The Input Method Framework

Android 1.5 introduced the input method framework (IMF), which is commonly referred to as soft keyboards. However, this term is not necessarily accurate, as IMF could be used for handwriting recognition or other means of accepting text input via the screen.

Keyboards, Hard and Soft

Some Android devices have a hardware keyboard that is visible some of the time (when it is slid out). A few Android devices have a hardware keyboard that is always visible (so-called “bar” or “slab” phones). Most Android devices, though, have no hardware keyboard at all. The IMF handles all of these scenarios.

In short, if there is no hardware keyboard, an input method editor (IME) will be available to the user when they tap an enabled EditText widget. If the default functionality of the IME is what you want to offer, you don’t need to make any code changes to your application. Fortunately, Android is fairly smart about guessing what you want, so you may simply need to test with the IME and make no specific code changes.

But the IME may not quite behave how you would like it to for your application. For example, in the Basic/Field sample project, the FieldDemo activity has the IME overlaying the multiple-line EditText, as shown in Figure 11–1. It would be nice to have more control over how this appears, and to be able to control other behavior of the IME. Fortunately, the IMF as a whole gives you many options for this, as described in this chapter.
Tailored to Your Needs

Android 1.1 and earlier offered many attributes on EditText widgets to control their style of input, such as android:password to indicate a field should be for password entry (shrouding the password keystrokes from prying eyes). Starting in Android 1.5, with the IMF, many of these attributes have been combined into a single android:inputType attribute.

The android:inputType attribute takes a class plus modifiers, in a pipe-delimited list (where | is the pipe character). The class generally describes what the user is allowed to input, and this determines the basic set of keys available on the soft keyboard. The available classes are as follows:

- text (the default)
- number
- phone
- datetime
- date
- time