
NSAccessibility Protocol Reference

User Experience: Accessibility



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NSAccessibility Protocol Reference

(informal protocol)

Adopted by	NSObject
Framework	/System/Library/Frameworks/AppKit.framework
Companion guide	Accessibility Programming Guidelines for Cocoa
Declared in	NSAccessibility.h

Overview

The `NSAccessibility` informal protocol defines methods that Cocoa classes must implement to make themselves available to an external assistive application. An assistive application interacts with your application to allow persons with disabilities to use your application. For example, a person with a visual impairment could use an application to convert menu items and button labels into speech and then perform actions by verbal command.

Because many Cocoa user interface classes already implement the `NSAccessibility` protocol, providing reasonable default behavior in most cases, Cocoa applications built with standard objects are automatically accessible. In general, you need to explicitly implement the `NSAccessibility` protocol methods only if you subclass one of them, adding new behavior.

The Cocoa implementations of these methods raise an `NSAccessibilityException` when errors occur, such as requesting the value of an unsupported attribute. In most cases, subclasses do not need to raise or catch these exceptions, because overridden methods should invoke their inherited methods for unrecognized attribute and action names.

An accessible object is described by a set of attributes that define characteristics such as the object type, its value, its size and position on the screen, and its place in the accessibility hierarchy. For some objects, the set of attributes can include parameterized attributes. Parameterized attributes behave similar to a function by allowing you to pass a parameter when requesting an attribute value.

See “Accessibility” in *Application Kit Functions Reference* for functions related to accessibility.

Tasks

Accessing Attributes

- [accessibilityAttributeNames](#) (page 9)
Returns an array of attribute names supported by the receiver.

- [accessibilityAttributeValue:](#) (page 9)
Returns the value of the specified attribute in the receiver.
- [accessibilityIsAttributeSettable:](#) (page 12)
Returns a Boolean value that indicates whether the value for the specified attribute in the receiver can be set.
- [accessibilitySetValue:forAttribute:](#) (page 14)
Sets the value of the specified attribute in the receiver to the specified value.
- [accessibilitySetOverrideValue:forAttribute:](#) (page 13)
Overrides the specified attribute in the receiver, or adds it if it does not exist, and sets its value to the specified value.
- [accessibilityArrayAttributeCount:](#) (page 8)
Returns the count of the specified accessibility array attribute.
- [accessibilityArrayAttributeValues:index:maxCount:](#) (page 8)
Returns a subarray of values of an accessibility array attribute.
- [accessibilityIndexOfChild:](#) (page 11)
Returns the index of the specified accessibility child in the parent.

Accessing Parameterized Attributes

- [accessibilityParameterizedAttributeNames](#) (page 13)
Returns a list of parameterized attribute names supported by the receiver.
- [accessibilityAttributeValue:forParameter:](#) (page 10)
Returns the value of the receiver's parameterized attribute corresponding to the specified attribute name and parameter.

Accessing Actions

- [accessibilityActionNames](#) (page 7)
Returns an array of action names supported by the receiver.
- [accessibilityActionDescription:](#) (page 7)
Returns a localized description of the specified action.
- [accessibilityPerformAction:](#) (page 13)
Performs the action associated with the specified action.

Querying Elements

- [accessibilityIsIgnored](#) (page 12)
Returns a Boolean value indicating whether the receiver should be ignored in the parent-child accessibility hierarchy.
- [accessibilityHitTest:](#) (page 11)
Returns the deepest descendant of the accessibility hierarchy that contains the specified point.
- [accessibilityFocusedUIElement](#) (page 10)
Returns the deepest descendant of the accessibility hierarchy that has the focus.

Instance Methods

accessibilityActionDescription:

Returns a localized description of the specified action.

```
- (NSString *)accessibilityActionDescription:(NSString *)action
```

Parameters

action

The action attribute.

Return Value

The description of the specified action, in a localized string.

Discussion

User interface classes must implement this method to return descriptions for all actions returned from [accessibilityActionNames](#) (page 7). A button, for example, might return the string "press" for the `NSAccessibilityPressAction` action. Subclasses should invoke the superclass's implementation, if it exists, to obtain the descriptions of any inherited actions.

Availability

Available in Mac OS X v10.2 and later.

Declared In

`NSAccessibility.h`

accessibilityActionNames

Returns an array of action names supported by the receiver.

```
- (NSArray *)accessibilityActionNames
```

Return Value

An array of action names.

Discussion

User interface classes must implement this method. Subclasses should invoke the superclass's implementation, if it exists, and append additional action names or remove unsupported actions. See ["Constants"](#) (page 15) for some common action names.

Availability

Available in Mac OS X v10.2 and later.

Related Sample Code

Dicey

ImageMap

ImageMapExample

Sketch+Accessibility

ZipBrowser

Declared In

NSAccessibility.h

accessibilityArrayAttributeCount:

Returns the count of the specified accessibility array attribute.

```
- (NSUInteger)accessibilityArrayAttributeCount:(NSString *)attribute
```

Parameters*attribute*

The accessibility array attribute.

Return Value

The number of items in the specified array attribute.

DiscussionIf *attribute* is not an array an exception is raised.**Availability**

Available in Mac OS X v10.6 and later.

Declared In

NSAccessibility.h

accessibilityArrayAttributeValues:index:maxCount:

Returns a subarray of values of an accessibility array attribute.

```
- (NSArray *)accessibilityArrayAttributeValues:(NSString *)attribute
    index:(NSUInteger)index maxCount:(NSUInteger)maxCount
```

Parameters*attribute*

The accessibility array attribute.

index

The starting index.

maxCount

The maximum desired number of items requested.

Return Value

An array of values within the specified index and count.

Discussion

Note that this method does not take a range. The max count is the maximum desired number of items requested by an accessibility client. This number may be beyond the bounds of your array.

Availability

Available in Mac OS X v10.6 and later.

Declared In

NSAccessibility.h

accessibilityAttributeNames

Returns an array of attribute names supported by the receiver.

```
- (NSArray *)accessibilityAttributeNames
```

Return Value

An array containing the attributes supported by the receiver.

Discussion

User interface classes must implement this method. Subclasses should invoke the superclass's implementation, if it exists, and append additional attributes or remove unsupported attributes. See [“Constants”](#) (page 15) for lists of attribute names.

Availability

Available in Mac OS X v10.2 and later.

Related Sample Code

Dicey

ImageMap

ImageMapExample

Sketch+Accessibility

TrackBall

Declared In

NSAccessibility.h

accessibilityAttributeValue:

Returns the value of the specified attribute in the receiver.

```
- (id)accessibilityAttributeValue:(NSString *)attribute
```

Parameters

attribute

The name of the attribute. See [“Constants”](#) (page 15) for lists of attribute names.

Discussion

User interface classes must implement this method. Subclasses should invoke the superclass's implementation, if it exists, if *attribute* is not implemented in the subclass.

Availability

Available in Mac OS X v10.2 and later.

Related Sample Code

ZipBrowser

Declared In

NSAccessibility.h

accessibilityAttributeValue:forParameter:

Returns the value of the receiver's parameterized attribute corresponding to the specified attribute name and parameter.

```
- (id)accessibilityAttributeValue:(NSString *)attribute forParameter:(id)parameter
```

Parameters

attribute

The name of the attribute. See “Constants” (page 15) for lists of attribute names.

parameter

The parameter.

Discussion

If you implement this method you should also implement [accessibilityParameterizedAttributeNames](#) (page 13).

Availability

Available in Mac OS X v10.3 and later.

Declared In

NSAccessibility.h

accessibilityFocusedUIElement

Returns the deepest descendant of the accessibility hierarchy that has the focus.

```
- (id)accessibilityFocusedUIElement
```

Return Value

The deepest accessibility object in the accessibility hierarchy that has focus.

Discussion

You can assume that the search for the focus has already been narrowed down to the receiver. Override this method to do deeper searching by identifying which child element, if any, may have the focus. If a child element does not have the focus, either return `self` or, if available, invoke the superclass's implementation. The default `NSView` and `NSCell` implementations test whether the receiver is an ignored element and, if so, return the receiver's first unignored parent; otherwise they return `self`.

Availability

Available in Mac OS X v10.2 and later.

Related Sample Code

Dicey

ImageMap

ImageMapExample

TrackBall

ZipBrowser

Declared In

NSAccessibility.h

accessibilityHitTest:

Returns the deepest descendant of the accessibility hierarchy that contains the specified point.

```
- (id)accessibilityHitTest:(NSPoint)point
```

Parameters

point

The point being hit-tested, in lower-left relative screen coordinates.

Return Value

The deepest accessibility element in the accessibility hierarchy that contains the specified point.

Discussion

You can assume that the specified point has already been determined to lie within the receiver. Override this method to do deeper hit-testing by identifying which child element, if any, contains the point. `NSMatrix`, for example, identifies which of its cells contains the point and propagates the hit-test to it.

If the specified point is not contained within one of the receiver's children, either return `self` or, if available, invoke the superclass's implementation. The default `NSView` and `NSCell` implementations test whether the receiver is an ignored element and, if it is, return the receiver's first unignored parent; otherwise they return `self`.

Availability

Available in Mac OS X v10.2 and later.

Related Sample Code

Dicey

ImageMap

ImageMapExample

Sketch+Accessibility

Declared In

`NSAccessibility.h`

accessibilityIndexOfChild:

Returns the index of the specified accessibility child in the parent.

```
- (NSUInteger)accessibilityIndexOfChild:(id)child
```

Parameters

child

The accessibility child of an object.

Return Value

The index of the accessibility child object in the parent. Returns `NSNotFound` if the child does not exist.

Availability

Available in Mac OS X v10.6 and later.

Declared In

`NSAccessibility.h`

accessibilityIsAttributeSettable:

Returns a Boolean value that indicates whether the value for the specified attribute in the receiver can be set.

```
- (BOOL)accessibilityIsAttributeSettable:(NSString *)attribute
```

Parameters

attribute

The name of the attribute. See “Constants” (page 15) for lists of attribute names.

Return Value

YES if the specified attribute can be set; otherwise, NO.

Discussion

User interface classes must implement this method. Subclasses should invoke the superclass’s implementation, if it exists, if *attribute* is not implemented in the subclass.

Availability

Available in Mac OS X v10.2 and later.

Declared In

NSAccessibility.h

accessibilityIsIgnored

Returns a Boolean value indicating whether the receiver should be ignored in the parent-child accessibility hierarchy.

```
- (BOOL)accessibilityIsIgnored
```

Return Value

YES if the receiver should be ignored; otherwise, NO.

Discussion

When asking for an object’s children, ignored children should not be included; instead, the ignored children should be replaced by their own unignored children. The same applies when asking for an object’s parent: an ignored parent should be skipped and the first unignored ancestor treated as the real parent. Likewise, when a hit-test or focus test is satisfied by an ignored element, the element’s first unignored ancestor (or descendant in certain cases, such as single-celled controls) should be used instead.

Ignored elements allow the accessibility hierarchy to be a simplified version of the view and object ownership hierarchies. Intermediate objects can be bypassed and the real user interface objects accessed more quickly. For example, `NSControl` objects are ignored when they are single-celled; the visible parent-child relationship is between the control’s parent (or a higher ancestor if the parent is ignored, too) and the control’s cell.

Availability

Available in Mac OS X v10.2 and later.

Related Sample Code

Dicey

ImageMap

ImageMapExample

Sketch+Accessibility

TrackBall

Declared In

NSAccessibility.h

accessibilityParameterizedAttributeNames

Returns a list of parameterized attribute names supported by the receiver.

- (NSArray *)accessibilityParameterizedAttributeNames

Return Value

An array of parameterized attributes in the receiver.

Discussion

If you implement this method you should also implement [accessibilityAttributeValue:forParameter:](#) (page 10).

Availability

Available in Mac OS X v10.3 and later.

Related Sample Code

Sketch+Accessibility

Declared In

NSAccessibility.h

accessibilityPerformAction:

Performs the action associated with the specified action.

- (void)accessibilityPerformAction:(NSString *)*action***Parameters***action*

The action to perform.

Discussion

User interface classes must implement this method to handle all the actions returned from [accessibilityActionNames](#) (page 7). Subclasses should invoke the superclass's implementation, if it exists, if *action* is not implemented in the subclass.

Availability

Available in Mac OS X v10.2 and later.

Declared In

NSAccessibility.h

accessibilitySetOverrideValue:forAttribute:

Overrides the specified attribute in the receiver, or adds it if it does not exist, and sets its value to the specified value.

```
- (BOOL)accessibilitySetOverrideValue:(id)value forAttribute:(NSString *)attribute
```

Parameters

value

The attribute value to set.

attribute

The name of the attribute. See [“Constants”](#) (page 15) for lists of attribute names.

Return Value

YES if the override was successful; otherwise, NO.

Discussion

This method is for changing the set of attributes on an instance, as an alternative to subclassing.

This method only works on objects whose class already implements the `NSAccessibility` protocol. If the specified attribute is already supported by the object, the value specified by this method wins.

If the specified attribute does not exist, it is created. This is done outside the `NSAccessibility` protocol, so `accessibilityAttributeNames` still returns the old list which does not contain the new attribute. Likewise, `accessibilityAttributeValue` does not return attributes created by the override process nor does it return their overridden values.

The values of overridden attributes are not settable by assistive applications.

If you need to undo the effect of using this method, call it again passing `nil` for the value.

Ensure that you invoke this method on the actual object that represents the user interface element. For example, in the case of `NSButton`, use the underlying `NSButtonCell`. The `NSButton` itself is ignored by accessibility.

This method works only on an object representing a single user interface element. So, for example, you cannot use it when a single object represents multiple user interface elements, as with `NSSegmentedCell`, which has only a single object but provides user interface elements for each segment.

Availability

Available in Mac OS X v10.4 and later.

Related Sample Code

Dicey

Declared In

`NSAccessibility.h`

accessibilitySetValue:forAttribute:

Sets the value of the specified attribute in the receiver to the specified value.

```
- (void)accessibilitySetValue:(id)value forAttribute:(NSString *)attribute
```

Parameters

value

The attribute value to set.

attribute

The name of the attribute. See [“Constants”](#) (page 15) for lists of attribute names.

Discussion

User interface classes must implement this method if any of its attributes are settable. Subclasses should invoke the superclass's implementation, if it exists, if *attribute* is not implemented in the subclass.

Availability

Available in Mac OS X v10.2 and later.

Declared In

NSAccessibility.h

Constants

Standard attributes

Standard attributes that can be adopted by any accessibility object.

```

NSString *const NSAccessibilityChildrenAttribute;
NSString *const NSAccessibilityContentsAttribute;
NSString *const NSAccessibilityDescriptionAttribute;
NSString *const NSAccessibilityEnabledAttribute;
NSString *const NSAccessibilityFocusedAttribute;
NSString *const NSAccessibilityHelpAttribute;
NSString *const NSAccessibilityMaxValueAttribute;
NSString *const NSAccessibilityMinValueAttribute;
NSString *const NSAccessibilityParentAttribute;
NSString *const NSAccessibilityPositionAttribute;
NSString *const NSAccessibilityRoleAttribute;
NSString *const NSAccessibilityRoleDescriptionAttribute;
NSString *const NSAccessibilitySelectedChildrenAttribute;
NSString *const NSAccessibilityShownMenuAttribute;
NSString *const NSAccessibilitySizeAttribute;
NSString *const NSAccessibilitySubroleAttribute;
NSString *const NSAccessibilityTitleAttribute;
NSString *const NSAccessibilityTopLevelUIElementAttribute;
NSString *const NSAccessibilityValueAttribute;
NSString *const NSAccessibilityValueDescriptionAttribute;
NSString *const NSAccessibilityVisibleChildrenAttribute;
NSString *const NSAccessibilityWindowAttribute;

```

Constants

NSAccessibilityChildrenAttribute

The element's child elements in the accessibility hierarchy (NSArray).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityContentsAttribute

Elements that represent the contents in the current element, such as the document view of a scroll view (NSArray).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

`NSAccessibilityDescriptionAttribute`

The purpose of the element, not including the role (NSString).

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityEnabledAttribute`

A flag that indicates the enabled state of the element (NSNumber).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityFocusedAttribute`

A flag that indicates the presence of keyboard focus (NSNumber).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityHelpAttribute`

The help text for the element (NSString).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityMaxValueAttribute`

The element's maximum value (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityMinValueAttribute`

The element's minimum value (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityParentAttribute`

The element's parent element in the accessibility hierarchy (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityPositionAttribute`

The screen position of the element's lower-left corner in lower-left relative screen coordinates (NSValue).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityRoleAttribute`

The element's type, such as `NSAccessibilityRadioButtonRole` (NSString). See ["Roles"](#) (page 39) for a list of available roles.

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityRoleDescriptionAttribute`

A localized, human-intelligible description of the element's role, such as "radio button" (NSString).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedChildrenAttribute`

The currently selected children of the element (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityShownMenuAttribute`

The menu currently being displayed (id).

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySizeAttribute`

The element's size (NSValue).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySubroleAttribute`

The element's subrole, such as `NSAccessibilityTableRowSubrole` (NSString). See ["Subroles"](#) (page 46) for a list of available subroles.

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityTitleAttribute`

The title of the element, such as a button's visible text (NSString).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityTopLevelUIElementAttribute`

The top-level element that contains this element (id).

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityValueAttribute`

The element's value (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityValueDescriptionAttribute`

The description of the element's value (NSString).

Available in Mac OS X v10.5 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityVisibleChildrenAttribute`

The element's child elements that are visible (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityWindowAttribute`

The window containing the current element (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

Declared In

`NSAccessibility.h`

Text-specific attributes

Attributes that are specific to text.

```
NSString *const NSAccessibilityInsertionPointLineNumberAttribute;
NSString *const NSAccessibilityNumberOfCharactersAttribute;
NSString *const NSAccessibilitySelectedTextAttribute;
NSString *const NSAccessibilitySelectedTextRangeAttribute;
NSString *const NSAccessibilitySelectedTextRangesAttribute;
NSString *const NSAccessibilitySharedCharacterRangeAttribute;
NSString *const NSAccessibilitySharedTextUIElementsAttribute;
NSString *const NSAccessibilityVisibleCharacterRangeAttribute;
```

Constants

`NSAccessibilityInsertionPointLineNumberAttribute`

The line number containing the insertion point (NSNumber).

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityNumberOfCharactersAttribute`

The number of characters in the text (NSNumber).

Available in Mac OS X v10.3 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedTextAttribute`

The currently selected text (NSString).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedTextRangeAttribute`

The range of selected text (NSValue).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedTextRangesAttribute`

An array of NSValue (rangeValue) ranges of selected text (NSArray).

Available in Mac OS X v10.5 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySharedCharacterRangeAttribute`

The (rangeValue) part of shared text in this view (NSValue).

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySharedTextUIElementsAttribute`

The elements with which the text of this element is shared (NSArray).

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityVisibleCharacterRangeAttribute`

The range of visible text (NSValue). Returns ranges for entire lines. For example, characters that are horizontally clipped will be reported in the visible range.

Available in Mac OS X v10.3 and later.

Declared in `NSAccessibility.h`.

Declared In

NSAccessibility.h

Text-specific parameterized attributes

Parameterized attributes specific to text.

```

NSString *const NSAccessibilityAttributedStringForRangeParameterizedAttribute;
NSString *const NSAccessibilityBoundsForRangeParameterizedAttribute;
NSString *const NSAccessibilityLineForIndexParameterizedAttribute;
NSString *const NSAccessibilityRTFForRangeParameterizedAttribute;
NSString *const NSAccessibilityRangeForIndexParameterizedAttribute;
NSString *const NSAccessibilityRangeForLineParameterizedAttribute;
NSString *const NSAccessibilityRangeForPositionParameterizedAttribute;
NSString *const NSAccessibilityStringForRangeParameterizedAttribute;
NSString *const NSAccessibilityStyleRangeForIndexParameterizedAttribute;

```

Constants

NSAccessibilityLineForIndexParameterizedAttribute

The line number (NSNumber) of the specified character (NSNumber).**Available in Mac OS X v10.3 and later.****Declared in NSAccessibility.h.**

NSAccessibilityRangeForLineParameterizedAttribute

The range of characters (NSValue containing an NSRange) corresponding to the specified line number (NSNumber).**Available in Mac OS X v10.3 and later.****Declared in NSAccessibility.h.**

NSAccessibilityStringForRangeParameterizedAttribute

The substring (NSString) specified by the range (NSValue containing an NSRange).**Available in Mac OS X v10.3 and later.****Declared in NSAccessibility.h.**

NSAccessibilityRangeForPositionParameterizedAttribute

The range of characters (NSValue containing an NSRange) composing the glyph at the specified point (NSValue containing NSPoint).**Available in Mac OS X v10.3 and later.****Declared in NSAccessibility.h.**

NSAccessibilityRangeForIndexParameterizedAttribute

The full range of characters (NSValue containing an NSRange), including the specified character, which compose a single glyph (NSNumber).**Available in Mac OS X v10.3 and later.****Declared in NSAccessibility.h.**

NSAccessibilityBoundsForRangeParameterizedAttribute

The rectangle (NSValue containing an NSRect) enclosing the specified range of characters (NSValue containing an NSRange). If the range crosses a line boundary, the returned rectangle will fully enclose all the lines of characters.**Available in Mac OS X v10.3 and later.****Declared in NSAccessibility.h.**

NSAccessibilityRTFForRangeParameterizedAttribute

The RTF data (NSData) describing the specified range of characters (NSValue containing an NSRange).

Available in Mac OS X v10.3 and later.

Declared in NSAccessibility.h.

NSAccessibilityStyleRangeForIndexParameterizedAttribute

The full range of characters (NSValue containing an NSRange), including the specified character (NSNumber), which have the same style.

Available in Mac OS X v10.3 and later.

Declared in NSAccessibility.h.

NSAccessibilityAttributedStringForRangeParameterizedAttribute

Does not use attributes from AppKit/AttributedString.h (NSAttributedString).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Text attributed string attributes and constants

Attributes and key constants used with attributed strings.

```
NSString *const NSAccessibilityAttachmentTextAttribute;
NSString *const NSAccessibilityBackgroundColorTextAttribute;
NSString *const NSAccessibilityFontFamilyKey;
NSString *const NSAccessibilityFontNameKey;
NSString *const NSAccessibilityFontSizeKey;
NSString *const NSAccessibilityFontTextAttribute;
NSString *const NSAccessibilityForegroundColorTextAttribute;
NSString *const NSAccessibilityLinkTextAttribute;
NSString *const NSAccessibilityMisspelledTextAttribute;
NSString *const NSAccessibilityShadowTextAttribute;
NSString *const NSAccessibilityStrikethroughColorTextAttribute;
NSString *const NSAccessibilityStrikethroughTextAttribute;
NSString *const NSAccessibilitySuperscriptTextAttribute;
NSString *const NSAccessibilityUnderlineColorTextAttribute;
NSString *const NSAccessibilityUnderlineTextAttribute;
NSString *const NSAccessibilityVisibleNameKey;
```

Constants

NSAccessibilityForegroundColorTextAttribute

Text foreground color (CGColorRef).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityBackgroundColorTextAttribute

Text background color (CGColorRef).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityUnderlineColorTextAttribute

Text underline color (CGColorRef).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityStrikethroughColorTextAttribute

Text strikethrough color (CGColorRef).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityUnderlineTextAttribute

Text underline style (NSNumber).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilitySuperscriptTextAttribute

Text superscript style (NSNumber). Values > 0 are superscript; values < 0 are subscript.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityStrikethroughTextAttribute

Text strikethrough (NSNumber as a Boolean value).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityShadowTextAttribute

Text shadow (NSNumber as a Boolean value).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityAttachmentTextAttribute

Text attachment (id).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityLinkTextAttribute

Text link (id).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityMisspelledTextAttribute

Misspelled text (NSNumber as a Boolean value).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityFontTextAttribute

Font keys (NSDictionary).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityFontNameKey

Required key for font name.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityFontFamilyKey

Optional key for font family.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityVisibleNameKey

Optional key for font visibility.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityFontSizeKey

Required key for font size.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Window-specific attributes

Attributes specific to windows.

```
NSString *const NSAccessibilityCancelButtonAttribute;
NSString *const NSAccessibilityCloseButtonAttribute;
NSString *const NSAccessibilityDefaultButtonAttribute;
NSString *const NSAccessibilityGrowAreaAttribute;
NSString *const NSAccessibilityMainAttribute;
NSString *const NSAccessibilityMinimizeButtonAttribute;
NSString *const NSAccessibilityMinimizedAttribute;
NSString *const NSAccessibilityModalAttribute;
NSString *const NSAccessibilityProxyAttribute;
NSString *const NSAccessibilityToolbarButtonAttribute;
NSString *const NSAccessibilityZoomButtonAttribute;
```

Constants

NSAccessibilityCloseButtonAttribute

The element representing the close button (id).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityGrowAreaAttribute

The element representing the grow area (id).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityModalAttribute

A flag that indicates whether the window represented by this element is modal (NSNumber).

Available in Mac OS X v10.3 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityDefaultButtonAttribute

The element that represents the default button (id).

Available in Mac OS X v10.3 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityCancelButtonAttribute

The element that represents the cancel button (id).

Available in Mac OS X v10.3 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityMainAttribute

A flag that indicates whether the window is the main window (NSNumber).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityMinimizeButtonAttribute

The element that represents the minimize button (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityMinimizedAttribute

A flag that indicates whether the window is minimized (NSNumber).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityToolbarButtonAttribute

The element that represents the toolbar button (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityProxyAttribute

The element that represents the window's document proxy (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityZoomButtonAttribute

The element that represents the zoom button (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

Declared In

`NSAccessibility.h`

Orientations

Values that indicate the orientation of elements, such as scroll bars and split views. One of these values is returned as the value for an object's `NSAccessibilityOrientationAttribute` (page 37).

```
NSString *const NSAccessibilityHorizontalOrientationValue;
NSString *const NSAccessibilityVerticalOrientationValue;
NSString *const NSAccessibilityUnknownOrientationValue;
```

Constants

NSAccessibilityHorizontalOrientationValue

The element is oriented horizontally.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityVerticalOrientationValue

The element is oriented vertically.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityUnknownOrientationValue

The element has unknown orientation.

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

Application-specific attributes

Attributes that are specific to the application object.

```
NSString *const NSAccessibilityClearButtonAttribute;
NSString *const NSAccessibilityColumnTitlesAttribute;
NSString *const NSAccessibilityFocusedUIElementAttribute;
NSString *const NSAccessibilityFocusedWindowAttribute;
NSString *const NSAccessibilityFrontmostAttribute;
NSString *const NSAccessibilityHiddenAttribute;
NSString *const NSAccessibilityMainWindowAttribute;
NSString *const NSAccessibilityMenuBarAttribute;
NSString *const NSAccessibilityOrientationAttribute;
NSString *const NSAccessibilitySearchButtonAttribute;
NSString *const NSAccessibilitySearchMenuAttribute;
NSString *const NSAccessibilityWindowsAttribute;
```

Constants

NSAccessibilityFocusedUIElementAttribute

The element with the current focus (id).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityFocusedWindowAttribute

The application's window that has current focus (id).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityFrontmostAttribute

A flag that indicates whether the application is frontmost (NSNumber).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityHiddenAttribute

A flag that indicates whether the application is hidden (NSNumber).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityMainWindowAttribute

The application's main window (id).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityMenuBarAttribute

The application's menu bar (id).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityWindowsAttribute

The application's windows (NSArray).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Grid view attributes

Attributes that are used with grid views, such as thumbnails and media browsers that present a grid of items. The children of a grid are ordered.

```
NSString *const NSAccessibilityColumnCountAttribute;
NSString *const NSAccessibilityOrderedByRowAttribute;
NSString *const NSAccessibilityRowCountAttribute;
```

Constants

NSAccessibilityColumnCountAttribute

The number of columns in the grid (NSNumber as intValue).

Available in Mac OS X v10.5 and later.

Declared in NSAccessibility.h.

NSAccessibilityOrderedByRowAttribute

A flag that indicates whether the grid is ordered row major (YES), or column major (NO) (NSNumber as boolValue).

Available in Mac OS X v10.5 and later.

Declared in NSAccessibility.h.

NSAccessibilityRowCountAttribute

The number of rows in the grid (NSNumber as intValue).

Available in Mac OS X v10.5 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Table view and outline view attributes

Attributes that are specific to tables and outlines.

```
NSString *const NSAccessibilityColumnHeaderUIElementsAttribute;
NSString *const NSAccessibilityColumnsAttribute;
NSString *const NSAccessibilityRowHeaderUIElementsAttribute;
NSString *const NSAccessibilityRowsAttribute;
NSString *const NSAccessibilitySelectedColumnsAttribute;
NSString *const NSAccessibilitySelectedRowsAttribute;
NSString *const NSAccessibilitySortDirectionAttribute;
NSString *const NSAccessibilityVisibleColumnsAttribute;
NSString *const NSAccessibilityVisibleRowsAttribute;
```

Constants

`NSAccessibilityColumnHeaderUIElementsAttribute`

The table's column headers (NSArray).

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityColumnsAttribute`

The table's columns (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityRowHeaderUIElementsAttribute`

The table's row headers (NSArray).

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityRowsAttribute`

The table's rows (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedColumnsAttribute`

The table's selected columns (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedRowsAttribute`

The table's selected rows (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySortDirectionAttribute`

The column's sort direction (NSString). See [“Column sort direction”](#) (page 29) for possible values.

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityVisibleColumnsAttribute`

The table's visible columns (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityVisibleRowsAttribute`

The table's visible rows (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

Declared In

`NSAccessibility.h`

Outline view attributes

Attributes that are used in outline views.

```
NSString *const NSAccessibilityDisclosedByRowAttribute;  
NSString *const NSAccessibilityDisclosedRowsAttribute;  
NSString *const NSAccessibilityDisclosingAttribute;  
NSString *const NSAccessibilityDisclosureLevelAttribute;
```

Constants

`NSAccessibilityDisclosedByRowAttribute`

The row disclosing this row (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityDisclosedRowsAttribute`

The rows disclosed by this row (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityDisclosingAttribute`

A flag that indicates whether a row is disclosing other rows (NSNumber).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityDisclosureLevelAttribute`

The indentation level of this row (NSNumber).

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

Declared In

`NSAccessibility.h`

Cell-based table attributes

Attributes that are specific to cell-based tables.

```
NSString *const NSAccessibilitySelectedCellsAttribute;
NSString *const NSAccessibilityVisibleCellsAttribute;
```

Constants

`NSAccessibilitySelectedCellsAttribute`

The table's selected cells (NSArray). This attribute is required for cell-based tables.

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityVisibleCellsAttribute`

The table's visible cells (NSArray). This attribute is required for cell-based tables.

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

Cell-based table parameterized attributes

Parameterized attributes specific to cell-based tables.

```
NSString *const NSAccessibilityCellForColumnAndRowParameterizedAttribute;
```

Constants

`NSAccessibilityCellForColumnAndRowParameterizedAttribute`

The cell at the specified row and column. The parameter is an NSArray that contains two NSNumber objects: the first number specifies the column index and the second number specifies the row index. This attribute is required for cell-based tables.

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

Cell attributes

Attributes that are specific to individual table cells.

```
NSString *const NSAccessibilityRowIndexRangeAttribute;
NSString *const NSAccessibilityColumnIndexRangeAttribute;
```

Constants

`NSAccessibilityRowIndexRangeAttribute`

The row index range of the cell (an NSRange that contains the row's starting index and index span in the table).

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityColumnIndexRangeAttribute`

The column index range of the cell (an NSRange that contains the row's starting index and index span in the table).

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

Column sort direction

Values that indicate the sort direction of a column (used with [NSAccessibilitySortDirectionAttribute](#) (page 26)).

```
NSString *const NSAccessibilityAscendingSortDirectionValue;
NSString *const NSAccessibilityDescendingSortDirectionValue;
NSString *const NSAccessibilityUnknownSortDirectionValue;
```

Constants

`NSAccessibilityAscendingSortDirectionValue`

The column is sorted in ascending values.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityDescendingSortDirectionValue`

The column is sorted in descending values.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityUnknownSortDirectionValue`

The sort direction is unknown.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

Declared In

`NSAccessibility.h`

Layout area attributes

Attributes that are specific to layout areas.

```
NSString *const NSAccessibilityHorizontalUnitsAttribute;
NSString *const NSAccessibilityVerticalUnitsAttribute;
NSString *const NSAccessibilityHorizontalUnitDescriptionAttribute;
NSString *const NSAccessibilityVerticalUnitDescriptionAttribute;
```

Constants

`NSAccessibilityHorizontalUnitsAttribute`

The units that the layout view uses for horizontal values (NSString). See [“Ruler unit attributes”](#) (page 34) for possible values.

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityVerticalUnitsAttribute`

The units that the layout view uses for vertical values (NSString). See [“Ruler unit attributes”](#) (page 34) for possible values.

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityHorizontalUnitDescriptionAttribute

The description of the layout view's horizontal units (NSString).

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilityVerticalUnitDescriptionAttribute

The description of the layout view's vertical units (NSString).

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

Layout area parameterized attributes

Parameterized attributes that are specific to layout areas.

```
NSString *const NSAccessibilityLayoutPointForScreenPointParameterizedAttribute;
```

```
NSString *const NSAccessibilityLayoutSizeForScreenSizeParameterizedAttribute;
```

```
NSString *const NSAccessibilityScreenPointForLayoutPointParameterizedAttribute;
```

```
NSString *const NSAccessibilityScreenSizeForLayoutSizeParameterizedAttribute;
```

Constants

NSAccessibilityLayoutPointForScreenPointParameterizedAttribute

The point in the layout area (NSValue) corresponding to the specified point on the screen (NSValue).

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilityLayoutSizeForScreenSizeParameterizedAttribute

The size of the layout area (NSValue) corresponding to the specified screen size (NSValue).

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilityScreenPointForLayoutPointParameterizedAttribute

The screen point (NSValue) corresponding to the specified point in the layout area (NSValue).

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilityScreenSizeForLayoutSizeParameterizedAttribute

The size of the screen (NSValue) corresponding to the specified size of the layout area (NSValue).

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

Layout item attributes

Attributes that are specific to the items in a layout area.

```
NSString *const NSAccessibilityHandlesAttribute;
```

Constants

`NSAccessibilityHandlesAttribute`
 The drag handles of the item (NSArray).
 Available in Mac OS X v10.6 and later.
 Declared in `NSAccessibility.h`.

Slider attributes

Attributes that are specific to sliders.

```
NSString *const NSAccessibilityAllowedValuesAttribute;
NSString *const NSAccessibilityLabelUIElementsAttribute;
NSString *const NSAccessibilityLabelValueAttribute;
```

Constants

`NSAccessibilityAllowedValuesAttribute`
 The allowed values in the slider (NSArray).
 Available in Mac OS X v10.4 and later.
 Declared in `NSAccessibility.h`.

`NSAccessibilityLabelUIElementsAttribute`
 The elements that represent the slider's labels (NSArray).
 Available in Mac OS X v10.4 and later.
 Declared in `NSAccessibility.h`.

`NSAccessibilityLabelValueAttribute`
 The value of the label represented by this element (NSNumber).
 Available in Mac OS X v10.4 and later.
 Declared in `NSAccessibility.h`.

Declared In

`NSAccessibility.h`

Screen matte attributes

Attributes that are specific to screen mattes.

```
NSString *const NSAccessibilityMatteContentUIElementAttribute;
NSString *const NSAccessibilityMatteHoleAttribute;
```

Constants

`NSAccessibilityMatteHoleAttribute`
 The bounds of the matte hole, in screen coordinates (NSValue containing an NSRect).
 Available in Mac OS X v10.4 and later.
 Declared in `NSAccessibility.h`.

NSAccessibilityMatteContentUIElementAttribute

The element that is clipped by the matte (id).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Ruler view attributes

Attributes that are specific to ruler views.

```
NSString *const NSAccessibilityMarkerGroupUIElementAttribute;
NSString *const NSAccessibilityMarkerTypeAttribute;
NSString *const NSAccessibilityMarkerTypeDescriptionAttribute;
NSString *const NSAccessibilityMarkerUIElementsAttribute;
NSString *const NSAccessibilityMarkerValuesAttribute;
NSString *const NSAccessibilityUnitDescriptionAttribute;
NSString *const NSAccessibilityUnitsAttribute;
```

Constants

NSAccessibilityMarkerGroupUIElementAttribute

Marker group user interface element (id).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityMarkerTypeAttribute

The type of the marker (NSString). See “[Ruler marker type values](#)” (page 33) for possible values.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityMarkerTypeDescriptionAttribute

The description of the marker type (NSString).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityMarkerUIElementsAttribute

Array of marker user interface elements (NSArray)

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityMarkerValuesAttribute

The marker values (NSArray of NSNumber).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityUnitDescriptionAttribute

The description of ruler units (NSString).

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityUnitsAttribute

The ruler units (NSString). See “[Ruler unit attributes](#)” (page 34) for possible values.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

Declared In

`NSAccessibility.h`

Ruler marker type values

Values that indicate the marker type of an element.

```
NSString *const NSAccessibilityCenterTabStopMarkerTypeValue;
NSString *const NSAccessibilityDecimalTabStopMarkerTypeValue;
NSString *const NSAccessibilityFirstLineIndentMarkerTypeValue;
NSString *const NSAccessibilityHeadIndentMarkerTypeValue;
NSString *const NSAccessibilityLeftTabStopMarkerTypeValue;
NSString *const NSAccessibilityRightTabStopMarkerTypeValue;
NSString *const NSAccessibilityTailIndentMarkerTypeValue;
NSString *const NSAccessibilityUnknownMarkerTypeValue;
```

Constants

`NSAccessibilityLeftTabStopMarkerTypeValue`

Left tab stop.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityRightTabStopMarkerTypeValue`

Right tab stop.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityCenterTabStopMarkerTypeValue`

Center tab stop.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityDecimalTabStopMarkerTypeValue`

Decimal tab stop.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityHeadIndentMarkerTypeValue`

Head indent marker.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityTailIndentMarkerTypeValue`

Tail indent marker.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityFirstLineIndentMarkerTypeValue
First line indent marker.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityUnknownMarkerTypeValue
Unknown marker type.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Measurement unit attributes

Values that indicate the unit values of a ruler or layout area (used with [NSAccessibilityUnitsAttribute](#) (page 33)).

```
NSString *const NSAccessibilityCentimetersUnitValue;
NSString *const NSAccessibilityInchesUnitValue;
NSString *const NSAccessibilityPicasUnitValue;
NSString *const NSAccessibilityPointsUnitValue;
NSString *const NSAccessibilityUnknownUnitValue;
```

Constants

NSAccessibilityInchesUnitValue
The units are inches.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityCentimetersUnitValue
The units are centimeters.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityPointsUnitValue
The units are points.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityPicasUnitValue
The units are picas.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityUnknownUnitValue
The units are unknown.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Linkage elements

Constants that specify links between accessibility elements.

```
NSString *const NSAccessibilityLinkedUIElementsAttribute;
NSString *const NSAccessibilityServesAsTitleForUIElementsAttribute;
NSString *const NSAccessibilityTitleUIElementAttribute;
```

Constants

`NSAccessibilityLinkedUIElementsAttribute`

The elements with which this element is related (NSArray). For example, the contents of a list item that are displayed in another pane or window.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityTitleUIElementAttribute`

An element that represents another element's static text title (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityServesAsTitleForUIElementsAttribute`

The elements for which this element serves as the title (NSArray).

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

Declared In

`NSAccessibility.h`

Miscellaneous attributes

Miscellaneous attributes that can apply to various types of elements.

```

NSString *const NSAccessibilityDecrementButtonAttribute;
NSString *const NSAccessibilityDocumentAttribute;
NSString *const NSAccessibilityEditedAttribute;
NSString *const NSAccessibilityExpandedAttribute;
NSString *const NSAccessibilityFilenameAttribute;
NSString *const NSAccessibilityHeaderAttribute;
NSString *const NSAccessibilityHorizontalScrollBarAttribute;
NSString *const NSAccessibilityIncrementButtonAttribute;
NSString *const NSAccessibilityIndexAttribute;
NSString *const NSAccessibilityNextContentsAttribute;
NSString *const NSAccessibilityOverflowButtonAttribute;
NSString *const NSAccessibilityPreviousContentsAttribute;
NSString *const NSAccessibilitySelectedAttribute;
NSString *const NSAccessibilitySplittersAttribute;
NSString *const NSAccessibilityTabsAttribute;
NSString *const NSAccessibilityURLAttribute;
NSString *const NSAccessibilityVerticalScrollBarAttribute;
NSString *const NSAccessibilityWarningValueAttribute;
NSString *const NSAccessibilityCriticalValueAttribute;
NSString *const NSAccessibilityPlaceholderValueAttribute;

```

Constants

NSAccessibilityClearButtonAttribute

The element that represents the clear button in a search field (id).

Available in Mac OS X v10.3 and later.

Declared in NSAccessibility.h.

NSAccessibilityColumnTitlesAttribute

The elements that represent column titles (NSArray).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityDecrementButtonAttribute

The element that represents a stepper's decrement button (id).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityDocumentAttribute

The URL for the file represented by the element (NSString).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityEditedAttribute

A flag that indicates whether the element has been modified (NSNumber).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityExpandedAttribute

A flag that indicates whether the element is expanded (NSNumber).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

`NSAccessibilityFilenameAttribute`

The filename associated with the element (`NSString`).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityHeaderAttribute`

The element that represents a table view's header (`id`).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityHorizontalScrollBarAttribute`

The element that represents a scroll view's horizontal scroll bar (`id`).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityIncrementButtonAttribute`

The element that represents a stepper's increment button (`id`).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityIndexAttribute`

The index of the row or column represented by the element (`NSNumber`).

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityNextContentsAttribute`

The contents following the current divider element, such as a subview adjacent to a split view's splitter element (`NSArray`).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityOrientationAttribute`

The element's orientation, which can have the value [NSAccessibilityHorizontalOrientationValue](#) (page 24) or [NSAccessibilityVerticalOrientationValue](#) (page 24).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityOverflowButtonAttribute`

The element that represents a toolbar's overflow button (`id`).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityPreviousContentsAttribute`

The contents preceding the current divider element, such as a subview adjacent to a split view's splitter bar element (`NSArray`).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySearchButtonAttribute`

The element that represents the search button in a search field (id).

Available in Mac OS X v10.3 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySearchMenuAttribute`

The element that represents the menu in a search field (id).

Available in Mac OS X v10.3 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedAttribute`

A flag that indicates whether the element is selected (NSNumber).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySplittersAttribute`

The views and splitter bar in a split view (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityTabsAttribute`

The tab elements in a tab view (NSArray).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityURLAttribute`

The URL associated with the element (NSURL).

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityVerticalScrollBarAttribute`

The element that represents the vertical scroll bar in a scroll view (id).

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityWarningValueAttribute`

The warning value in a level indicator (typically, NSNumber).

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityCriticalValueAttribute`

The critical value in a level indicator (typically, NSNumber).

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityPlaceholderValueAttribute`

The placeholder value for a control, such as a text field (NSString).

Available in Mac OS X v10.6 and later.

Declared in `NSAccessibility.h`.

Declared In

`NSAccessibility.h`

Roles

Standard roles that identify the type of object an accessibility object represents. One of these values is returned as the value for an object's [NSAccessibilityRoleAttribute](#) (page 16).

```

NSString *const NSAccessibilityApplicationRole;
NSString *const NSAccessibilityBrowserRole;
NSString *const NSAccessibilityBusyIndicatorRole;
NSString *const NSAccessibilityButtonRole;
NSString *const NSAccessibilityCellRole;
NSString *const NSAccessibilityCheckBoxRole;
NSString *const NSAccessibilityColorWellRole;
NSString *const NSAccessibilityColumnRole;
NSString *const NSAccessibilityComboBoxRole;
NSString *const NSAccessibilityDisclosureTriangleRole;
NSString *const NSAccessibilityDrawerRole;
NSString *const NSAccessibilityGridRole;
NSString *const NSAccessibilityGroupRole;
NSString *const NSAccessibilityGrowAreaRole;
NSString *const NSAccessibilityHandleRole;
NSString *const NSAccessibilityHelpTagRole;
NSString *const NSAccessibilityImageRole;
NSString *const NSAccessibilityIncrementorRole;
NSString *const NSAccessibilityLayoutAreaRole;
NSString *const NSAccessibilityLayoutItemRole;
NSString *const NSAccessibilityLinkRole;
NSString *const NSAccessibilityListRole;
NSString *const NSAccessibilityMatteRole;
NSString *const NSAccessibilityMenuBarRole;
NSString *const NSAccessibilityMenuButtonRole;
NSString *const NSAccessibilityMenuItemRole;
NSString *const NSAccessibilityMenuRole;
NSString *const NSAccessibilityOutlineRole;
NSString *const NSAccessibilityPopUpButtonRole;
NSString *const NSAccessibilityProgressIndicatorRole;
NSString *const NSAccessibilityRadioButonRole;
NSString *const NSAccessibilityRadioGroupRole;
NSString *const NSAccessibilityRelevanceIndicatorRole;
NSString *const NSAccessibilityRowRole;
NSString *const NSAccessibilityRulerMarkerRole;
NSString *const NSAccessibilityRulerRole;
NSString *const NSAccessibilityScrollAreaRole;
NSString *const NSAccessibilityScrollBarRole;
NSString *const NSAccessibilitySheetRole;
NSString *const NSAccessibilitySliderRole;
NSString *const NSAccessibilitySortButtonRole;
NSString *const NSAccessibilitySplitGroupRole;
NSString *const NSAccessibilitySplitterRole;
NSString *const NSAccessibilityStaticTextRole;
NSString *const NSAccessibilitySystemWideRole;
NSString *const NSAccessibilityTabGroupRole;
NSString *const NSAccessibilityTableRole;
NSString *const NSAccessibilityTextAreaRole;
NSString *const NSAccessibilityTextFieldRole;
NSString *const NSAccessibilityToolbarRole;
NSString *const NSAccessibilityUnknownRole;
NSString *const NSAccessibilityValueIndicatorRole;
NSString *const NSAccessibilityWindowRole;

```

Constants

NSAccessibilityApplicationRole

Application.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityBrowserRole

Browser.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityBusyIndicatorRole

Busy indicator.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityButtonRole

Button.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityCellRole

Cell in a table or matrix.

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilityCheckBoxRole

Checkbox.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityColorWellRole

Color well.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityColumnRole

Column.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityComboBoxRole

Combo box.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityDisclosureTriangleRole

Disclosure triangle.

Available in Mac OS X v10.5 and later.

Declared in NSAccessibility.h.

NSAccessibilityDrawerRole

Drawer.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityGridRole

Grid.

Available in Mac OS X v10.5 and later.

Declared in NSAccessibility.h.

NSAccessibilityGroupRole

Group.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityGrowAreaRole

A window's grow (resize) area.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityHandleRole

Drag handle.

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilityHelpTagRole

Help tag.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityImageRole

Image.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityIncrementorRole

Stepper.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityLayoutAreaRole

Layout area (a view, such as a graphic view, that contains visual elements that may not have any accessibility representation).

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilityLayoutItemRole

An item in a layout area.

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilityLinkRole

Link.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityListRole

List.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityMatteRole

Matte.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityMenuBarRole

Menu bar.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityMenuButtonRole

Menu button.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityMenuItemRole

Menu item.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityMenuRole

Menu.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityOutlineRole

Outline.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityPopUpButtonRole

Pop-up button.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityProgressIndicatorRole

Progress indicator.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityRadioButtonRole

Radio button.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityRadioGroupRole

Radio button group.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityRelevanceIndicatorRole

Relevance indicator.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityRowRole

Row.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityRulerRole

Ruler.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityRulerMarkerRole

Ruler marker.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityScrollAreaRole

Scroll view.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityScrollBarRole

Scroll bar.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilitySheetRole

Sheet.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilitySliderRole

Slider.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilitySortButtonRole

Sort button.

Available in Mac OS X v10.4 and later.

Deprecated in Mac OS X v10.6.

Declared in NSAccessibility.h.

NSAccessibilitySplitGroupRole

Split view.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilitySplitterRole

Splitter bar of a split view.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityStaticTextRole

Uneditable text.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilitySystemWideRole

The system-wide accessibility object.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityTabGroupRole

Tab group.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityTableRole

Table.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityTextAreaRole

Text view.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityTextFieldRole

Text field.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityToolbarRole

Toolbar.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityUnknownRole

Unknown object type.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityValueIndicatorRole

Value indicator.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityWindowRole

Window.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Subroles

Subroles that identify a specialized type of object an accessibility object represents. One of these values is returned as the value for an object's [NSAccessibilitySubroleAttribute](#) (page 17).

```
NSString *const NSAccessibilityCloseButtonSubrole;
NSString *const NSAccessibilityDecrementArrowSubrole;
NSString *const NSAccessibilityDecrementPageSubrole;
NSString *const NSAccessibilityDialogSubrole;
NSString *const NSAccessibilityFloatingWindowSubrole;
NSString *const NSAccessibilityIncrementArrowSubrole;
NSString *const NSAccessibilityIncrementPageSubrole;
NSString *const NSAccessibilityMinimizeButtonSubrole;
NSString *const NSAccessibilityOutlineRowSubrole;
NSString *const NSAccessibilitySearchFieldSubrole;
NSString *const NSAccessibilitySecureTextFieldSubrole;
NSString *const NSAccessibilityStandardWindowSubrole;
NSString *const NSAccessibilitySystemDialogSubrole;
NSString *const NSAccessibilitySystemFloatingWindowSubrole;
NSString *const NSAccessibilityTableRowSubrole;
NSString *const NSAccessibilityTextAttachmentSubrole;
NSString *const NSAccessibilityTextLinkSubrole;
NSString *const NSAccessibilityTimelineSubrole;
NSString *const NSAccessibilityToolbarButtonSubrole;
NSString *const NSAccessibilityUnknownSubrole;
NSString *const NSAccessibilityZoomButtonSubrole;
NSString *const NSAccessibilitySortButtonSubrole;
NSString *const NSAccessibilityRatingIndicatorSubrole;
NSString *const NSAccessibilityContentListSubrole;
NSString *const NSAccessibilityDefinitionListSubrole;
```

Constants

NSAccessibilityCloseButtonSubrole

A window's close button.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

- `NSAccessibilityDecrementArrowSubrole`
Decrement arrow (the down arrow in a scroll bar).
Available in Mac OS X v10.3 and later.
Declared in `NSAccessibility.h`.
- `NSAccessibilityDecrementPageSubrole`
Decrement page (the decrement area in the scroll track of a scroll bar).
Available in Mac OS X v10.3 and later.
Declared in `NSAccessibility.h`.
- `NSAccessibilityDialogSubrole`
Dialog.
Available in Mac OS X v10.3 and later.
Declared in `NSAccessibility.h`.
- `NSAccessibilityFloatingWindowSubrole`
Floating window.
Available in Mac OS X v10.3 and later.
Declared in `NSAccessibility.h`.
- `NSAccessibilityIncrementArrowSubrole`
Increment arrow (the up arrow in a scroll bar).
Available in Mac OS X v10.3 and later.
Declared in `NSAccessibility.h`.
- `NSAccessibilityIncrementPageSubrole`
Increment page (the increment area in the scroll track of a scroll bar).
Available in Mac OS X v10.3 and later.
Declared in `NSAccessibility.h`.
- `NSAccessibilityMinimizeButtonSubrole`
A window's minimize button.
Available in Mac OS X v10.2 and later.
Declared in `NSAccessibility.h`.
- `NSAccessibilityOutlineRowSubrole`
Outline row.
Available in Mac OS X v10.2 and later.
Declared in `NSAccessibility.h`.
- `NSAccessibilitySearchFieldSubrole`
Search field.
Available in Mac OS X v10.3 and later.
Declared in `NSAccessibility.h`.
- `NSAccessibilitySecureTextFieldSubrole`
Secure text field.
Available in Mac OS X v10.2 and later.
Declared in `NSAccessibility.h`.

NSAccessibilityStandardWindowSubrole

A standard window.

Available in Mac OS X v10.3 and later.

Declared in NSAccessibility.h.

NSAccessibilitySystemDialogSubrole

System dialog (a system-generated dialog that floats on the top layer, regardless of which application is frontmost).

Available in Mac OS X v10.3 and later.

Declared in NSAccessibility.h.

NSAccessibilitySystemFloatingWindowSubrole

System floating window (a system-generated panel).

Available in Mac OS X v10.3 and later.

Declared in NSAccessibility.h.

NSAccessibilityTableRowSubrole

Table row.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityTextAttachmentSubrole

Text attachment.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityTextLinkSubrole

Text link.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityTimelineSubrole

Timeline.

Available in Mac OS X v10.5 and later.

Declared in NSAccessibility.h.

NSAccessibilityToolbarButtonSubrole

A window's toolbar button.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityUnknownSubrole

Unknown subrole.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityZoomButtonSubrole

A window's zoom button.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

`NSAccessibilitySortButtonSubrole`
Sort button in a table or outline view.
Available in Mac OS X v10.6 and later.
Declared in `NSAccessibility.h`.

`NSAccessibilityRatingIndicatorSubrole`
Rating indicator.
Available in Mac OS X v10.6 and later.
Declared in `NSAccessibility.h`.

`NSAccessibilityContentListSubrole`
Content that is organized in a list, but is not in a list control or table view.
Available in Mac OS X v10.6 and later.
Declared in `NSAccessibility.h`.

`NSAccessibilityDefinitionListSubrole`
A content list in a webpage.
Available in Mac OS X v10.6 and later.
Declared in `NSAccessibility.h`.

Declared In
`NSAccessibility.h`

Action values

Standard actions that accessibility objects can perform.

```
NSString *const NSAccessibilityCancelAction;
NSString *const NSAccessibilityConfirmAction;
NSString *const NSAccessibilityDecrementAction;
NSString *const NSAccessibilityDeleteAction;
NSString *const NSAccessibilityIncrementAction;
NSString *const NSAccessibilityPickAction;
NSString *const NSAccessibilityPressAction;
NSString *const NSAccessibilityRaiseAction;
NSString *const NSAccessibilityShowMenuAction;
```

Constants

`NSAccessibilityConfirmAction`
Simulates pressing Return in the object, such as a text field.
Available in Mac OS X v10.2 and later.
Declared in `NSAccessibility.h`.

`NSAccessibilityDecrementAction`
Decrements the value of the object.
Available in Mac OS X v10.2 and later.
Declared in `NSAccessibility.h`.

`NSAccessibilityDeleteAction`
Deletes the value of the object.
Available in Mac OS X v10.4 and later.
Declared in `NSAccessibility.h`.

NSAccessibilityIncrementAction

Increments the value of the object.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityPickAction

Selects the object, such as a menu item.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityPressAction

Simulates clicking an object, such as a button.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityCancelAction

Cancels the operation.

Available in Mac OS X v10.3 and later.

Declared in NSAccessibility.h.

NSAccessibilityRaiseAction

Simulates bringing a window forward by clicking on its title bar.

Available in Mac OS X v10.3 and later.

Declared in NSAccessibility.h.

NSAccessibilityShowMenuAction

Simulates showing a menu by clicking on it.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Focus-change notifications

Notifications that are sent to observing assistive applications when focus-change events occur. The notifications are sent using the `NSAccessibilityPostNotification` function instead of an `NSNotificationCenter` object.

```
NSString *const NSAccessibilityMainWindowChangedNotification;
NSString *const NSAccessibilityFocusedWindowChangedNotification;
NSString *const NSAccessibilityFocusedUIElementChangedNotification;
```

Constants

NSAccessibilityMainWindowChangedNotification

Posted after the main window has changed.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityFocusedWindowChangedNotification
 Posted after the key window has changed.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityFocusedUIElementChangedNotification
 Posted after the element has gained focus.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Window-change notifications

Notifications that are sent to observing assistive applications when window-change events occur. The notifications are sent using the `NSAccessibilityPostNotification` function instead of an `NSNotificationCenter` object.

```
NSString *const NSAccessibilityWindowCreatedNotification;
NSString *const NSAccessibilityWindowDeminiaturizedNotification;
NSString *const NSAccessibilityWindowMiniaturizedNotification;
NSString *const NSAccessibilityWindowMovedNotification;
NSString *const NSAccessibilityWindowResizedNotification;
```

Constants

NSAccessibilityWindowCreatedNotification
 Posted after a new window has appeared.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityWindowDeminiaturizedNotification
 Posted after the window has been restored to full size from the Dock.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityWindowMiniaturizedNotification
 Posted after the window has been put in the Dock.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityWindowMovedNotification
 Posted after the window has moved.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityWindowResizedNotification
 Posted after the window has changed size.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Application notifications

Notifications that are sent to observing assistive applications when application events occur. The notifications are sent using the `NSAccessibilityPostNotification` function instead of an `NSNotificationCenter` object.

```
NSString *const NSAccessibilityApplicationActivatedNotification;
NSString *const NSAccessibilityApplicationDeactivatedNotification;
NSString *const NSAccessibilityApplicationHiddenNotification;
NSString *const NSAccessibilityApplicationShownNotification;
```

Constants

`NSAccessibilityApplicationActivatedNotification`

Posted after the application has activated.

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityApplicationDeactivatedNotification`

Posted after the application has deactivated.

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityApplicationHiddenNotification`

Posted after the application has been hidden.

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityApplicationShownNotification`

Posted after the application has been shown.

Available in Mac OS X v10.2 and later.

Declared in `NSAccessibility.h`.

Declared In

`NSAccessibility.h`

Drawer and sheet notifications

Notifications that are sent to observing assistive applications when drawer and sheet events occur. The notifications are sent using the `NSAccessibilityPostNotification` function instead of an `NSNotificationCenter` object.

```
NSString *const NSAccessibilityDrawerCreatedNotification;
NSString *const NSAccessibilitySheetCreatedNotification;
```

Constants

`NSAccessibilityDrawerCreatedNotification`

Posted after a drawer has appeared.

Available in Mac OS X v10.3 and later.

Declared in `NSAccessibility.h`.

NSAccessibilitySheetCreatedNotification

Posted after a sheet has appeared.

Available in Mac OS X v10.3 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Element notifications

Notifications that are sent to observing assistive applications when certain element-related events occur.

Note that these notifications are not sent from every element. The notifications are sent using the NSAccessibilityPostNotification function instead of an NSNotificationCenter object.

```
NSString *const NSAccessibilityCreatedNotification;
NSString *const NSAccessibilityMovedNotification;
NSString *const NSAccessibilityResizedNotification;
NSString *const NSAccessibilityTitleChangedNotification;
NSString *const NSAccessibilityUIElementDestroyedNotification;
NSString *const NSAccessibilityValueChangedNotification;
```

Constants

NSAccessibilityCreatedNotification

Posted after the element has been created.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityMovedNotification

Posted after the element has been moved.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityResizedNotification

Posted after the element has been resized.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityTitleChangedNotification

Posted after the title has changed.

Available in Mac OS X v10.4 and later.

Declared in NSAccessibility.h.

NSAccessibilityUIElementDestroyedNotification

Posted after the element has been destroyed.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

NSAccessibilityValueChangedNotification

Posted after the element's value has changed.

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Miscellaneous notifications

Notifications that are sent to observing assistive applications when certain events occur. The notifications are sent using the `NSAccessibilityPostNotification` function instead of an `NSNotificationCenter` object.

```
NSString *const NSAccessibilityHelpTagCreatedNotification;
NSString *const NSAccessibilityRowCountChangedNotification;
NSString *const NSAccessibilitySelectedChildrenChangedNotification;
NSString *const NSAccessibilitySelectedColumnsChangedNotification;
NSString *const NSAccessibilitySelectedRowsChangedNotification;
NSString *const NSAccessibilitySelectedTextChangedNotification;
NSString *const NSAccessibilityRowExpandedNotification;
NSString *const NSAccessibilityRowCollapsedNotification;
NSString *const NSAccessibilitySelectedCellsChangedNotification;
NSString *const NSAccessibilityUnitsChangedNotification;
NSString *const NSAccessibilitySelectedChildrenMovedNotification;
```

Constants

`NSAccessibilityHelpTagCreatedNotification`

Posted after a help tag has appeared.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilityRowCountChangedNotification`

Posted after a row has been added or deleted.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedChildrenChangedNotification`

Posted after selected child elements have changed.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedColumnsChangedNotification`

Posted after selected columns have changed.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedRowsChangedNotification`

Posted after selected rows have changed.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

`NSAccessibilitySelectedTextChangedNotification`

Posted after selected text has changed.

Available in Mac OS X v10.4 and later.

Declared in `NSAccessibility.h`.

NSAccessibilityRowExpandedNotification

Posted after the row has expanded.

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilityRowCollapsedNotification

Posted after the row has collapsed.

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilitySelectedCellsChangedNotification

Posted after selected cells in a cell-based table have changed.

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilityUnitsChangedNotification

Posted after the units in a layout area have changed.

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

NSAccessibilitySelectedChildrenMovedNotification

Posted after selected items in a layout area have moved.

Available in Mac OS X v10.6 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

UserInfo key for error codes in accessibility exceptions

This is a key used by the userInfo dictionary of an NSAccessibilityException.

```
NSString *const NSAccessibilityErrorCodeExceptionInfo;
```

Constants

NSAccessibilityErrorCodeExceptionInfo

Integer error code used for debugging (as an NSInteger).

Available in Mac OS X v10.2 and later.

Declared in NSAccessibility.h.

Declared In

NSAccessibility.h

Document Revision History

This table describes the changes to *NSAccessibility Protocol Reference*.

Date	Notes
2009-11-17	Updated optional status of protocol methods.
2009-08-14	Updated for Mac OS X v10.6 with descriptions of new methods and constants.
2007-12-11	Corrected descriptions of several constants.
2007-04-03	Added constants introduced with Mac OS X v10.5.
2006-05-23	First publication of this content as a separate document.

REVISION HISTORY

Document Revision History

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