

Extending the Operating System's Available Memory

In system 7.0, suitably equipped Macintosh computers can take advantage of an operating-system feature known as **virtual memory**, by which the machines have a logical address space that extends beyond the limits of the available physical memory. This means that a user can load more programs and data into the logical address space than if limited to the actual physical RAM installed in the machine. The Operating System extends the address space by using part of the available secondary storage (that is, part of a hard disk) to hold portions of programs and data that are not currently needed in RAM. When some of those portions of memory are needed, the Operating System swaps other parts of programs or data that are not needed out to the secondary storage, thereby making room for the parts that are needed.

It is important to realize that virtual memory operates transparently to most applications. You allocate and release memory in your application heap exactly as you always have, by calling **Memory Manager** routines. You can also request temporary memory by using special Operating System routines. But unless your application has time-critical needs that might be adversely affected by the operation of virtual memory, you do not need to know whether virtual memory is operating.