About the Slot Manager

The **Slot Manager** contains routines that let your program identify cards plugged into NuBus slots in the Macintosh II and communicate with the firmware on each card.

> **Note**: the Macintosh SE computer also has slots, but they work differently. For an explanation of Macintosh SE slots, see the book *Designing Cards and Drivers for Macintosh II and Macintosh SE*.

The **Slot Manager** routines are required only if you are writing an application, driver, or operating system that must access a slot card directly. Otherwise, the standard Macintosh Toolbox and Operating System routines normally take care of all slot card management, making the **Slot Manager** transparent to most applications.

> **Note:** When accessing NuBus cards directly, it is important that you use the standard **Slot Manager** routines. If you try to bypass them, your application may conflict with other applications and probably will not work in future Apple computers.

Before trying to use the information in **Slot Manager**, you should already be familiar with the **Device Manager**. If you are writing a driver, you should also be familiar with:

- The information in the book *Designing Cards and Drivers for Macintosh II and Macintosh SE*.

- The architecture and mode of operation of the specific card or cards your driver will access.

Slot Card Firmware

Most of the routines described in **Slot Manager** let you access data or code structures residing in the firmware of all NuBus plug-in cards. These structures are described in the book *Designing Cards and Drivers for Macintosh II and Macintosh SE*. They have certain uniform features that create a standard interface to the **Slot Manager**. The principal card firmware structures are the following:

- A **format block**, containing format and identification information for the card's firmware and an offset to its **sResource directory**

- An **sResource directory**, containing an identification number and offset for each **sResource list** in the firmware

- A **Board sResource list**, containing information about the slot card itself

- One or more other **sResource lists**, each of which contains information about a single **sResource** in the card's firmware

Do not confuse **sResources** on plug-in cards with standard Macintosh resources; they are different, although related conceptually. Every **sResource** has a type and a name. It may also have an icon and driver code in firmware, and may define a region of system memory allocated to the card it is in. Such **sResources** are treated like devices. Some **sResources**, however,

may contain only data--for example, special fonts. You must understand the specific nature of an **sResource** before trying to access it with the **Slot Manager**.

The physical location of a slot card's firmware is called its **declaration ROM**. The **Slot Manager** maintains a table, called the **Slot Resource Table** of all **sResources** currently available in the system.

For full details about slot card firmware, see the book: *Designing Cards and Drivers for Macintosh II and Macintosh SE*.

Slot Manager Routines

The **Slot Manager** is a section of the Macintosh II ROM containing routines that communicate with NuBus card firmware. They fall into three distinct categories:

- **Principal Slot Manager Routines** are available to drivers and applications that need to perform slot management tasks beyond those automatically provided by the system. Their principal purpose is to find the slot devices and open their drivers.

  The description of each **Slot Manager** routine specifies which parameters are required for communication with the routine. A right-pointing arrow indicates that the parameter is an input to the routine; a left-pointing arrow indicates that it is an output. Other parameters whose values may be affected by the routine are also listed. Parameters not mentioned remain unchanged.

- **Specialized Slot Manager Routines** are used only by drivers. They find data structures in slot card firmware.

- **Advanced Slot Manager Routines** are used only by the Macintosh II Operating System. They are described only for completeness.