
QTTrack Class Reference

[QuickTime](#) > [Cocoa](#)



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QTTrack Class Reference

Inherits from	NSObject
Conforms to	NSObject (NSObject)
Framework	/System/Library/Frameworks/QTKit.framework
Availability	Available in Mac OS X v10.4 and later.
Declared in	QTTrack.h
Related sample code	CIVideoDemoGL MoviePlayer - C# QTAudioExtractionPanel QTKitTimeCode QTMetadataEditor

Overview

The `QTTrack` class represents a QuickTime track (of type `Track`). `QTTrack` objects are associated with `QTMovie` objects and support methods for getting and setting the track properties. If necessary, you can retrieve the track identifier associated with a `QTTrack` object by calling its `quickTimeTrack:` method. Note that a movie can have multiple tracks. A track has a single media.

Tasks

Creating a QTTrack

- + [trackWithQuickTimeTrack:error:](#) (page 7)
Creates a `QTTrack` object with data from the QuickTime track *track*.

Initializing a QTTrack

Initializes a newly created `QTTrack` object with data from the QuickTime track *track*.

- [initWithQuickTimeTrack:error:](#) (page 9)
If a `QTTrack` object cannot be created, an `NSError` object is returned in the location pointed to by *errorPtr*.

Getting Track Properties

- [movie](#) (page 11)
Returns the movie that contains a QTTrack object.
- [media](#) (page 11)
Returns the media associated with a QTTrack object.
- [isEnabled](#) (page 10)
Returns YES if the QTTrack object is currently enabled, NO otherwise.
- [volume](#) (page 14)
Returns the volume of a QTTrack object.
- [attributeForKey:](#) (page 8)
Returns the current value of the track attribute *attributeKey*.
- [trackAttributes](#) (page 14)
Returns a dictionary containing the current values of all defined track attributes.

Setting Track Properties

- [setEnabled:](#) (page 13)
Sets the enabled state of a QTTrack to *enabled*.
- [setVolume:](#) (page 13)
Sets the volume of a QTTrack to *volume*.
- [setAttribute:forKey:](#) (page 12)
Set the track attribute *attributeKey* to the value specified by the *value* parameter.
- [setTrackAttributes:](#) (page 13)
Set the track attributes using the key-value pairs specified in the dictionary *attributes*.

Editing Track Properties

- [addImage:forDuration:withAttributes:](#) (page 7)
Adds an image for the specified duration to the receiver, using attributes specified in the attributes dictionary.
- [deleteSegment:](#) (page 8)
Deletes from a QTTrack the segment delimited by *segment*.
- [insertEmptySegmentAt:](#) (page 9)
Inserts into a QTTrack an empty segment delimited by the range *range*.
- [insertSegmentOfTrack:timeRange:atTime:](#) (page 10)
Inserts into a QTTrack at time *time* the selection in movie delimited by the time range *range*.
- [insertSegmentOfTrack:fromRange:scaledToRange:](#) (page 10)
Inserts the specified segment from the track into the receiver, scaled to the range *dstRange*.
- [scaleSegment:newDuration:](#) (page 12)
Scales the QTTrack segment delimited by the segment *segment* so that it will have the new duration *newDuration*.

Getting QTTrack Primitives

- [quickTimeTrack](#) (page 11)
Returns the QuickTime track associated with a QTTrack object.

Getting and Setting Aperture Mode Dimensions

- [apertureModeDimensionsForMode:](#) (page 8)
Returns an NSSize value that indicates the dimensions of the target track for the specified movie aperture mode.
- [setApertureModeDimensions:forMode:](#) (page 12)
Sets the dimensions of the target track for the specified movie aperture mode.
- [generateApertureModeDimensions](#) (page 9)
Adds information to a QTTrack needed to support aperture modes for tracks created with applications and/or versions of QuickTime that did not support aperture mode dimensions.
- [removeApertureModeDimensions](#) (page 11)
Removes aperture mode dimension information from the target track.

Class Methods

trackWithQuickTimeTrack:error:

Creates a QTTrack object with data from the QuickTime track *track*.

```
+ (id)trackWithQuickTimeTrack:(Track)track error:(NSError **)errorPtr
```

Discussion

If a QTTrack object cannot be created, an NSError object is returned in the location pointed to by *errorPtr*. Pass NIL if you do not want an NSError object returned.

Availability

Available in Mac OS X v10.3 and later.

Not available to 64-bit applications.

Declared In

QTTrack.h

Instance Methods

addImage:forDuration:withAttributes:

Adds an image for the specified duration to the receiver, using attributes specified in the attributes dictionary.

```
- (void)addImage:(NSImage *)image forDuration:(QTTime)duration  
withAttributes:(NSDictionary *)attributes
```

Discussion

Keys in the dictionary can be `QTAddImageCodecType` to select a codec type and `QTAddImageCodecQuality` to select a quality. Qualities are expected to be specified as `NSNumber`s, using the codec values like `codecNormalQuality`. (See `ImageCompression.h` for the complete list.)

Availability

Available in Mac OS X v10.3 and later.

Declared In

`QTTrack.h`

apertureModeDimensionsForMode:

Returns an `NSSize` value that indicates the dimensions of the target track for the specified movie aperture mode.

```
-(NSSize)apertureModeDimensionsForMode:(NSString *)mode
```

Discussion

For instance, passing a mode of `QTMovieApertureModeClean` would cause `apertureModeDimensionsForMode:` to return the track dimensions to use in clean aperture mode.

Availability

Available in Mac OS X v10.3 and later.

Declared In

`QTTrack.h`

attributeForKey:

Returns the current value of the track attribute *attributeKey*.

```
-(id)attributeForKey:(NSString *)attributeKey
```

Discussion

A list of supported track attributes and their acceptable values can be found in the [“Constants”](#) (page 14) section.

Availability

Available in Mac OS X v10.3 and later.

Related Sample Code

`QTKitPlayer`

`QTMetadataEditor`

`TrackFormatDemo`

Declared In

`QTTrack.h`

deleteSegment:

Deletes from a `QTTrack` the segment delimited by *segment*.

- (void)deleteSegment:(QTTimeRange) *segment*

Discussion

If the track is not editable, this method raises an exception.

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

generateApertureModeDimensions

Adds information to a QTTrack needed to support aperture modes for tracks created with applications and/or versions of QuickTime that did not support aperture mode dimensions.

- (void)generateApertureModeDimensions

Discussion

If the image descriptions in the track lack tags describing clean aperture and pixel aspect ratio information, the media data is scanned to see if the correct values can be divined and attached. Then the aperture mode dimensions are calculated and set. Afterwards, the `QTTrackHasApertureModeDimensionsAttribute` property will be set to YES for this track. Tracks that do not support aperture modes are not changed.

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

initWithQuickTimeTrack:error:

If a QTTrack object cannot be created, an NSError object is returned in the location pointed to by *errorPtr*.

- (id)initWithQuickTimeTrack:(Track) *track* error:(NSError **) *errorPtr*

Discussion

Pass NIL if you do not want an NSError object returned.

Availability

Available in Mac OS X v10.3 and later.

Not available to 64-bit applications.

Declared In

QTTrack.h

insertEmptySegmentAt:

Inserts into a QTTrack an empty segment delimited by the range *range*.

- (void)insertEmptySegmentAt:(QTTimeRange) *range*

Discussion

If the track is not editable, this method raises an exception.

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

insertSegmentOfTrack:fromRange:scaledToRange:

Inserts the specified segment from the track into the receiver, scaled to the range *dstRange*.

```
- (void)insertSegmentOfTrack:(QTTrack *)track fromRange:(QTTimeRange)srcRange
    scaledToRange:(QTTimeRange)dstRange
```

Discussion

This is essentially an Add Scaled operation on a track. If the track is not editable, this method raises an exception.

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

insertSegmentOfTrack:timeRange:atTime:

Inserts into a QTTrack at time *time* the selection in movie delimited by the time range *range*.

```
- (void)insertSegmentOfTrack:(QTTrack *)track timeRange:(QTTimeRange)range
    atTime:(QTTime)time
```

Discussion

If the track is not editable, this method raises an exception.

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

isEnabled

Returns YES if the QTTrack object is currently enabled, NO otherwise.

```
- (BOOL)isEnabled
```

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

media

Returns the media associated with a QTTrack object.

- (QTMedia *)media

Availability

Available in Mac OS X v10.3 and later.

Related Sample Code

QTKitTimeCode

QTMetadataEditor

Declared In

QTTrack.h

movie

Returns the movie that contains a QTTrack object.

- (QTMovie *)movie

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

quickTimeTrack

Returns the QuickTime track associated with a QTTrack object.

-(Track)quickTimeTrack

Availability

Available in Mac OS X v10.3 and later.

Not available to 64-bit applications.

Related Sample Code

QTAudioExtractionPanel

QTKitTimeCode

Declared In

QTTrack.h

removeApertureModeDimensions

Removes aperture mode dimension information from the target track.

- (void)removeApertureModeDimensions

Discussion

It does not attempt to modify sample descriptions, so it may not completely reverse the effects of `generateApertureModeDimensions`. It sets the `QTTrackHasApertureModeDimensionsAttribute` property to NO.

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

scaleSegment:newDuration:

Scales the QTTrack segment delimited by the segment *segment* so that it will have the new duration *newDuration*.

```
- (void)scaleSegment:(QTimeRange)segment newDuration:(QTime)newDuration
```

Discussion

If the track is not editable, this method raises an exception.

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

setApertureModeDimensions:forMode:

Sets the dimensions of the target track for the specified movie aperture mode.

```
- (void)setApertureModeDimensions:(NSSize)dimensions forMode:(NSString *)mode
```

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

setAttribute:forKey:

Set the track attribute *attributeKey* to the value specified by the *value* parameter.

```
-(void)setAttribute:(id)value forKey:(NSString *)attributeKey
```

Discussion

A list of supported track attributes and their acceptable values can be found in the [“Constants”](#) (page 14) section.

Availability

Available in Mac OS X v10.3 and later.

Declared In
QTTrack.h

setEnabled:

Sets the enabled state of a QTTrack to *enabled*.

```
-(void)setEnabled:(BOOL)enabled
```

Availability
Available in Mac OS X v10.3 and later.

Related Sample Code
QTKitTimeCode

Declared In
QTTrack.h

setTrackAttributes:

Set the track attributes using the key-value pairs specified in the dictionary *attributes*.

```
-(void)setTrackAttributes:(NSDictionary *)attributes
```

Discussion
A list of supported track attributes and their acceptable values can be found in the [“Constants”](#) (page 14) section.

Availability
Available in Mac OS X v10.3 and later.

Declared In
QTTrack.h

setVolume:

Sets the volume of a QTTrack to *volume*.

```
-(void)setVolume:(float)volume
```

Discussion
The valid range is 0.0 to 1.0.

Availability
Available in Mac OS X v10.3 and later.

Declared In
QTTrack.h

trackAttributes

Returns a dictionary containing the current values of all defined track attributes.

```
-(NSDictionary *)trackAttributes
```

Discussion

A list of supported track attributes and their acceptable values can be found in the “Constants” (page 14) section.

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

volume

Returns the volume of a QTTrack object.

```
-(float)volume
```

Discussion

The valid range is 0.0 to 1.0.

Availability

Available in Mac OS X v10.3 and later.

Declared In

QTTrack.h

Constants

The following constants specify the track attributes that you can get and set using the `trackAttributes` and `setTrackAttributes` methods. To get or set a single attribute, use `attributeForKey` or `setAttribute`.

Constant	Description
QTTrackBoundsAttribute	The bounding rectangle of a QTTrack object; the value for this key is of type <code>NSValue</code> , interpreted as an <code>NSRect</code> .
QTTrackCreationTimeAttribute	The creation time of a QTTrack object; the value for this key is of type <code>NSDate</code> .
QTTrackDimensionsAttribute	The dimensions of a QTTrack object; the value for this key is of type <code>NSValue</code> , interpreted as an <code>NSSize</code> .
QTTrackDisplayNameAttribute	The display name of a QTTrack object; the value for this key is of type <code>NSString</code> .

Constant	Description
QTTrackEnabledAttribute	The track enabled state of a QTTrack object; the value for this key is of type <code>NSNumber</code> , interpreted as a <code>BOOL</code> .
QTTrackFormatSummaryAttribute	An <code>NSString</code> that is a localized, human-readable string that summarizes a track's format; for example, "16-bit Integer (Big Endian), Stereo (L R), 48.000 kHz". This attribute is gettable but not settable. Mac OS X v10.5 and later.
QTTrackHasApertureModeDimensionsAttribute	The value to determine whether aperture mode dimensions have been set on a track, even if they are all identical to the classic dimensions (as is the case for content with square pixels and no edge-processing region).
QTTrackIDAttribute	The track ID of a QTTrack object; the value for this key is of type <code>NSNumber</code> , interpreted as a <code>long</code> .
QTTrackLayerAttribute	The track layer of a QTTrack object; the value for this key is of type <code>NSNumber</code> , interpreted as a <code>short</code> .
QTTrackMediaTypeAttribute	The media type of a QTTrack object; the value for this key is of type <code>NSString</code> .
QTTrackModificationTimeAttribute	The modification time of a QTTrack object; the value for this key is of type <code>NSDate</code> .
QTTrackRangeAttribute	The range of time this track occupies; the value for this key is of type <code>NSValue</code> , interpreted as a <code>QTTimeRange</code> .
QTTrackTimeScaleAttribute	The track time scale; the value for this key is of type <code>NSNumber</code> , interpreted as a <code>long</code> .
QTTrackUsageInMovieAttribute	The movie usage setting; the value for this key is of type <code>NSNumber</code> , interpreted as a <code>BOOL</code> .
QTTrackUsageInPosterAttribute	The poster usage setting; the value for this key is of type <code>NSNumber</code> , interpreted as a <code>BOOL</code> .
QTTrackUsageInPreviewAttribute	The preview usage setting; the value for this key is of type <code>NSNumber</code> , interpreted as a <code>BOOL</code> .
QTTrackVolumeAttribute	The volume of a QTTrack object; the value for this key is of type <code>NSNumber</code> , interpreted as a <code>float</code> .

Document Revision History

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

Date	Notes
2009-03-04	Fixed constants listings; minor edits.
2006-07-11	Updated with information about new methods and attributes available in QuickTime 7.1 and Mac OS X v10.5.

REVISION HISTORY

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