Developing with Eclipse

Using Eclipse with the ADT plug-in for your Android development offers some signifi cant advantages.

Eclipse is an open source IDE (integrated development environment) particularly popular for Java development. It's available to download for each of the development platforms supported by Android (Windows, Mac OS, and Linux) from the Eclipse foundation homepage:

www.eclipse.org/downloads/

There are many variations available when selecting your Eclipse download; the following is the recommended confi guration for Android:

❑ Eclipse 3.3, 3.4 (Ganymede)

    ❑ Eclipse JDT plug-in

    ❑ WST

WST and the JDT plug-in are included in most Eclipse IDE packages. Installing Eclipse consists of uncompressing the download into a new folder. When that's done, run the Eclipse executable. When it starts for the fi rst time, create a new workspace for your Android development.

Using the Eclipse Plug-in

The ADT plug-in for Eclipse simplifi es your Android development by integrating the developer tools, including the emulator and .class-to-.dex converter, directly into the IDE. While you don't have to use the ADT plug-in, it does make creating, testing, and debugging your applications faster and easier.
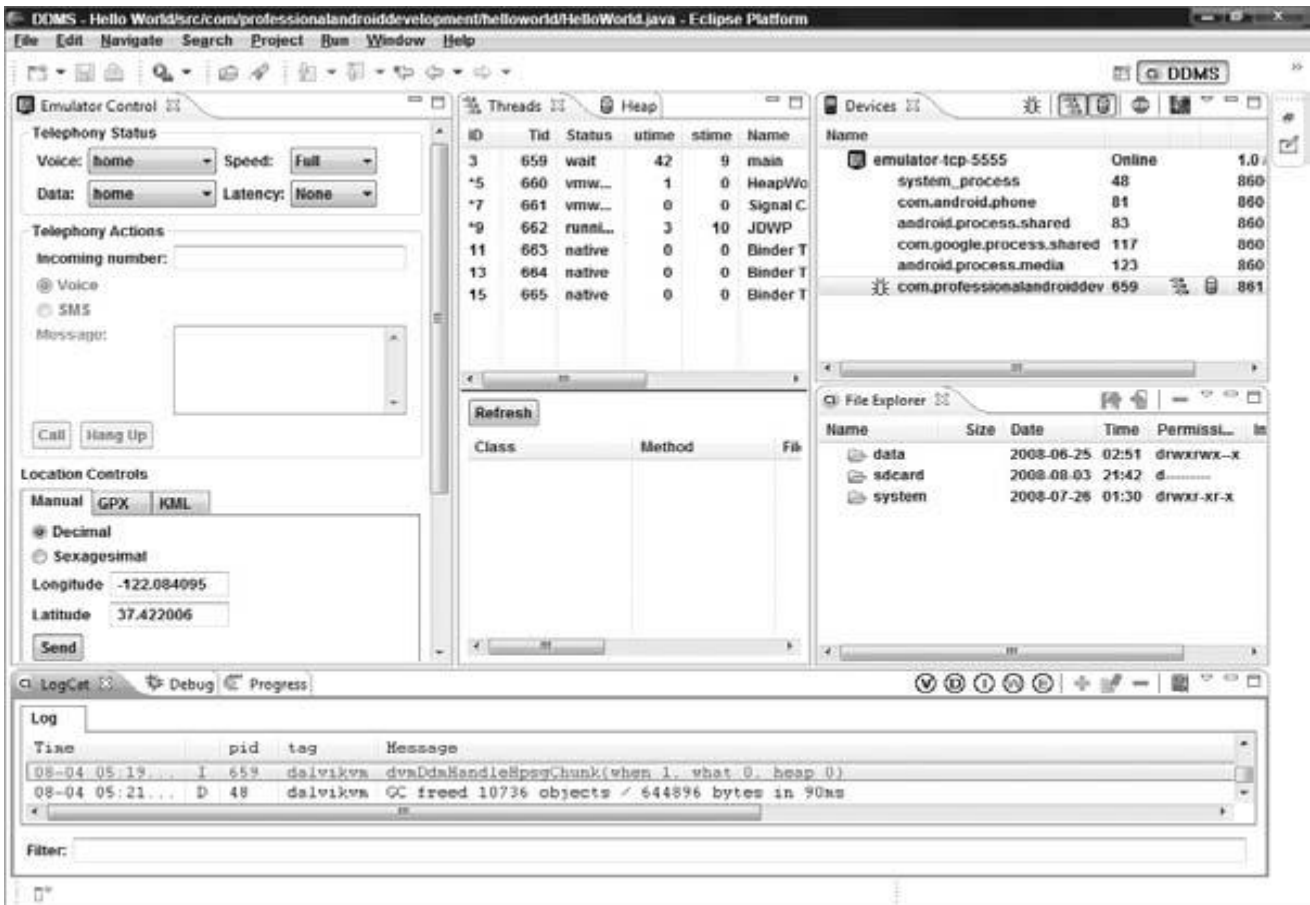

Figure 2-1

The ADT plug-in integrates the following into Eclipse:

❑ An Android Project Wizard that simplifi es creating new projects and includes a basic application template

❑ Forms-based manifest, layout, and resource editors to help create, edit, and validate your XML resources

Chapter 2

❑ Automated building of Android projects, conversion to Android executables (.dex), packaging to package fi les (.apk), and installation of packages onto Dalvik virtual machines

❑ The Android Emulator, including control of the emulator's appearance, network connection settings, and the ability to simulate incoming calls and SMS messages

❑ The Dalvik Debug Monitoring Service (DDMS), which includes port forwarding; stack, heap, and thread viewing; process details; and screen capture facilities

❑ Access to the device or emulator's fi lesystem, allowing you to navigate the folder tree and transfer files

❑ Runtime debugging, so you can set breakpoints and view call stacks

❑ All Android/Dalvik log and console outputs

Figure 2-1 shows the DDMS perspective within Eclipse with the ADT plug-in installed.

Installing the ADT Plug-in

Install the developer tools plug-in by the following steps:

1. Select **Help** ➪ **Software Updates** ➪ **Find and Install** … from within Eclipse.

2. In the resulting dialog box, choose **Search for new features to install**.

3. Select **New Remote Site**, and enter the following address into the dialog box, as shown in

Figure 2-2:

https://dl-ssl.google.com/android/eclipse/

Figure 2-2

4. The new site you entered should now be checked. Click **Finish**.

5. Eclipse will now download the plug-in. When it's fi nished, select Android **Plugin** ⇨ **Developer Tools** from the resulting Search Results dialog box, and click **Next**.

6. Read and then **Accept** the terms of the license agreement, and click **Next** and then **Finish**. As the ADT plug-in is not signed, you'll be prompted before the installation continues.

7. When complete, you'll have to restart Eclipse and update the ADT preferences. Restart and select **Window** ⇨ **Preferences** ... (or **Eclipse** ⇨ **Preferences** for the Mac OS).

8. Then select **Android** from the left panel.

9. Click **Browse** ..., and navigate to the folder into which you unzipped the Android SDK, as shown in Figure 2-3; then click **Apply** and **OK**.
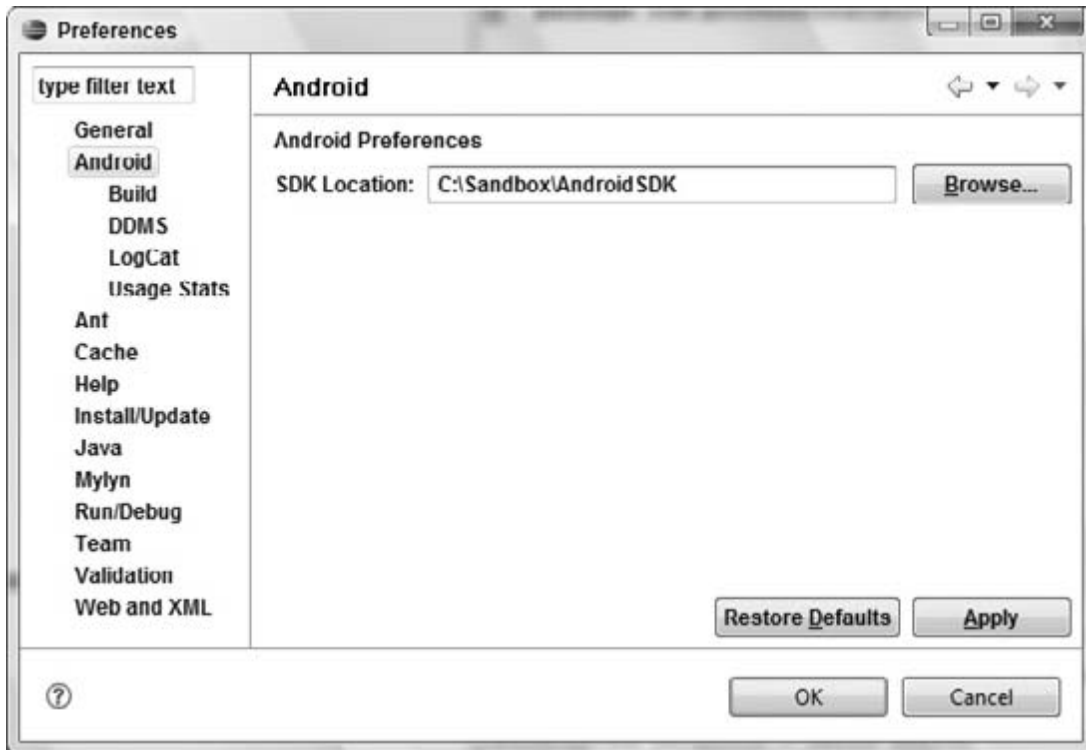

Figure 2-3

If you download a new version of the SDK and place it in a different location, you will need to update this preference to refl ect the SDK with which the ADT should be building.

Updating the Plug-in

As the Android SDK matures, there are likely to be frequent updates to the ADT plug-in. In most cases, to update your plug-in, you simply:

1. Navigate to **Help** ⇨ **Software Updates** ⇨ **Find and Install** ...

2. Select **Search for updates of the currently installed features**, and click **Finish** ...

Chapter 2

3. If there are any ADT updates available, they will be presented. Simply select them and choose **Install**.

Sometimes a plug-in upgrade is so signifi cant that the dynamic update mechanism can't be used. In those cases, you may have to remove the previous plug-in completely before installing the newer version as described in the previous section.

Chapter 2