NSTableColumn Class Reference

User Experience: Data Presentation

2007-10-31

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NSTableColumn Class Reference

Inherits from	NSObject
Conforms to	NSCoding NSObject (NSObject)
Framework	/System/Library/Frameworks/AppKit.framework
Availability	Available in Mac OS X v10.0 and later.
Companion guide	Table View Programming Guide
Declared in	NSTableColumn.h
Related sample code	AnimatedTableView MixMash MyPhoto QTKitMovieShuffler STUCAuthoringDeviceCocoaSample

Overview

An NSTableColumn stores the display characteristics and attribute identifier for a column in an NSTableView. The NSTableColumn determines the width and width limits, resizability, and editability of its column in the NSTableView. It also stores two NSCell objects: the header cell, which is used to draw the column header, and the data cell, used to draw the values for each row. You can control the display of the column by setting the subclasses of NSCell used and by setting the font and other display characteristics for these NSCells. For example, you can use the default NSTextFieldCell for displaying string values or substitute an NSImageCell to display pictures.

Adopted Protocols

NSCoding

- `encodeWithCoder:`
- `initWithCoder:`

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Tasks

Creating an NSTableColumn

- `initWithIdentifier:` (page 10)
  Initializes a newly created NSTableColumn with *identifier* as its identifier and with an NSTextFieldCell as its data cell.

Setting the NSTableView

- `setTableView:` (page 16)
  Sets *aTableView* as the receiver's NSTableView.
- `tableView` (page 18)
  Returns the NSTableView the receiver belongs to.

Controlling Size

- `setWidth:` (page 17)
  Sets the receiver's width to *newWidth*.
- `width` (page 18)
  Returns the width of the receiver.
- `setMinWidth:` (page 15)
  Sets the receiver's minimum width to *minWidth*, also adjusting the current width if it's less than this value.
- `minWidth` (page 11)
  Returns the minimum width for the receiver.
- `setMaxWidth:` (page 15)
  Sets the receiver's maximum width to *maxWidth*, also adjusting the current width if it's greater than this value.
- `maxWidth` (page 11)
  Returns the maximum width of the receiver.
- `setResizingMask:` (page 16)
  Sets the resizing mask for the receiver to *resizingMask*.
- `resizingMask` (page 12)
  Returns the receiver's resizing mask.
- `sizeToFit` (page 17)
  Resizes the receiver to fit the width of its header cell.

Setting Component Cells

- `setHeaderCell:` (page 13)
  Sets the NSCell used to draw the receiver's header to *aCell*.

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- `headerCell` (page 9)
  Returns the NSTableHeaderCell object used to draw the header of the receiver.
- `setDataCell:` (page 12)
  Sets the NSCell used by the NSTableView to draw individual values for the receiver to *`aCell`*.
- `dataCell` (page 8)
  Returns the NSCell object used by the NSTableView to draw values for the receiver.
- `dataCellForRow:` (page 8)
  Returns the NSCell object used by the NSTableView to draw values for the receiver.

Setting the Identifier

- `setIdentifier:` (page 14)
  Sets the receiver's identifier to *`anObject`*.
- `identifier` (page 9)
  Returns the object used by the data source to identify the attribute corresponding to the receiver.

Controlling Editability

- `setEditable:` (page 13)
  Controls whether the user can edit cells in the receiver by double-clicking them.
- `isEditable` (page 10)
  Returns `YES` if the user can edit cells associated with the receiver by double-clicking the column in the NSTableView, `NO` otherwise.

Sorting

- `setSortDescriptorPrototype:` (page 16)
  Sets the receiver's sort descriptor prototype.
- `sortDescriptorPrototype` (page 18)
  Returns the receiver's sort descriptor prototype.

Setting Column Visibility

- `isHidden` (page 11)
  Returns a Boolean value that indicates whether the receiver is hidden.
- `setHidden:` (page 14)
  Sets whether the receiver is hidden.

Setting Tool Tips

- `setHeaderToolTip:` (page 13)
  Sets the tooltip string that is displayed when the cursor pauses over the header cell of the receiver.

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- `headerToolTip` (page 9)
  Returns the tooltip string that is displayed when the cursor pauses over the header cell of the receiver.

Deprecated Methods

- `isResizable` (page 21) Deprecated in Mac OS X v10.4
  Returns `YES` if the user is allowed to resize the receiver in its NSTableView, `NO` otherwise.
- `setResizable:` (page 21) Deprecated in Mac OS X v10.4
  Sets whether the user can resize the receiver in its NSTableView.

Instance Methods

dataCell

Returns the NSCell object used by the NSTableView to draw values for the receiver.

```
- (id)dataCell
```

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

See Also
- `setDataCell:` (page 12)

Related Sample Code
AnimatedTableView
DragNDropOutlineView
FunHouse
SourceView

Declared In
`NSTableColumn.h`

dataCellForRow:

Returns the NSCell object used by the NSTableView to draw values for the receiver.

```
- (id)dataCellForRow:(NSInteger)row
```

Discussion
NSTableView always calls this method. By default, this method just calls `dataCell` (page 8). Subclassers can override if they need to potentially use different cells for different rows. Subclasses should expect this method to be invoked with *row* equal to –1 in cases where no actual row is involved but the table view needs to get some generic cell info.

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

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Declared In
NSTableColumn.h

headerCell

Returns the NSTableHeaderCell object used to draw the header of the receiver.

```
- (id)headerCell
```

Discussion
You can set the column title by sending `setStringValue:` to this object.

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

See Also
- `setHeaderCell:` (page 13)

Related Sample Code
CapabilitiesSample

Declared In
NSTableColumn.h

headerToolTip

Returns the tooltip string that is displayed when the cursor pauses over the header cell of the receiver.

```
- (NSString *)headerToolTip
```

Return Value
The tooltip displayed when the cursor pauses over the header cell of the receiver.

Availability
Available in Mac OS X v10.5 and later.

See Also
- `setHeaderToolTip:` (page 13)

Declared In
NSTableColumn.h

identifier

Returns the object used by the data source to identify the attribute corresponding to the receiver.

```
- (id)identifier
```

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

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See Also
- setIdentifier: (page 14)

Related Sample Code
DragNDropOutlineView
MyPhoto
NewsReader
NSOperationSample
QTAudioContextInsert

Declared In
NSTableColumn.h

initWithIdentifier:

Initializes a newly created NSTableColumn with *identifier* as its identifier and with an NSTextFieldCell as its data cell.

```
- (id)initWithIdentifier:(id)identifier
```

Discussion
Send setStringValue: to the header cell to set the column title. This method is the designated initializer for the NSTableColumn class. Returns an initialized object.

See the NSTableView class specification for information on identifiers.

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

See Also
- setIdentifier: (page 14)

Declared In
NSTableColumn.h

isEditable

Returns YES if the user can edit cells associated with the receiver by double-clicking the column in the NSTableView, NO otherwise.

```
- (BOOL)isEditable
```

Discussion
You can initiate editing programmatically regardless of this setting with NSTableView's editColumn:row:withEvent:select: method.

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

See Also
- setEditable: (page 13)

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Declared In
NSTableColumn.h

isHidden

Returns a Boolean value that indicates whether the receiver is hidden.

```
- (BOOL)isHidden
```

Return Value
YES if the receiver is hidden, otherwise NO.

Availability
Available in Mac OS X v10.5 and later.

See Also
- setHidden: (page 14)

Declared In
NSTableColumn.h

maxWidth

Returns the maximum width of the receiver.

```
- (CGFloat)maxWidth
```

Discussion
The receiver's width can't be made larger than this size either by the user or programmatically.

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

See Also
- minWidth (page 11)
- width (page 18)
- setMaxWidth: (page 15)
- autoresizesAllColumnsToFit (NSTableView)

Declared In
NSTableColumn.h

minWidth

Returns the minimum width for the receiver.

```
- (CGFloat)minWidth
```

Discussion
The receiver's width can't be made less than this size either by the user or programmatically.

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

See Also
- `maxWidth` (page 11)
- `width` (page 18)
- `setMinWidth:` (page 15)
- `autoresizesAllColumnsToFit` (NSTableView)

Declared In
`NSTableColumn.h`

resizingMask

Returns the receiver's resizing mask.

```
- (NSUInteger)resizingMask
```

Discussion
See "`Resizing Modes`" (page 19) for a description of the resizing mask constants.

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

See Also
- `setResizingMask:` (page 16)

Declared In
`NSTableColumn.h`

setDataCell:

Sets the NSCell used by the NSTableView to draw individual values for the receiver to *`aCell`*.

```
- (void)setDataCell:(NSCell *)aCell
```

Discussion
You can use this method to control the font, alignment, and other text attributes for an NSTableColumn. You can also assign a cell to display things other than text—for example, an NSImageCell to display images.

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

See Also
- `dataCell` (page 8)

Related Sample Code
EnhancedDataBurn
ImageBackground
QTKitMovieShuffler
SourceView

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Declared In
NSTableColumn.h

setEditable:

Controls whether the user can edit cells in the receiver by double-clicking them.

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

Discussion
If *flag* is YES a double click initiates editing; if *flag* is NO it merely sends the double-click action to the NSTableView's target. You can initiate editing programmatically regardless of this setting with NSTableView's editColumn:row:withEvent:select: method.

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

See Also
- isEditable (page 10)

Related Sample Code
SimpleCocoaMovie
SimpleCocoaMovieQT

Declared In
NSTableColumn.h

setHeaderCell:

Sets the NSCell used to draw the receiver's header to *aCell*.

```
- (void)setHeaderCell:(NSCell *)aCell
```

Discussion
aCell should never be nil.

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

See Also
- headerCell (page 9)

Declared In
NSTableColumn.h

setHeaderToolTip:

Sets the tooltip string that is displayed when the cursor pauses over the header cell of the receiver.

```
- (void)setHeaderToolTip:(NSString *)string
```


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Parameters

string

A string that functions as the tooltip for the header cell of the receiver.

Availability
Available in Mac OS X v10.5 and later.

See Also
- headerToolTip (page 9)

Declared In
NSTableColumn.h

setHidden:

Sets whether the receiver is hidden.

```
- (void)setHidden:(BOOL)hidden
```

Parameters

hidden

YES if the receiver is to be hidden, otherwise NO.

Discussion
Columns which are hidden still exist in the tableview's `tableColumns` array and are included in the tableview's `numberOfColumns` count.

The hidden state of the receiver is stored when the tableview autosaves the NSTableColumn state.

Availability
Available in Mac OS X v10.5 and later.

See Also
- isHidden (page 11)

Declared In
NSTableColumn.h

setIdentifier:

Sets the receiver's identifier to *anObject*.

```
- (void)setIdentifier:(id)anObject
```

Discussion
This object is used by the data source to identify the attribute corresponding to the NSTableColumn.

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

See Also
- identifier (page 9)

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Related Sample Code
CapabilitiesSample

Declared In
`NSTableColumn.h`

setMaxWidth:

Sets the receiver's maximum width to *maxWidth*, also adjusting the current width if it's greater than this value.

```
- (void)setMaxWidth:(CGFloat)maxWidth
```

Discussion
The NSTableView can be made no wider than this size, either by the user or programmatically.

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

See Also
- `setMinWidth:` (page 15)
- `setWidth:` (page 17)
- `maxWidth` (page 11)
- `autoresizesAllColumnsToFit` (NSTableView)

Declared In
`NSTableColumn.h`

setMinWidth:

Sets the receiver's minimum width to *minWidth*, also adjusting the current width if it's less than this value.

```
- (void)setMinWidth:(CGFloat)minWidth
```

Discussion
The NSTableView can be made no less wide than this size, either by the user or programmatically.

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

See Also
- `setMaxWidth:` (page 15)
- `setWidth:` (page 17)
- `minWidth` (page 11)
- `autoresizesAllColumnsToFit` (NSTableView)

Declared In
`NSTableColumn.h`

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setResizingMask:

Sets the resizing mask for the receiver to *resizingMask*.

```
- (void)setResizingMask:(NSUInteger)resizingMask
```

Discussion
If *resizingMask* is 0, the column is not resizable. See "Resizing Modes" (page 19) for the appropriate mask values.

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

See Also
- resizingMask (page 12)

Declared In
NSTableColumn.h

setSortDescriptorPrototype:

Sets the receiver's sort descriptor prototype.

```
- (void)setSortDescriptorPrototype:(NSSortDescriptor *)sortDescriptor
```

Discussion
A table column is considered sortable if it has a sort descriptor that specifies the sorting direction, a key to sort by, and a selector defining how to sort.

Availability
Available in Mac OS X v10.3 and later.

See Also
- sortDescriptorPrototype (page 18)

Declared In
NSTableColumn.h

setTableView:

Sets *aTableView* as the receiver's NSTableView.

```
- (void)setTableView:(NSTableView *)aTableView
```

Discussion
You should never need to invoke this method; it's invoked automatically when you add an NSTableColumn to an NSTableView.

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

See Also
- tableView (page 18)
- addTableColumn: (NSTableView)

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Declared In
NSTableColumn.h

setWidth:

Sets the receiver's width to *newWidth*.

```
- (void)setWidth:(CGFloat)newWidth
```

Discussion
If *newWidth* exceeds the minimum or maximum width, it's adjusted to the appropriate limiting value. Marks the NSTableView as needing display.

This method posts `NSTableViewColumnDidResizeNotification` on behalf of the receiver's NSTableView.

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

See Also
- `width` (page 18)
- `setMinWidth:` (page 15)
- `setMaxWidth:` (page 15)
- `autoresizesAllColumnsToFit` (NSTableView)

Declared In
NSTableColumn.h

sizeToFit

Resizes the receiver to fit the width of its header cell.

```
- (void)sizeToFit
```

Discussion
If the maximum width is less than the width of the header, the maximum is increased to the header's width. Similarly, if the minimum width is greater than the width of the header, the minimum is reduced to the header's width. Marks the NSTableView as needing display if the width actually changes.

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

See Also
- `width` (page 18)
- `minWidth` (page 11)
- `maxWidth` (page 11)
- `autoresizesAllColumnsToFit` (NSTableView)

Declared In
NSTableColumn.h

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sortDescriptorPrototype

Returns the receiver's sort descriptor prototype.

```
- (NSSortDescriptor *)sortDescriptorPrototype
```

Availability
Available in Mac OS X v10.3 and later.

See Also
- setSortDescriptorPrototype: (page 16)

Declared In
NSTableColumn.h

tableView

Returns the NSTableView the receiver belongs to.

```
- (NSTableView *)tableView
```

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

See Also
- setTableView: (page 16)

Related Sample Code
QTAudioContextInsert
QTAudioExtractionPanel

Declared In
NSTableColumn.h

width

Returns the width of the receiver.

```
- (CGFloat)width
```

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

Related Sample Code
FunHouse

Declared In
NSTableColumn.h

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Constants

Resizing Modes

These constants specify the resizing modes available for the table column. You specify either NSTableColumnNoResizing or a resizing mask created using the C bitwise OR operator. These values are then passed as the parameter to the `setResizingMask:` (page 16) method.

```
enum {     NSTableColumnNoResizing = 0,      NSTableColumnAutoresizingMask = ( 1
<< 0 ),     NSTableColumnUserResizingMask = ( 1 << 1 ), };
```

Constants

`NSTableColumnNoResizing`

Prevents the table column from resizing.

Available in Mac OS X v10.4 and later.

Declared in `NSTableColumn.h`.

`NSTableColumnAutoresizingMask`

Allows the table column to resize automatically in response to resizing the tableview. Enabling this option is the same as enabling the "Live Resizable" option in Interface Builder. The resizing behavior for the table view is set using the `NSTableView` method `setColumnAutoresizingStyle:`.

Available in Mac OS X v10.4 and later.

Declared in `NSTableColumn.h`.

`NSTableColumnUserResizingMask`

Allows the table column to be resized explicitly by the user. Enabling this option is the same as enabling the "User Resizable" option in Interface Builder.

Available in Mac OS X v10.4 and later.

Declared in `NSTableColumn.h`.

Declared In

`NSTableColumn.h`

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Deprecated NSTableColumn Methods

A method identified as deprecated has been superseded and may become unsupported in the future.

Deprecated in Mac OS X v10.4

isResizable

Returns `YES` if the user is allowed to resize the receiver in its NSTableView, `NO` otherwise. (Deprecated in Mac OS X v10.4.)

```
- (BOOL)isResizable
```

Discussion
You can change the size programmatically regardless of this setting.

This method is deprecated. You should use `resizingMask` (page 12) instead.

Availability
Available in Mac OS X v10.0 and later.
Deprecated in Mac OS X v10.4.

See Also
- `setWidth:` (page 17)
- `setMinWidth:` (page 15)
- `setMaxWidth:` (page 15)
- `setResizable:` (page 21)

Declared In
`NSTableColumn.h`

setResizable:

Sets whether the user can resize the receiver in its NSTableView. (Deprecated in Mac OS X v10.4.)

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

Discussion
If *flag* is `YES` the user can resize the receiver; if *flag* is `NO` the user can't resize it. You can always set the size programmatically.

This method is deprecated. You should use `setResizingMask:` (page 16) instead.

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Availability
Available in Mac OS X v10.0 and later.
Deprecated in Mac OS X v10.4.

See Also
- `isResizable` (page 21)
- `setWidth:` (page 17)
- `setMinWidth:` (page 15)
- `setMaxWidth:` (page 15)

Declared In
`NSTableColumn.h`

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Document Revision History

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

Date	Notes
2007-10-31	Updated for Mac OS X v10.5. Corrected typos.
2007-04-09	Updated for Mac OS X v10.5.
2006-05-23	Clarified how the table column resizing masks relate to the Interface Builder options.
	First publication of this content as a separate document.

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Document Revision History

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