Receiving High-Level Events

In System 7.0+, your application can receive a high-level event when it retrieves an event from the **Event Manager**. As always, your application determines what kind of event it has received by looking at the what field of the EventRecord returned by the **Event Manager**. The event code for high-level events is defined by a constant name.

kHighLevelEvent

For high-level events, two fields of the EventRecord have special meanings. The *message* field and the where field of the EventRecord together define the specific type of high-level event and are interpreted as type OSType, not long or Ptr. The *message* field contains the event class of this high-level event. For example, Apple events sent by the **Edition Manager**have the event class called 'sect'. You can define your own class of events that are specific to your application. If you have registered your application signature, then you can use your signature to define the class of events that belong to your application. Note, however, that Apple reserves all lowercase letters and nonalphabetic characters for the classes of events defined by Apple.

For high-level events, the where field in the EventRecord contains a second *message* specifier, called the eventID. The eventID defines the particular type of event (or *message*) within the class of events defined by the event class. For example, the SectionReadApple event sent by the **Edition Manager** has EventClass 'sect' and eventID 'read'. The OpenDocumentsApple event sent by the **Finder** has event class 'aevt' and eventID 'odoc'. You can define your own set of eventIDs, corresponding to your own event class. For example, if the *message* field contains 'boff' and the where field contains 'cmd1', then the high-level event indicates the type of event defined by 'cmd1' within the class of events defined by the application with the signature 'boff'.

Unlike **low-level events** and **operating-system events**, high-level events may not be completely determined by the EventRecord returned to your application when it calls **WaitNextEvent**. For example, you might still need to know which other application sent you the high-level event or what additional data that application wants to send you. This further information about the high-level event is available to your application by calling the **AcceptHighLevelEvent** function. The additional information associated with a high-level event includes:

- the identity of the sender of the event
- unique EventID number that identifies this particular event
- the address and length of a data buffer that can contain optional data

To obtain this additional information, your application must call **AcceptHighLevelEvent** before calling **WaitNextEvent** again. By convention, calling **AcceptHighLevelEvent** indicates that your application intends to process the high-level event.

Note: Because the where field of an EventRecord for a high-level event is used to select a specific kind of event (within the class determined by the *message* field), high-level event records do not contain the mouse position at the

time of the event. Moreover, it is dangerous to interpret the where field before interpreting the what field because different event classes can contain overlapping sets of eventIDs.