

init
initContent:style:backing:buttonMask:defer:
initContent:style:backing:buttonMask:
defer:screen:

Freeing a Window object free

Computing frame and content rectangles

+ getFrameRect:forContentRect:style:
+ getContentRect:forFrameRect:style:
+ minFrameWidth:forStyle:buttonMask:

Accessing the frame rectangle getFrame:

getFrame:andScreen:
setFrameUsingName:
saveFrameUsingName:
+ removeFrameUsingName:
setFrameAutosaveName:
frameAutosaveName
setFrameFromString:
saveFrameToString:

Accessing the content view setContentView:

contentView

Querying Window attributes windowNum

buttonMask
style
worksWhenModal

Window graphics setTitle:

setTitleAsFilename:
title
setBackgroundColor:
backgroundColor

setMiniWindowImage:
setMiniWindowTitle:
miniWindowIcon
miniWindowImage
miniWindowTitle

The field editor endEditingFor:

getFieldEditor:for:

Window status makeKeyWindow

makeKeyAndOrderFront:
becomeKeyWindow
isKeyWindow
resignKeyWindow
canBecomeKeyWindow
becomeMainWindow
isMainWindow
resignKeyWindow
canBecomeMainWindow

Moving and resizing

moveTo::screen:
moveTopLeftTo::
moveTopLeftTo::screen:
dragFrom::eventNum:
constrainFrameRect:toScreen:
placeWindow:
placeWindow:screen:
placeWindowAndDisplay:
sizeWindow::
setMinSize:
setMaxSize:
getMinSize:
getMaxSize:
resizeFlags
center

Ordering on and off screen makeKeyAndOrderFront:

orderFront:
orderBack:
orderOut:
orderWindow:relativeTo:
orderFrontRegardless
isVisible
setHideOnDeactivate:
doesHideOnDeactivate

Converting coordinates convertBaseToScreen:

convertScreenToBase:

Managing display display

displayIfNeeded
disableDisplay
isDisplayEnabled
reenableDisplay
flushWindow
flushWindowIfNeeded
disableFlushWindow
reenableFlushWindow

setDynamicDepthLimit:
hasDynamicDepthLimit
canStoreColor

Graphics state objects gState

Cursor management addCursorRect:cursor:forView:
removeCursorRect:cursor:forView:
invalidateCursorRectsForView:
disableCursorRects
enableCursorRects
discardCursorRects
resetCursorRects

Handling user actions and events

close
performClose:
miniaturize:
performMiniaturize:
deminiaturize:
setDocEdited:
isDocEdited
windowExposed:
windowMoved:
screenChanged:

Setting the event mask setEventMask:

addToEventMask:
removeFromEventMask:
eventMask

Aiding event handling getMouseLocation:

setTrackingRect:inside:owner:tag:left:right:
discardTrackingRect:
makeFirstResponder:
firstResponder
sendEvent:
rightMouseDown:
commandKey:
tryToPerform:with:
setAvoidsActivation:
avoidsActivation

Dragging registerForDraggedTypes:count:

unregisterDraggedTypes
dragImage:at:offset:event:pasteboard:source:slideBack:

Services and Windows menu support

validRequestorForSendType:andReturnType:
setExcludedFromWindowsMenu:
isExcludedFromWindowsMenu

Assigning a delegate setDelegate:

delegate

Printing printPSCode:

smartPrintPSCode:
faxPSCode:
smartFaxPSCode:
openSpoolFile:
spoolFile:

```
endHeaderComments
endPrologue
beginSetup
endSetup
beginPage:label:bBox:fonts:
endPage
beginPageSetupRect:placement:
endPageSetup
beginTrailer
endTrailer
```

Archiving read:

```
write:
awake
```

setDepthLimit:, setDynamicDepthLimit:, canStoreColor

setFrameUsingName:, setFrameAutosaveName:

addCursorRect:(const NXRect *)aRect
cursor:anObject
forView:aView

Adds the rectangle specified by aRect to the Window's list of cursor rectangles and returns self. aRect, in the Window's base coordinate system, must lie within the Window's content rectangle. If it doesn't, it isn't added and nil is returned.

You typically add cursor rectangles to View objects (through View's addCursorRect:cursor: method) and not to Windows.

addCursorRect:cursor: (View)

(int)addToEventMask:(int)newEvents

Adds newEvents to the Window's current event mask and returns the original event mask. This method is used when an object sets up a modal event loop to respond to certain events. The return value should be the Window's original event mask when the modal loop is done. See setEventMask: for a list of event masks.

setEventMask:, eventMask, removeFromEventMask:

(BOOL)avoidsActivation

Returns YES if the Window's application doesn't become active when the user clicks in the Window. The default is NO. Note that clicking on the title bar will always activate the Window's application.

setAvoidsActivation:

awake

You never invoke this method directly; it's invoked automatically after the Window has been read from disk. See read:

(NXColor)backgroundColor

Returns the color of the Window's background when the object is displayed on a color screen. The default is the equivalent of NX_LTGRAY.

setBackgroundColor:, setBackgroundGray:

(int)backingType

Returns the Window's backing type as one of the following constants:

NX_BUFFERED

NX_RETAINED

NX_NONRETAINED

setBackingType:

becomeKeyWindow

You never invoke this method it's invoked automatically when the Window becomes the key window. You send `becomeKeyWindow` to the Window's first responder, and sends `windowDidBecomeKey:` to the Window's delegate (if the delegate can respond). Returns self.

`makeKeyWindow`, `makeKeyAndOrderFront:`

becomeMainWindow

You never invoke this method it's invoked automatically when the Window becomes the main window. You send `becomeMainWindow` to the Window's delegate (if the delegate can respond). Returns self.

`makeKeyWindow`, `makeKeyAndOrderFront:`

beginPage:(int)ordinalNum

label:(const char *)aString

bBox:(const NXRect *)pageRect

fonts:(const char *)fontNames

Writes a PostScript page separator by forwarding the `beginPage:...` message to the Window's frame view. You never invoke this method directly it's invoked automatically when printing or faxing the Window.

`beginPage:labelbBox:fonts:` (View)

beginPageSetupRect:(const NXRect *)aRect

placement:(const NXPoint *)location

Writes the start of a PostScript page-setup section by forwarding the `beginPageSetupRect:placement:` message to the Window's frame view. You never invoke this method directly it's invoked automatically when printing or faxing the Window.

`beginPageSetupRect:placement:` (View)

beginPrologueBBox:(const NXRect *)boundingBox

creationDate:(const char *)dateCreated

createdBy:(const char *)anApplication

beginPSOutput

Prepares the Window (and the application environment) for printing or faxing by forwarding the beginPSOutput message to the Window's frame view. You never invoke this method directly it's invoked automatically when printing or faxing the Window.

beginPSOutput (View)

beginSetup

Writes the start of a PostScript document-setup section by forwarding the beginSetup message to the Window's frame view. You never invoke this method directly it's invoked automatically when printing or faxing the Window.

beginSetup (View)

beginTrailer

Writes the start of a PostScript document-trailer section by forwarding the beginTrailer message to the Window's frame view. You never invoke this method directly it's invoked automatically when printing or faxing the Window.

beginTrailer (View)

(const NXScreen *)bestScreen

Returns a pointer to the deepest screen that the Window is on, or NULL if the Window is currently not on any screen, colorScreen (Application)

(int)buttonMask

Returns a mask that indicates which buttons appear in the Window's title bar. The return value is a bitwise OR of these constants:

NX_CLOSEBUTTONMASK
NX_MINIATURIZEBUTTONMASK

The button mask is set when the Window is initialized and is, thereafter, immutable.

initWithContent:style:backing:buttonMask:defer:screen:

(BOOL)canBecomeKeyWindow

Returns YES if the Window can be made the key window, and NO if it can't. This method is consulted when the Window tries to become the key window the attempt is thwarted if this method returns NO.

isKeyWindow, makeKeyWindow

(BOOL)canStoreColor

Returns YES if the Window has a depth limit that allows it to store color values, and NO if it does not.
depthLimit, shouldDrawColor (View)

center

Moves the Window to the center of the screen: The Window is placed dead-center horizontally and above center vertically. Such a placement is considered to carry a certain immediacy and importance; typically use this method to place a WindowDmost likely an attention PanelDwhere the user can't be interrupted. This method is invoked automatically when a Panel is placed on the screen by Application's runModalFor: method.

close

Removes the Window from the screen. If the Window is set to be freed when it's closed (the default), this method sends a close message to the object (but note that the message isn't sent until the current event is completed).

Normally, this method is invoked by the Application Kit when the user clicks the Window's close button. The close method doesn't cause windowWillClose: to be sent to the Window's delegate (the message is sent to the delegate when the user clicks the close button). You can induce an invocation of the delegate method by simulating the user's action with the performClose: method.

Returns nil.

performClose:, setFreeWhenClosed:

(BOOL)commandKey:(NXEvent *)theEvent

Responds to the Command key-down event passed as theEvent. You never invoke this method directly on a Window object; upon receiving a Command key-down event, sends a commandKey: message to each Window object until one of them returns YES (signifying that the event was recognized and handled). The default implementation of this method returns NODinstances of Window can't handle these events. (By contrast, Panels can.)

You can create your own subclass of Window that responds to Command key-down events. A typical implementation of this method passes a performKeyEquivalent: message down the view hierarchy.

performKeyEquivalent: (View), commandKey: (Panel)

(BOOL)constrainFrameRect:(NXRect *)theFrame
toScreen:(const NXScreen *)screen

Modifies the rectangle pointed to by theFrame such that its top edge lies on the given screen. If the rectangle's height is adjusted to bring the bottom edge onto the screen as well. The rectangle's

contentView

Returns the Window's content view, the highest accessible View object in the Window's view hierarchy.

setContentView:

convertBaseToScreen:(NXPoint *)aPoint

Converts the point referred to by aPoint from the Window's base coordinate system to the screen coordinate system.
Returns self.

convertScreenToBase:

convertScreenToBase:(NXPoint *)aPoint

Converts the point referred to by aPoint from the screen coordinate system to the Window's base coordinate system.
Returns self.

convertBaseToScreen:

copyPSCodeInside:(const NXRect *)rect to:(NXStream *)stream

Generates PostScript code, in the manner of printPSCode:, for all the Views located inside the rectangle rect in the Window. The rectangle is specified in the Window's base coordinates. The PostScript code is written to the stream stream.
Returns self (unless an exception is raised).

printPSCode:, faxPSCode:

counterpart

Returns the Window's miniwindow or, if this Window is a miniwindow, the Window that it represents. If the Window's counterpart directly a corresponding miniwindow is created automatically the first time the Window is miniaturized. If the Window has not yet been miniaturized, this method will return nil.

setMiniwindowImage:, setMiniwindowTitle:

delegate

Returns the Window's delegate, or nil if it doesn't have one.

setDelegate:

deminiaturize:sender

(NXWindowDepth)depthLimit

Returns the depth limit of the Window as one of the following values:

NX_DefaultDepth

NX_TwoBitGrayDepth

NX_EightBitGrayDepth

NX_TwelveBitRGBDepth

NX_TwentyFourBitRGBDepth

If the return value is NX_DefaultDepth, you can find out the actual depth limit by sending the Window defaultDepthLimit message.

setDepthLimit:, setDynamicDepthLimit:

disableCursorRects

Disables all cursor rectangle management within the Window. Typically this method is used when doing special cursor manipulation, and you don't want the Application Kit interfering. Returns self.

enableCursorRects

disableDisplay

Disables View's display methods, thus preventing the Views in the Window's view hierarchy from displaying (however, that this doesn't disable Window's display method). This permits you to alter or update the Views without displaying them again.

Displaying should be disabled only temporarily. Each disableDisplay message should be paired with a reenableView message. Pairs of these messages can be nested drawing won't be reenabled until a reenableView message is sent or until a display message is sent to the Window.

Returns self.

reenableView, isEnabled, display, display::: (View)

disableFlushWindow

Disables the flushWindow method for the Window. If the Window is a buffered window, drawing is flushed to the screen by the display methods defined in the View class. This permits several Views to be updated without the results being shown to the user.

Flushing should be disabled only temporarily, while the Window's display is being updated. Each disableFlushWindow message should be paired with a subsequent reenableView message. Message pairs can be nested drawing won't be reenabled until the last (unnested) reenableView message is sent.

Returns self.

reenableView, flushWindow, disableDisplay

discardCursorRects

Removes the tracking rectangle identified by trackNum and returns self. The tag was assigned when the rectangle was created.

setTrackingRect:inside:owner:tag:left:right:

display

Passes a display message down the Window's view hierarchy, thus redrawing all Views within the border, resize bar, and title bar. If displaying is disabled for the Window, this method reenables it.

display (View), disableDisplay, displayIfNeeded

displayBorder

Redraws the Window's border, title bar, and resize bar, and returns self. You rarely need to invoke this method. The Window's border is automatically displayed when any of the elements therein are changed. When the Window's title is changed, for example.

display

displayIfNeeded

Sends a displayIfNeeded message down the Window's view hierarchy, thus redrawing all Views that are displayed, including the Window's border, title bar, and resize bar. This method is useful when you are displaying in the Window, modify some number of Views, and then display only the ones that were modified. This method, unlike display, doesn't reenable display if it's currently disabled. Returns self.

display, displayIfNeeded (View), setNeedsDisplay: (View), update (View)

(BOOL)doesHideOnDeactivate

Returns YES if the Window will be removed from the screen when its application is deactivated, and NO otherwise.

setHideOnDeactivate:

dragFrom:(float)x
:(float)y
eventNum:(int)num

Lets the user drag a Window from a location other than the title bar.

mouseDown:(NXEvent *)theEvent

dragImage:anImage
at:(NXPoint *)location
offset:(NXPoint *)initialOffset
event:(NXEvent *)event
pasteboard:(Pasteboard *)pboard
source:sourceObject
slideBack:(BOOL)slideFlag

Instigates an image-dragging session. You never invoke this method directly from your application; it is invoked from within a View's implementation of the mouseDown: method. Furthermore, View also has a dragImage:... method you typically instigate an image-dragging session by sending this message to the Window. The two methods are identical except for the interpretation of the location argument: In the Window implementation, location is taken in the base coordinate system. See the description of this method for the meanings of the other arguments.

dragImage:at:offset:event:pasteboard:source:slideBack: (View)

enableCursorRects

Reenables cursor rectangle management. Returns self.

disableCursorRects

endEditingFor:anObject

Prepares the Window's field editor for a new editing assignment and returns self. The argument is the object to be edited. The default implementation.

If the field editor is the first responder, it resigns that status, passing it to the Window (even if the field editor is not the first responder). This forces a textDidEnd:endChar: message to be sent to the field editor's delegate. The field editor is removed from the view hierarchy and its delegate is set to nil.

To conditionally end editing, first try to make the Window the first responder:

getFieldEditor:for:

endHeaderComments

Writes the end of a PostScript comment section by forwarding the endHeaderComments message to the Window. You never invoke this method directly; it's invoked automatically when printing or faxing the document.

endHeaderComments (View)

endPage

You never invoke this method directly it's invoked automatically when printing or faxing the Window.
`endPageSetup (View)`

`endPrologue`

Writes the end of a PostScript prolog section by forwarding the `endPrologue` message to the Window's frame view. You never invoke this method directly it's invoked automatically when printing or faxing the Window.
`endPrologue (View)`

`endPSOutput`

Declares that printing or faxing is finished by forwarding the `endPSOutput` to the Window's frame view. You never invoke this method directly it's invoked automatically when printing or faxing the Window.
`endPSOutput (View)`

`endSetup`

Writes the end of a PostScript document-setup section by forwarding the `endSetup` message to the Window's frame view. You never invoke this method directly it's invoked automatically when printing or faxing the Window.
`endSetup (View)`

`endTrailer`

Writes the end of a PostScript document-trailer section by forwarding the `endTrailer` message to the Window's frame view. You never invoke this method directly it's invoked automatically when printing or faxing the Window.
`endTrailer (View)`

`(int)eventMask`

Returns the current event mask for the Window. See `setEventMask:` for a list of the possible contents of the event mask.
`setEventMask:`, `addToEventMask:`, `removeFromEventMask:`

`faxPSCode:sender`

Prints the Window (all the Views in its view hierarchy including the frame view) to a fax modem. The `sender` argument indicates that there were errors in generating the PostScript code or that the user canceled the job. In the current user interface, faxing is initiated from within the Print panel. However, with this method you can give users with an independent control for faxing a Window.

Returns the Window's first responder.

makeFirstResponder:, acceptsFirstResponder (Responder)

flushWindow

if the Window is buffered and flushing hasn't been disabled by disableFlushWindow, this flushes the screen. This method is automatically invoked when you send a display message to a Window. It has no effect if the display is being directed to a printer or other device, rather than to the screen.

display:: (View), disableFlushWindow

flushWindowIfNeeded

Flushes the Window's off-screen buffer to the screen, provided that:

- The Window is a buffered window
- Flushing isn't currently disabled
- Some previous flushWindow messages had no effect because flushing was disabled

You should use this method, rather than flushWindow, to flush a Window after flushing has been disabled.

flushWindow, disableFlushWindow, reenableViewFlushWindow

(const char *)frameAutosaveName

Returns the name that's used to automatically save the Window's frame rectangle data in the default autosave file through setFrameAutosaveName:. If the Window has an autosave name, its frame data is written to the file when the frame rectangle changes.

setFrameAutosaveName:

free

Deallocates memory for the Window object and all that it surveys. This includes the Views in its instance variables (including the field editor), and the Window Server window device that it's associated with.

getFieldEditor:(BOOL)flag for:anObject

Returns the field editor, the Window's communal Text object. The field editor is provided as a convenience, but is used however your application sees fit. Typically, the field editor is used by simple text-bearing objects. A TextField object uses its Window's field editor to display and manipulate text. The field editor can be shared by a number of objects and so its state may be constantly changing. Therefore, it shouldn't be used to create objects that demand sophisticated Text object preparation (for this you should create a dedicated Text object).

A freshly created Window doesn't have a field editor the only way to create a field editor is to invoke setFrameAutosaveName: with a flag value of YES. After a field editor has been created for a Window, the flag argument is ignored.

endEditingFor:

getFrame:(NXRect *)theRect

Returns the Window's frame rectangle by reference in theRect and returns self. The frame rectangle is in the screen coordinate system.

getFrame:andScreen:

getFrame:(NXRect *)theRect andScreen:(const NXScreen **)theScreen

Copies the Window's frame rectangle into the structure referred to by theRect. A pointer to the screen is located is provided in the variable referred to by theScreen. The frame rectangle is specified relative to the top-left corner of the screen. However, if theScreen is NULL, the frame rectangle is specified in absolute coordinates (relative to the origin of the screen coordinate system). Returns self.

getFrame:

getMaxSize:(NXSize *)aSize

Returns, by reference in aSize, an NXSize structure that gives the maximum size to which the Window can be sized by the user or by the setFrame:... methods. Note that this constraint doesn't apply to sizeWindow: and placeWindow:... methods.

setMaxSize:, setMinSize:, getMinSize:

getMinSize:(NXSize *)aSize

Returns, by reference in aSize, an NXSize structure that gives the minimum size to which the Window can be sized by the user or by the setFrame:... methods. Note that this constraint doesn't apply to sizeWindow: and placeWindow:... methods.

setMinSize:, setMaxSize:, getMaxSize:

getMouseLocation:(NXPoint *)thePoint

Returns, by reference in thePoint, the current location of the mouse reckoned in the Window's base coordinate system. Returns self.

currentEvent (Application)

(BOOL)getRect:(NXRect *)theRect forPage:(int)page

Implemented by subclasses to provide the rectangle to be printed for page number page. A Window can be asked to print forPage: messages when it's being printed (or faxed) if its knowsPagesFirst:last: method returns YES.

(int)gState

Returns the PostScript graphics state object associated with the Window.

(BOOL)hasDynamicDepthLimit

Returns YES if the Window's depth limit can change to match the depth of the screen it's on, and NO otherwise. See `setDynamicDepthLimit:`

(float)heightAdjustLimit

Returns the fraction of a page that can be pushed onto the next page to prevent items from being cut off. This property applies to vertical pagination. By default, it's 0.2.

You never invoke this method directly it's invoked during automatic pagination when printing (or saving to a file). However, you can override it to return a different value. The value returned should lie between 0.0 and 1.0.

`widthAdjustLimit`

`init`

Initializes the receiver, a newly allocated Window object, by passing default values to the `initWithContentRect:style:backing:buttonMask:defer:` method. The initialized object is a plain, buffered window, and has a default frame.

`initWithContentRect:style:backing:buttonMask:defer:`

`initWithContentRect:(const NXRect *)contentRect
style:(int)aStyle
backing:(int)backingType
buttonMask:(int)mask
defer:(BOOL)flag`

Initializes the Window object and returns self. This method is the designated initializer for the Window class.

The first argument, `contentRect`, specifies the location and size of the Window's content area in screen coordinates. If a NULL pointer is passed for this argument, a default rectangle is used.

The second argument, `aStyle`, specifies the Window's style. It can be:

`NX_PLAINSTYLE
NX_TITLEDSTYLE
NX_RESIZEBARSTYLE
NX_MENUSTYLE
NX_MINIWINDOWSTYLE
NX_MINIWORLDSTYLE
NX_TOKENSTYLE`

The fourth argument, mask, specifies whether the Window's title bar will sport a close or resize button. You can create a custom mask by joining (with the bitwise OR operator) the individual masks for the buttons:

```
NX_CLOSEBUTTONMASK  
NX_MINIATURIZEBUTTONMASK
```

The fifth argument, flag, determines whether the Window Server will create a window device for the Window immediately. If flag is YES, it will defer creating the window until the Window is ordered on-screen. Messages sent to the Window or its Views will be postponed until the window is created, just before it appears on screen. Deferring the creation of the window improves launch time and minimizes the virtual memory usage.

The Window creates an instance of View to be its default content view. You can replace it with your own by calling the setContentView: method.

orderFront:, setTitle:, setOneShot:

```
initWithContentRect:(const NXRect *)contentRect  
style:(int)aStyle  
backing:(int)bufferingType  
buttonMask:(int)mask  
defer:(BOOL)flag  
screen:(const NXScreen *)aScreen
```

Initializes the Window object and returns self. This method is equivalent to initWithContentRect:style:backingType:buttonMask:defer:screen: except that the content rectangle is specified relative to the lower left corner of aScreen.

If aScreen is NULL, the content rectangle is interpreted relative to the lower left corner of the main screen. The main screen is the one that contains the current key window, or, if there is no key window, the one that contains the main menu. If there's neither a key window nor a main menu (if there's no active application), the main screen is the one whose origin of the screen coordinate system is located at (0,0).

initWithStyle:backing:buttonMask:defer:

```
invalidateCursorRectsForView:aView
```

Marks the Window as having invalid cursor rectangles. If the Window is the key window, the AppKit will send it a resetCursorRects message to have it fix its cursor rectangles before getting the next event. If the Window is not the key window, it will receive the message when it next becomes the key window. Returns self.

resetCursorRects

```
(BOOL)isDisplayEnabled
```

Returns YES if the display mechanism is currently disabled (because of a previous disableDisplay call), otherwise returns NO.

disableDisplay, reenableView, display::: (View)

```
(BOOL)isDocEdited
```

Returns YES if the Window's document has been edited, otherwise returns NO.

(BOOL)isFlushWindowDisabled

Returns YES if the Window's flushing ability has been disabled otherwise returns NO.
disableFlushWindow, reenableFlushWindow

(BOOL)isKeyWindow

Returns YES if the Window is the key window for the application, and NO if it isn't.
isMainWindow

(BOOL)isMainWindow

Returns YES if the Window is the main window for the application, and NO if it isn't.
isKeyWindow

(BOOL)isOneShot

Returns YES if the window device that the Window manages is freed when it's removed from the not. The default is NO.

setOneShot:

(BOOL)isVisible

Returns YES if the Window is on-screen (even if it's obscured by other Windows).
getVisibleRect: (View)

(BOOL)knowsPagesFirst:(int *)firstPageNum last:(int *)lastPageNum

Implemented by subclasses to indicate whether the Window knows where its own pages lie. This is used when printing (or faxing) the Window. Although it can be implemented in a Window subclass, it is not required in program code.

If this method returns YES, the Window will receive getRect:forPage: messages querying it for the corresponding to specific pages. If it returns NO, pagination will be done automatically. By default

Just before this method is invoked, the first page to be printed is set to 1 and the last page to be printed is set to the maximum integer size. An implementation of this method can set firstPageNum to a different initial value (e.g. chapter may start on page 40), even if it returns NO. If it returns YES, lastPageNum can be set to a different value. If it doesn't reset lastPageNum, the subclass implementation of getRect:forPage: must be able to sign off on pages asked for beyond what is available in the document.

getRect:forPage:, printPSCode:

The Application Kit uses this method to alter the first responder in response to mouse-down events. You can explicitly set the first responder from within your program. `aResponder` should be a `Responder` object or a `View` in the Window's view hierarchy.

If successful in making `aResponder` the first responder, this method returns `self`. If not (if the old first responder to resign), it returns `nil`.

`becomeFirstResponder (Responder)`, `resignFirstResponder (Responder)`

`makeKeyAndOrderFront:sender`

Moves the Window to the front of the screen list (within its tier) and makes it the key window. This is an action message. Returns `self`.

`orderFront:`, `orderBack:`, `orderOut:`, `orderWindow:relativeTo:`

`makeKeyWindow`

Makes the Window object the key window, and returns `self`.

`becomeKeyWindow`, `isKeyWindow`

`miniaturize:sender`

Removes the Window from the screen list and displays its miniwindow counterpart on-screen. If the Window does not have a miniwindow counterpart, one is created.

A `miniaturize:` message is generated when the user clicks the miniaturize button in the Window's title bar. It has a sender argument so that it can be used in an action message from a Control. It ignores this argument.

`deminaturize:`

`(const char *)miniwindowIcon`

Returns the name of the icon that's displayed in the Window's miniwindow.

`setMiniwindowIcon:`

`(NXImage *)miniwindowImage`

Returns the `NXImage` object that's displayed in the Window's miniwindow.

`setMiniwindowImage:`

`(const char *)miniwindowTitle`

Returns the title that's displayed in the Window's miniwindow.

`moveTo:(NXCoord)x :(NXCoord)y screen:(const NXScreen *)aScreen`

Repositions the Window so that its lower left corner lies at (x, y) relative to a coordinate origin at the top left of aScreen. If aScreen is NULL, this method is the same as `moveTo::`. Returns self.

`moveTopLeftTo:(NXCoord)x :(NXCoord)y`

Moves the Window by the top left corner of its frame rectangle. The arguments are taken in the same units as `moveTo::`. Returns self.

`dragFrom::eventNum:, moveTo::`

`moveTopLeftTo:(NXCoord)x :(NXCoord)y screen:(const NXScreen *)aScreen`

Repositions the Window so that its top left corner lies at (x, y) relative to a coordinate origin at the top left of aScreen. If aScreen is NULL, this method is the same as `moveTopLeftTo::`. Returns self.

`moveTo::`

`openSpoolFile:(char *)filename`

Opens the filename file for print spooling. This method is invoked when printing (or faxing) the Window. If filename is NULL or empty, PostScript code for the Window will be sent directly to the printing machinery without opening a file. (However, if the Window is being previewed or saved, a default file is opened in /tmp/). If a filename is provided, the file is opened. The printing machinery will then write the PostScript code to the file. The file will be printed using lpr.

This method opens a Display PostScript context that will write to the spool file, and sets the context's PrintInfo object to this new context. It returns nil if the file can't be opened.

`printPSCode:`

`orderBack:sender`

Moves the Window to the back of its tier in the screen list. It may also change the key window and the key window's tier. Returns self.

`orderFront:, orderOut:, orderWindow:relativeTo:, makeKeyAndOrderFront:`

`orderFront:sender`

moved in front of the key window unless the window and the key window are in the same application. If you need to invoke this method it's designed to be used when applications are cooperating such that an application (with the key window) is using another application to display data.

`orderFront:`

`orderOut:sender`

Takes the Window out of the screen list. It may also change the key window and main window. Returns self.

`orderFront:`, `orderBack:`, `orderWindow:relativeTo:`

`orderWindow:(int)place relativeTo:(int)otherWin`

Repositions the Window's window device in the Window Server's screen list. place can be one of the following constants:

`NX_ABOVE`

`NX_BELOW`

`NX_OUT`

If it's `NX_OUT`, the window is removed from the screen list and otherWin is ignored. If it's `NX_ABOVE` or `NX_BELOW`, otherWin is the window number of the window that the receiving Window is to be placed above or below. If otherWin is 0, the receiving Window will be placed above or below all other windows in its tier.

`orderFront:`, `orderBack:`, `orderOut:`, `makeKeyAndOrderFront:`

`performClose:sender`

Simulates the user clicking the close button by momentarily highlighting the button and then closing the Window. If the Window's delegate or the Window itself implements `windowWillClose:`, then that message is sent to the delegate or the Window (only one such message is sent if both the delegate and the Window implement the method). Otherwise, the delegate will receive the message).

If the Window doesn't have a close button, then the method calls `NXBeep()`. Returns self.

`performClick: (Button), close, performMiniaturize:`

`performMiniaturize:sender`

Simulates the user clicking the miniaturize button by momentarily highlighting the button then minimizing the Window. If the Window doesn't have a miniaturize button, then this method calls `NXBeep()`. Returns self.

`performClick: (Button), miniaturize:, performClose:`

`placePrintRect:(const NXRect *)aRect offset:(NXPoint *)location`

Determines the location of the rectangle being printed on the physical page. You never invoke this method directly; it is automatically invoked when the Window is printed or faxed. However, you can override it to change the location of the rectangle.

`placeWindow:(const NXRect *)frameRect`

Resizes and moves the Window. `frameRect` specifies the Window's new frame rectangle in screen coordinates. `placeWindow` automatically redisplayed at its new size and position. Returns self.

`sizeWindow::`, `moveTo::`, `placeWindowAndDisplay:`

`placeWindow:(const NXRect *)frameRect screen:(const NXScreen *)aScreen`

This is the same as `placeWindow:`, except that the frame rectangle is specified relative to a coordinate system with its origin at the top-left corner of `aScreen`. If `aScreen` is NULL, this method is exactly the same as `placeWindow:`. Returns self.

`placeWindow:`, `placeWindowAndDisplay:`

`placeWindowAndDisplay:(const NXRect *)frameRect`

This is the same as `placeWindow:`, except the Window's Views are redisplayed before the Window is redisplayed. Returns self.

`placeWindow:`

`printPSCode:sender`

Prints the Window (all the Views in its view hierarchy including the frame view). A return value of NO indicates that there were errors in generating the PostScript code or that the user canceled the job.

This method normally brings up the Print panel before actually beginning printing. But if `sender` is a `PrintPanel` object, `shouldRunPrintPanel:` method, that method will be invoked to first query whether to run the panel. If `shouldRunPrintPanel:` returns NO, the Print panel won't be displayed, and the Window will be printed using the default settings of the panel.

`smartPrintPSCode:`, `faxPSCode:`, `shouldRunPrintPanel:` (Object Methods)

`read:(NXTypedStream *)stream`

Reads the Window and its Views from the typed stream `stream`. Returns self.

`write:`

`reenableDisplay`

Counters the effect of `disableDisplay`, reenabling View's display methods. Returns self.

`disableDisplay`, `isDisplayEnabled`, `display::` (View)

registerForDraggedTypes:(const char *const *)pbTypes count:(int)count

Registers the Pasteboard types that the Window will accept in an image-dragging session. pbTypes array of the types count is the number of elements in the array. Returns self.

Keep in mind that the values in the first argument are Pasteboard types, not file extensions (you can use file extensions). For example, the following registers a Window as accepting files:

unregisterDraggedTypes

removeCursorRect:(const NXRect *)aRect
cursor:anObj
forView:aView

Removes a cursor rectangle from the Window. You never invoke this method it's used by View's cursor: method. To remove a cursor rectangle, use the View method.

removeCursorRect:cursor: (View), resetCursorRects (View)

(int)removeFromEventMask:(int)oldEvents

Removes the event types specified by oldEvents from the Window's event mask, and returns the old eventMask, setEventMask:, addToEventMask:

resetCursorRects

Removes all existing cursor rectangles from the Window, then recreates the cursor rectangles by sending resetCursorRects message to every View in the Window's view hierarchy. Returns self.

This method is typically invoked by the Application object when it detects that the key window's cursor rectangles are invalid. In program code, it's more efficient to invoke invalidateCursorRectsForView:, rather than invalidate cursor rectangles.

invalidateCursorRectsForView:, resetCursorRects (View)

resignKeyWindow

You never invoke this method it's invoked automatically when the Window resigns key window status. The Window sends resignKeyWindow to the Window's first responder, and sends windowDidResignKey: to the objects that want to respond (so that the respective objects can respond). Returns self.

becomeKeyWindow

resignMainWindow

event that initiated the resizing session. The integer encodes, as a mask, information such as which key was held down when the event occurred. The flags are listed in `dpsclient/event.h`. Because of its low-level nature, this method should only be invoked from within an implementation of the delegate methods `windowWillResize:` and `windowDidResize:`.

`rightMouseDown:(NXEvent *)theEvent`

Responds to uncaught right mouse-down events by forwarding this message to the Application object. A right mouse-down event in a window causes the main menu to pop up under the cursor. Returns the value of the Application object.

`rightMouseDown: (Application)`

`(void)saveFrameToString:(char *)string`

Saves the Window's frame rectangle data as a NULL-terminated ASCII string to the buffer pointed to by `string`. The string can be stored as you see fit and used later to set the dimensions of a Window through the `setFrameFromString:` method. You should use the constant `NX_MAXFRAMESTRINGLENGTH` to allocate the buffer.

`setFrameFromString:, saveFrameUsingName:`

`(void)saveFrameUsingName:(const char *)name`

Saves the Window's frame rectangle as a system default. With the companion method `setFrameUsingName:`, you can save and reset a Window's frame over various launchings of an application. The default is owned by the system under the name

`^Window Frame name^`

`setFrameUsingName:, saveFrameToString:`

`(const NXScreen *)screen`

Returns a pointer to the screen that the Window is on. If the Window is partly on one screen and partly on another, the screen where most of it lies is the one returned.

`bestScreen`

`screenChanged:(NXEvent *)theEvent`

Invoked when the user releases the Window, having moved all or part of it to a different screen. The delegate should respond by sending a `windowDidChangeScreen:` message (if the delegate can respond) and returns self.

If the Window has a dynamic depth limit, this method will make sure that the depth limit matches the screen it's on. If the Window is on more than one screen, its depth limit will be adjusted to match the deepest screen it's on.

`bestScreen`

Establishes whether the Window's application will become the active application when the user clicks on the Window's content area. If flag is YES, the application won't become active if flag is NO, it will. The default is YES. Clicking on the title bar will always activate the Window's application.

avoidsActivation

setBackgroundColor:(NXColor)color

Sets the color that fills the Window's content area when the Window is displayed on a color screen.

backgroundColor

setBackgroundGray:(float)value

Sets the shade of gray that fills the Window's content area when the Window is displayed on a monochrome screen. The value should lie in the range 0.0 (black) to 1.0 (white). Returns self.

backgroundGray, setBackgroundColor:

setBackingType:(int)backing

Sets the type of backing used by the Window's window device and returns self. This method can only be used on a buffered Window to retained or vice versa you can't change the backing type of a nonretained Window (an error is generated if you attempt to do so).

backingType

setContentView:aView

Makes aView the Window's content view the previous content view is removed from the Window. Returns aView. aView returned by this method. aView is resized to fit precisely within the content area of the Window. aView's origin is in the content view's coordinate system, but you can't alter its size or location directly.

contentView