Using QuickTime in Director

About QuickTime

QuickTime was developed by Apple Computer and has become a leading standard for creation and publishing of time-based digital media (video, audio, MIDI, etc.). Available for Mac OS, Windows 95 and Windows NT, QuickTime is an extension that allows applications to use QuickTime-formatted files. With optional extensions, QuickTime allows for playing of MIDI music and "Virtual Reality" panorama s and 3D objects (QuickTime VR). You can use a variety of compression formats for QuickTime video, depending on the source material and delivery method. A number of applications exist to create, edit, enhance and compress QuickTime files, such as Adobe Premiere, Adobe AfterEffects, Media 100, Final Cut, and Media Cleaner Pro.

The compression phase of QuickTime asset preparation is very compute-intensive, and can take many hours for a segment of significant length, even on very fast computers. But the compression ratios are impressive, especially with the latest compressor, or "codec" (coder-decoder), called Sorenson.

There are two basic versions of QuickTime in use today: QuickTime 3 and QuickTime 4. QuickTime 5, scheduled for release early in 2001, promises some exciting new features, especially for streaming Web playback, a new MIDI synthesizer, and cubic VR (panoramic) movies.

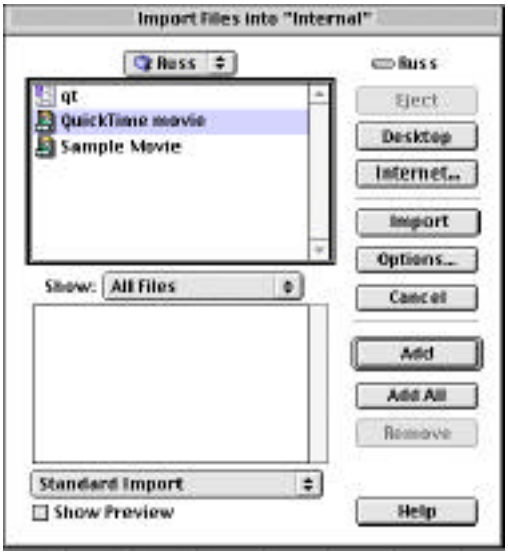
You can download the latest version from Apple's web site at **http://www.apple.com/quicktime/**. You must obtain a free license from Apple to distribute it with published products. if you pay the nominal $30 registration fee to Apple, they will provide with a registration number that converts the free QuickTime extension set into "QuickTime Pro", which opens up numerous extra features.

Regardless of which QuickTime version or import method you're using, QuickTime files are always linked assets and are never stored internally in the Director file.

Importing QuickTime

- To import QuickTime files into Director select "Import..." from the "File" Menu

- You will then be shown the Director Import Dialog, where you may locate for your QuickTime file(s). With the file selected, click the "Add" button to add the file to the import list. Press "Import" when you are ready to import the files that you've added to the list.



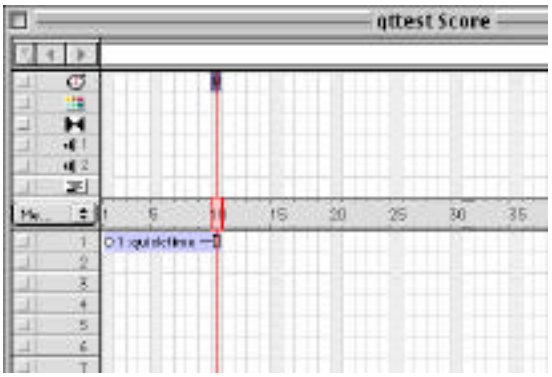
- You movie will now appear in the Cast Window. Note that the cast member name will be the name of the external file, but without the ".mov" extension.

- The Cast window will display your movie with the QuickTime icon.

Using QuickTime

After your movie is imported into the Cast, you can drag its icon into the Score like any other cast member. Once in the Score, the QuickTime file will play whenever Director's playback head is in a frame that contains the QuickTime cast member.

- In most cases, you will want to pause at some point in the Score until the QuickTime finishes playing.
- Double-click in the Tempo channel (the channel identified by a watch icon) in the frame you want Director to pause while your QuickTime movie plays. This will open the "Frame Properties: Tempo" window.



- In the "Frame Properties:Tempo" window, select the fourth radio button, "Wait for Cue Point," then select the drop-down arrow next to "Channel" . Here, choose the Score channel (sprite) that contains your QuickTime cast member. Click the "OK" button when done.

- This Tempo channel setting tells Director to wait in the specified frame for your QuickTime to finish before continuing playback of the Director movie.

Lingo and QuickTime

The two most common Lingo properties used for controlling QuickTime Video are:

```
the movieRate of sprite whichSprite
```

and

```
the movieTime of sprite whichSprite
```

the movieRate of sprite *whichSprite*

This sprite property controls the rate at which a digital video cast member in a specific channel plays. A value of 1 means normal forward play, -1 means reverse, and 0 means stop. Higher and lower values are possible. For example, a value of 0.5 causes the digital video to play at half normal speed, while a value of 2 causes the video to play at double speed. Use caution here, because frames may be dropped if the movieRate of sprite exceeds 1. The severity of dropping frames depends on factors such as the performance of the computer the movie is playing on, whether the digital video sprite is stretched on the Stage, and so on.

This property can be tested and set.

Example 1: This statement sets the rate for a digital video in sprite channel 9 to normal playback speed -

```
set the movieRate of sprite 9 to 1
```

Example 2: This statement causes the digital video in sprite channel 9 to play in reverse -

```
set the movieRate of sprite 9 to -1
```

the movieTime of sprite *whichSprite*

This sprite property determines the current time of a digital video movie playing in the channel specified by *whichSprite*. The value of the movieTime is measured in ticks (60 ticks per second). The movieTime of sprite property can be tested and set.

Example 1: This statement displays the current time of the QuickTime movie in channel 9 in the Message window -

```
put the movieTime of sprite 9
```

Example 2: This statement sets the current time of the QuickTime movie in channel 9 to the value contained in the variable **poster** -

```
set the movieTime of sprite 9 to poster
```

As an advanced exercise, try writing Lingo handlers “movietimeToSMPTE” and “SMPTEToMovietime”, which convert Director’s movietime in ticks to the industry standard SMPTE timecode, and back. SMPTE (Society of Motion Picture and Television Engineers) timecode represents time in a format HH:MM:SS.FF, where “HH” is hours, “MM” is minutes, “SS” is seconds, and “FF” is frames. Note that “FF” may go up to 24 for film, 30 for video, because of the different base frame rates used in the two media.

Here are some notes on streaming QuickTime in Director 7.0.2 or later:

QuickTime cast members may now be streamed into Director. Set the Lingo property "the streaming of member" to TRUE to enable this feature; the cast member's Direct to Stage property must also be TRUE. The streaming of member is TRUE by default in Director 7.0.2, but FALSE by default for any Director 7.0 and earlier QuickTime cast members.

QuickTime 4 must be installed to enable streaming.

If a streaming QuickTime file contains cue points, then you must set the text track to be preloaded (use a QuickTime editor such as MoviePlayerPro to do this). If you do not preload the text track, Director will disable the cue points in the QuickTime file so it can stream without downloading the entire file. A warning dialog appears to advise you of this behavior. You will need to reload the file after editing the QuickTime movie to preload the cuepoint track.

It is also possible to import an **rtsp** stream as a QuickTime cast member. Make sure the **rtsp://** URL ends with a .mov file so that Director knows it is a QuickTime stream.