Demonstration Plan Overview

1. Demonstrate communication and parsing of GPS data by entering receiver node calibration mode.
   (a) The User interfaces with the ARM LCD screen and follows on-screen calibration instructions.
   (b) GPS data is received over UART on the mobile node.
   (c) GPS data is then parsed and transmitted using MiWi to the receivers.
   (d) ARM board queries node0 for GPS position information.
   (e) ARM board accumulates several samples of GPS position information and determines the designated node's position.
2. Demonstrate position estimation algorithm by placing the system into run mode.
   (a) As the user moves about, GPS data is transmitted from the mobile node.
   (b) Each receiver node calculates received signal strength from the mobile node.
   (c) node1 and node2 forward their received signal strength to node0.
   (d) ARM board queries node0 for all RSSI and GPS data.
   (e) Positioning algorithm updates position estimation based on RSSI data.
3. Demonstrate web interface functionality
   (a) After section 2 is complete, continue to operate system in run mode.
   (b) Establish a connection to the ARM webserver.
   (c) Recent position information will be displayed on the web page.
   (d) The web page refresh rate is once every 10 seconds.
4. Demonstrate filesystem functionality
   (a) After sections 2 and 3 are complete, shut down the ARM board.
   (b) Remove the SD card and insert into a computer.
   (c) Display the logged information on a computer.
5. Demonstration Complete.