3 // Compatibility Decomposition followed by Canonical Composition

dim s as CFStringMBS = NewCFStringMBS(t)
dim m as CFMutableStringMBS = s.Normalize(kCFStringNormalizationFormD)

Return m.str
End Function

```

Notes: This uses Apple's CFString functions to normalize unicode variants.

18.0.177 How to obscure the mouse cursor on Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this declare:

Example:

```
Declare Sub ObscureCursor Lib "Carbon" ()
```

```
ObscureCursor
```

Notes: The MBS Plugin has this function, but it's not supported for Windows.

18.0.178 How to open icon file on Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Use the NSImageMBS class like this:

Example:

```
dim f as FolderItem = SpecialFolder.Desktop.Child("test.ico")
dim n as new NSImageMBS(f)
```

```
window1.Backdrop = n.CopyPictureWithMask
```

18.0.179 How to open PDF in acrobat reader?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this code:

Example:

```
dim pdf as FolderItem = SpecialFolder.Desktop.Child("test.pdf")

// open PDF in Acrobat Reader on Mac:

// find app
dim bundleID as string = "com.adobe.Reader"
dim app as FolderItem = LaunchServicesFindApplicationForInfoMBS("", bundleID, "")

if app<>nil then

// launch app with parameters

dim docs() as FolderItem
docs.Append pdf

dim param as new LaunchServicesLaunchParameterMBS
param.Defaults = true
param.Application = app

dim x as FolderItem = LaunchServicesOpenXMBS(docs, param)

// on failure, simply launch it
if x = nil then
pdf.Launch(true)
end if

else
pdf.Launch(true)
end if
```

Notes: On Windows, simply use pdf.launch or WindowsShellExecuteMBS.

18.0.180 How to open printer preferences on Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use our OpenMacOSXPreferencesPaneMBS function like this:

Example:

```
dim e as Integer = OpenMacOSXPreferencesPaneMBS("PrintAndFax")
if 0 = e then
```

```
MsgBox "OK"  
elseif e = -43 then  
MsgBox "File not found."  
else  
MsgBox "Error: " +str(e)  
end if
```

18.0.181 How to open special characters panel on Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** We have functions for that in Cocoa and Carbon.

Example:

```
dim a as new NSApplicationMBS  
a.orderFrontCharacterPalette
```

Notes:

For Cocoa, you can use `orderFrontCharacterPalette` method in `NSApplicationMBS` class.

Or simply for Carbon and Cocoa the `ShowCharacterPaletteMBS` method.

18.0.182 How to optimize picture loading in Web Edition?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use the `WebPicture` class.

Notes:

Take your picture and create a `WebPicture` object. Store this `WebPicture` in a property of the `WebPage`, `Session` or `app` (as global as possible). On the first time you use this picture on an user session, the browser will load it. Second time you use it, the browser will most likely pick it from the cache.

Having pictures in `App` or some module reuses the same picture for all sessions which reduces memory footprint.

This does not work well with pictures you change very often or use only for one webpage on one user.

If you like to see an example, check our `Map` example:

<http://www.monkeybreadsoftware.de/realbasic/webapps.shtml>

18.0.183 How to parse XML?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use code like this:

Example:

```
dim s as string = "<test><test /></test>"
```

```
try
dim x as new XmlDocument(s)
MsgBox "OK"
catch xe as XmlException
MsgBox "invalid XML"
end try
```

Notes: If you got an exception, you have a parse error.

18.0.184 How to play audio in a web app?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use the HTML5 audio tag and control it with javascript.

Notes:

See our web apps here:

<http://www.monkeybreadsoftware.de/realbasic/webapps.shtml>

This is just another example app I made today. It plays a christmas song. The audio file is provided by the application to the server, so no external web server is needed and this application can run stand alone. To compile and run you need Real Studio 2010r5.

In the open event we search the audio files and open them as binarystreams. We create the two webfile objects. Those webfiles are part of the app class, so we have them globally. There we set the data with the content of our streams. We also define file names and mime types. They are needed so browser know what we have here:

```
audioFileM4V = new WebFile
audioFileM4V.Data = bM.Read(BM.Length)
audioFileM4V.Filename = "music.m4a"
audioFileM4V.MIMETYPE = "audio/m4a"
```

```
audioFileOGG = new WebFile
audioFileOGG.Data = bO.Read(BO.Length)
```

```
audioFileOGG.Filename = "music.ogg"
audioFileOGG.MIMEType = "audio/ogg"
```

Next in the open event of the webpage we have a PageSource control. The location is set to be before content. In the open event we define the html code for this. First we pick the URLs for the audio files. Then we build the html to use the audio tag. As you see, we give it an ID for later use and have it preload automatically. If you add an autoplay tag, you can have the audio play right away. Inside the audio tag we have two sources so we provide audio for both Firefox (OGG) and Safari (MPEG4). Finally we have a text to display if HTML5 audio tag is not supported.

You can set the source in the EditSource event:

```
dim urlO as string = app.audioFileOGG.URL
dim urlM as string = app.audioFileM4V.URL
me.Source = "<audio id=""mymusic"" preload=""auto""><source src="""+urlO+""" type=""audio/ogg""
/><source src="""+urlM+""" type=""audio/mpeg"" />Your browser does not support the audio ele-
ment.</audio>"
```

Next in the Play button we execute code to play the audio. This is a short javascript code which searches in the html document for the element with the ID "mymusic" which is the ID of our audio tag above. Once we got the object, we call it's play method to start playback.

```
me.ExecuteJavaScript("document.getElementById('mymusic').play();")
```

same for pause:

```
me.ExecuteJavaScript("document.getElementById('mymusic').pause();")
```

and finally for changing volume:

```
me.ExecuteJavaScript("document.getElementById('mymusic').volume="+str(me.Value/100.0)+";")
```

18.0.185 How to pretty print xml?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use the XML Transform method with the right XLS.

Notes:

Learn more here:

<http://docs.xojo.com/index.php/XMLDocument.Transform>

18.0.186 How to print to PDF?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** This code below shows how to redirect printing to a PDF file on Mac OS X.

Example:

```
// get Xojo printer setup
dim p as new PrinterSetup

// now put it into NSPrintInfo to manipulate
dim n as new NSPrintInfoMBS
n.SetupString = p.SetupString

// change destination to file
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
n.SetSaveDestination(f)

// move back
p.SetupString = n.SetupString

// and print as usual
dim g as Graphics = OpenPrinter(p)
g.DrawString "Hello World", 20, 20
```

Notes: And you can use normal graphics class for that.

18.0.187 How to query Spotlight's Last Open Date for a file?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use a MDItemMBS objec to query this value:

Example:

```
Function LastOpenedDate(Extends F As FolderItem, DefaultOtherDates As Boolean = True) As Date
# If TargetMacOS Then
Dim xMDItem as New MDItemMBS(F)
Dim xDate as Variant

If xMDItem <>Nil Then
xDate = xMDItem.GetAttribute(xMDItem.kMDItemLastUsedDate).DateValue
If xDate IsA Date Then Return xDate
Else
If xDate <>Nil Then Break
End If
# EndIf
```

```

If DefaultOtherDates Then
If F.ModificationDate <>Nil Then Return F.ModificationDate
If F.CreationDate <>Nil Then Return F.CreationDate
End If
End Function

```

Notes: Thanks for Josh Hoggan for this example code.

18.0.188 How to quit windows?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Try this code:

Example:

```

# if targetwin32 then
dim i1,i2,r as Integer
declare function ExitWindowsEx lib "user32" (uFlags as Integer, dwReserved as Integer) as Integer
i1 = 2
i2 = 0
r = ExitWindowsEx(i1,i2)
if r<>0 then
' Error()
end if

# endif

```

Notes:

uFlags parameters:

```

'4 = EWX_Force
'0 = EWX_Logoff
'2 = EWX_Reboot
'1 = EWX_shutdown, should shut down computer

```

Also check the ExitWindowsMBS method.

18.0.189 How to read a CSV file correctly?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** With all the rules for quotes and delimiters, you can simply use the SplitCommaSeparatedValuesMBS method in our plugins like

this:

Example:

```

dim f as FolderItem = SpecialFolder.Desktop.Child("test.csv")
dim t as TextInputStream = f.OpenAsTextFile

while not t.EOF
dim s as string = t.ReadLine(encodings.ASCII)

dim items() as string = SplitCommaSeparatedValuesMBS(s, ";", """")

List.AddRow ""
dim u as Integer = UBound(items)
for i as Integer = 0 to u
List.Cell(List.LastIndex,i) = items(i)
next

wend

```

Notes: Please make sure you choose the right text encoding.

18.0.190 How to read the command line on windows?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Try this code:

Example:

```

# if targetwin32 then
dim line as string
Dim mem as MemoryBlock

Declare Function GetCommandLineA Lib "kernel32" () As Ptr

mem=GetCommandLineA()
s=mem.cstring(0)

# endif

```

Notes: Newer Realbasic versions have a system.commandline property.

18.0.191 How to render PDF pages with PDF Kit?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Try this code:

Example:

```
// choose a file
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")

// open it as PDF Document
dim sourceFile as New PDFDocumentMBS(f)

if sourceFile.handle <>0 then // it is a PDF file

// get upper bound of pages
dim c as Integer = sourceFile.pageCount-1

// from first to last page
for n as Integer = 0 to c

// pick that page
dim page as PDFPageMBS = sourceFile.pageAtIndex(n)

// render to image
dim p as NSImageMBS = page.Render

// and convert to RB picture and display
Backdrop = p.CopyPictureWithMask

next

end if
```

Notes: PDFKit works only on Mac OS X.

18.0.192 How to restart a Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Ask the Finder via Apple Events:

Example:

```
dim ae as appleevent
ae=newappleEvent("FNDR", "rest", "MACS")
if not ae.send then
msgBox "The computer couldn't be restarted."
end if
```

18.0.193 How to resume ftp upload with curl plugin?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** CURL supports that and you simply need to set the right options.

Notes:

First of course OptionUpload must be true. Second OptionFTPAppend must be true so the OptionResumeFrom is used. Store there (or in OptionResumeFromLarge) your start value. Don't forget to implement the read event and return data there as requested.

18.0.194 How to rotate a PDF page with CoreGraphics?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** This code opens a PDF and draws the first page into a new PDF with 90 rotation.

Example:

```
// Rotate a PDF page

// our files
dim sourcefile as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
dim destfile as FolderItem = SpecialFolder.Desktop.Child("rotated.pdf")

// open PDF
dim pdf as CGPDFDocumentMBS = sourcefile.OpenAsCGPDFDocumentMBS

// query media size of first page
dim r as CGRectMBS = pdf.MediaBox(1)

// create new PDF
dim c as CGContextMBS = destfile.NewCGPDFDocumentMBS(r,"title","Author","Creator")

// create rotated rectangle
dim nr as new CGRectMBS(0,0,r.Height,r.Width)

// create new page
c.BeginPage nr
c.SaveGState

const pi = 3.14159265

// rotate by 90
c.RotateCTM pi*1.5
```

```

// fix origin
c.TranslateCTM -r.width,0

// draw PDF
c.DrawCGPDFDocument pdf,r,1

// cleanup
c.RestoreGState
c.EndPage

c = nil

// show in PDF viewer
destfile.Launch

```

Notes: This code is Mac only as it needs CoreGraphics.

18.0.195 How to rotate image with CoreImage?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Use the code like the one below:

Example:

```

// Rotate image with CoreImage

// load image
dim f as FolderItem = SpecialFolder.Desktop.Child("test.png")
dim image as new CIImageMBS(f)

// rotate 45 degree
dim n as new NSAffineTransformMBS
n.rotateByDegrees(45)

dim TransformFilter as new CIFilterAffineTransformMBS
TransformFilter.inputImage = image
TransformFilter.inputTransform = n

// get result
dim resultImage as CIImageMBS = TransformFilter.outputImage

// for saving to file
dim outputImage as NSImageMBS = resultImage.RenderNSImage(false)

f = SpecialFolder.Desktop.Child("output.png")
dim b as BinaryStream = BinaryStream.Create(f, true)

```

b. Write `outputImage.PNGRepresentation`

```
// as Real Studio picture object for display
dim pic as Picture = outputImage.CopyPictureWithMask
```

```
Backdrop = pic
```

18.0.196 How to run a 32 bit application on a 64 bit Linux?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Install 32 bit compatibility libraries.

Notes:

The package is called `ia32-libs` for ubuntu (and others).

Some applications need to be run on a 32 bit system as they need some hardware related libraries. Like `libUSB` or `libHID` for USB devices.

18.0.197 How to save a quicktime movie as a reference movie?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** Example code is below:

Example:

```
// save as reference movie
dim f as FolderItem
dim m as movie

f=SpecialFolder.Desktop.Child("test.mov")
m=f.OpenAsMovie

f=SpecialFolder.Desktop.Child("new movie.mov")

msgbox str(m.SaveMBS(f,false,false))
```

18.0.198 How to save HTMLViewer to PDF with landscape orientation?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use `NSPrint-InfoMBS` to change the options for `PrintToPDFFile` function.

Example:

```
// make it landscape
dim n as NSPrintInfoMBS = NSPrintInfoMBS.sharedPrintInfo
```

```
n.orientation = n.NSLandscapeOrientation

// save html to file
dim f as FolderItem = SpecialFolder.Desktop.Child("test.pdf")
call HTMLViewer1.PrintToPDFFileMBS(f,10,30,10,30)
```

Notes:

You may want to reset options later.
This code is only for Mac OS X.

18.0.199 How to save RTFD?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** With NSTextViewMBS you can use this code to save to RTFD:

Example:

```
// save text as RTFD including image attachments
dim f as FolderItem = GetSaveFolderItem(FileTypes1.ApplicationRtf, "test.rtf")

if f = nil then Return

dim a as NSAttributedStringMBS = textView.textStorage
dim w as NSFileWrapperMBS = a.RTFDFileWrapperFromRange(0, a.length, DocumentAttributes)

dim e as NSErrorMBS
if w.writeToFile(f, e) then

else
  MsgBox e.LocalizedDescription
end if
```

Notes: For TextArea you can query the underlying NSTextViewMBS object via TextArea.NSTextViewMBS method.

18.0.200 How to scale a picture proportionally with mask?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** For a proportional scaling, we calculate the new picture size relative to the target maximum size.

Example:

```

Function ProportionalScaledWithMask(extends pic as Picture, Width as Integer, Height as Integer) As Pic-
ture
// Calculate scale factor

dim faktor as Double = min( Height / Pic.Height, Width / Pic.Width)

// Calculate new size
dim w as Integer = Pic.Width * faktor
dim h as Integer = Pic.Height * faktor

// create new picture
dim NewPic as new Picture(w,h,32)

// check if we have a mask and clear it
dim m as picture = pic.mask(False)
pic.mask = nil

// draw picture in the new size
NewPic.Graphics.DrawPicture Pic, 0, 0, w, h, 0, 0, Pic.Width, Pic.Height

if m <>nil then
// restore mask and scale it
pic.mask = m
NewPic.mask.Graphics.DrawPicture m, 0, 0, w, h, 0, 0, Pic.Width, Pic.Height
end if

// return result
Return NewPic
End Function

```

Notes: This version handles mask. As you see we actually have to remove mask in order to copy the picture part correctly.

18.0.201 How to scale a picture proportionally?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** For a proportional scaling, we calculate the new picture size relative to the target maximum size.

Example:

```

Function ProportionalScaled(extends pic as Picture, Width as Integer, Height as Integer) As Picture
// Calculate scale factor

dim faktor as Double = min( Height / Pic.Height, Width / Pic.Width)

```

```

// Calculate new size
dim w as Integer = Pic.Width * faktor
dim h as Integer = Pic.Height * faktor

// create new picture
dim NewPic as new Picture(w,h,32)

// draw picture in the new size
NewPic.Graphics.DrawPicture Pic, 0, 0, w, h, 0, 0, Pic.Width, Pic.Height

// return result
Return NewPic
End Function

```

Notes:

This does not handle mask, but you can scale the mask the same way and assign it to the new picture. (see other FAQ entry with mask)

18.0.202 How to scale/resize a picture?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** There are several ways to scale or resize a picture. The easiest way may be the ScaleMBS function in the Picture class.

Example:

```

dim Original,Scaled as Picture

Original=LogoMBS(500)
Scaled=Original.ScaleMBS(100,100,true)

```

Notes:

The plugin ways:

- The GWorld class which uses QuickTime. Includes nice Bicubic scaling with QuickTime 6.
- QTGraphicsImporterMBS and QTGraphicsExporterMBS can scale/resize.
- CoreImage scale filter may result in the fastest and best images on Mac OS X 10.4.
- NSImageMBS can scale, but is Mac OS X only.
- CGImageMBS can scale, but is Mac OS X only.
- CIImageMBS can scale, but is Mac OS X only.
- QuickTime Graphics exporter and importer can be connected to scale. (this was used more often a few years ago)
- ImageMagick can scale very nice and crossplatform. But the ImageMagick libraries are big.
- The picture.ScaleMBS function is self written and results in equal output on Mac, Windows and Linux without any additional libraries installed.

- Picture.ScopingMBS does crossplatform scaling with several modes.

with pure REALbasic:

- make a new picture and draw the old one with new size inside.

18.0.203 How to search with regex and use unicode codepoints?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can specify unicode characters in search string with backslash x and digits.

Example:

```

dim r as RegExMbs
dim s as string
dim c as Integer

s="123 ABC 456"

r=new RegExMBS
if r.Compile(".") then
c=r.Execute(s,0)
MsgBox str(c)+" "+str(r.Offset(0))+" "+str(r.Offset(1))
// shows: 1 4 10
// 1 for ubound of the offset array
// 4 for 4 bytes before the matched pattern
// 10 for the 10 bytes before the end of the matched pattern
end if

r=new RegExMBS
if r.Compile(".\xF6.") then // finds using Unicode codepoint
c=r.Execute(s,0)
MsgBox str(c)+" "+str(r.Offset(0))+" "+str(r.Offset(1))
// shows: 1 4 10
// 1 for ubound of the offset array
// 4 for 4 bytes before the matched pattern
// 10 for the 10 bytes before the end of the matched pattern
end if

```

18.0.204 How to see if a file is invisible for Mac OS X?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this function:

Example:

```

Function Invisible(F As FolderItem) As Boolean
Dim TIS As TextInputStream
Dim S,All As String
Dim I as Integer
dim g as folderitem

If Left(F.Name,1)="." or not f.visible Then
Return True
End If

g=F.Parent.Child(".hidden")
If g.Exists Then
TIS=g.OpenAsTextFile
if tis<>Nil then
All=TIS.ReadAll
For I=1 to CountFields(All,Chr(11))
S=NthField(All, Chr(11), I)
If S=F.name Then
Return True
End If
Next
end if
End if
End Function

```

18.0.205 How to set cache size for SQLite or REALSQLDatabase?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You use the pragma cache_size command on the database.

Example:

```

// set cache size to 20000 pages which is about 20 MB for default page size
dim db as REALSQLDatabase
db.SQLExecute "PRAGMA cache_size = 20000"

```

Notes:

Default cache size is 2000 pages which is not much.

You get best performance if whole database fits in memory.

At least you should try to have a cache big enough so you can do queries in memory.

You only need to call this pragma command once after you opened the database.

18.0.206 How to set the modified dot in the window?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this declares:

Example:

```
window1.ModifiedMBS=true
```

18.0.207 How to show a PDF file to the user in a Web Application?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use a WebHTMLViewer control and load the

Example:

```
dim CurrentFile as WebFile // a property of the WebPage

// define the PDF file
CurrentFile = new WebFile
CurrentFile.Filename = "test.pdf"
CurrentFile.MIMEType = "application/pdf"
CurrentFile.Data = "some pdf data" // MyDynaPDF.GetBuffer

// load into html viewer
HTMLViewer1.URL = CurrentFile.URL
```

Notes:

See our Create PDF example for the Real Studio Web Edition.
<http://www.monkeybreadsoftware.de/realbasic/webapps.shtml>

18.0.208 How to show Keyboard Viewer programmatically?

Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Use Realbasic or AppleScript to launch the KeyboardViewerServer.app.

Example:

```
dim a as new AppleScriptMBS
dim text as string
dim lines(-1) as string

lines.append "set theApplication to ""KeyboardViewerServer"""
lines.append "set thePath to ""/System/Library/Components/KeyboardViewer.component/Contents/Shared-Support/KeyboardViewerServer.app"""
lines.append ""
```

```

lines.append "set POSIXPath to ((POSIX file thePath) as string)"
lines.append "tell application ""System Events"" to set isRunning to 0 <(count (application processes whose
name is theApplication))"
lines.append "if isRunning then tell application POSIXPath to quit"
lines.append "delay 0.15"
lines.append ""
lines.append "ignoring application responses"
lines.append " tell application POSIXPath to run"
lines.append "end ignoring"

```

```
text=join(lines,EndOfLine.macintosh)
```

```
a.Compile text
```

```
a.Execute
```

Notes:

AppleScript code:

```

set theApplication to "KeyboardViewerServer"
set thePath to "/System/Library/Components/KeyboardViewer.component/Contents/SharedSupport/Key-
boardViewerServer.app"

```

```

set POSIXPath to ((POSIX file thePath) as string)
tell application "System Events" to set isRunning to 0 <(count (application processes whose name is theAp-
plication))
if isRunning then tell application POSIXPath to quit
delay 0.15

```

```

ignoring application responses
tell application POSIXPath to run
end ignoring

```

18.0.209 How to show the mouse cursor on Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Try this declare:

Example:

```
Declare Sub ShowCursor Lib "Carbon" ()
```

```
ShowCursor
```

Notes: The MBS Plugin has this function and supports it on Windows, too.

18.0.210 How to shutdown a Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Ask the Finder via Apple Events:

Example:

```
dim ae as appleevent
ae=newappleEvent("FNDR","shut","MACS")
if not ae.send then
msgBox "The computer couldn't be shutdown."
end if
```

Notes:

Or toolbox call (Attention: This method will stop the computer immediatly: No document asked to be saved, all applications quitting without knowing).

```
Declare Sub ShutDownPower Lib "Carbon" ()
ShutDownPower
```

18.0.211 How to sleep a Mac?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Ask the Finder via Apple Events:

Example:

```
dim ae as appleevent
ae=newappleEvent("FNDR","slep","MACS")
if not ae.send then
msgBox "The computer doesn't want to sleep."
end if
```

18.0.212 How to speed up rasterizer for displaying PDFs with DynaPDF?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Here a few speed tips:
Notes:

- Use the DynaPDFRasterizerMBS function instead of our render functions.
- Reuse DynaPDFRasterizerMBS as long as the target picture size doesn't change.
- Import only the PDF pages you want to display.
- Let DynaPDF do zooming, rotating or other effects instead of you change it.

18.0.213 How to use PDFLib in my RB application?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** The PDFlib plugin was discontinued in favor of our DynaPDF plugin.
Notes: If you need help to move, please contact us.

18.0.214 How to use quotes in a string?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Just double them.

Example:

```
msgbox "This String contains ""quotes""."
```

18.0.215 How to use Sybase in Web App?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Please use our MBS Real Studio SQL Plugin to connect to a Sybase Database in your web application.

Notes:

If you see db.Connect giving the error message "cs.ctx_alloc ->CS_MEM_ERROR", than some things are not setup right for Sybase.

The Apache process may not have all the SYBASE environment variables being set when the CGI was launched.

Adding these lines to /etc/httpd/conf/httpd.conf stopped the faux memory errors for us:

```
SetEnv LD_LIBRARY_PATH /opt/sybase/OCS-15.0/lib:/opt/sybase/OCS-15.0/lib3p64:/opt/sybase/OCS-15.0/lib3p:  
SetEnv SYBROOT /opt/sybase  
SetEnv SYBASE_OCS /opt/sybase
```

```
SetEnv SYBASE /opt/sybase
```

18.0.216 How to use the Application Support folder?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:**

I was saving a registration code for an app to the Preference folder. People on the list have suggested that it would be better in the ApplicationSupportFolder. How do I save the file called CWWPrefs into that folder using MBS?

I have checked for examples and the docs but can't see how to apply it

```
//f = SpecialFolder.Preferences.child("CWWPrefs")
f = ApplicationSupportFolderMBS(-32768)
```

Example:

```
dim folder,file as FolderItem
```

```
folder = createApplicationSupportFolderMBS(-32763)
```

```
if folder=nil then
// Some very old Mac OS Versions may not support it
// or the plugin may fail for any reason
folder=SpecialFolder.Preferences
end if
```

```
file=folder.Child("CWWPrefs")
```

```
MsgBox file.UnixpathMBS
```

Notes: You may not be able to write there with a normal user account!

18.0.217 How to use the IOPMCopyScheduledPowerEvents function in Real-basic?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You can use the following code which does this using the SoftDeclareMBS class.

Example:

```
Sub Open()
dim c as CFDateMBS
```

```

dim t as CFAbsoluteTimeMBS

// get current date
c=NewCFDateMBS

// in absolute time (seconds since x)
t=c.AbsoluteTime

// add 600 seconds (= 10 Minutes)
t.Value=t.Value+600

// Make a Date from it
c=t.Date

// Schedule the event
// 0 on success
// E00002C1 for missing root rights
Title=hex(schedulePowerEvent(c, "wake"))

// Just for information, display the scheduled stuff
CFShowMBS CopyScheduledPowerEvents
End Sub

Function CopyScheduledPowerEvents() As cfarrayMBS
dim s as SoftDeclareMBS
dim m as MemoryBlock

s=new SoftDeclareMBS

if s.LoadLibrary("IOKit.framework") then
if s.LoadFunction("IOPMCopyScheduledPowerEvents") then
if s.CallFunction(0,nil) then
Return NewCFArrayMBSHandle(s.Result,true)
else
MsgBox "Failed to Call IOPMCopyScheduledPowerEvents."
end if
else
MsgBox "Failed to load IOPMCopyScheduledPowerEvents."
end if
else
MsgBox "Failed to load IOKit."
end if

Return nil
End Function

Function SchedulePowerEvent(time_to_wake as CFDateMBS, Type as CFStringMBS) as Integer
dim s as SoftDeclareMBS

```



```

dim m as MemoryBlock

'/*
' * Types of power event
' * These are potential arguments to IOPMSchedulePowerEvent().
' * These are all potential values of the kIOPMPowerEventTypeKey in the CFDictionaryes
' * returned by IOPMCopyScheduledPowerEvents().
' */
'/*!
'@define kIOPMAutoWake
'@abstract Value for scheduled wake from sleep.
' */
'# define kIOPMAutoWake "wake"
,

'/*!
'@define kIOPMAutoPowerOn
'@abstract Value for scheduled power on from off state.
' */
'# define kIOPMAutoPowerOn "poweron"
,

'/*!
'@define kIOPMAutoWakeOrPowerOn
'@abstract Value for scheduled wake from sleep, or power on. The system will either wake OR
'power on, whichever is necessary.
' */
,

'# define kIOPMAutoWakeOrPowerOn "wakepoweron"
'/*!
'@define kIOPMAutoSleep
'@abstract Value for scheduled sleep.
' */
,

'# define kIOPMAutoSleep "sleep"
'/*!
'@define kIOPMAutoShutdown
'@abstract Value for scheduled shutdown.
' */
,

'# define kIOPMAutoShutdown "shutdown"

s=new SoftDeclareMBS

if s.LoadLibrary("IOKit.framework") then
if s.LoadFunction("IOPMSchedulePowerEvent") then

m=NewMemoryBlock(12)
m.Long(0)=time_to_wake.handle
m.Long(4)=0 // nil

```

```

m.Long(8)=type.Handle

if s.CallFunction(3,m) then
Return s.Result
end if
end if
end if

End Function

```

Notes: Requires Mac OS X and to execute root rights.

18.0.218 How to validate a GUID?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use this function below which uses a regular expression to verify that the string is a valid UUID/GUID:

Example:

```

Function IsGUID(guid as string) As Boolean
dim r as new RegEx

```

```

r.SearchPattern = "^(\{ { 0,1 } ( [ 0-9a-fA-F ] ) { 8 } -( [ 0-9a-fA-F ] ) { 4 } -( [ 0-9a-fA-F ] ) { 4 }
-( [ 0-9a-fA-F ] ) { 4 } -( [ 0-9a-fA-F ] ) { 12 } \} { 0,1 } )$"

```

```

Return r.Search(guid)<>nil
End Function

```

Notes: Simply parsing the GUID with CFUUIDMBS does not give the same result as CFUUIDMBS will also take a string like "DDDD".

18.0.219 How to walk a folder hierarchie non recursively?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Use code like this one:

Example:

```

Sub Walk(folder as FolderItem)
dim folders() as FolderItem

folders.Append folder

while UBound(folders)>=0

```

```

dim currentFolder as FolderItem = folders.pop

dim c as Integer = currentFolder.Count
for i as Integer = 1 to c
dim item as FolderItem = currentFolder.TrueItem(i)

if item = Nil then
// no permission
elseif item.Visible then // only visible

if item.Directory then
folders.Append item
else
// work with file here
end if

end if

next

wend
End Sub

```

Notes:

As you see we go with a long loop which runs until we don't have more folders to process.

We ignore items we can't access due to permission limits.

And we only work visible items.

If you like, check `folderitem.isBundleMBS` on item to handle packages and applications better on Mac OS X.

18.0.220 I got this error: PropVal, QDPictMBS.Name (property value), Type mismatch error. Expected CGDataProviderMBS, but got Variant, Name:QDPictMBS

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** The plugins MacOSX and MacOSXCF belong together. If you use one part, please also install the other part.

Notes: We splitted the plugin because the Real Studio IDE on Windows crashed on compilation.

18.0.221 I registered the MBS Plugins in my application, but later the registration dialog is shown.

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** There are two main reasons.

Notes:

1. you may use the plugin before registering them. This is often the case if you register in a window open event and use the plugin in a control open event.

On the console on Mac OS X or Windows, you may see a message like this "MBS Plugins were used by the application before the RegisterMBSPlugin function was called. Please fix this in your code!".

2. you may have mixed different plugin versions which are not compatible.

In this case you can see a message "Internal plugin registration error." on the console on Mac OS X. Newer plugins may show a message dialog reporting this. Older version simply think they are not registered.

If the installer just merges old and new applications, users may have libraries of older and newer plugin versions in the libs folder. If your application loads the wrong version, the registration fails.

If you use remote debugging, make sure you clear the temporary files there, too. Otherwise you may have old DLLs on your hard disc which may disturb your application.

You can run into issues if you use your registration code on different places of your app. Please register only once in app.open (or app Constructor). If you have several codes, simply call them one after the other.

Also check that you only call RegisterMBSPlugin with valid serial number. If you later call RegisterMBSPlugin with Demo like in example code above, you remove the license.

Finally make sure you use the right serial number. Not an older one or a misspelled one.

18.0.222 I want to accept Drag & Drop from iTunes

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You need to accept AcceptMacDataDrop "itun" and Handle the DropObject.

Example:

```
Sub Open()
window1.AcceptMacDataDrop "itun"
End Sub
```

```
Sub DropObject(obj As DragItem)
dim s as string
dim f as folderItem
```

```

dim d as CFDictionaryMBS
dim o as CFOBJECTMBS
dim key as CFStringMBS
dim dl as CFDictionaryListMBS
dim i,c as Integer
dim u as CFURLMBS
dim file as FolderItem

if obj.MacDataAvailable("itun") then
s = obj.MacData("itun")

// Parse XML
o=NewCFOBJECTMBSFromXML(NewCFBinaryDataMBSStr(s))

// Make dictionary
if o isa CFDictionaryMBS then
d=CFDictionaryMBS(o)

// get Tracks Dictionary
key=NewCFStringMBS("Tracks")
o=d.Value(key)

if o isa CFDictionaryMBS then
d=CFDictionaryMBS(o)
dl=d.List

// Walk over all entries in the Tracks dictionary
c=dl.Count-1
for i=0 to c
o=dl.Value(i)

if o isa CFDictionaryMBS then
d=CFDictionaryMBS(o)

key=NewCFStringMBS("Location")
o=d.Value(key)
if o isa CFStringMBS then
u=NewCFURLMBS CFStringMBS(CFStringMBS(o),nil)

file=u.file
if file<>nil then
MsgBox file.UnixpathMBS
end if
end if
end if
next
end if
end if

```

```
end if
End Sub
```

Notes: The code above inside a window on Realbasic 5.5 with MBS Plugin 5.3 will do it nice and show the paths.

18.0.223 I'm drawing into a listbox but don't see something.

Plugin Version: all, Console & Web: No. **Answer:** If you draw this in a listbox cellbackground, you need to draw on the correct position

Example:

```
Function CellBackgroundPaint(g As Graphics, row as Integer, column as Integer) As Boolean
dim f as FolderItem
f=SpecialFolder.Desktop
f.DrawWideIconMBS(g,listbox1.left,listbox1.top+row*20,16)
Return true
End Function
```

Notes: Try this in a listbox. The Graphics object there has a clipping and an offset which the plugin doesn't know about.

18.0.224 I'm searching for a method or so to move a window from position x.y to somewhere else on the screen.

Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:**

The code I produced in RB isn't smooth enough. Is there a call in MBS, if not, can it be done? The speed of it has to be like the show of a DrawerWindow.

Try the declare below for Carbon. With WindowLib it will work on Mac OS 8.5 and newer.

Notes: See Window.Transition functions.

18.0.225 If I use one of your plug-ins under windows, would this then impose the use of dll after compilation or my would my compiled soft still be a stand-alone single file software?

Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Stand alone.

Notes:

REALbasic compiles all used plugins into the application binary.

Some plugin parts need external dlls but you will find that in the documentation. (e.g. pdflib for some classes)

18.0.226 Is the fn key on a powerbook keyboard down?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** I am unable to figure out how or if it is possible to detect if the fn key is down on a powerbook keyboard. Is it possible?

Example:

' Window.Open Event of a blank project:

```
dim i as Integer
```

```
for i=0 to 127
```

```
if keyboard.asynckeydown(i) then
```

```
title=str(i) // found
```

```
return
```

```
end if
```

```
next
```

```
title="" // not found
```

Notes: This test application shows the keycode (decimal) 63 for the fn key.

18.0.227 Is there a case sensitive Dictionary?

Plugin Version: all, Console & Web: No. **Answer:** The MBS Plugin has several classes which can work as a replacement.

Notes:

First you could use VariantToVariantHashMapMBS or VariantToVariantOrderedMapMBS.

If you know that all keys are Strings or Integers only, you can use the specialized classes which are a little bit faster due to avoiding variants:

IntegerToIntegerHashMapMBS class

IntegerToIntegerOrderedMapMBS class

IntegerToStringHashMapMBS class
 IntegerToStringOrderedMapMBS class
 IntegerToVariantHashMapMBS class
 IntegerToVariantOrderedMapMBS class
 StringToStringHashMapMBS class
 StringToStringOrderedMapMBS class
 StringToVariantHashMapMBS class
 StringToVariantOrderedMapMBS class

18.0.228 Is there a way to use the MBS plugin to get only the visible item and folder count on a volume?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can use the DirectorySizeMBS class for this as in the example below:

Example:

```
dim d as DirectorySizeMBS

d=new DirectorySizeMBS

// volume(1) as my boot volume is very full
if d.update(volume(1),true,0) then
  MsgBox str(d.VisibleItemCount)+" visible items, "+str(d.HiddenItemCount)+" invisible items."
end if
```

Notes:

Complete Question: Is there a way to use the MBS plugin to get only the visible item and folder count on a volume? The FileCount and FolderCount properties of VolumeInformationMBS seem to provide the total # of items including invisible items such as .DS_Store and more importantly .Trashes which is causing me a great amount of difficulty during a recursive scan of a volume. I've got a progress bar which uses the total of the filecount and foldercount properties as the maximum value, but my routine needs to filter out all invisible items, as it is creating a catalog of a volume for archiving purposes. Any thoughts how I could get accurate number.

18.0.229 Is there an easy way I can launch the Displays preferences panel?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Use the code below:

Example:


```

dim error as Integer

error=OpenMacOSXPreferencesPaneMBS("Displays")
if error<>0 then
MsgBox "Failed to launch QuickTime System Preferences panel."
end if

```

18.0.230 Is there an easy way I can launch the Quicktime preferences panel?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Use the code below:
Example:

```

dim error as Integer

error=OpenMacOSXPreferencesPaneMBS("QuickTime")
if error<>0 then
MsgBox "Failed to launch QuickTime System Preferences panel."
end if

```

18.0.231 List of Windows Error codes?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** We have a list of windows error codes on our website.

Notes: <http://www.monkeybreadsoftware.de/xojo/winerror.shtml>

18.0.232 Midi latency on Windows problem?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** The issue is system related, not a problem with RB or the plugin.

Notes:

Two things will adversely affect the timing:

(1) latency of the software synthesizer output driver. The default Windows wavetable synthesizer has considerable latency. I don't know how many milliseconds, but it is noticeable.

(2) latency of the digital audio output driver. Different systems have different drivers for different audio hardware. My Dell laptop has a minimum 15ms latency in the audio driver.

These two things put together were causing a very sluggish MIDI response. I was able to verify these as the culprits by routing MIDI directly out of RB into a sample player, which only introduces the latency of (2) and does not include latency of (1).

I don't know how widely known are these facts, if not then you may want to add this information to the documentation, since Windows programmers using the MIDI plugin may not know those problems, and might mistakenly blame your plugin, as I did :) Sorry about that!

(From Aaron Andrew Hunt)

18.0.233 My Xojo Web App does not launch. Why?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Here is a list of checks to do for linux apache installations with Xojo or Real Studio Web applications:

Notes:

Just a list of checks to do for linux apache installations:

- You have 64bit linux? Than you need 32 bit compatibility libraries.
- The folder of your app is writable? Set permissions to 777.
- The cgi script is executable? Set permissions to 755.
- The app file itself is executable? Set permissions to 755.
- You uploaded cgi file as text, so it has unix line endings? (this often gives error "Premature end of script headers" in apache log)
- You uploaded config.cfg file and made it writable? Set permissions to 666.
- Your apache allows execution of cgi scripts? You enabled cgi for apache and uncommented addhandler command for CGI on a new apache installation?
- You uploaded the app file and libraries as binary files? Upload as text breaks them.
- You did upload the libs folder?
- You don't have code in app.open, session.open and other events which crashes app right at launch?
- You don't have a print command in your app.open event? (see feedback case 23817)
- You allowed htaccess file to overwrite permissions?

18.0.234 Pictures are not shown in my application. Why?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:**

On Mac OS Classic, please check the memory partition size which may be too low.
Else (most times on Windows) you are simple missing the part of QuickTime to load images.

18.0.235 Realbasic doesn't work with your plugins on Windows 98.

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Upgrade your Windows version or complain to Realsoftware.

18.0.236 REALbasic or my RB application itself crashes on launch on Mac OS Classic. Why?

Plugin Version: all, Console & Web: No. **Answer:**

You may check if the application has enough memory to be loaded.
RB should have on Mac OS Classic more than 20 MB of RAM.
I preferred to use 50 MB and for an application a 10 MB partition is a good way to start.

18.0.237 SQLiteDatabase not initialized error?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Before you can use SQLiteDatabaseMBS, it must be initialized.

Example:

```
dim d as new SQLiteDatabaseMBS
```

Notes:

This happens normally when you use "new SQLiteDatabaseMBS".
But if you just have a SQLConnectionMBS and get a recordset there, the initialization may not have happened, yet.
So please simply add a line "dim d as new SQLiteDatabaseMBS" to your app.open code after registration, so the plugin part can initialize and late provide recordsets.

18.0.238 Textconverter returns only the first x characters. Why?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:**

Some older REALbasic versions limit the Textconverter to around 1024 characters in input and output. This should be fixed with RB5.

Notes: REALbasic seems not to support Textconverters at all on Windows.

18.0.239 The type translation between CoreFoundation/Foundation and Realbasic data types.

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** The plugin does conversion between Cocoa/Carbon data types and native REALbasic data types. The following list help you knowing what the current plugins support:

Notes:

Cocoa NSObject to Variant:

```

nil ->nil
NSDictionary ->Dictionary
NSData ->MemoryBlock
NSString ->String
NSAttributedString ->NSAttributedStringMBS
NSDate ->Date
NSNumber ->double/integer/Int64/UInt64/UInt32/Boolean
NSURL ->String
NSValue with NSRect ->NSRectMBS
NSValue with NSPoint ->NSPointMBS
NSValue with NSSize ->NSSizeMBS
NSValue with NSRange ->NSRangeMBS
NSValue with QTTime ->QTTimeMBS
NSValue with QTTimeRange ->QTTimeRangeMBS
NSArray ->Array of Variant
QuartzFilter ->QuartzFilterMBS

```

- ->*MBS

Variant to Cocoa NSObject:

```

nil ->nil
Dictionary ->NSDictionary
Boolean ->NSNumber
Integer ->NSNumber
Color ->NSColor
Int64 ->NSNumber
Single ->NSNumber
Double ->NSNumber
Date ->NSDate

```

MemoryBlock ->NSData
 String ->NSString
 NSImageMBS ->NSImage
 NSAttributedStringMBS ->NSAttributedString
 NSColorMBS ->NSColor
 NSRectMBS ->NSValue with NSRect
 NSSizeMBS ->NSValue with NSSize
 NSPointMBS ->NSValue with NSPoint
 NSRangeMBS ->NSValue with NSRange
 NSBurnMBS ->NSBurn
 NSViewMBS ->NSView
 NSFontMBS ->NSFont
 NSParagraphStyleMBS ->NSParagraphStyle
 NSAttributedStringMBS ->NSAttributedString
 WebPolicyDelegateMBS ->WebPolicyDelegate
 WebUIDelegateMBS ->WebUIDelegate
 WebFrameLoadDelegateMBS ->WebFrameLoadDelegate
 WebResourceLoadDelegateMBS ->WebResourceLoadDelegate
 NSIndexSetMBS ->NSIndexSet
 QTTimeMBS ->QTTime
 QTTimeRangeMBS ->QTTimeRange
 Array of Variant ->NSArray
 Array of String ->NSArray
 CFStringMBS ->NSString
 CFNumberMBS ->NSNumber
 CFDataMBS ->NSData
 CFURLMBS ->NSURL
 CFArrayMBS ->NSArray
 CFDictionaryMBS ->NSDictionary
 CFBinaryDataMBS ->NSData

Carbon CFTypeRef to Variant:

CFDictionaryRef ->Dictionary
 CFStringRef ->String
 CFDataRef ->String
 CFURL ->String
 CFNumber ->Integer/Double/Int64
 CFArray ->Array
 CFDate ->date
 nil ->nil
 CGColorSpace ->CGColorSpaceMBS
 CGColor ->CGColorMBS
 CGImage ->CGImageMBS
 CF* ->CF*MBS

Variant to Carbon CTypeRef:

Dictionary ->CFDictionaryRef
 Boolean ->CFBooleanRef
 Color ->CFNumberRef
 Integer ->CFNumberRef
 Int64 ->CFNumberRef
 Single ->CFNumberRef
 Double ->CFNumberRef
 String ->CFStringRef
 Color ->CGColorRef
 Date ->CFDateRef
 nil ->nil
 Memoryblock ->CFDataRef
 Folderitem ->CFURLRef
 Dictionary ->CFDictionaryRef
 Array of Variant/String/Date/Double/Single/Int64/Integer ->CFArray
 CGRectMBS ->CGRect as CFDataRef
 CGSizeMBS ->CGSize as CFDataRef
 CGPointMBS ->CGPoint as CFDataRef
 CGColorMBS ->CGColor
 CGColorSpaceMBS ->CGColorSpace
 CGImageMBS ->CGImage
 CGDataConsumerMBS ->CGDataConsumer
 CGDataProviderMBS ->CGDataProvider
 CF*MBS ->CF*

Strings without encodings should be put into dictionaries as memoryblocks.

18.0.240 Uploaded my web app with FTP, but it does not run on the server!

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** If you see errors like a simple "Segmentation Fault" on Linux or some other wired errors, you may want to check your FTP upload mode. It must be binary for web apps. ASCII mode corrupts the application.

18.0.241 What classes to use for hotkeys?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Please use CarbonHotKeyMBS class on Mac and WindowsKeyFilterMBS on Windows.

Notes: CarbonHotKeyMBS will also work fine in Cocoa apps.

18.0.242 What do I need for Linux to get picture functions working?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** In order to get our plugins working on Linux systems without GUI, the plugin loads graphics libraries dynamically.

Notes:

To get it working, the plugin tries to load gtk with this paths:

- libgtk-x11-2.0.so”
- libgtk-x11-2.0.so.0”
- /usr/lib/libgtk-x11-2.0.so”
- /usr/lib32/libgtk-x11-2.0.so”
- /usr/lib/libgtk-x11-2.0.so.0”
- /usr/lib32/libgtk-x11-2.0.so.0”

gdk is loaded with this paths:

- libgdk-x11-2.0.so”
- libgdk-x11-2.0.so.0”
- /usr/lib/libgdk-x11-2.0.so”
- /usr/lib32/libgdk-x11-2.0.so”
- /usr/lib/libgdk-x11-2.0.so.0”
- /usr/lib32/libgdk-x11-2.0.so.0”

For the paths without explicit path, the system will search in /lib, /usr/lib and all directories in the LD_LIBRARY_PATH environment variable.

18.0.243 What does the NAN code mean?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:**

18.0.244 What font is used as a 'small font' in typical Mac OS X apps?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:**

REALbasic 4.5 has a constant "SmallSystem" to use for a font name.

For older versions try this code:

Example:

```
Sub GetThemeFont(fontType as Integer, ByRef fontName as String, ByRef fontSize as Integer, ByRef
fontName as Integer)
dim err as Integer
dim theFont, theFontSize, theFontStyle as MemoryBlock
```

```
const smSystemScript = -1
```

```
Declare Function GetThemeFont Lib "Carbon" (inFontID as Integer, inScript as Integer, outFontName
as Ptr, outFontSize as Ptr, outStyle as Ptr) as Integer
```

```
theFont = NewMemoryBlock(256) //Str255
theFontSize = NewMemoryBlock(2) //SInt16
theFontStyle = NewMemoryBlock(1) //Style
```

```
err = GetThemeFont(fontType, smSystemScript, theFont, theFontSize, theFontStyle)
```

```
if err = 0 then
fontName = theFont.PString(0)
fontSize = theFontSize.UShort(0)
fontStyle = theFontStyle.Byte(0)
else
fontName = ""
fontSize = 0
fontStyle = 0
end if
End Sub
```

18.0.245 What is last plugin version to run on Mac OS X 10.4?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Last Version with 10.4 support is version 15.4.

Notes:

With version 15.4 you can build applications for OS X 10.4 and newer.

For Version 16.0 we disabled 10.4 and moved minimum to 10.5. We may be able to enable it again to build a version of 16.x, but may need to charge for this by hour.

18.0.246 What is last plugin version to run on PPC?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Last Version with PPC is 15.4.

Notes:

With version 15.4 you can build PPC applications for OS X 10.4 and newer.

For Version 16.0 we disabled PPC. We may be able to enable it again to build a PPC version of 16.x, but may need to charge for this by hour.

18.0.247 What is the difference between Timer and WebTimer?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Time is server side and WebTimer client side.

Notes: Timer is the normal timer class in Real Studio. It runs on the server. On the side the WebTimer runs on the client. It triggers a request to the server to perform the action. So a WebTimer is good to keep the connection running and the website updated regularly. A timer on the server is good to make regular jobs like starting a database backup every 24 hours.

18.0.248 What is the list of Excel functions?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Below a list of function names known by LibXL.

Notes:

LibXL parses the functions and writes tokens to the excel file. So even if Excel can do more functions, we can only accept the ones known by LibXL.

ABS, ABSREF, ACOS, ACOSH, ACTIVE.CELL, ADD.BAR, ADD.COMMAND, ADD.MENU, ADD.TOOLBAR, ADDRESS, AND, APP.TITLE, AREAS, ARGUMENT, ASC, ASIN, ASINH, ATAN, ATAN2, ATANH, AVEDEV, AVERAGE, AVERAGEA, BAHTTEXT, BETADIST, BETAINV, BINOMDIST, BREAK, CALL, CALLER, CANCEL.KEY, CEILING, CELL, CHAR, CHECK.COMMAND, CHIDIST, CHIINV, CHITEST, CHOOSE, CLEAN, CODE, COLUMN, COLUMNS, COMBIN, CONCATENATE, CONFIDENCE, CORREL, COS, COSH, COUNT, COUNTA, COUNTBLANK, COUNTIF, COVAR, CREATE.OBJECT, CRITBINOM, CUSTOM.REPEAT, CUSTOM.UNDO, DATE, DATEDIF, DATESTRING, DATEVALUE, DAVERAGE, DAY, DAYS360, DB, DBCS, DCOUNT, DCOUNTA, DDB, DEGREES, DELETE.BAR, DELETE.COMMAND, DELETE.MENU, DELETE.TOOLBAR, Deref, DEVSQ, DGET, DIALOG.BOX, DIRECTORY, DMAX, DMIN, DOCUMENTS, DOLLAR, DPRODUCT, DSTDEV, DSTDEVP, DSUM, DVAR, DVARP, ECHO, ELSE, ELSE.IF, ENABLE.COMMAND, ENABLE.TOOL, END.IF, ERROR, ERROR.TYPE, EVALUATE, EVEN, EXACT, EXEC, EXECUTE, EXP, EXPONDIST, FACT, FALSE, FCLOSE, FDIST, FILES, FIND, FINDB, FINV, FISHER, FISHERINV, FIXED, FLOOR, FOPEN, FOR, FOR.CELL, FORECAST, FORMULA.CONVERT, FPOS, FREAD, FREADLN, FREQUENCY, FSIZE, FTEST, FV, FWRITE, FWRITELN, GAMMADIST, GAMMAINV, GAMMALN, GEOMEAN, GET.BAR, GET.CELL, GET.CHART.ITEM, GET.DEF, GET.DOCUMENT, GET.FORMULA, GET.LINK.INFO, GET.MOVIE, GET.NAME, GET.NOTE,

GET.OBJECT, GET.PIVOT.FIELD, GET.PIVOT.ITEM, GET.PIVOT.TABLE, GET.TOOL, GET.TOOLBAR, GET.WINDOW, GET.WORKBOOK, GET.WORKSPACE, GETPIVOTDATA, GOTO, GROUP, GROWTH, HALT, HARMEAN, HELP, HLOOKUP, HOUR, HYPERLINK, HYPGEOMDIST, IF, INDEX, INDIRECT, INFO, INITIATE, INPUT, INT, INTERCEPT, IPMT, IRR, ISBLANK, ISERR, ISERROR, ISLOGICAL, ISNA, ISNONTEXT, ISNUMBER, ISPMT, ISREF, ISTEXT, ISTHAIDIGIT, KURT, LARGE, LAST.ERROR, LEFT, LEFTB, LEN, LENB, LINEST, LINKS, LN, LOG, LOG10, LOGEST, LOGINV, LOGNORMDIST, LOOKUP, LOWER, MATCH, MAX, MAXA, MDETERM, MEDIAN, MID, MIDB, MIN, MINA, MINUTE, MINVERSE, MIRR, MMULT, MOD, MODE, MONTH, MOVIE.COMMAND, N, NA, NAMES, NEGBINOMDIST, NEXT, NORMDIST, NORMINV, NORMSDIST, NORMSINV, NOT, NOTE, NOW, NPER, NPV, NUMBERSTRING, ODD, OFFSET, OPEN.DIALOG, OPTIONS.LISTS.GET, OR, PAUSE, PEARSON, PERCENTILE, PERCENTRANK, PERMUT, PHONETIC, PI, PIVOT.ADD.DATA, PMT, POISSON, POKE, POWER, PPMT, PRESS.TOOL, PROB, PRODUCT, PROPER, PV, QUARTILE, RADIANS, RAND, RANK, RATE, REFTTEXT, REGISTER, REGISTER.ID, RELREF, RENAME.COMMAND, REPLACE, REPLACEB, REPT, REQUEST, RESET.TOOLBAR, RESTART, RESULT, RESUME, RETURN, RIGHT, RIGHTB, ROMAN, ROUND, ROUNDBAHTDOWN, ROUNDBAHTUP, ROUNDDOWN, ROUNDUP, ROW, ROWS, RSQ, RTD, SAVE.DIALOG, SAVE.TOOLBAR, SCENARIO.GET, SEARCH, SEARCHB, SECOND, SELECTION, SERIES, SET.NAME, SET.VALUE, SHOW.BAR, SIGN, SIN, SINH, SKEW, SLN, SLOPE, SMALL, SPELLING.CHECK, SQRT, STANDARDIZE, STDEV, STDEVA, STDEVP, STDEVPA, STEP, STEYX, SUBSTITUTE, SUBTOTAL, SUM, SUMIF, SUMPRODUCT, SUMSQ, SUMX2MY2, SUMX2PY2, SUMXMY2, SYD, T, TAN, TANH, TDIST, TERMINATE, TEXT, TEXT.BOX, TEXTREF, THAIDAYOFWEEK, THAIDIGIT, THAIMONTHOFYEAR, THAINUMSOUND, THAINUMSTRING, THAISTRINGLENGTH, THAIYEAR, TIME, TIMEVALUE, TINV, TODAY, TRANSPOSE, TREND, TRIM, TRIMMEAN, TRUE, TRUNC, TTEST, TYPE, UNREGISTER, UPPER, USDOLLAR, USERDEFINED, VALUE, VAR, VARA, VARP, VARPA, VDB, VIEW.GET, VLOOKUP, VOLATILE, WEEKDAY, WEIBULL, WHILE, WINDOW.TITLE, WINDOWS, YEAR and ZTEST.

18.0.249 What is the replacement for PluginMBS?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Use the SoftDeclareMBS class to load libraries dynamically.

18.0.250 What to do on Realbasic reporting a conflict?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:**

I get an error like "This item conflicts with another item of the same name" when using one of the plugin functions.

REALbasic just wants to tell you that you dropped something in the plugins folder what is not a plugin.

Notes: Some users dropped the examples, the documentation or other files into the plugins folder. Don't do it.

18.0.251 What to do with a NSImageCacheException?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** You need to add exception handlers for NSExcptionMBS in order to catch this exception.

Notes:

You may also add code to write the stack of the exception into a log file for later locating the error source.

A NSImage has several image representations in memory. So basicly you pass in the base image and for whatever size an image is needed, the NSImage class will create a cache image representation of the requested size so on the next query it can use that cache for the same requested size.

18.0.252 What to do with MySQL Error 2014?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** You can get this error on MySQL if you have a recordset open while you create another one.

18.0.253 What ways do I have to ping?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** You have different ways

Notes:

1. Use the shell class and the ping utility.
2. Use the MBS Network Plugin and there the SuperSocket part:
 - a) On Windows the ICMPPingMBS works to ping.
 - b) On Mac OS X it uses OpenTransport and needs root rights. You need to use sudo to run this application. This does not work on Intel Macs, because the plugin is not endian safe.

3. The DarwinPingMBS.Ping method:

Compiled for Mac OS X Macho target it works as a synchronized ping method.
The Windows version had a bug and was fixed in plugin version 8.2pr4. So it works now.

4. The DarwinPingMBS.SimplePing method:

Works on Mac OS X Macho target.

But this method can be called from a thread to make it working in background.

18.0.254 Where is `CGGetActiveDisplayListMBS`?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** This is now `CGDisplayMBS.GetActiveDisplayList`.

18.0.255 Where is `CGGetDisplaysWithPointMBS`?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** This is now `CGDisplayMBS.GetDisplaysWithPoint`.

18.0.256 Where is `CGGetDisplaysWithRectMBS`?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** This is now `CGDisplayMBS.GetDisplaysWithRect`.

18.0.257 Where is `CGGetOnlineDisplayListMBS`?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** This is now `CGDisplayMBS.GetOnlineDisplayList`.

18.0.258 Where is `GetObjectClassNameMBS`?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Please use this replacement method:

Example:

```
Function GetObjectClassNameMBS(o as Object) As string
dim t as Introspection.TypeInfo = Introspection.GetType(o)
Return t.FullName
End Function
```

Notes: `GetObjectClassNameMBS` was removed from the plugins.

18.0.259 Where is NetworkAvailableMBS?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** We removed NetworkAvailableMBS some versions ago. It was not working right and basically it's not useful. If you want to check whether you have a network, then do a DNS resolve:

Example:

```
// two independent domain names
const domain1 = "www.google.com"
const domain2 = "www.macs.w.de"

// resolve IPs
dim ip1 as string = DNSNameToAddressMBS(Domain1)
dim ip2 as string = DNSNameToAddressMBS(Domain2)

// if we got IPs and not the same IPs (error/login pages)
if len(ip1)=0 or len(ip2)=0 or ip1=ip2 then
  MsgBox "no connection"
else
  MsgBox "have connection"
end if
```

Notes: This way you can detect whether you got something from DNS. And you can make sure that a DNS redirection to a login page won't catch you.

18.0.260 Where is StringHeight function in DynaPDF?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Use the function GetFTextHeight or GetFTextHeightEx.

Notes: Be aware that GetFTextHeight works with format commands and you may want to escape your text if you don't use them.

18.0.261 Where is XLSDocumentMBS class?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** This class has been removed in favor of XLBookMBS class.

Notes: These classes have been removed XLSCellMBS, XLSDocumentMBS, XLSFormatRecordMBS, XLSMergedCellsMBS, XLSRowMBS and XLSSheetMBS.

18.0.262 Where to get information about file formats?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:**

Please visit this web page:

<http://www.wotsit.org>

18.0.263 Where to register creator code for my application?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:**

Register at Apple:

<http://developer.apple.com/dev/cftype/information.html>

18.0.264 Which Mac OS X frameworks are 64bit only?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Some frameworks from Mac OS X do not support 32 bit applications, so we can't provide plugins for Xojo until 64bit target is available.

Notes:

For Mac OS X 10.8:

- Accounts
- EventKit
- GLKit
- Social

and in 10.9:

- Accounts
- AVKit
- EventKit
- GameController
- GLKit
- MapKit

- MediaLibrary
- Social
- SpriteKit

In general Apple makes all new frameworks being 64 bit only.

18.0.265 Which plugins are 64bit only?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** Some of our plugins work only in 64 bit modes as operation systems do not provide 32 bit code.

Notes: This effects currently: EventKit, Accounts, Social frameworks from Apple and our matching plugins.

18.0.266 Why application doesn't launch because of a missing ddraw.dll!?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Some RB versions require that you install DirectX from Microsoft on your Windows.

18.0.267 Why application doesn't launch because of a missing shlwapi.dll!?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** Some RB versions require that you install the Internet Explorer from Microsoft on your Windows.

Notes: This bug is for several older Windows 95 editions.

18.0.268 Why do I hear a beep on keydown?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** When the user presses a key, RB goes through all keydown event handlers till on returns true.

Notes: If no keydown event handler returns true for the key, a beep is performed.

18.0.269 Why does folderitem.item return nil?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:** Because Realbasic fails to make a folderitem for you. Reason may be an alias file which can't be resolved or simply that you don't have enough access rights to read the folder content.

Notes: A more rarely reason is that the directory changed and the file with the given index or name does no longer exist.

18.0.270 Why doesn't showurl work?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: Yes. **Answer:**

There are three main reasons:

1. showurl is not supported by REALbasic in 68k applications.
2. there is now application defined for the protocol (e.g. http) in the Internet Control panel.
3. You don't have Internet Config installed.

You can use the InternetConfigMBS class to check for this stuff.

18.0.271 Why have I no values in my chart?

Plugin Version: all, Console & Web: No, Mac: Yes, Win: Yes, Linux: No. **Answer:** You have no data points visible, there may be several reasons:

Notes:

For example one of the data values may be infinite or invalid.
Or the scaling may be out of range, so you simply see nothing.

18.0.272 Will application size increase with using plugins?

Plugin Version: all, Console & Web: No, Mac: No, Win: Yes, Linux: No. **Answer:** All plugins used by your application will be included in the application.

Notes:

If you use no plugins, your application will not change size.
And if you use one class from the plugins, your application size will increase by a few kilobytes.
The documentation of the plugins include a list of all plugin parts and their sizes for the different platforms.

18.0.273 XLS: Custom format string guidelines

Plugin Version: all, Console & Web: No, Mac: Yes, Win: No, Linux: No. **Answer:** You have to download the source code and compile a static version of the library.

Notes:

Up to four sections of format codes can be specified. The format codes, separated by semicolons, define the formats for positive numbers, negative numbers, zero values, and text, in that order. If only two sections are specified, the first is used for positive numbers and zeros, and the second is used for negative numbers. If only one section is specified, it is used for all numbers. Four sections example:

,# # # .00-); [Red] (# ,# # # .00);0.00;"sales"@

The following table describes the different symbols that are available for use in custom number formats.

Specify colors

To set the text color for a section of the format, type the name of one of the following eight colors in square brackets in the section. The color code must be the first item in the section.

Instead of using the name of the color, the color index can be used, like this [Color3] for Red. Valid numeric indexes for color range from 1 to 56, which reference by index to the legacy color palette.

Specify conditions

To set number formats that will be applied only if a number meets a specified condition, enclose the condition in square brackets. The condition consists of a comparison operator and a value. Comparison operators include: = Equal to; >Greater than; <Less than; >= Greater than or equal to, <= Less than or equal to, and <>Not equal to. For example, the following format displays numbers that are less than or equal to 100 in a red font and numbers that are greater than 100 in a blue font.

[Red] [<=100] ; [Blue] [>100]

If the cell value does not meet any of the criteria, then pound signs ("# ") are displayed across the width of the cell.

Dates and times

Examples

Parameter	Description
x	The x value of the data point. For an enumerated x-axis (see <code>Axis.setLabels</code> on what is an enumerated axis), the first data point is 0, and the nth data point is (n-1).
xLabel	The bottom x-axis label of the data point.
x2Label	The top x-axis label of the data point.
value	The value of the data point.
accValue	The sum of values of all data points that are in the same x position and same data group as the current data point, and with data set number less than or equal to the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
totalValue	The sum of values of all data points that are in the same x position and same data group as the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
percent	The percentage of the data point based on the total value of all data points that are in the same x position and same data group as the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
accPercent	The accumulated percentage of the data point based on the total value of all data points that are in the same x position and same data group as the current data point. This is useful for stacked charts, such as stacked bar chart and stacked area chart.
gpercent	The percentage of the data point based on the total value of all data points in a layer.
dataSet	The data set number to which the data point belongs. The first data set is 0. The nth data set is (n-1).
dataSetName	The name of the data set to which the data point belongs.
dataItem	The data point number within the data set. The first data point is 0. The nth data point is (n-1).
dataGroup	The data group number to which the data point belongs. The first data group is 0. The nth data group is (n-1).
dataGroupName	The name of the data group to which the data point belongs.
layerId	The layer number to which the data point belongs. The first layer is 0. The nth layer is (n-1).
fieldN	The (N + 1)th extra field. For example, { field0 } means the first extra field. An extra field is an array of custom elements added using <code>Layer.addExtraField</code> , <code>Layer.addExtraField2</code> , <code>BaseChart.addExtraField</code> or <code>BaseChart.addExtraField2</code> .

diFieldN	Same as fieldN. See above.
dsFieldN	Similar to fieldN, except that dsFieldN means the extra field is indexed by data set number. The Pth data set corresponds to the Pth element of the extra field.
dsdiFieldN	Similar to fieldN, except that dsdiFieldN means the extra fields are indexed by both the data set number and data point number. The Pth data item of the Qth data set corresponds to the Pth element of the (N + Q)th extra field.

Parameter	Description
zx	The symbol scale in the x dimension. Applicable for layers with symbol scales set by <code>LineStyle.setSymbolScale</code> .
zy	The symbol scale in the y dimension. Applicable for layers with symbol scales set by <code>LineStyle.setSymbolScale</code> .
z	The symbol scale without distinguishing the dimension to use. Applicable for layers with symbol scales set by <code>LineStyle.setSymbolScale</code> .

Parameter	Description
slope	The slope of the trend line.
intercept	The y-intercept of the trend line.
corr	The correlation coefficient in linear regression analysis.
stderr	The standard error in linear regression analysis.

Parameter	Description
top	The value of the top edge of the box-whisker symbol.
bottom	The value of the bottom edge of the box-whisker symbol.
max	The value of the maximum mark of the box-whisker symbol.
min	The value of the minimum mark of the box-whisker symbol.
med	The value of the median mark of the box-whisker symbol.

Parameter	Description
high	The high value.
low	The low value.
open	The open value.
close	The close value.

Parameter	Description
dir	The direction of the vector.
len	The length of the vector.

Parameter	Description
radius	The radial value of the data point.
value	Same as { radius } . See above.
angle	The angular value of the data point.
x	Same as { angle } . See above.
label	The angular label of the data point.
xLabel	Same as { label } . See above.
name	The name of the layer to which the data point belongs.
dataSetName	Same as { name } . See above.
i	The data point number. The first data point is 0. The nth data point is (n-1).
dataItem	Same as { i } . See above.
z	The symbol scale. Applicable for layers with symbol scales set by Polar-Layer.setSymbolScale.
fieldN	The (N + 1)th extra field. For example, { field0 } means the first extra field. An extra field is an array of custom elements added using Layer.addExtraField, Layer.addExtraField2, BaseChart.addExtraField or BaseChart.addExtraField2.
diFieldN	Same as fieldN. See above.
dsFieldN	Similar to fieldN, except that dsFieldN means the extra field is indexed by layer index. The Pth layer corresponds to the Pth element of the extra field.
dsdiFieldN	Similar to fieldN, except that dsdiFieldN means the extra fields are indexed by both the data set number and data point number. The Pth data item of the Qth layer corresponds to the Pth element of the (N + Q)th extra field.
Parameter	Description
dir	The direction of the vector.
len	The length of the vector.
Parameter	Description
value	The axis value at the tick position.
label	The axis label at the tick position.
Parameter	Description
[param]	The name of the parameter
[a]	If this field a number, it specifies the number of decimal places (digits to the right of the decimal point).

[b]	The thousand separator. Should be a non-alphanumeric character (not 0-9, A-Z, a-z). Use ' '.
textasciitilde ' for no thousand separator. The default is ' '.	
textasciitilde ' , which can be modified using BaseChart.setNumberFormat.	
[c]	The decimal point character. The default is '.', which can be modified using BaseChart.setNumberFormat.
[d]	The negative sign character. Use ' '.
textasciitilde ' for no negative sign character. The default is '-', which can be modified using BaseChart.setNumberFormat.	

Parameter	Description
yyyy	The year in 4 digits (e.g. 2002)
yyy	The year showing only the least significant 3 digits (e.g. 002 for the year 2002)
yy	The year showing only the least significant 2 digits (e.g. 02 for the year 2002)
y	The year showing only the least significant 1 digits (e.g. 2 for the year 2002)
mmm	The month formatted as its name. The default is to use the first 3 characters of the english month name (Jan, Feb, Mar ...). The names can be configured using BaseChart.setMonthNames.
mm	The month formatted as 2 digits from 01 - 12, adding leading zero if necessary.
m	The month formatted using the minimum number of digits from 1 - 12.
MMM	The first 3 characters of the month name converted to upper case. The names can be configured using BaseChart.setMonthNames.
MM	The first 2 characters of the month name converted to upper case. The names can be configured using BaseChart.setMonthNames.
M	The first character of the month name converted to upper case. The names can be configured using BaseChart.setMonthNames.
dd	The day of month formatted as 2 digits from 01 - 31, adding leading zero if necessary.
d	The day of month formatted using the minimum number of digits from 1 - 31.
w	The name of the day of week. The default is to use the first 3 characters of the english day of week name (Sun, Mon, Tue ...). The names can be configured using BaseChart.setWeekDayNames.
hh	The hour of day formatted as 2 digits, adding leading zero if necessary. The 2 digits will be 00 - 23 if the 'a' option (see below) is not specified, otherwise it will be 01 - 12.
h	The hour of day formatted using the minimum number of digits. The digits will be 0 - 23 if the 'a' option (see below) is not specified, otherwise it will be 01 - 12.
nn	The minute formatted as 2 digits from 00 - 59, adding leading zero if necessary.
n	The minute formatted using the minimum number of digits from 00 - 59.
ss	The second formatted as 2 digits from 00 - 59, adding leading zero if necessary.
s	The second formatted using the minimum number of digits from 00 - 59.
a	Display either 'am' or 'pm', depending on whether the time is in the morning or afternoon. The text 'am' and 'pm' can be modified using BaseChart.setAMPM.

Shape Id	Value	Description
SquareShape	1	Square shape. See (1, 1) above.
DiamondShape	2	Diamond shape. See (2, 1) above.
TriangleShape	3	Triangle shape pointing upwards. See (3, 1) above.
RightTriangleShape	4	Triangle shape pointing rightwards. See (4, 1) above.
LeftTriangleShape	5	Triangle shape pointing leftwards. See (5, 1) above.
InvertedTriangleShape	6	Triangle shape pointing downwards. See (1, 2) above.
CircleShape	7	Circle shape. See (2, 2) above.
StarShape	[Method]	Star shapes of various points. See (2, 3), (2, 4), (2, 5), (3, 1), (3, 2), (3, 3), (3, 4), (3, 5) above for stars with 3 to 10 points.
PolygonShape	[Method]	Polygon shapes symmetrical about a vertical axis with a vertex at the top center position. See (4, 1), (4, 3), (4, 5), (5, 1) for polygons of 5 to 8 sides.
Polygon2Shape	[Method]	Polygon shapes symmetrical about a vertical axis but without any vertex at the top center position. See (4, 2), (4, 4) for polygons of 5 and 6 sides.
CrossShape	[Method]	'+' shapes. See (5, 2), (5, 3), (5, 4), (5, 5), (6, 1), (6, 2), (6, 3) for '+' shape with arm width of 0.1 - 0.7.
Cross2Shape	[Method]	'X' shapes. See (6, 4), (6, 5), (7, 1), (7, 2), (7, 3), (7, 4), (7, 5) for 'X' shapes with arm width of 0.1 - 0.7.

langEnglish	0	Roman script
langFrench	1	Roman script
langGerman	2	Roman script
langItalian	3	Roman script
langDutch	4	Roman script
langSwedish	5	Roman script
langSpanish	6	Roman script
langDanish	7	Roman script
langPortuguese	8	Roman script
langNorwegian	9	Roman script
langHebrew	10	Hebrew script
langJapanese	11	Japanese script
langArabic	12	Arabic script
langFinnish	13	Roman script
langGreek	14	Greek script using smRoman script code
langIcelandic	15	modified smRoman/Icelandic script
langMaltese	16	Roman script
langTurkish	17	modified smRoman/Turkish script
langCroatian	18	modified smRoman/Croatian script
langTradChinese	19	Chinese (Mandarin) in traditional characters
langUrdu	20	Arabic script
langHindi	21	Devanagari script
langThai	22	Thai script
langKorean	23	Korean script

Nan	Meaning
1	Invalid square root (negative number, usually)
2	Invalid addition (indeterminate such as infinity + (-infinity))
4	Invalid division (indeterminate such as 0/0)
8	Invalid multiplication (indeterminate such as 0*infinity)
9	Invalid modulo such as (a mod 0)
17	Try to convert invalid string to a number like val("x7")
33	Invalid argument in a trig function
34	Invalid argument in an inverse trig function
36	Invalid argument in a log function
37	Invalid argument in Pow function
38	Invalid argument in toolbox financial function
40	Invalid argument in hyperbolic function
42	Invalid argument in a gamma function

Symbol	Description and result
0	Digit placeholder. For example, if the value 8.9 is to be displayed as 8.90, use the format #.00
#	Digit placeholder. This symbol follows the same rules as the 0 symbol. However, the application shall not display extra zeros when the number typed has fewer digits on either side of the decimal than there are # symbols in the format. For example, if the custom format is #.# #, and 8.9 is in the cell, the number 8.9 is displayed.
?	Digit placeholder. This symbol follows the same rules as the 0 symbol. However, the application shall put a space for insignificant zeros on either side of the decimal point so that decimal points are aligned in the column. For example, the custom format 0.0? aligns the decimal points for the numbers 8.9 and 88.99 in a column.
. (period)	Decimal point.
%	Percentage. If the cell contains a number between 0 and 1, and the custom format 0% is used, the application shall multiply the number by 100 and add the percentage symbol in the cell.
, (comma)	Thousands separator. The application shall separate thousands by commas if the format contains a comma that is enclosed by number signs (#) or by zeros. A comma that follows a placeholder scales the number by one thousand. For example, if the format is #.0,, and the cell value is 12,200,000 then the number 12.2 is displayed.
E- E+ e- e+	Scientific format. The application shall display a number to the right of the "E" symbol that corresponds to the number of places that the decimal point was moved. For example, if the format is 0.00E+00, and the value 12,200,000 is in the cell, the number 1.22E+07 is displayed. If the number format is #0.0E+0, then the number 12.2E+6 is displayed.
\$ -+/():space	Displays the symbol. If it is desired to display a character that differs from one of these symbols, precede the character with a backslash (\). Alternatively, enclose the character in quotation marks. For example, if the number format is (000), and the value 12 is in the cell, the number (012) is displayed.
\	Display the next character in the format. The application shall not display the backslash. For example, if the number format is 0\!, and the value 3 is in the cell, the value 3! is displayed.
*	Repeat the next character in the format enough times to fill the column to its current width. There shall not be more than one asterisk in one section of the format. If more than one asterisk appears in one section of the format, all but the last asterisk shall be ignored. For example, if the number format is 0*x, and the value 3 is in the cell, the value 3xxxxxx is displayed. The number of x characters that are displayed in the cell varies based on the width of the column.
_ (underline)	Skip the width of the next character. This is useful for lining up negative and positive values in different cells of the same column. For example, the number format _(0.0.);(0.0) aligns the numbers 2.3 and -4.5 in the column even though the negative number is enclosed by parentheses.
"text"	Display whatever text is inside the quotation marks. For example, the format 0.00 "dollars" displays 1.23 dollars when the value 1.23 is in the cell.
@	Text placeholder. If text is typed in the cell, the text from the cell is placed in the format where the at symbol (@) appears. For example, if the number format is "Bob "@ Smith" (including quotation marks), and the value "John" is in the cell, the value Bob John Smith is displayed.

[Black] [Green] [White] [Blue] [Magenta] [Yellow] [Cyan] [Red]

To display	As	Use this code
Months	1-12	m
Months	01-12	mm
Months	Jan-Dec	mmm
Months	January-December	mmmm
Months	J-D	mmmmm
Days	1-31	d
Days	01-31	dd
Days	Sun-Sat	ddd
Days	Sunday-Saturday	dddd
Years	00-99	yy
Years	1900-9999	yyyy
Hours	0-23	h
Hours	00-23	hh
Minutes	0-59	m
Minutes	00-59	mm
Seconds	0-59	s
Seconds	00-59	ss
Time	4 AM	h AM/PM
Time	4:36 PM	h:mm AM/PM
Time	4:36:03 P	h:mm:ss A/P
Time	4:36:03.75	h:mm:ss.00
Elapsed time	1:02	[h] :mm
Elapsed time	62:16	[mm] :ss
Elapsed time	3735.80	[ss] .00

To display	As	Use this code
1234.59	1234.6	# # # # .#
8.9	8.900	# .000
.631	0.6	0.#
12	12.0	# .0#
1234.568	1234.57	# .0#
44.398	44.398	???.???
102.65	102.65	???.???
2.8	2.8	???.???
5.25	5 1/4	# ??/??
5.3	5 3/10	# ??/??
12000	12,000	# ,# # #
12000	12	# ,
12400000	12.4	0.0,,