Tech Info Library

QuickTime: Music Architecture Specifications (9/94)

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TOPIC ---

I need to know the answers to these questions about QuickTime:

1) When QuickTime plays music, does it play a MIDI file or does it make the
   music track into a QuickTime movie?

2) Is QuickTime GM and GS standard (in other words, when it uses Roland
   files, a guitar stays a guitar and a bass stays a bass).

3) Is QuickTime 16 or 24 or some other value polyphonic.

DISCUSSION ---

When QuickTime plays music, the music track is an embedded MIDI file within the
QuickTime movie file. I have included some additional information about the
Macintosh Music Architecture that further explains QuickTime music tracks:

A QuickTime music track can store several sampled sounds, and a time-ordered
playback list for these sounds. In this case, the same musical output is
produced every time the track is played. However, a music track might not carry
the sampled sounds with it; it might only carry the name of the desired sound,
such as "piano." The movie would then be considered to be playing "correctly"
regardless of exactly which piano-type-sound was used to reproduce the music, as
long as it was a "piano."

The Macintosh Music Architecture consists of three main pieces: the Note
Allocator, the Tune Player, and various music components. Music components are
sound-playing devices and softwares. Initially, we intend to support a
software-only music component, and a General MIDI music component.

The Note Allocator maintains a database of what music components are presently
attached to the Macintosh. This database is maintained by the user via a

configuration utility (unfortunately, MIDI -- the standard communication protocol for musical synthesizers -- does not support self-configuration). Most users will not have to use this utility, since they will have no external music components, and will be using the software-only component. Most of those users who do have devices will need only click on the "General MIDI Synthesizer in Modem Port" or "General MIDI Synthesizer in Printer Port" buttons.

The Tune Player will play a time-ordered list of events into a music component. To determine which music component to use, it will negotiate with the Note Allocator.

A music component is a software or device-driver with a standard interface that produces musical notes. The component is characterized by two values: the maximum polyphony, and the maximum number of different timbres which can be produced. Unlike MIDI devices, a music component is not constrained to a multitimbrality of 16. There is no API limit to the maximum polyphony.

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