**Location Sensor Quick Notes**

**When and Why You Need to Use It**
Many interesting apps make use of the current location. App Inventor gives you easy access to the phone or emulator's location sensor.

**Getting Started**
The Location Sensor is a non visible component. Add it to your app. At least for working with the emulator, I find is helpful to set these properties. Usually in screen initialize:

1. ProviderName to gps
2. ProviderLocked to true

Make sure the phone / emulator’s setting are set to allow location.

1. Applications > Settings > Location and Security Settings
2. Check both Use Wireless Networks and Use GPS Satellites

**Using Location with the Emulator**
You can “move” the emulator to anywhere in the world (or should we say emulate being anywhere…):

1. Open a command line and start the Emulator Console
   a. telnet localhost 5554 (or other emulator port id)
2. In the Emulator Console
   a. To go to a location, enter the command
      i. geo fix longitude latitude altitude
   b. Long and lat are in the *opposite* order from what you may be used to
      i. Longitude first
      ii. Long and lat are both expressed as floating point numbers or “decimal degrees”
         1. Try geo fix -87.656822 42.00192
         2. Or geo fix 12.492312, 41.890266
c. Don’t be surprised if the location in your app is not quite the same. In App Inventor you are not allowed to control the precision of GPS locations and your app is only getting an approximate location similar to what you enter into the console with geo fix.

3. Need a tutorial on how to think of the world in these terms?
   b. Try out a few places you know

4. Want to find a lat and long for a location?
   a. In google maps, right click and say What’s Here?

**Spoofing Location on a Phone**
For this you have to use the underlying debug tools of the Android system. If you have a phone it’s worthwhile to get to know how to do this!

1. You need to use the Dalvik Debug Monitor Server (DDMS)
   b. Easiest to install the full Android SDK http://developer.android.com/sdk/index.html

2. Be sure your phone is connected; it should show up as a device
3. You can use the location tab to send a fake location to your phone.
4. There are lots of other things you can do with DDMS (manipulate phone, sms, network…)

**More Info**
See these links and search about for more ideas and uses.

Android, Where’s My Car? Tutorial using Location and Activity Starter to Display a Route on a Map
http://beta.appinventor.mit.edu/learn/tutorials/whereismycar/whereismycar.html