QTKit Functions Reference

QuickTime > Cocoa

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QTKit Functions Reference

Framework:	/System/Library/Frameworks/QTKit.framework
Declared in	QTTime.h QTTimeRange.h QTUtilities.h

Overview

This chapter describes the functions that are available in the QuickTime Kit framework.

Functions by Task

Creating QTTime Structures

The following functions are used to create QTTime structures.

`QTMakeTime` (page 8)
Creates a `QTTime` structure.

`QTMakeTimeScaled` (page 9)
Returns a `QTTime` structure.

`QTTimeFromString` (page 13)
Returns a `QTTime` structure.

`QTMakeTimeWithTimeRecord` (page 10)
Creates a `QTTime` structure.

`QTMakeTimeWithTimeInterval` (page 10)
Creates a `QTTime` structure.

Getting and Setting Times

The following functions are used to get and set times.

`QTGetTimeRecord` (page 7)
Returns the value of a `QTTime` structure expressed as a `TimeRecord`.

`QTGetTimeInterval` (page 7)
Returns the value of a `QTTime` structure expressed as an `NSTimeInterval`.

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Comparing QTTime Structures

The following function is used to compare `QTTime` structures.

`QTTimeCompare` (page 12)
Returns a value of type `NSComparisonResult`.

`QTSMPTETimeCompare` (page 11)
Compares two `SMPTETime` structures.

`QTStringFromSMPTETime` (page 11)
Returns a human-readable string from the `SMPTETime`. The returned string is of the form hh:mm:ss.ff.

Adding and Subtracting Times

The following functions are used to add and subtract times:

`QTTimeIncrement` (page 13)
Adds two `QTTime` structures.

`QTTimeDecrement` (page 12)
Subtracks one `QTTime` from another.

Getting a Time Description

The following function is used to get a time description:

`QTStringFromTime` (page 11)
Returns a description of a `QTTime` structure.

Time Range Functions

`QTEqualTimeRanges` (page 7)
Returns `YES` if the specified time ranges are identical.

`QTIntersectionTimeRange` (page 8)
Returns a `QTTimeRange` structure that represents the intersection of the two ranges.

`QTMakeTimeRange` (page 9)
Returns a `QTTimeRange` structure initialized using the QTTime structures `time` and `duration`.

`QTStringFromTimeRange` (page 12)
Returns a description of a `QTTimeRange` structure.

`QTTimeInTimeRange` (page 14)
Returns `YES` if the specified time time lies in the time range range.

`QTTimeRangeEnd` (page 14)
Returns a `QTTime` structure representing the end of the specified time range.

`QTTimeRangeFromString` (page 14)
Returns a `QTTimeRange` structure

`QTUnionTimeRange` (page 15)
Returns a `QTTimeRange` structure.

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QuickTime Helper Functions

`QTStringForOSType` (page 11)
Returns an NSString representing the specified four-character code type.

`QTOSTypeForString` (page 10)
Returns a four-character code representing the specified `NSString`.

Functions

QTEqualTimeRanges

Returns `YES` if the specified time ranges are identical.

```
BOOL QTEqualTimeRanges (
   QTTimeRange range,
   QTTimeRange range2
);
```

Discussion
This function returns `YES` if the specified time ranges are identical.

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

Declared In
`QTTimeRange.h`

QTGetTimeInterval

Returns the value of a `QTTime` structure expressed as an `NSTimeInterval`.

```
BOOL QTGetTimeInterval (
   QTTime time,
   NSTimeInterval *timeInterval
);
```

Discussion
This function returns, in the location to by *`timeInterval`*, the value of a `QTTime` structure expressed as a `NSTimeInterval`. Returns `YES` if the method succeeded.

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

Declared In
`QTTime.h`

QTGetTimeRecord

Returns the value of a `QTTime` structure expressed as a `TimeRecord`.

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```
BOOL QTGetTimeRecord (
   QTTime time,
   TimeRecord *timeRecord
);
```

Discussion
This function returns, in the location pointed to by *timeRecord*, the value of a `QTTime` structure expressed as a `TimeRecord`. Returns `YES` if the method succeeded.

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

Related Sample Code
QTAudioExtractionPanel

Declared In
`QTTime.h`

QTIntersectionTimeRange

Returns a `QTTimeRange` structure that represents the intersection of the two ranges.

```
QTTimeRange QTIntersectionTimeRange (
   QTTimeRange range1,
   QTTimeRange range2
);
```

Discussion
This function returns a `QTTimeRange` structure that represents the intersection of the two ranges. The intersection of two ranges is the largest range that includes all times that are in both ranges.

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

Declared In
`QTTimeRange.h`

QTMakeTime

Creates a `QTTime` structure.

```
QTTime QTMakeTime (
   long long timeValue,
   long timeScale
);
```

Discussion
This function creates a `QTTime` structure initialized using the scalar value `timeValue` and the time scale *scale*.

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

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Related Sample Code
QTAudioExtractionPanel
QTKitCommandLine
QTKitCreateMovie
QTKitMovieShuffler

Declared In
`QTTime.h`

QTMakeTimeRange

Returns a `QTTimeRange` structure initialized using the QTTime structures `time` and `duration`.

```
QTTimeRange QTMakeTimeRange (
   QTTime time,
   QTTime duration
);
```

Discussion
This function returns a `QTTimeRange` structure initialized using the `QTTime` structures time and duration. Those structures may have different time scales. In all cases, the time scale used in the new `QTTimeRange` structure is that of time.

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

Related Sample Code
QTKitCommandLine
QTKitMovieShuffler

Declared In
`QTTimeRange.h`

QTMakeTimeScaled

Returns a `QTTime` structure.

```
QTTime QTMakeTimeScaled (
   QTTime time,
   long timeScale
);
```

Discussion
This function returns a `QTTime` structure whose time is set to the time of a `QTTime` structure interpreted using the time scale *`scale`*.

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

Declared In
`QTTime.h`

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QTMakeTimeWithTimeInterval

Creates a `QTTime` structure.

```
QTKIT_EXTERN QTTime QTMakeTimeWithTimeInterval (
   NSTimeInterval timeInterval
);
```

Discussion
Creates a QTTime structure initialized using the NSTimeInterval value *`timeInterval`*.

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

Declared In
`QTTime.h`

QTMakeTimeWithTimeRecord

Creates a `QTTime` structure.

```
QTKIT_EXTERN QTTime QTMakeTimeWithTimeRecord (
   TimeRecord timeRecord
);
```

Discussion
This function creates a `QTTime` structure initialized using the values in the time record *`timeRecord`*.

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

Related Sample Code
QTAudioExtractionPanel

Declared In
`QTTime.h`

QTOSTypeForString

Returns a four-character code representing the specified `NSString`.

```
OSType QTOSTypeForString (
   NSString *string
);
```

Discussion
This function returns a four-character code representing the specified `NSString`.

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

Declared In
`QTUtilities.h`

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QTSMPTETimeCompare

Compares two `SMPTETime` structures.

```
NSComparisonResult QTSMPTETimeCompare(SMPTETime time, SMPTETIme otherTime)
```

QTStringForOSType

Returns an NSString representing the specified four-character code type.

```
NSString * QTStringForOSType (
   OSType type
);
```

Discussion
This function returns an `NSString` representing the specified four-character code type.

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

Declared In
`QTUtilities.h`

QTStringFromSMPTETime

Returns a human-readable string from the `SMPTETime`. The returned string is of the form hh:mm:ss.ff.

```
NSString* QTStringFromSMPTETime(SMPTETime time)
```

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

Declared In
`QTTime.h`

QTStringFromTime

Returns a description of a `QTTime` structure.

```
NSString * QTStringFromTime (
   QTTime time
);
```

Discussion
This function returns a description of a `QTTime` structure. The string is in the form `"sign:days:hours:minutes:seconds:timevalue:timescale"`, where sign is empty or "-". Note that this is not for user input, but for archiving and debugging purposes.

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

Related Sample Code
CIVideoDemoGL

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QTAudioExtractionPanel
QTKitPlayer
QTRecorder

Declared In
`QTTime.h`

QTStringFromTimeRange

Returns a description of a `QTTimeRange` structure.

```
NSString * QTStringFromTimeRange (
   QTTimeRange range
);
```

Discussion
This function returns a description of a `QTTimeRange` structure. The string is in the form `"hours:minutes:seconds.frames:: hours:minutes:seconds.frames"`. Note that this is for archiving and debugging purposes, not for user display.

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

Declared In
`QTTimeRange.h`

QTTimeCompare

Returns a value of type `NSComparisonResult`.

```
NSComparisonResult QTTimeCompare (
   QTTime time,
   QTTime otherTime
);
```

Discussion
This function returns a value of type `NSComparisonResult` that indicates the result of comparing a `QTTime` structure with the specified `QTTime` structure *`otherTime`*.

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

Related Sample Code
QTAudioExtractionPanel
QTKitMovieShuffler

Declared In
`QTTime.h`

QTTimeDecrement

Subtracts one `QTTime` from another.

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```
QTTime QTTimeDecrement (
   QTTime time,
   QTTime decrement
);
```

Discussion
This function returns a `QTTime` structure whose time is set to the time of a `QTTime` structure minus that of the structure *`decrement`*.

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

Related Sample Code
QTAudioExtractionPanel

Declared In
`QTTime.h`

QTTimeFromString

Returns a `QTTime` structure.

```
QTKIT_EXTERN QTTime QTTimeFromString (
   NSString *string
);
```

Discussion
This function returns a `QTTime` structure whose time is set to the time expressed by the string; the string is assumed to be in the form "`days:hours:minutes:seconds:frames/timescale`".

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

Related Sample Code
QTAudioExtractionPanel

Declared In
`QTTime.h`

QTTimeIncrement

Adds two `QTTime` structures.

```
QTTime QTTimeIncrement (
   QTTime time,
   QTTime increment
);
```

Discussion
This function returns a `QTTime` structure whose time is set to the time of a `QTTime` structure plus that of the structure *`increment`*.

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

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Declared In
`QTTime.h`

QTTimeInTimeRange

Returns `YES` if the specified time time lies in the time range range.

```
BOOL QTTimeInTimeRange (
   QTTime time,
   QTTimeRange range
);
```

Discussion
This function returns `YES` if the specified time time lies in the time range `range`.

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

Declared In
`QTTimeRange.h`

QTTimeRangeEnd

Returns a `QTTime` structure representing the end of the specified time range.

```
QTTime QTTimeRangeEnd (
   QTTimeRange range
);
```

Discussion
This function returns a `QTTime` structure representing the end of the specified time range.

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

Declared In
`QTTimeRange.h`

QTTimeRangeFromString

Returns a `QTTimeRange` structure

```
QTTimeRange QTTimeRangeFromString (
   NSString *string
);
```

Discussion
This function returns a `QTTimeRange` structure whose range is set to the range expressed by string; the string is assumed to be in the form `"days:hours:minutes:seconds.frames/timescale~days:hours:minutes:seconds.frames/timescale"`.

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

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Declared In
`QTTimeRange.h`

QTUnionTimeRange

Returns a `QTTimeRange` structure.

```
QTTimeRange QTUnionTimeRange (
   QTTimeRange range1,
   QTTimeRange range2
);
```

Discussion
This function returns a `QTTimeRange` structure that represents the union of the two ranges. The union of two ranges is the smallest range that includes all times that are in either range.

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

Declared In
`QTTimeRange.h`

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Document Revision History

This table describes the changes to *QTKit Functions Reference*.

Date	Notes
2009-05-06	Fixed and updated function listings. Minor fixes.
2006-05-23	First publication of this content as a separate document.

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