Receiving Low-Level Events

Applications receive events one at a time by asking the **Event Manager** for the next available event. You use **Event Manager** routines to receive (or in the case of **EventAvail**, simply to look at) the next available event that is pending for your application. The **Event Manager** returns to your application an EventRecord, which includes the relevant information about that event.

Your application can use the **WaitNextEvent**, **GetNextEvent**, and **EventAvail** functions to retrieve events from the **Event Manager**. **GetNextEvent** returns the next available event of a specified type. Further, if the event returned is in the event queue, **GetNextEvent** removes it from the queue. **EventAvail** is just like **GetNextEvent**, except that if the event reported is in the event queue, it is left there. **EventAvail** thus allows your application to look at the next event in the event queue without actually processing the event.

You should use the **WaitNextEvent** function to retrieve an event from the **Event Manager**.

WaitNextEvent requires four parameters: an event mask, an event record, a sleep value, and a mouse region. If the function **WaitNextEvent** returns successfully, the EventRecord contains information about the retrieved event. The eventMask parameter selects which events are to be waited for. The sleep parameter specifies the amount of time (in sleepTicks) that your application agrees to relinquish the processor if no events are pending for it. When that time expires or when an event becomes available for your application, the **Process Manager** schedules your application for execution. In general, you should specify a value greater than 0 in the sleep parameter so that other applications can receive processing time if they need it. Your application should not sleep more than 15 ticks if you use **TextEdit** because the fastest cursor blink occurs every 15 ticks.

The mouseRgn parameter to **WaitNextEvent** specifies a screen region that lets you determine the conditions when your application is to receive notice of mouse-moved events. Your application receives mouse-moved events only when the mouse is outside of the specified region and your application is the foreground process. You can use the mouseRgn parameter as a convenient way to change the shape of the cursor-for example, when the mouse moves from the content area of a window to the scroll bar.

Note: If your application calls **WaitNextEvent**, it should not call the **SystemTask** procedure.