How the Process Manager Creates Processes

The information in this section about the Finder information supplements the description in the **Segment Loader**.

When a user first opens your application, the **Process Manager** creates a partition for it. A partition is a contiguous block of memory that the **Process Manager** allocates for the application's use. The partition is divided into specific areas: application heap, A5 world, and stack. The application heap contains the application's 'CODE' segment 1, data structures, resources, and other code segments as needed. The A5 world refers to the QuickDraw globals, application global variables, and its jump table, all of which are accessed through the A5 register. The application jump table contains one entry for every externally referenced routine in every code segment of your application. The application stack is used to store temporary variables. See **Memory Manager** for illustrations of these areas of your application's partition. When you create an application, you specify in the 'SIZE' resource how much memory you want the **Process Manager** to allocate for your application's partition. You specify two values: the preferred amount of memory to allocate, and the minimum amount of memory to allocate. When a user opens your application from the Finder, the **Process Manager** first attempts to allocate a partition of the preferred size. If your application cannot be launched in the preferred amount of memory, the Finder displays a dialog box giving the user the option of opening the application using less than the preferred size. The Finder will not launch your application if the minimum amount of memory specified for your application is not available.

After the **Process Manager** creates a partition for your application, the **Process Manager** loads your code into memory and sets up the stack, heap, and A5 world (including the jump table) for your application. If the user selected one or more files to open or print, the Finder sets up information your application can use to determine which files to open or print.

The **Process Manager** assigns the application a process serial number, records its context, and returns control to the launching application (usually the Finder). The **Process Manager** transfers control to the new application after the launching application makes a subsequent call to **WaitNextEvent** or **EventAvail**.

The next section describes how your application can allow other applications to receive CPU time and how the **Process Manager** schedules CPU time among processes.