
CIImageAccumulator Class Reference

[Cocoa](#) > [Graphics & Imaging](#)



2007-01-05



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CIImageAccumulator Class Reference

Inherits from	NSObject
Conforms to	NSObject (NSObject)
Framework	Library/Frameworks/QuartzCore.framework
Availability	Mac OS X v10.4 and later
Companion guide	Core Image Programming Guide
Declared in	CIImageAccumulator.h
Related sample code	CIAnnotation

Overview

The `CIImageAccumulator` class enables feedback-based image processing for such things as iterative painting operations or fluid dynamics simulations. You use `CIImageAccumulator` objects in conjunction with other Core Image classes, such as `CIFilter`, `CIImage`, `CIVector`, and `CIContext`, to take advantage of the built-in Core Image filters when processing images.

Tasks

Creating an Image Accumulator

- + `imageAccumulatorWithExtent:format:` (page 6)
Creates an image accumulator with the specified extent and pixel format.

Initializing an Image Accumulator

- `initWithExtent:format:` (page 8)
Initializes an image accumulator with the specified extent and pixel format.

Setting an Image

- [setImage:](#) (page 8)
Sets the contents of the image accumulator to the contents of the specified image object.
- [setImage:dirtyRect:](#) (page 9)
Updates an image accumulator with a subregion of an image object.

Obtaining Data From an Image Accumulator

- [extent](#) (page 7)
Returns the extent of the image associated with the image accumulator.
- [format](#) (page 7)
Returns the pixel format of the image accumulator.
- [image](#) (page 8)
Returns the current contents of the image accumulator.

Resetting an Accumulator

- [clear](#) (page 7)
Resets the accumulator, discarding any pending updates and the current content.

Class Methods

imageAccumulatorWithExtent:format:

Creates an image accumulator with the specified extent and pixel format.

```
+ (CImageAccumulator *)imageAccumulatorWithExtent:(CGRect)r format:(CIFormat)f
```

Parameters

r

A rectangle that specifies the x-value of the rectangle origin, the y-value of the rectangle origin, and the width and height.

f

The format and size of each pixel. You must supply a pixel format constant, such as `kCIFormatARGB8` (32 bit-per-pixel, fixed-point pixel format) or `kCIFormatRGBAf` (128 bit-per-pixel, floating-point pixel format). See *CImage Class Reference* for more information about pixel format constants.

Return Value

The image accumulator object.

Availability

Mac OS X v10.4 and later.

See Also

- [initWithExtent:format:](#) (page 8)

Declared In

CIImageAccumulator.h

Instance Methods

clear

Resets the accumulator, discarding any pending updates and the current content.

- (void)clear

Availability

Available in Mac OS X v10.5 and later.

Declared In

CIImageAccumulator.h

extent

Returns the extent of the image associated with the image accumulator.

- (CGRect)extent

Return Value

The rectangle that specifies the size of the image associated with the image accumulator. This rectangle is the size of the complete region of the working coordinate space, and is a fixed area. It specifies the x-value of the rectangle origin, the y-value of the rectangle origin, and the width and height.

Availability

Mac OS X v10.4 and later.

Declared In

CIImageAccumulator.h

format

Returns the pixel format of the image accumulator.

- (CIFormat)format

Return Value

The pixel format of the image accumulator.

Availability

Mac OS X v10.4 and later.

Declared In

CIImageAccumulator.h

image

Returns the current contents of the image accumulator.

```
- (CIImage *)image
```

Return Value

The image object that represents the current contents of the image accumulator.

Availability

Mac OS X v10.4 and later.

Declared In

CIImageAccumulator.h

initWithExtent:format:

Initializes an image accumulator with the specified extent and pixel format.

```
- (id)initWithExtent:(CGRect)r format:(CIFormat)f
```

Parameters

r

A rectangle that specifies the x-value of the rectangle origin, the y-value of the rectangle origin, and the width and height.

f

The format and size of each pixel. You must supply a pixel format constant, such as `askCIFormatARGB8` (32 bit-per-pixel, fixed-point pixel format) or `kCIFormatRGBAf` (128 bit-per-pixel, floating-point pixel format). See *CIImage Class Reference* for more information about pixel format constants.

Return Value

The initialized image accumulator object.

Availability

Mac OS X v10.4 and later.

See Also

+ [imageAccumulatorWithExtent:format:](#) (page 6)

Related Sample Code

CIAnnotation

Declared In

CIImageAccumulator.h

setImage:

Sets the contents of the image accumulator to the contents of the specified image object.

```
- (void)setImage:(CIImage *)im
```


Parameters

im

The image object whose contents you want to assign to the image accumulator.

Availability

Mac OS X v10.4 and later.

See Also

- [setImage:dirtyRect:](#) (page 9)

Declared In

CIImageAccumulator.h

setImage:dirtyRect:

Updates an image accumulator with a subregion of an image object.

```
- (void)setImage:(CIImage *)im dirtyRect:(CGRect)r
```

Parameters

im

The image object whose contents you want to assign to the image accumulator.

r

A rectangle that defines the subregion of the image object that's changed since the last time you updated the image accumulator. You must guarantee that the new contents differ from the old only within the region specified by the this argument.

Discussion

For additional details on using this method, see “Imaging Dynamical Systems” in *Core Image Programming Guide*.

Availability

Mac OS X v10.4 and later.

See Also

- [setImage:](#) (page 8)

Declared In

CIImageAccumulator.h

Document Revision History

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

Date	Notes
2007-01-05	Added information to setImage:dirtyRect:.
2006-05-23	First publication of this content as a separate document.
	Added parameter descriptions and updated Class Description.

REVISION HISTORY

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