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QuickTime 2.5: Features & Enhancements (9/96)

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TOPIC -----

This article describes new features and enhancements for Apple Quicktime 2.5.

DISCUSSION -----

On Monday April 15, the QuickTime team announced enhancements to QuickTime for video professionals at the National Association of Broadcasters (NAB) conference in Las Vegas. Although announced on 15 April 1996, these updates are still under development and will not be available for distribution until mid May 1996 (WWDC timeframe). QuickTime 2.5 replaces QuickTime 2.1 for Macintosh and provides several performance enhancements as well as bug fixes that primarily impact developers and content authors, including:

QUICKTIME 2.5

QuickTime v2.5 is a reference release for Macintosh and is fully compatible with today's QuickTime content. It provides several new features and enhancements:

- Improved performance, better quality movie playback
- Improved MIDI/music support
- Multi-processing and PCI card support
- Closed-Caption text capture support
- Improvements to overall reliability through numerous bug fixes in the core QuickTime extensions
- Better performance movie playback

QuickTime's primary data handler has been updated to allow for higher

performance playback. The data handler has been modified to maximize throughput resulting in noticeable performance improvements.

- Native Component Manager dispatching mechanism

A new Component Manager provides a more efficient, fully Power PC native path for QuickTime video, sound, music and as well as other Component Manager clients such as ColorSync, QuickDraw GX, Sound Manager, AppleScript, Macintosh Easy Open and the Display Manager. These enhancements provide better movie playback performance as well as overall better system performance.

- Asynchronous JPEG and Raw codecs on Power Mac

The JPEG and Raw codecs are now asynchronous allowing QuickTime to continue processing data while the codecs simultaneously compress or decompress video.

- Public API and format for software synthesizers and musical instruments (MIDI)

QuickTime 2.5 has music capabilities that make it possible for developers to bring a unique music experience to multimedia titles while taking advantage of the MIDI standard. QuickTime 2.5 provides developers the ability to create their own distinctive, custom software synthesizers and libraries of musical instruments and sounds. QuickTime 2.5 introduces a public API and format for adding these synthesizers and instruments using the QuickTime Music Architecture (QTMA). These sounds may be embedded in a QuickTime movie, passed via a call to QuickTime, or dropped into the System Folder.

Third parties such as InVision, Roland, Yamaha, and others can now sell and/or license instruments and instrument libraries to developers and musicians. With the introduction of this enhancement to the QTMA, these instruments and instrument libraries are to developers and musicians, what fonts are to desktop publishers and graphic artists.

- Support for QuickDraw 3D / Tweening media handler

QuickTime 2.5 includes support for Apple's QuickDraw 3D technology. With this addition, 3DMF objects can be put into a 3D track and synchronized with other media types, such as video and music. Going forward QuickTime will support controls so users will be able to interact with these 3D objects by simply "grabbing" the object.

- PCI acceleration support / Multi-processor support

QuickTime 2.5 includes new API hooks that enhance the ability of hardware vendors to improve QuickTime performance through hardware acceleration. Examples include new PCI video accelerator cards from ATI and Diamond Multimedia for improved playback performance - regardless of the size the movie was originally captured and digitized at. Cards such as the Daystar Genesis multi-processor card will greatly increase creation and authoring performance.

- Support for Closed-Caption in the capture APIs

A new sequence grabber channel is now available. Along with video, sound, and music channels, closed-captioned text can be captured and embedded into a QuickTime movie's text track. This allows for fast searching and cataloging of stored media. Just as the video grabber digitizer components have been written for specific hardware, the text grabber calls components that supply text. QuickTime 2.5 uses a component that works with an Apple TV Tuner card. It converts the closed-captioned data into text data for a text track.

- Enhanced text import/export descriptors

Editing text in movies is now easier. The import/export text components now work with text descriptors and timeStamps. Text descriptors are just that, descriptions of the text that follows. TimeStamps make it simple to do repeated export-edit-import tasks. The timeStamp keeps track of the starting time and duration of the sample, thus keeping the samples in sync with other media in the movie.

- Better support for low data rate audio capture

The sequence grabber sound channel has been enhanced to allow sound to be captured at any sample rate. This feature is important to network video conferencing solutions such as Apple's QuickTime Conferencing technology. The user interface in the sequence grabber sound sample panel has been updated for this feature. If 8k is not present in the sound input driver's native rates, 8k is added to the rate pop-up.

- Sprite enhancements

Both the Sprite Toolbox and the Sprite Track in QuickTime 2.5 now support graphics modes. This allows for sprites to blend with the background in various ways. Of particular interest is the ability to use 32 bit animation compressed sprites with an alpha channel graphics modes.

- Clock component

A new Clock component now guarantees enhanced synchronization of video and sound, and simplifies the problem of synchronizing these data types across the diverse array of sound and video hardware configurations supported by QuickTime.

- CD AutoStart for audio CDs

The AutoStart feature enables multimedia developers to create CD-ROMs that automatically start up when the disc is inserted. QuickTime 2.5 now extends this feature to standard audio Compact Discs which will begin playing when mounted.

Article Change History:

30 Sep 1996 - Changed distribution status.

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