
CGPDFPage Reference

Graphics & Animation: 2D Drawing



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CGPDFPage Reference

Derived From:	CType
Framework:	ApplicationServices/ApplicationServices.h
Companion guide	Quartz 2D Programming Guide
Declared in	CGPDFPage.h

Overview

The `CGPDFPageRef` opaque type represents a page in a PDF document.

Functions by Task

Retaining and Releasing a PDF Page

[CGPDFPageRetain](#) (page 10)

Increments the retain count of a PDF page.

[CGPDFPageRelease](#) (page 9)

Decrements the retain count of a PDF page.

Getting the CType ID

[CGPDFPageGetTypeID](#) (page 9)

Returns the CType ID for PDF page objects.

Getting Page Information

[CGPDFPageGetBoxRect](#) (page 6)

Returns the rectangle that represents a type of box for a content region or page dimensions of a PDF page.

[CGPDFPageGetDictionary](#) (page 6)

Returns the dictionary of a PDF page.

[CGPDFPageGetDocument](#) (page 7)

Returns the document for a page.

[CGPDFPageGetDrawingTransform](#) (page 7)

Returns the affine transform that maps a box to a given rectangle on a PDF page.

[CGPDFPageGetPageNumber](#) (page 8)

Returns the page number of the specified PDF page.

[CGPDFPageGetRotationAngle](#) (page 9)

Returns the rotation angle of a PDF page.

Functions

CGPDFPageGetBoxRect

Returns the rectangle that represents a type of box for a content region or page dimensions of a PDF page.

```
CGRect CGPDFPageGetBoxRect (
    CGPDFPageRef page,
    CGPDFBox box
);
```

Parameters

page

A PDF page.

box

A `CGPDFBox` constant that specifies the type of box. For possible values, see “PDF Boxes” (page 11).

Return Value

Returns the rectangle associated with the type of box specified by the `box` parameter in the specified page.

Discussion

Returns the rectangle associated with the specified box in the specified page. This is the value of the corresponding entry (such as `/MediaBox`, `/ArtBox`, and so on) in the page’s dictionary.

Availability

Available in Mac OS X v10.3 and later.

Declared In

`CGPDFPage.h`

CGPDFPageGetDictionary

Returns the dictionary of a PDF page.

```
CGPDFDictionaryRef CGPDFPageGetDictionary (
    CGPDFPageRef page
);
```

Parameters

page

A PDF page.

Return Value

Returns the PDF dictionary for the specified page.

Availability

Available in Mac OS X v10.3 and later.

Declared In

CGPDFPage.h

CGPDFPageGetDocument

Returns the document for a page.

```
CGPDFDocumentRef CGPDFPageGetDocument (
    CGPDFPageRef page
);
```

Parameters

page

A PDF page.

Return Value

The PDF document with which the specified page is associated.

Availability

Available in Mac OS X v10.3 and later.

Declared In

CGPDFPage.h

CGPDFPageGetDrawingTransform

Returns the affine transform that maps a box to a given rectangle on a PDF page.

```
CGAffineTransform CGPDFPageGetDrawingTransform (
    CGPDFPageRef page,
    CGPDFBox box,
    CGRect rect,
    int rotate,
    bool preserveAspectRatio
);
```

Parameters

page

A PDF page.

box

A CGPDFBox constant that specifies the type of box. For possible values, see “PDF Boxes” (page 11).

rect

A Quartz rectangle.

rotate

An integer, that must be a multiple of 90, that specifies the angle by which the specified rectangle is rotated clockwise.

preserveAspectRatio

A Boolean value that specifies whether or not the aspect ratio should be preserved. A value of `true` specifies that the aspect ratio should be preserved.

Return Value

An affine transform that maps the box specified by the `box` parameter to the rectangle specified by the `rect` parameter.

Discussion

Quartz constructs the affine transform as follows:

- Computes the effective rectangle by intersecting the rectangle associated with `box` and the `/MediaBox` entry of the specified page.
- Rotates the effective rectangle according to the page's `/Rotate` entry.
- Centers the resulting rectangle on `rect`. If the value of the `rotate` parameter is non-zero, then the rectangle is rotated clockwise by `rotate` degrees. The value of `rotate` must be a multiple of 90.
- Scales the rectangle, if necessary, so that it coincides with the edges of `rect`. If the value of `preserveAspectRatio` parameter is `true`, then the final rectangle coincides with the edges of `rect` only in the more restrictive dimension.

Availability

Available in Mac OS X v10.3 and later.

Declared In

CGPDFPage.h

CGPDFPageGetPageNumber

Returns the page number of the specified PDF page.

```
size_t CGPDFPageGetPageNumber (
    CGPDFPageRef page
);
```

Parameters*page*

A PDF page.

Return Value

Returns the page number of the specified page.

Availability

Available in Mac OS X v10.3 and later.

Declared In

CGPDFPage.h

CGPDFPageGetRotationAngle

Returns the rotation angle of a PDF page.

```
int CGPDFPageGetRotationAngle (
    CGPDFPageRef page
);
```

Parameters

page

A PDF page.

Return Value

The rotation angle (in degrees) of the specified page. This is the value of the `/Rotate` entry in the page's dictionary.

Availability

Available in Mac OS X v10.3 and later.

Declared In

CGPDFPage.h

CGPDFPageGetTypeID

Returns the CType ID for PDF page objects.

```
CTypeID CGPDFPageGetTypeID (
    void
);
```

Return Value

Returns the Core Foundation type for a PDF page.

Availability

Available in Mac OS X v10.3 and later.

Declared In

CGPDFPage.h

CGPDFPageRelease

Decrements the retain count of a PDF page.

```
void CGPDFPageRelease (
    CGPDFPageRef page
);
```

Parameters

page

A PDF page.

Discussion

This function is equivalent to `CFRelease`, except that it does not cause an error if the `page` parameter is `NULL`.

Availability

Available in Mac OS X v10.3 and later.

Declared In

CGPDFPage.h

CGPDFPageRetain

Increments the retain count of a PDF page.

```
CGPDFPageRef CGPDFPageRetain (  
    CGPDFPageRef page  
);
```

Parameters

page

A PDF page.

Return Value

The same page you passed in as the *page* parameter.

Discussion

This function is equivalent to `CFRetain`, except that it does not cause an error if the *page* parameter is `NULL`.

Availability

Available in Mac OS X v10.3 and later.

Declared In

CGPDFPage.h

Data Types

CGPDFPageRef

An opaque type that represents a page in a PDF document.

```
typedef struct CGPDFPage *CGPDFPageRef;
```

Availability

Available in Mac OS X v10.3 and later.

Declared In

CGPDFPage.h

Constants

PDF Boxes

Box types for a PDF page.

```
enum CGPDFBox {
    kCGPDFMediaBox = 0,
    kCGPDFCropBox = 1,
    kCGPDFBleedBox = 2,
    kCGPDFTrimBox = 3,
    kCGPDFArtBox = 4
};
typedef enum CGPDFBox CGPDFBox;
```

Constants

`kCGPDFMediaBox`

The page media box—a rectangle, expressed in default user space units, that defines the boundaries of the physical medium on which the page is intended to be displayed or printed

Available in Mac OS X v10.3 and later.

Declared in `CGPDFPage.h`.

`kCGPDFCropBox`

The page crop box—a rectangle, expressed in default user space units, that defines the visible region of default user space. When the page is displayed or printed, its contents are to be clipped to this rectangle.

Available in Mac OS X v10.3 and later.

Declared in `CGPDFPage.h`.

`kCGPDFBleedBox`

The page bleed box—a rectangle, expressed in default user space units, that defines the region to which the contents of the page should be clipped when output in a production environment

Available in Mac OS X v10.3 and later.

Declared in `CGPDFPage.h`.

`kCGPDFTrimBox`

The page trim box—a rectangle, expressed in default user space units, that defines the intended dimensions of the finished page after trimming.

Available in Mac OS X v10.3 and later.

Declared in `CGPDFPage.h`.

`kCGPDFArtBox`

The page art box—a rectangle, expressed in default user space units, defining the extent of the page's meaningful content (including potential white space) as intended by the page's creator.

Available in Mac OS X v10.3 and later.

Declared in `CGPDFPage.h`.

Declared In

`CGPDFPage.h`

Document Revision History

This table describes the changes to *CGPDFPage Reference*.

Date	Notes
2008-04-08	Made minor corrections to the introduction.
2006-12-22	Made minor editorial changes.
2005-04-29	Revised introduction.
2004-02-26	First version of this document. An earlier version of this information appeared in <i>Quartz 2D Reference</i> .

REVISION HISTORY

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