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Macintosh AV Series: Software Enhancements (12/93)

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TOPIC -----

What are the software enhancements incorporated into the Macintosh Centris 660AV, the Quadra 660AV and the Quadra 840AV?

DISCUSSION -----

System Software

The Centris 660AV, Quadra 660AV and Quadra 840AV require System Software 7.1 and System Enabler 088 in order to operate.

QuickTime 1.6.1 is included and has been enhanced to support built-in video features, provide better playback performance, and require less memory to run.

System software is shipped on bootable CD-ROMs with those units equipped with an internal CD-ROM drive.

SCSI Manager 4.3

SCSI Manager 4.3 is a new system level manager that extends the capabilities of Macintosh systems both in terms of functionality and performance.

This new SCSI Manager is fully asynchronous, allowing each of several SCSI devices to have multiple requests outstanding. By queuing requests in this manner, overall throughput is improved. Other features such as direct memory access (DMA) support further enhance overall performance. Functionality has been improved through support for multiple buses and hardware configurations, and support for SCSI-2 messages and protocol actions.

Real-Time Manager

The Real-Time Manager is a key part of Apple's Real-Time Architecture (ARTA), providing a uniform API (application programmable interface) to DSP capabilities. These DSPs can reside on the logic board or on NuBus cards and are scalable in that multiple DSPs are supported.

Sound Manager 3.0

Sound Manager 3.0 represents a marked change from past sound manager versions and supports many new features that greatly enhance Macintosh system sound. In addition, the internals of the Sound Manager have been rewritten, resulting in a more flexible tool that can better accommodate new hardware capabilities.

New features provided by the Sound Manager 3.0 include:

- Support for a wider range of data types, including 16-bit stereo sounds, 11 - 48 KHz sounds, MACE (Macintosh Audio Compression and Expansion) 3:1 and 6:1 compression ratios, and MIDI
- Support for Sound Panel components which allow developers to create snap-in control panels for sound devices and algorithms
- Device independence, allowing the Macintosh to support sound chips other than the Apple Sound Chip, and to support output devices other than the Apple internal speaker.
- A uniform API across hardware systems
- More efficient use of the system processor
- Smaller memory footprint
- Improved sound performance
- Backward compatibility with previous sound managers

PlainTalk

PlainTalk is Apple's implementation of speech technology, it refers to two separate parts: speech recognition which responds to verbal commands from the user, and text-to-speech (TTS) that allows the computer to communicate verbally with the user.

While computer speech recognition is still in its infancy, the Macintosh AV Series models introduce the most advanced system ever on a personal computer.

The speech system is unique in that it is speaker independent, accommodates continuous speech, and automatically adapts itself to the environment where it is being used.

Speech activated commands can be programmed through the use of AppleScript when the application is AppleEvent aware, or through a new version of QuickKeys which supports spoken commands.

Text-to-speech refers to the ability of the Macintosh to interpret textual data and to "read" the data to the user in a near natural voice. Multiple voices at various sound quality levels are supported.

For further information on PlainTalk, please search in the Tech Info Library by the string "PlainTalk."

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