NSMenuItemCell Class Reference

Cocoa > User Experience

2007-03-07

No licenses, express or implied, are granted with respect to any of the technology described in this document. Apple retains all intellectual property rights associated with the technology described in this document. This document is intended to assist application developers to develop applications only for Apple-labeled computers.

Every effort has been made to ensure that the information in this document is accurate. Apple is not responsible for typographical errors.

Apple Inc.
1 Infinite Loop
Cupertino, CA 95014
408-996-1010

Simultaneously published in the United States and Canada.

Even though Apple has reviewed this document, APPLE MAKES NO WARRANTY OR REPRESENTATION, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS DOCUMENT, ITS QUALITY, ACCURACY, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. AS A RESULT, THIS DOCUMENT IS PROVIDED "AS IS," AND YOU, THE READER, ARE ASSUMING THE ENTIRE RISK AS TO ITS QUALITY AND ACCURACY.

IN NO EVENT WILL APPLE BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT OR INACCURACY IN THIS DOCUMENT, even if advised of the possibility of such damages.

THE WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, ORAL OR WRITTEN, EXPRESS OR IMPLIED. No Apple dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

Some states do not allow the exclusion or limitation of implied warranties or liability for incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Contents

NSMenuItemCell Class Reference

Inherits from	NSButtonCell : NSActionCell : NSCell : NSObject
Conforms to	NSCoding (NSCell) NSCopying (NSCell) NSObject (NSObject)
Framework	/System/Library/Frameworks/AppKit.framework
Availability	Available in Mac OS X v10.0 and later.
Companion guide	Application Menu and Pop-up List Programming Topics for Cocoa
Declared in	NSMenuItemCell.h

Overview

`NSMenuItemCell` is a class that handles the measurement and display of a single menu item in its encompassing frame. Instances of `NSMenuItemCell` work in conjunction with an `NSMenuView` object to control the overall appearance of the menu.

Note: `NSMenuItemCell` is no longer used to draw menus. Using it will not affect the appearance of your menus.

Tasks

Configuring Menu-Item Attributes

– `menuItem` (page 11)
    Returns the `NSMenuItem` object associated with the receiver.

– `setMenuItem:` (page 13)
    Sets the `NSMenuItem` object associated withthe receive.

– `menuView` (page 12)
    Returns the menu view associated with the receiver.

– `setMenuView:` (page 13)
    Sets the menu view for the receiver.

Calculating the Size of a Menu Item

- `calcSize` (page 7)
  Calculates the minimum required width and height of the receiver's menu item.
- `needsSizing` (page 12)
  Returns `YES` if the size of the menu item needs to be calculated; otherwise returns `NO`.
- `setNeedsSizing:` (page 14)
  Sets a flag that indicates whether or not the menu item must be resized.
- `imageWidth` (page 10)
  Returns the width of the image associated with a menu item.
- `titleWidth` (page 16)
  Returns the width of the menu item text.
- `keyEquivalentWidth` (page 11)
  Returns the width of the key equivalent associated with the menu item.
- `stateImageWidth` (page 15)
  Returns the width of the image used to indicate the state of the menu item.

Getting the Menu Item's Drawing Rectangle

- `keyEquivalentRectForBounds:` (page 11)
  Returns the rectangle into which the menu item's key equivalent should be drawn.
- `stateImageRectForBounds:` (page 14)
  Returns the rectangle into which the menu item's state image should be drawn.
- `titleRectForBounds:` (page 15)
  Returns the rectangle into which the menu item's title should be drawn.

Drawing the Menu Item

- `drawBorderAndBackgroundWithFrame:inView:` (page 7)
  Draws the borders and background associated with the receiver's menu item (if any).
- `drawImageWithFrame:inView:` (page 8)
  Draws the image associated with the menu item.
- `drawKeyEquivalentWithFrame:inView:` (page 8)
  Draws the key equivalent associated with the menu item.
- `drawSeparatorItemWithFrame:inView:` (page 9)
  Draws a menu item separator.
- `drawStateImageWithFrame:inView:` (page 9)
  Draws the state image associated with the menu item.
- `drawTitleWithFrame:inView:` (page 10)
  Draws the title associated with the menu item.
- `needsDisplay` (page 12)
  Returns `YES` if the menu item needs to be displayed; otherwise returns `NO`.

`- setNeedsDisplay:` (page 13)
: Sets whether the menu item needs to be drawn.

Assigning a Tag

`- tag` (page 15)
: Returns the integer tag of the selected menu item, or 0 if no item is selected.

Instance Methods

calcSize

Calculates the minimum required width and height of the receiver's menu item.

```
- (void)calcSize
```

Discussion
The calculated values are cached for future use. This method also calculates the sizes of individual components of the cell's menu item and caches those values.

This method is invoked automatically when necessary. You should not need to invoke it directly.

Availability
Available in Mac OS X v10.0 and later.

See Also
`- needsSizing` (page 12)

Declared In
`NSMenuItemCell.h`

drawBorderAndBackgroundWithFrame:inView:

Draws the borders and background associated with the receiver's menu item (if any).

```
- (void)drawBorderAndBackgroundWithFrame:(NSRect)cellFrame inView:(NSView
    *)controlView
```

Parameters

cellFrame
: A rectangle defining the receiver's frame area.

controlView
: The view object that contains this cell (usually an `NSControl` object).

Discussion
This method invokes the `NSCell` method `imageRectForBounds:`, passing it *cellFrame*, to calculate the rectangle in which to draw the image. The cell invokes this method before invoking the methods to draw the other menu item components.

Availability
Available in Mac OS X v10.0 and later.

See Also
`- drawWithFrame:inView:` (NSCell)

Declared In
`NSMenuItemCell.h`

drawImageWithFrame:inView:

Draws the image associated with the menu item.

```
- (void)drawImageWithFrame:(NSRect)cellFrame inView:(NSView *)controlView
```

Parameters

cellFrame
A rectangle defining the receiver's frame area.

controlView
The view object that contains this cell (usually an `NSControl` object).

Discussion
This method invokes the `NSCell` method `imageRectForBounds:`, passing it *cellFrame*, to calculate the rectangle in which to draw the image. This method is invoked by the cell's `drawWithFrame:` method. You should not need to invoke it directly. Subclasses may override this method to control the drawing of the image.

Availability
Available in Mac OS X v10.0 and later.

Declared In
`NSMenuItemCell.h`

drawKeyEquivalentWithFrame:inView:

Draws the key equivalent associated with the menu item.

```
- (void)drawKeyEquivalentWithFrame:(NSRect)cellFrame inView:(NSView *)controlView
```

Parameters

cellFrame
A rectangle defining the receiver's frame area.

controlView
The view object that contains this cell (usually an `NSControl` object).

Discussion
This method invokes `keyEquivalentRectForBounds:` (page 11), passing it *cellFrame*, to calculate the rectangle in which to draw the key equivalent. This method is invoked by the cell's `drawWithFrame:` method. You should not need to invoke it directly. Subclasses may override this method to control the drawing of the key equivalent.

Availability
Available in Mac OS X v10.0 and later.

Declared In

`NSMenuItemCell.h`

drawSeparatorItemWithFrame:inView:

Draws a menu item separator.

```
- (void)drawSeparatorItemWithFrame:(NSRect)cellFrame inView:(NSView *)controlView
```

Parameters

cellFrame

A rectangle defining the receiver's frame area.

controlView

The view object that contains this cell (usually an `NSControl` object).

Discussion

This method uses the *cellFrame* parameter to calculate the rectangle in which to draw the menu item separator. This method uses the *controlView* to determine whether the separator item should be drawn normally or flipped.

You should not need to invoke this method directly. Subclasses may override this method to control the drawing of the separator.

Availability

Available in Mac OS X v10.0 and later.

See Also

- `drawKeyEquivalentWithFrame:inView:` (page 8)
- `drawTitleWithFrame:inView:` (page 10)
- `isFlipped` (NSView)

Declared In

`NSMenuItemCell.h`

drawStateImageWithFrame:inView:

Draws the state image associated with the menu item.

```
- (void)drawStateImageWithFrame:(NSRect)cellFrame inView:(NSView *)controlView
```

Parameters

cellFrame

A rectangle defining the receiver's frame area.

controlView

The view object that contains this cell (usually an `NSControl` object).

Discussion

This method invokes `stateImageRectForBounds:` (page 14), passing it *cellFrame*, to calculate the rectangle in which to draw the state image. This method is invoked by the cell's `drawWithFrame:` method. You should not need to invoke it directly. Subclasses may override this method to control the drawing of the state image.

Availability

Available in Mac OS X v10.0 and later.

Declared In

`NSMenuItemCell.h`

drawTitleWithFrame:inView:

Draws the title associated with the menu item.

```
- (void)drawTitleWithFrame:(NSRect)cellFrame inView:(NSView *)controlView
```

Parameters

cellFrame

A rectangle defining the receiver's frame area.

controlView

The view object that contains this cell (usually an `NSControl` object).

Discussion

This method invokes `titleRectForBounds:` (page 15), passing it *cellFrame*, to calculate the rectangle in which to draw the title. The *controlView* parameter specifies the view that contains this cell.This method is invoked by the cell's `drawWithFrame:` method. You should not need to invoke it directly. Subclasses may override this method to control the drawing of the title.

Availability

Available in Mac OS X v10.0 and later.

Declared In

`NSMenuItemCell.h`

imageWidth

Returns the width of the image associated with a menu item.

```
- (CGFloat)imageWidth
```

Discussion

You can associate an image with a menu item using the `NSMenuItem` `setImage:` method.

Availability

Available in Mac OS X v10.0 and later.

See Also

- `- stateImageWidth` (page 15)
- `- calcSize` (page 7)
- `- needsSizing` (page 12)

Declared In

`NSMenuItemCell.h`

keyEquivalentRectForBounds:

Returns the rectangle into which the menu item's key equivalent should be drawn.

```
- (NSRect)keyEquivalentRectForBounds:(NSRect)cellFrame
```

Parameters

cellFrame

A rectangle that defines the bounds of the receiver.

Return Value

The returned rectangle is based on *cellFrame* but encompasses only the area to be occupied by the key equivalent.

Availability

Available in Mac OS X v10.0 and later.

See Also

- keyEquivalent (NSMenuItem)
- stateImageRectForBounds: (page 14)
- titleRectForBounds: (page 15)
- keyEquivalentRectForBounds: (page 11)

Declared In

NSMenuItemCell.h

keyEquivalentWidth

Returns the width of the key equivalent associated with the menu item.

```
- (CGFloat)keyEquivalentWidth
```

Discussion

You can associate a key equivalent with a menu item using the NSMenuItem method setKeyEquivalent:.

Availability

Available in Mac OS X v10.0 and later.

See Also

- calcSize (page 7)
- needsSizing (page 12)

Declared In

NSMenuItemCell.h

menuItem

Returns the NSMenuItem object associated with the receiver.

```
- (NSMenuItem *)menuItem
```

Availability

Available in Mac OS X v10.0 and later.

See Also

- setMenuItem: (page 13)

Declared In

NSMenuItemCell.h

menuView

Returns the menu view associated with the receiver.

```
- (NSMenuView *)menuView
```

Availability

Available in Mac OS X v10.0 and later.

Not available to 64-bit applications.

See Also

- setMenuView: (page 13)

Declared In

NSMenuItemCell.h

needsDisplay

Returns YES if the menu item needs to be displayed; otherwise returns NO.

```
- (BOOL)needsDisplay
```

Availability

Available in Mac OS X v10.0 and later.

See Also

- setNeedsDisplay: (page 13)

Declared In

NSMenuItemCell.h

needsSizing

Returns YES if the size of the menu item needs to be calculated; otherwise returns NO.

```
- (BOOL)needsSizing
```

Availability

Available in Mac OS X v10.0 and later.

See Also

- setNeedsSizing: (page 14)
- calcSize (page 7)

Declared In

`NSMenuItemCell.h`

setMenuItem:

Sets the `NSMenuItem` object associated withthe receive.

```
- (void)setMenuItem:(NSMenuItem *)item
```

Parameters

`item`

The `NSMenuItem` object to set.

Availability

Available in Mac OS X v10.0 and later.

See Also

`- menuItem` (page 11)

Declared In

`NSMenuItemCell.h`

setMenuView:

Sets the menu view for the receiver.

```
- (void)setMenuView:(NSMenuView *)menuView
```

Parameters

`menuView`

The `NSMenuView` object to associate with the receiver.

Availability

Available in Mac OS X v10.0 and later.

Not available to 64-bit applications.

See Also

`- menuView` (page 12)

Declared In

`NSMenuItemCell.h`

setNeedsDisplay:

Sets whether the menu item needs to be drawn.

```
- (void)setNeedsDisplay:(BOOL)flag
```

Parameters

`flag`

`YES` if the menu item needs to be drawn, `NO` otherwise.

Availability
Available in Mac OS X v10.0 and later.

See Also
`- needsDisplay` (page 12)

Declared In
`NSMenuItemCell.h`

setNeedsSizing:

Sets a flag that indicates whether or not the menu item must be resized.

```
- (void)setNeedsSizing:(BOOL)flag
```

Parameters

`flag`
If *`flag`* is `YES`, the next attempt to obtain any size-related information from this menu item cell invokes the `calcSize` (page 7) method to recalculate the information. If *`flag`* is `NO`, the next attempt to obtain size-related information returns the currently cached values.

Discussion
Subclasses that drastically change the way a menu item is drawn may need to invoke this method to recalculate the menu item information. Other parts of your application should not need to invoke this method directly. The cell invokes this method as necessary when the content of its menu item changes.

Availability
Available in Mac OS X v10.0 and later.

See Also
`- needsSizing` (page 12)

Declared In
`NSMenuItemCell.h`

stateImageRectForBounds:

Returns the rectangle into which the menu item's state image should be drawn.

```
- (NSRect)stateImageRectForBounds:(NSRect)cellFrame
```

Parameters

`cellFrame`
A rectangle that defines the bounds of the receiver.

Return Value
The returned rectangle is based on *`cellFrame`* but encompasses only the area to be occupied by the menu item's state image.

Availability
Available in Mac OS X v10.0 and later.

See Also
`- stateImageRectForBounds:` (page 14)

- `titleRectForBounds:` (page 15)
- `keyEquivalentRectForBounds:` (page 11)

Declared In
`NSMenuItemCell.h`

stateImageWidth

Returns the width of the image used to indicate the state of the menu item.

```
- (CGFloat)stateImageWidth
```

Discussion
If the menu item has multiple images associated with it (to indicate any of the available states: on, off, or mixed), this method returns the width of the largest image. You can set the state images for a menu item using the `NSMenuItem` methods `setOnStateImage:`, `setOffStateImage:`, and `setMixedStateImage:`.

To change the state of the cell's menu item, use the `NSMenuItem` method `setState:`.

Availability
Available in Mac OS X v10.0 and later.

See Also
- `calcSize` (page 7)
- `needsSizing` (page 12)
- `setState:` (NSMenuItem)

Declared In
`NSMenuItemCell.h`

tag

Returns the integer tag of the selected menu item, or 0 if no item is selected.

```
- (NSInteger)tag
```

Discussion
Setting the tag value of an `NSMenuItemCell` object with `setTag:` does nothing.

Availability
Available in Mac OS X v10.4 and later.

See Also
- `setTag:` (NSActionCell)

Declared In
`NSMenuItemCell.h`

titleRectForBounds:

Returns the rectangle into which the menu item's title should be drawn.

```
- (NSRect)titleRectForBounds:(NSRect)cellFrame
```

Parameters

cellFrame

A rectangle that defines the bounds of the receiver.

Return Value

The returned rectangle is based on *cellFrame* but encompasses only the area to be occupied by the text of the title.

Availability

Available in Mac OS X v10.0 and later.

See Also

- stateImageRectForBounds: (page 14)
- titleRectForBounds: (page 15)
- keyEquivalentRectForBounds: (page 11)

Declared In

`NSMenuItemCell.h`

titleWidth

Returns the width of the menu item text.

```
- (CGFloat)titleWidth
```

Discussion

To set the menu item text, use NSMenuItem's `setTitle:` method.

Availability

Available in Mac OS X v10.0 and later.

See Also

- calcSize (page 7)
- needsSizing (page 12)

Declared In

`NSMenuItemCell.h`

Document Revision History

This table describes the changes to *NSMenuItemCell Class Reference*.

Date	Notes
2007-03-07	Removed descriptions of methods declared in superclass.
2006-05-23	First publication of this content as a separate document.

Index