# NSPrintInfo

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|---|---|
| **Inherits From:** | NSObject |
| **Conforms To:** | NSCoding |
| | NSCopying |
| | NSObject (NSObject) |
| **Declared In:** | AppKit/NSPrintInfo.h |

## Class Description

An NSPrintInfo object stores information that's used to generate PostScript output. A shared NSPrintInfo object is automatically created for an application and is used by default for all printing jobs for that application. You can create any number of additional NSPrintInfo objects; however, only one can be "active" at a time, set using the **setSharedPrintInfo**: class method. You get the shared NSPrintInfo object using the **sharedPrintInfo** class method.

An NSPrintInfo object is used by NSPrintOperation objects to control printing (it is passed to a NSPrintOperation object which makes a copy of it to use during an operation). If you create special instances of NSPrintInfo objects for a specific printing task, you must ensure that your NSPrintInfo object is the shared one, or instantiate an NSPrintOperation object specifying your NSPrintInfo object.

Normally you don't set NSPrintInfo attributes directly—this is done by instances of NSPageLayout and NSPrintPanel. The NSView that's being printed may also supercede some NSPrintInfo settings. In particular, an NSView can supply the range of pages in the document and can provide its own pagination mechanism through the **knowsPagesFirst:last:** and **rect:forPage:** methods (see the documentation of these methods in the NSView class for details).

If the NSView doesn't supply pagination information, the NSPrintInfo's vertical and horizontal pagination constants are used to trigger these built-in pagination mechanisms:

| Pagination Constant | Meaning |
|---|---|
| NSAutoPagination | The image is diced into equal-sized rectangles and placed in one column of pages. |
| NSFitPagination | The image is scaled to produce one column or one row of pages. |
| NSClipPagination | The image is clipped to produce one column or row of pages. |

Vertical and horizontal pagination needn't be the same. However, if either dimension is scaled (NSFitPagination), the other dimension is scaled by the same amount to avoid stretching the image. If both dimensions are scaled, the scaling factor that produces the smallest image is used. Note that NSPrintInfo's

scaling factor is independent of the scaling that's imposed by pagination and is applied after the document has been paginated.

NSPrintInfo uses points as the unit of measurement for paper size and margin width in the methods described below. See the NSFont specification for a discussion of points.

## Adopted Protocols

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|---|---|
| NSCoding | – encodeWithCoder: |
| | – initWithCoder: |
| NSCopying | – copyWithZone: |

## Method Types

| | |
|---|---|
| Initializing an NSPrintInfo | – initWithDictionary: |
| Managing the shared NSPrintInfo | + setSharedPrintInfo: |
| | + sharedPrintInfo |
| Managing the printing rectangle | + sizeForPaperName: |
| | – bottomMargin |
| | – leftMargin |
| | – orientation |
| | – paperName |
| | – paperSize |
| | – rightMargin |
| | – setBottomMargin: |
| | – setLeftMargin: |
| | – setOrientation: |
| | – setPaperName: |
| | – setPaperSize: |
| | – setRightMargin: |
| | – setTopMargin: |
| | – topMargin |
| Pagination | – horizontalPagination |
| | – setHorizontalPagination: |
| | – setVerticalPagination: |
| | – verticalPagination |

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| Positioning the image on the page | – isHorizontallyCentered |
| | – isVerticallyCentered |
| | – setHorizontallyCentered: |
| | – setVerticallyCentered: |
| Specifying the printer | + defaultPrinter |
| | + setDefaultPrinter: |
| | – printer |
| | – setPrinter: |
| Controlling printing | – jobDisposition |
| | – setJobDisposition: |
| | – setUpPrintOperationDefaultValues |
| Accessing the dictionary | – dictionary |

## Class Methods

### defaultPrinter

+ (NSPrinter \*)**defaultPrinter**

Returns the user's default printer. Returns **nil** if the printer can not be found.

**See also:** + **setDefaultPrinter:**

### setDefaultPrinter:

+ (void)**setDefaultPrinter:**(NSPrinter \*)*aPrinter*

Sets the user's default printer to *aPrinter*. Unless the receiver's printer was specified using **setPrinter:**, this default printer is used.

**See also:** + **defaultPrinter**, – **printer**

### setSharedPrintInfo:

+ (void)**setSharedPrintInfo:**(NSPrintInfo \*)*printInfo*

Sets the shared NSPrintInfo object to *printInfo*. The shared NSPrintInfo object defines the settings for the NSPageLayout panel and print operations that will be used if no NSPrintInfo object is specified for those operataions. *printInfo* should never be **nil**.

**See also:** + **sharedPrintInfo**

### sharedPrintInfo

+ (NSPrintInfo *)**sharedPrintInfo**

Returns the shared NSPrintInfo object.

**See also:** + **setSharedPrintInfo:**

### sizeForPaperName:

+ (NSSize)**sizeForPaperName:**(NSString *)*name*

Returns the size for the specified type of paper in points. *name* identifies the type of paper, such as Letter or Legal. Paper names are implementation specific.

## Instance Methods

### bottomMargin

– (float)**bottomMargin**

Returns the height of the bottom margin in points.

**See also:** – **setBottomMargin:**

### dictionary

– (NSMutableDictionary *)**dictionary**

Returns the receiver's dictionary that stores its attribute settings. The key/value pairs contained in the dictionary are described in **initWithDictionary:**. Note, modifying the returned dictionary will change the receiver's attributes.

### horizontalPagination

– (NSPrintingPaginationMode)**horizontalPagination**

Returns the horizontal pagination mode, see **setHorizontalPagination:** for description of return values.

**See also:** – setVerticalPagination:, – verticalPagination

## initWithDictionary:

    – (id)**initWithDictionary:**(NSDictionary *)*aDictionary*

Initializes a newly allocated NSPrintInfo object by assigning it the parameters specified in *aDictionary*. This is the designated initializer for this class. The possible key/value pairs contained in *aDictionary* are listed below. Non-object values should be stored as NSValues in the dictionary.

| Key | Type | Description |
|---|---|---|
| NSPrintPaperName | NSString | The paper name. |
| NSPrintPaperSize | NSSize | Height and width of paper in points. |
| NSPrintMustCollate | BOOL | If YES, collates output. |
| NSPrintFormName | NSString | Form name such as "Letter" or "Letter Small". |
| NSPrintOrientation | NSPrintingOrientation | NSPortraitOrientation or NSLandscapeOrientation |
| NSPrintLeftMargin | float | The left margin in points. |
| NSPrintRightmargin | float | The right margin in points. |
| NSPrintTopMargin | float | The top margin in points. |
| NSPrintBottomMargin | float | The bottom margin in points. |
| NSPrintHorizontallyCentered | BOOL | If YES, pages are centered horizontally. |
| NSPrintVerticallyCentered | BOOL | If YES, pages are centered vertically. |
| NSPrintHorizontalPagination | NSPrintingPaginationMode | NSAutoPagination, NSFitPagination, or NSClipPagination. See **setHorizontalPagination:** for details. |
| NSPrintVerticalPagination | NSPrintingPaginationMode | NSAutoPagination, NSFitPagination,  or NSClipPagination. See **setVerticalPagination**: for details. |
| NSPrintScalingFactor | float | Scale factor before pagination. |
| NSPrintAllPages | BOOL | If YES, includes all pages in output. |
| NSPrintReversePageOrder | BOOL | If YES, prints last page first. |
| NSPrintFirstPage | int | The first page in the print job. |
| NSPrintLastPage | int | The last page in the print job. |
| NSPrintCopies | int | Number of copies to spool. |
| NSPrintPagesPerSheet | int | The number of pages of the document that are printed on a single sheet of paper. This number is rounded up to the power of two when used by the system. |
| NSPrintJobFeatures | NSMutableDictionary | Features from the NSPrinter object where keys are the feature name and |

|  |  | values are the settings. For example, the key NSPrintPaperFeed might have the value *InputSlot/Upper. See the NSPrinter class description. |
| NSPrintPaperFeed | NSString | The printer slot. For example, InputSlot/Upper or NSPrintManualFeed. |
| NSPrintPrinter | NSPrinter | The printer to use. |
| NSPrintJobDisposition | NSString | NSPrintSpoolJob, NSPrintFaxJob, NSPrintPreviewJob, NSPrintSaveJob, or NSPrintCancelJob. See **setJobDisposition:** for details. |
| NSPrintSavePath | NSString | Pathname to save as a file if job disposition is NSPrintSaveJob. |
| NSPrintFaxReceiverNames | NSArray | Array of NSStrings containing receiver names for a fax job. |
| NSPrintFaxReceiverNumbers | NSArray | Array of NSStrings containing the receiver phone numbers for a fax job. |
| NSPrintFaxSendTime | NSDate | When to send the fax. |
| NSPrintFaxUseCoverSheet | BOOL | If YES, send cover sheet. |
| NSPrintFaxCoverSheetName | NSString | The filename containing the cover sheet. |
| NSPrintFaxReturnReceipt | BOOL | If YES, sends confirmation email when fax is sent. |
| NSPrintFaxHighResolution | BOOL | If YES, sends fax at high resolution. |
| NSPrintFaxTrimPageEnds | BOOL | If YES, trims page ends, otherwise sends complete pages. |
| NSPrintFaxModem | NSPrinter | The fax modem to use. |

**See also:** – **dictionary**


## isHorizontallyCentered

– (BOOL)**isHorizontallyCentered**

Returns YES if the image is centered horizontally, otherwise returns NO.

**See also:** – **isVerticallyCentered**, – **setHorizontallyCentered:**

### isVerticallyCentered

    – (BOOL)**isVerticallyCentered**

Returns YES if the image is centered vertically, otherwise returns NO.

**See also:** – **isHorizontallyCentered**, – **setVerticallyCentered:**

### jobDisposition

    – (NSString *)**jobDisposition**

Returns the action specified for the job. See **setJobDisposition:** for description of return values.

### leftMargin

    – (float)**leftMargin**

Returns the width of the left margin in points.

**See also:** – **setLeftMargin:**

### orientation

    – (NSPrintingOrientation)**orientation**

Returns the orientation attribute. See **setOrientation:** for description of return values.

### paperName

    – (NSString *)**paperName**

Returns the paper name such as "Letter" or "Legal". Paper names are implementation specific.

**See also:** – **setPaperName:**

### paperSize

    – (NSSize)**paperSize**

Returns the size of the paper in points.

**See also:** – **setPaperSize:**

## printer

    – (NSPrinter \*)**printer**

Returns the NSPrinter to be used for printing.

**See also:**   – **setPrinter:**

## rightMargin

    – (float)**rightMargin**

Returns the width of the right margin in points.

**See also:**   – **setRightMargin:**

## setBottomMargin:

    – (void)**setBottomMargin:**(float)*margin*

Sets the bottom margin to *margin* specified in points.

**See also:**   – **bottomMargin**

## setHorizontalPagination:

    – (void)**setHorizontalPagination:**(NSPrintingPaginationMode)*mode*

Sets the horizontal pagination to *mode* where *mode* is one of:

| | |
|---|---|
| NSAutoPagination | The image is diced into equal-sized rectangles and placed in one column of pages. |
| NSFitPagination | The image is scaled to produce one column or one row of pages. |
| NSClipPagination | The image is clipped to produce one column or row of pages. |

**See also:**   – **horizontalPagination**, – **setVerticalPagination:, – verticalPagination**

## setHorizontallyCentered:

    – (void)**setHorizontallyCentered:**(BOOL)*flag*

If *flag* is YES the image will be centered horizontally.

**See also:**   – **isHorizontallyCentered, – isVerticallyCentered, – setVerticallyCentered:**

### setJobDisposition:

– (void)**setJobDisposition:**(NSString *)*disposition*

Sets the action specified for the job to *disposition*, where *disposition* is one of:

| | |
|---|---|
| NSPrintSpoolJob | Normal print job. |
| NSPrintFaxJob | Fax job. |
| NSPrintPreviewJob | Send to Preview application. |
| NSPrintSaveJob | Save to a file. |
| NSPrintCancelJob | Cancel print job. |

**See also:**   – **jobDisposition**


### setLeftMargin:

– (void)**setLeftMargin:**(float)*margin*

Sets the left margin to *margin* specified in points.

**See also:**   – **leftMargin**


### setOrientation:

– (void)**setOrientation:**(NSPrintingOrientation)*orientation*

Sets the page orientation to *orientation* where *orientation* is one of:

NSPortraitOrientation

NSLandscapeOrientation

This method may change either the paper name or size for consistency. To avoid this side effect set the values in the dictionary directly.

**See also:**   – **dictionary**, – **initWithDictionary:**, – **orientation**

## setPaperName:

   – (void)**setPaperName:**(NSString *)*name*

Sets the paper name to *name* (i.e., Letter or Legal). Paper names are implementation specific.This method may change either the size or orientation for consistency. To avoid this side effect set the values in the dictionary directly.

**See also:**   – **dictionary**, – **initWithDictionary:**, – **paperName**

## setPaperSize:

   – (void)**setPaperSize:**(NSSize)*aSize*

Sets the width and height of the paper to *aSize* specified in points. This method may change either the paper name or orientation for consistency. To avoid this side effect set the values in the dictionary directly.

**See also:**   – **dictionary**, – **initWithDictionary:**, – **paperSize**

## setPrinter:

   – (void)**setPrinter:**(NSPrinter *)*aPrinter*

Sets the printer used in subsequent printing jobs to *aPrinter*. This method iterates through the dictionary. If a feature in the dictionary is not supported by this new printer (this is determined by a query to the PPD file), then that feature is removed from the dictionary

**See also:**   – **printer**

## setRightMargin:

   – (void)**setRightMargin:**(float)*margin*

Sets the right margin to *margin* specified in points.

**See also:**   – **rightMargin**

## setTopMargin:

   – (void)**setTopMargin:**(float)*margin*

Sets the top margin to *margin* specified in points.

**See also:**   – **topMargin**

## setUpPrintOperationDefaultValues

– (void)**setUpPrintOperationDefaultValues**

Invoked when the print operation is about to start. Subclasses may override this method to set default values for any attributes that are not set.

## setVerticalPagination:

– (void)**setVerticalPagination:**(NSPrintingPaginationMode)*mode*

Sets the vertical pagination to *mode* where *mode* is one of:

| | |
|---|---|
| NSAutoPagination | The image is diced into equal-sized rectangles and placed in one column of pages. |
| NSFitPagination | The image is scaled to produce one column or one row of pages. |
| NSClipPagination | The image is clipped to produce one column or row of pages. |

**See also:** – **horizontalPagination**, – **setHorizontalPagination:**, – **verticalPagination**

## setVerticallyCentered:

– (void)**setVerticallyCentered:**(BOOL)*flag*

If *flag* is YES, the image will be vertically centered.

**See also:** – **isHorizontallyCentered**, – **isVerticallyCentered**, – **setHorizontallyCentered:**

## topMargin

– (float)**topMargin**

Returns the top margin in points.

**See also:** – **setTopMargin:**

## verticalPagination

– (NSPrintingPaginationMode)**verticalPagination**

Returns the vertical pagination mode, see **setVerticalPagination:** for description of return values.

**See also:** – **horizontalPagination, – setHorizontalPagination:**