Power Macintosh: Brief Description Of System Software (3/94)

Article Created: 9 March 1994

TOPIC ---

The Power Macintosh 6100/60, 7100/66, and 8100/80 require System software 7.1.2 and the appropriate system enabler.

DISCUSSION ---

This version of system software is based on System 7.1, with modifications to run on a PowerPC processor. It has been architected to support both 680x0 and PowerPC software. The mixed mode operation is accomplished using an efficient 68LC040 Emulator which emulate 680x0 instructions with PowerPC instructions.

If a 680x0 application conforms to the basic programming requirements imposed by System Software version 7.0 or later; it is highly probable that it will run with no problems on a Power Macintosh.

The Mixed Mode Manager handles switches between the PowerPC and 680x0 runtime environments. Note, even if a program is completely written in 680x0 or PowerPC instructions, there may be switches between runtime environments. Portions of the Macintosh Toolbox have been rewritten into PowerPC code to take advantage of the processor's speed. However, the entire Toolbox was not converted. Thus, a PowerPC application may call a 680x0 coded Toolbox routine.

A major change introduced with the new PowerPC runtime environment is a new method of organizing code and data. It is called a fragment. It can be an application, import library, or an extension. These fragments are handled by the new Code Fragment Manager. These fragments are the basis by which the Macintosh Operating System can be modernized (for example, the implementation of a microkernal).

In addition, the New Exception Manager allows applications to specify a call back routine that will be called if an exception is generated. At the very least applications will be able to make a more graceful crash. In some cases the application may actually be able to handle the exception and continue execution.

Support Information Services

Keywords: kppc

==========

This information is from the Apple Technical Information Library.

19960215 11:05:19.00

Tech Info Library Article Number: 14844