
CABasicAnimation Class Reference

[Graphics & Imaging](#) > Quartz



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CABasicAnimation Class Reference

Inherits from	CAPropertyAnimation : CAAnimation : NSObject
Conforms to	NSCoding (CAAnimation) NSCopying (CAAnimation) CAAction (CAAnimation) CAMediaTiming (CAAnimation) NSObject (NSObject)
Framework	/System/Library/Frameworks/QuartzCore.framework
Availability	Available in Mac OS X v10.5 and later.
Declared in	CAAnimation.h
Companion guides	Core Animation Programming Guide Core Animation Cookbook

Overview

`CABasicAnimation` provides basic, single-keyframe animation capabilities for a layer property. You create an instance of `CABasicAnimation` using the inherited `animationWithKeyPath:` method, specifying the key path of the property to be animated in the render tree.

Setting Interpolation Values

The `fromValue` (page 6), `byValue` (page 6) and `toValue` (page 7) properties define the values being interpolated between. All are optional, and no more than two should be non-`nil`. The object type should match the type of the property being animated.

The interpolation values are used as follows:

- Both `fromValue` (page 6) and `toValue` (page 7) are non-`nil`. Interpolates between `fromValue` (page 6) and `toValue` (page 7).
- `fromValue` (page 6) and `byValue` (page 6) are non-`nil`. Interpolates between `fromValue` (page 6) and $(\text{fromValue (page 6)} + \text{byValue (page 6)})$.
- `byValue` (page 6) and `toValue` (page 7) are non-`nil`. Interpolates between $(\text{toValue (page 7)} - \text{byValue (page 6)})$ and `toValue` (page 7).
- `fromValue` (page 6) is non-`nil`. Interpolates between `fromValue` (page 6) and the current presentation value of the property.

- `toValue` (page 7) is non-`nil`. Interpolates between the current value of `keyPath` in the target layer's presentation layer and `toValue` (page 7).
- `byValue` (page 6) is non-`nil`. Interpolates between the current value of `keyPath` in the target layer's presentation layer and that value plus `byValue` (page 6).
- All properties are `nil`. Interpolates between the previous value of `keyPath` in the target layer's presentation layer and the current value of `keyPath` in the target layer's presentation layer.

Tasks

Interpolation Values

`fromValue` (page 6) *property*

Defines the value the receiver uses to start interpolation.

`toValue` (page 7) *property*

Defines the value the receiver uses to end interpolation.

`byValue` (page 6) *property*

Defines the value the receiver uses to perform relative interpolation.

Properties

For more about Objective-C properties, see “Properties” in *The Objective-C 2.0 Programming Language*.

byValue

Defines the value the receiver uses to perform relative interpolation.

```
@property(retain) id byValue
```

Discussion

See “[Setting Interpolation Values](#)” (page 5) for details on how `byValue` interacts with the other interpolation values.

Availability

Available in Mac OS X v10.5 and later.

Declared In

`CAAnimation.h`

fromValue

Defines the value the receiver uses to start interpolation.

@property(retain) id fromValue

Discussion

See [“Setting Interpolation Values”](#) (page 5) for details on how fromValue interacts with the other interpolation values.

Availability

Available in Mac OS X v10.5 and later.

Declared In

CAAnimation.h

toValue

Defines the value the receiver uses to end interpolation.

@property(retain) id toValue

Discussion

See [“Setting Interpolation Values”](#) (page 5) for details on how toValue interacts with the other interpolation values.

Availability

Available in Mac OS X v10.5 and later.

Declared In

CAAnimation.h

Document Revision History

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

Date	Notes
2007-07-24	New document that describes the class that provides basic interpolation of a layer property.

REVISION HISTORY

Document Revision History

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F

fromValue instance property [6](#)

T

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