

## Setting up the Emulator with Test Providers

Location-based services are dependant on device hardware for finding the current location. When developing and testing with the emulator, your hardware is virtualized, and you're likely to stay in pretty much the same location.

To compensate, Android includes hooks that let you emulate Location Providers for testing location based applications. In this section, you'll learn how to mock the position of the supported GPS provider.

If you're planning on doing location-based application development and using the Android emulator, this section will show how to create an environment that simulatesreal hardware and location changes. In the remainder of this chapter, it will be assumed that you have used the examples in this section to update the locationfor, the GPS\_PROVIDER within the emulator.

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## **Updating Locations in Emulator Location Providers**

Use the Location Controls available from the DDMS perspective in Eclipse (shown in Figure 7-1) to push location changes directly into the test GPS\_PROVIDER.

Location Controls				Location Controls			
Manual	GPX	KML		Manual GPX KML			
Decim Sexage	al simal			Load KML			
Lanaitud	122	004005	1	Name	Longitude	Latitude	*
Longitud	e -122	.084095		Sabina Park	-76.782589	17.977958	
Latitude	37.4	22006	1	Trelawny Stadium	-77.631562	18.473402	
Send				Warner Park	62.723286	17.298609	-
- Mina				Sir Vivian Richards Stadi	-61.784850	17.103275	
				Beausejour Stadium	-60.931689	14.070543	
				Arnos Vale Ground	-61.221485	13.146520	
				Three Ws Oval	-59.630898	13.135528	
				Kensington Oval	-59.622581	13.105050	
				Queen's Park (National	-61.752777	12.058879	-
				*		,	
				Spee	d: 1X		

Figure 7-1

Figure 7-1 shows the Manual and KML tabs. Using the Manual tab, you can specify particular latitude/ longitude pairs. Alternatively, the KML and GPX tabs let you load KML (Keyhole Markup Language) and GPX (GPS Exchange Format) fi les, respectively. Once loaded, you can jump to particular waypoints (locations) or play back each location sequentially.

Most GPS systems record track fi les using GPX, while KML is used extensively online to defi ne geographic information. You can handwrite your own KML fi le or generate one automatically using Google Earth and fi nding directions between two locations.

All location changes applied using the DDMS Location Controls will be applied to the GPS receiver, which must be enabled and active. Note that the GPS values returned by getLastKnownLocation will not change unless at least one application has requested location updates.