



Technically speaking, Android is more than just an OS. It's also a complete *software stack*, which comprises several key components that work together to create the complete Android platform:

- » **The OS core**, which is based on the popular Linux OS
- » **A middleware layer**, which provides drivers and other support code to enable the OS core to work with the hardware devices that make up a complete phone, such as a touch-sensitive display, the cellphone radio, the speaker and microphone, Bluetooth or Wi-Fi networking components, and so on
- » **A set of core applications** that the user interacts with to make phone calls, read email, send text messages, take pictures, and so on
- » **A Software Developers Kit (SDK)** that lets third-party software developers create their own applications to run on an Android phone, as well as a marketplace where the applications can be marketed and sold, much as the App Store lets iPhone developers market and sell applications for the iPhone

Besides the basic features provided by all operating systems, here are a few bonus features of the Android software stack:

- » An optimized graphical display engine that can produce sophisticated 2-D and 3-D graphics
- » GPS capabilities that provide location awareness that can be integrated with applications such as Google Maps
- » Compass and accelerometer capabilities that can determine whether the phone is in motion and in which direction it's pointed
- » A built-in SQL database server for data storage
- » Support for several network technologies, including 3G, 4G, Bluetooth, and Wi-Fi
- » Built-in media support, including common formats for still images, audio, and video files

Perusing Android's core applications

The Android OS comes preconfigured with several standard applications, which provide the functionality that most people demand from a modern smartphone. These applications include

- » **Dialer**: Provides the basic cellphone function that lets users make calls.
- » **Browser**: A built-in web browser that's similar to Google's Chrome browser.