CIFilterShape Class Reference

Cocoa > Graphics & Imaging

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CIFilterShape Class Reference

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

Overview

The `CIFilterShape` class describes the bounding shape of a filter and the domain of definition (DOD) of a filter operation. You use `CIFilterShape` objects in conjunction with Core Image classes, such as `CIFilter`, `CIKernel`, and `CISampler`, to create custom filters.

Tasks

Creating a Filter Shape

`+ shapeWithRect:` (page 6)
Creates a filter shape object and initializes it with a rectangle.

Initializing a Filter Shape

`- initWithRect:` (page 7)
Initializes a filter shape object with a rectangle.

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Modifying a Filter Shape

- `insetByX:Y:` (page 7)
  Modifies a filter shape object so that it is inset by the specified x and y values.
- `intersectWith:` (page 7)
  Creates a filter shape object that represents the intersection of the current filter shape and the specified filter shape object.
- `intersectWithRect:` (page 8)
  Creates a filter shape that represents the intersection of the current filter shape and a rectangle.
- `transformBy:interior:` (page 8)
  Creates a filter shape that results from applying a transform to the current filter shape.
- `unionWith:` (page 9)
  Creates a filter shape that results from the union of the current filter shape and another filter shape object.
- `unionWithRect:` (page 9)
  Creates a filter shape that results from the union of the current filter shape and a rectangle.

Class Methods

shapeWithRect:

Creates a filter shape object and initializes it with a rectangle.

```
+ (id)shapeWithRect:(CGRect)r
```

Parameters

r

A rectangle. The filter shape object will contain the smallest integral rectangle specified by this argument.

Availability
Mac OS X v10.4 and later.

See Also
`- initWithRect:` (page 7)

Related Sample Code
CIAnnotation

Declared In
`CIFilterShape.h`

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Instance Methods

initWithRect:

Initializes a filter shape object with a rectangle.

```
- (id)initWithRect:(CGRect)r
```

Parameters

r

A rectangle. Core Image uses the rectangle specified by integer parts of the values in the `CGRect` data structure.

Return Value
An initialized CIFilterShape object, or `nil` if the method fails.

Availability
Mac OS X v10.4 and later.

See Also
`+ shapeWithRect:` (page 6)

Declared In
`CIFilterShape.h`

insetByX:Y:

Modifies a filter shape object so that it is inset by the specified x and y values.

```
- (CIFilterShape *)insetByX:(int)dx Y:(int)dy
```

Parameters

dx

A value that specifies an inset in the x direction.

dy

A value that specifies an inset in the y direction.

Availability
Mac OS X v10.4 and later.

Declared In
`CIFilterShape.h`

intersectWith:

Creates a filter shape object that represents the intersection of the current filter shape and the specified filter shape object.

```
- (CIFilterShape *)intersectWith:(CIFilterShape *)s2
```


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Parameters

s2

A filter shape object.

Return Value

The filter shape object that results from the intersection.

Availability

Mac OS X v10.4 and later.

See Also

- intersectWithRect: (page 8)

Declared In

CIFilterShape.h

intersectWithRect:

Creates a filter shape that represents the intersection of the current filter shape and a rectangle.

```
- (CIFilterShape *)intersectWithRect:(CGRect)r
```

Parameters

rect

A rectangle. Core Image uses the rectangle specified by integer parts of the width and height.

Return Value

The filter shape that results from the intersection

Availability

Mac OS X v10.4 and later.

See Also

- intersectWith: (page 7)

Declared In

CIFilterShape.h

transformBy:interior:

Creates a filter shape that results from applying a transform to the current filter shape.

```
- (CIFilterShape *)transformBy:(CGAffineTransform)m interior:(BOOL)flag
```

Parameters

m

A transform.

flag

NO specifies that the new filter shape object can contain all the pixels in the transformed shape (and possibly some that are outside the transformed shape). YES specifies that the new filter shape object can contain a subset of the pixels in the transformed shape (but none of those outside the transformed shape).

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Return Value
The transformed filter shape object.

Availability
Mac OS X v10.4 and later.

Declared In
`CIFilterShape.h`

unionWith:

Creates a filter shape that results from the union of the current filter shape and another filter shape object.

```
- (CIFilterShape *)unionWith:(CIFilterShape *)s2
```

Parameters

s2

A filter shape object.

Return Value
The filter shape object that results from the union.

Availability
Mac OS X v10.4 and later.

See Also
`- unionWithRect:` (page 9)

Declared In
`CIFilterShape.h`

unionWithRect:

Creates a filter shape that results from the union of the current filter shape and a rectangle.

```
- (CIFilterShape *)unionWithRect:(CGRect)r
```

Parameters

rect

A rectangle. Core Image uses the rectangle specified by integer parts of the width and height.

Availability
Mac OS X v10.4 and later.

See Also
`- unionWith:` (page 9)

Related Sample Code
CIAnnotation

Declared In
`CIFilterShape.h`

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Document Revision History

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

Date	Notes
2006-12-07	Revised class description.
2006-05-23	First publication of this content as a separate document.
	Added parameter descriptions and updated Class Description.

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