NSAffineTransform Additions Reference

Cocoa > Graphics & Imaging

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NSAffineTransform Additions Reference

Inherits from	NSObject
Conforms to	NSCoding NSCopying NSObject (NSObject)
Framework	/System/Library/Frameworks/AppKit.framework
Companion guide	Cocoa Drawing Guide
Declared in	NSAffineTransform.h

Overview

The Application Kit extends Foundation's NSAffineTransform class by adding:

- Methods for applying affine transformations to the current graphics context.
- A method for applying an affine transformation to an `NSBezierPath`.

Note: In Mac OS X v10.3 and earlier the `NSAffineTransform` class was declared and implemented entirely in the Application Kit framework. As of Mac OS X v10.4 the `NSAffineTransform` class has been split across the Foundation Kit and Application Kit frameworks.

Tasks

Setting and Building the Current Transformation Matrix

- `set` (page 6)
  Sets the current transformation matrix to the receiver's transformation matrix.
- `concat` (page 6)
  Appends the receiver's matrix to the current transformation matrix stored in the current graphics context, replacing the current transformation matrix with the result.

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Transforming Bezier Paths

- `transformBezierPath:` (page 7)
  Creates and returns a new `NSBezierPath` object with each point in the given path transformed by the receiver.

Instance Methods

concat

Appends the receiver's matrix to the current transformation matrix stored in the current graphics context, replacing the current transformation matrix with the result.

```
- (void)concat
```

Discussion
Concatenation is performed by matrix multiplication—see "Manipulating Transform Values".

If this method is invoked from within an `NSView drawRect:` method, then the current transformation matrix is an accumulation of the screen, window, and any superview's transformation matrices. Invoking this method defines a new user coordinate system whose coordinates are mapped into the former coordinate system according to the receiver's transformation matrix. To undo the concatenation, you must invert the receiver's matrix and invoke this method again.

Availability
Available in Mac OS X v10.0 and later.

See Also
- `set` (page 6)
- `invert`

Related Sample Code
DockTile
PDF Annotation Editor
Sketch-112
SpeedometerView
WebKitPluginWithJavaScript

Declared In
`NSAffineTransform.h`

set

Sets the current transformation matrix to the receiver's transformation matrix.

```
- (void)set
```


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Discussion
The current transformation is stored in the current graphics context and is applied to subsequent drawing operations. You should use this method sparingly because it removes the existing transformation matrix, which is an accumulation of transformation matrices for the screen, window, and any superviews. Instead use the `concat` (page 6) method to add this transformation matrix to the current transformation matrix.

Availability
Available in Mac OS X v10.0 and later.

Declared In
`NSAffineTransform.h`

transformBezierPath:

Creates and returns a new `NSBezierPath` object with each point in the given path transformed by the receiver.

```
- (NSBezierPath *)transformBezierPath:(NSBezierPath *)aPath
```

Parameters

aPath

An object representing the bezier path to be used in the transformation.

Discussion
The original `NSBezierPath` object is not modified.

Availability
Available in Mac OS X v10.0 and later.

See Also
`- transformPoint:transformSize:`

Related Sample Code
Cropped Image
Polygons

Declared In
`NSAffineTransform.h`

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Document Revision History

This table describes the changes to *NSAffineTransform Additions Reference*.

Date	Notes
2007-02-28	Revised task headings.
2006-05-23	First publication of this content as a separate document.

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Document Revision History

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C

`concat` instance method 6

S

`set` instance method 6

T

`transformBezierPath:` instance method 7

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