Technical Note IMERRATA06
Inside Macintosh: Processes Errata

This Technical Note discusses known errors and omissions in *Inside Macintosh: Processes* .

[Oct 01 1994]

Topics

- Correction to Figure 1-1 October 1994
- Clarification of Installing Persistent VBL Tasks October 1994
- Clarification of `GetVBLQHdr` October 1994
- Clarification of Interrupt Priorities During VBL Tasks October 1994
- Correction to Listing 8-1 October 1994
- Correction to Glossary Entry October 1994

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Chapter 1 - Introduction to Processes and Tasks

Correction to Figure 1-1

Page 1-4, The Cooperative Multitasking Environment

Figure 1-1 shows the wrong application icon in the menu bar. The SurfWriter icon should be in the menu bar labeling the application menu, not the Finder icon.

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Chapter 4 - Vertical Retrace Manager

Clarification of Installing Persistent VBL Tasks

Page 4-20, Installing a Persistent VBL Task

The description of installing a persistent VBL task is partly incorrect. The documentation states that "if you want to install a persistent system-based VBL task, you need to load its VBL task record into the system partition." This is incorrect, and it is not what is demonstrated in Listing 4-15. Listing 4-15 shows how to put the VBL task *code* (or enough of it to fool the Vertical Retrace Manager) into the system partition.

However, Listing 4-15 needs a call to `FlushInstructionCache` added immediately before the call to `VInstall`. In addition, it is preferable to code the error-handling part of Listing 4-15 like this:

```
SysHeapPtr := NewPtrSys(kJMPSize);
IF SysHeapPtr = NIL THEN
    BEGIN
        InstallPersistentVBL := MemError;
        Exit(InstallPersistentVBL );
    END;
```

Clarification of GetVBLQHdr

Page 4-28

`GetVBLQHdr` returns a pointer to the head of the VBL queue. One of the bits of the `qFlags` field of the VBL queue header indicates whether a VBL task is currently executing. The correct bit is bit 6 of the *first* byte of the `qFlags` field, or bit 14 of the entire two-byte field. Versions of A/UX prior to 3.1 incorrectly used bit 6 of the entire two-byte field.

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Chapter 6 - Deferred Task Manager

Clarification of Interrupt Priorities During VBL Tasks

Pages 6-3, 6-5, About the Deferred Task Manager

The documentation states "If the current application is then interrupted by a vertical retrace interrupt, the interrupt priority is set to 1 during the servicing of the interrupt and restored to 0 upon completion." This is not strictly correct. The Vertical Retrace Manager actually restores the interrupt mask to 0 before running VBL tasks. As a result, VBL tasks can be interrupted by future level-1 interrupts, although a VBL task cannot interrupt another VBL task.

On page 6-5, the documentation states "Suppose that your application installs and activates a Time Manager task, which is triggered by level-2 interrupts." Actually, Time Manager interrupts are level-1 interrupts.

Also on page 6-5, there is occasional mention of the status register being restored to 0. In fact, only three bits of the status register (the processor priority level) are restored to 0. All other bits are unchanged.

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Chapter 8 - Shutdown Manager

Correction to Listing 8-1

Page 8-8, Sending a Shutdown or Restart Event

Listing 8-1 on page 8-8 contains several errors. The constant kFinderSig should be defined to be 'MACS'. In addition, that constant cannot be passed directly to the AECreateDesc function. Instead, you must declare a variable of type OSType and assign kFinderSig to it, as follows:

```
CONST
    kFinderSig = 'MACS';
VAR
    ...
    signature: OSType
BEGIN
    signature := kFinderSig;
    myErr := AECreateDesc(typeApplSignature, @signature, ...);
    ...
```

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Glossary

Correction to Glossary Entry

Page GL-2

The entry **interrupt handle** should be **interrupt handler**.

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