Intents, Broadcast Receivers, Adapters, and the Internet

At fi rst glance, the subjects of this chapter may appear to have little in common; in practice, they represent the glue that binds applications and their components.

Mobile applications on most platforms run in their own sandboxes. They're isolated from each other and have strict limits on their interaction with the system hardware and native components. Android applications are also sandboxed, but they can use Intents, Broadcast Receivers, Adapters, Content Providers, and the Internet to extend beyond those boundaries.

In this chapter, you'll look at Intents and learn how to use them to start Activities, both explicitly and using late runtime binding. Using implicit Intents, you'll learn how to request that an action be performed on a piece of data, letting Android determine which application component can service that request.

Broadcast Intents are used to announce application events system-wide. You'll learn how to transmit these broadcasts and consume them using Broadcast Receivers.

You'll examine Adapters and learn how to use them to bind your presentation layer to data sources, and you'll examine the Dialog-box mechanisms available.

Having looked at the mechanisms for transmitting and consuming local data, you'll be introduced to Android's Internet connectivity model and some of the Java techniques for parsing Internet data feeds.

An earthquake-monitoring example will then demonstrate how to tie all these features together. The earthquake monitor will form the basis of an ongoing example that you'll improve and extend in later chapters.