QTFormatDescription Class Reference

QuickTime > Cocoa

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Apple Inc.
1 Infinite Loop
Cupertino, CA 95014
408-996-1010

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QTFormatDescription Class Reference

Inherits from	NSObject
Conforms to	NSObject (NSObject)
Framework	/System/Library/Frameworks/QTKit.framework
Availability	Available in QuickTime 7.2.1 and later.
Declared in	QTFormatDescription.h

Overview

`QTFormatDescription` objects are used to describe the media format of media samples and of media sources, such as devices and capture connections. Format descriptions include basic information about the media, such as media type and format type (or codec type), as well as extended information specific to each media type. The extended information can be accessed via the object's `attributeForKey:` and `formatDescriptionAttributes` methods, using the keys described in the "Core Audio and Video Types" (page 8) section. In addition to these explicit methods, applications can use key-value coding to get extended attributes. For an object that supports a given attribute, `valueForKey:` will be functionally identical to `attributeForKey:`. Applications wishing to observe changes for a given attribute can add a key-value observer where the key path is the attribute key.

Tasks

Formatting Different Types of Media

- `attributeForKey:` (page 6)
  Returns the current value of the format description attribute for the given key.
- `formatDescriptionAttributes` (page 6)
  Returns a dictionary of all attributes set for the receiver.
- `formatType` (page 6)
  Returns the format type of the described media, a four character code representing the format or codec type.
- `isEqualToFormatDescription:` (page 7)
  Returns whether the receiver describes the same format as the given format description.
- `localizedFormatSummary` (page 7)
  Returns a localized summary of the media format.

Instance Methods

attributeForKey:

Returns the current value of the format description attribute for the given key.

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

Parameters

key
  The key for the desired format description attribute.

Discussion
Use this method to get attributes of a format description. The keys that can be used with this method are described in the Constants section. Applications using key-value coding can also get an attribute for a given key by passing that key to the NSObject `valueForKey:` method.

Availability
Mac OS X v10.5 and later.

Declared In
`QTFormatDescription.h`

formatDescriptionAttributes

Returns a dictionary of all attributes set for the receiver.

```
- (NSDictionary *)formatDescriptionAttributes
```

Discussion
Applications can use this method to determine what attributes a specific format description supports.

Availability
Available in Mac OS X v10.5 and later.

Declared In
`QTFormatDescription.h`

formatType

Returns the format type of the described media, a four character code representing the format or codec type.

```
- (UInt32)formatType
```

Parameters

formatType

The format type for the described media.

Discussion

This method returns the specific format, or codec, used to represent the media. Video format types are defined in `QuickTime/ImageCompression.h` and audio format types are defined in `CoreAudio/CoreAudioTypes.h`.

Availability

Mac OS X v10.5 and later.

Declared In

`QTFormatDescription.h`

isEqualToFormatDescription:

Returns whether the receiver describes the same format as the given format description.

```
- (BOOL)isEqualToFormatDescription:(QTFormatDescription *)formatDescription
```

Parameters

formatDescription

The format description for the `QTFormatDescription` object.

Availability

Mac OS X v10.5 and later.

Declared In

`QTFormatDescription.h`

localizedFormatSummary

Returns a localized summary of the media format.

```
- (NSString *)localizedFormatSummary
```

Return Value

A localized string summarizing the media format.

Availability

Mac OS X v10.5 and later.

Related Sample Code

QTRecorder

Declared In

`QTFormatDescription.h`

mediaType

Returns the media type of the described media.

```
- (NSString *)mediaType
```

Parameters

mediaType

The QuickTime media type of the described media object.

Return Value

A QuickTime media type, such as `QTMediaTypeVideo`, `QTMediaTypeSound`, or `QTMediaTypeMuxed`.

Discussion

Media types are defined in `QTMedia.h`.

Availability

Mac OS X v10.5 and later.

Declared In

`QTFormatDescription.h`

quickTimeSampleDescription

Returns the media's QuickTime SampleDescription.

```
- (NSData *)quickTimeSampleDescription
```

Return Value

An `NSData` containing the `SampleDescription` for the media.

Discussion

This method returns a QuickTime `SampleDescription` structure, allowing applications to get detailed information on the media format. The `SampleDescription` is returned in the native endian byte order for the system.

Availability

Mac OS X v10.5 and later.

Not available to 64-bit applications.

Declared In

`QTFormatDescription.h`

Constants

Core Audio and Video Types

Constants for different core audio and video types.

```
NSString * const QTFormatDescriptionAudioChannelLayoutAttribute;
NSString * const QTFormatDescriptionAudioMagicCookieAttribute;
NSString * const QTFormatDescriptionAudioStreamBasicDescriptionAttribute;
NSString * const QTFormatDescriptionVideoCleanApertureDisplaySizeAttribute;
NSString * const QTFormatDescriptionVideoEncodedPixelsSizeAttribute;
NSString * const QTFormatDescriptionVideoProductionApertureDisplaySizeAttribute;
```

Constants

`QTFormatDescriptionAudioChannelLayoutAttribute`

Returns an `NSData` interpreted as a Core Audio `AudioChannelLayout` for audio media.

This string value can be used in key paths for key-value coding, key-value observing, and bindings.

Declared in `QTFormatDescription.h`.

QuickTime 7.2 and later.

`QTFormatDescriptionAudioMagicCookieAttribute`

Returns an `NSData` interpreted as a Core Audio magic cookie for audio media.

This string value can be used in key paths for key-value coding, key-value observing, and bindings.

Declared in `QTFormatDescription.h`.

QuickTime 7.2 and later.

`QTFormatDescriptionAudioStreamBasicDescriptionAttribute`

Returns an `NSValue` interpreted as a Core Audio `AudioStreamBasicDescription` for audio media.

This string value can be used in key paths for key-value coding, key-value observing, and bindings.

Declared in `QTFormatDescription.h`.

QuickTime 7.2 and later.

`QTFormatDescriptionVideoCleanApertureDisplaySizeAttribute`

Returns an `NSValue` interpreted as an `NSSize` that indicates the size of video media displayed through its clean aperture and scaled by its pixel aspect ratio.

This string value can be used in key paths for key-value coding, key-value observing, and bindings.

Declared in `QTFormatDescription.h`.

QuickTime 7.2 and later.

`QTFormatDescriptionVideoEncodedPixelsSizeAttribute`

Returns an `NSValue` interpreted as an `NSSize` that indicates the encoded size of video media.

This string value can be used in key paths for key-value coding, key-value observing, and bindings.

Declared in `QTFormatDescription.h`.

QuickTime 7.2 and later.

`QTFormatDescriptionVideoProductionApertureDisplaySizeAttribute`

Returns an `NSValue` interpreted as an `NSSize` that indicates the size of video media scaled by its pixel aspect ratio but not displayed through its clean aperture.

This string value can be used in key paths for key-value coding, key-value observing, and bindings.

Declared in `QTFormatDescription.h`.

QuickTime 7.2 and later.

Document Revision History

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

Date	Notes
2009-04-08	Fixed constant listings, parameter descriptions. Updated availability information. Minor fixes and clarification of attributes.
2007-07-23	New document that describes the Objective-C API for supporting and working with QuickTime Capture.

Document Revision History

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