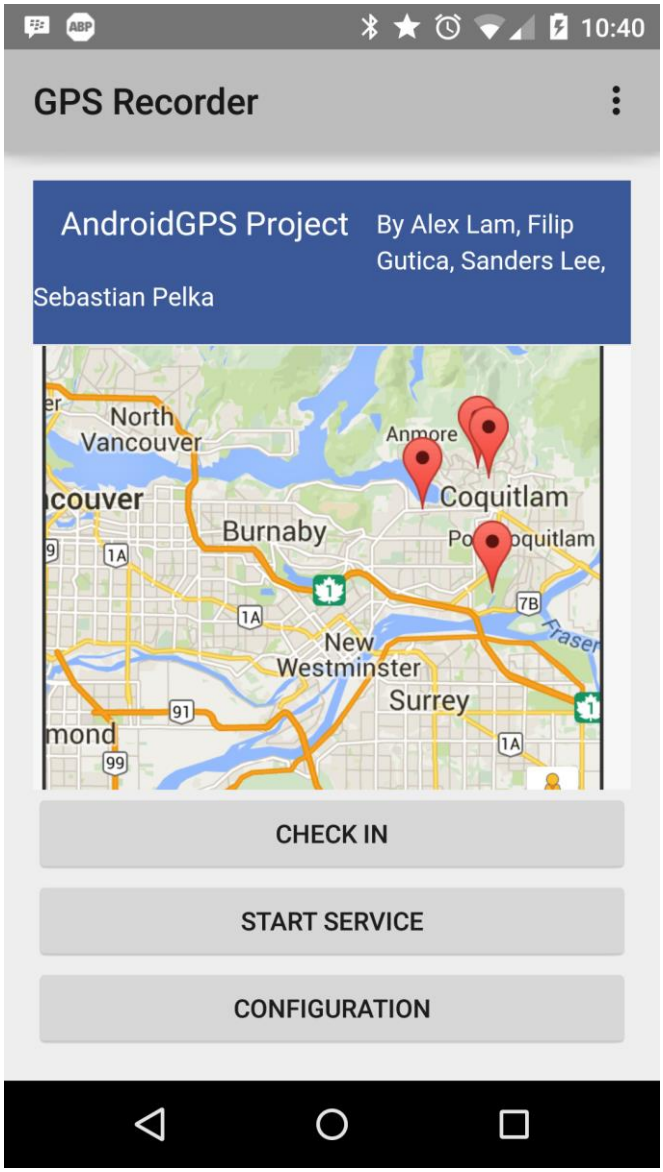
Test #	Method	Tool/App	Expected Outcome	Pass/Fail
1	Create a fabricated XML document to see whether the server can read and parse the required fields for each GPS coordinate reading	server app	Each coordinate entry has all its fields loaded into a structure, including name, MAC, IP, date-time, longitude, & latitude	Pass
2	Enter fabricated GPS data to see whether the server can turn the data into an XML entry and put it into the XML document from the previous test	server app	A new entry with fabricated data is inserted into the coordinates XML document	Pass
3	Gather information from the Android client app and send it to the Linux server app to see whether the TCP connection and data transfer is working properly	server app + Android app + strace	The GPS data sent by the Android client is printed out on a terminal on the Linux server	Pass
4	Gather information from the Android client app and send it to the Linux server app to see whether the sent data is formatted correctly	server app + Android app + strace	The server can parse the information from the client and add that to the XML file in the proper format	Pass
5	Load the website to see whether it can read from a coordinates XML file and parse the data correctly	web browser	A table listing all coordinate entries is displayed on the web page	Pass
6	Load the website to see whether it can display all the coordinates read on a Google Map	web browser	The Google Map shows all the coordinates in the XML file as pins on the map	Pass
7	Click on the "All Current Positions" button to see whether the website can show just the last known position of each unique device	web browser	All unique devices are shown at their last known locations with no duplicates or missing entries	Pass
8	Enter a valid MAC address and click on the "History Of One MAC" button to see whether the website can show the history of the specified device	web browser	The location history of the device is shown in both table form and as pins on the Google Map	Pass
9	Enter an *invalid* MAC address and click on the "History Of One MAC" button to see whether the website can show the history of the specified device	web browser	No history is shown on either the table or on the Google Map, and the website does not crash	Pass
10	Multiple devices update their position while the website is set to "All Current Positions" mode and automatic refresh is turned *off*	web browser + server app + Android app	Last known positions of the devices involved are shown on both the table and the Google Map, not updated live	Pass
11	Multiple devices update their position while the website is set to "History Of One MAC" mode, with a valid MAC address specified, and automatic refresh is turned *off*	web browser + server app + Android app	The location history of the device is shown in both table form and as pins on the Google Map, with the most recent pin in red and all other pins in green, not updated live	Pass
12	Multiple devices update their position while the website is set to "History Of One MAC" mode, with an *invalid* MAC address specified, and automatic refresh is turned *off*	web browser + server app + Android app	No history is shown on either the table or on the Google Map, and the website does not crash	Pass
13	Multiple devices update their position while the website is set to "All Current	web browser + server app +	Last known positions of the devices involved are shown on both the table and	Pass

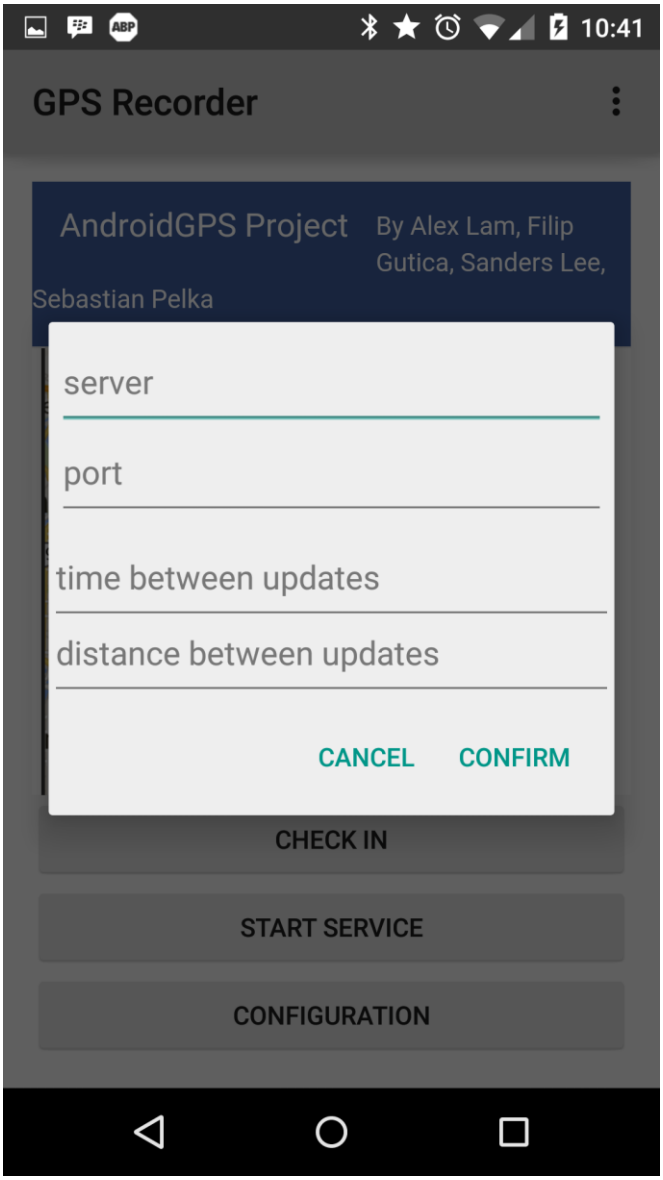
	Positions" mode and automatic refresh is turned on	Android app	the Google Map, updated live	
14	Multiple devices update their position while the website is set to "History Of One MAC" mode, with a valid MAC address specified, and automatic refresh is turned on	web browser + server app + Android app	The location history of the device is shown in both table form and as pins on the Google Map, with the most recent pin in red and all other pins in green, updated live	Pass
15	Multiple devices update their position while the website is set to "History Of One MAC" mode, with an *invalid* MAC address specified, and automatic refresh is turned on	web browser + server app + Android app	No history is shown on either the table or on the Google Map, and the website does not crash	Pass
16	A single device updates its position in "GPS" mode while the website is set to "History Of One MAC" mode, with the device's MAC address specified, and automatic refresh is turned on	web browser + server app + Android app	The location history of the device is shown in both table form (no IP, accurate position) and as pins on the Google Map, with the most recent pin in red and all other pins in green, updated live	Pass
17	A single device updates its position in "Network" mode while the website is set to "History Of One MAC" mode, with the device's MAC address specified, and automatic refresh is turned on	web browser + server app + Android app	The location history of the device is shown in both table form (no IP, inaccurate position) and as pins on the Google Map, with the most recent pin in red and all other pins in green, updated live	Pass
18	A single device updates its position in "GPS + Network" mode while the website is set to "History Of One MAC" mode, with the device's MAC address specified, and automatic refresh is turned on	web browser + server app + Android app	The location history of the device is shown in both table form (has IP, accurate position) and as pins on the Google Map, with the most recent pin in red and all other pins in green, updated live	Pass

Android Application Testing Screenshots:

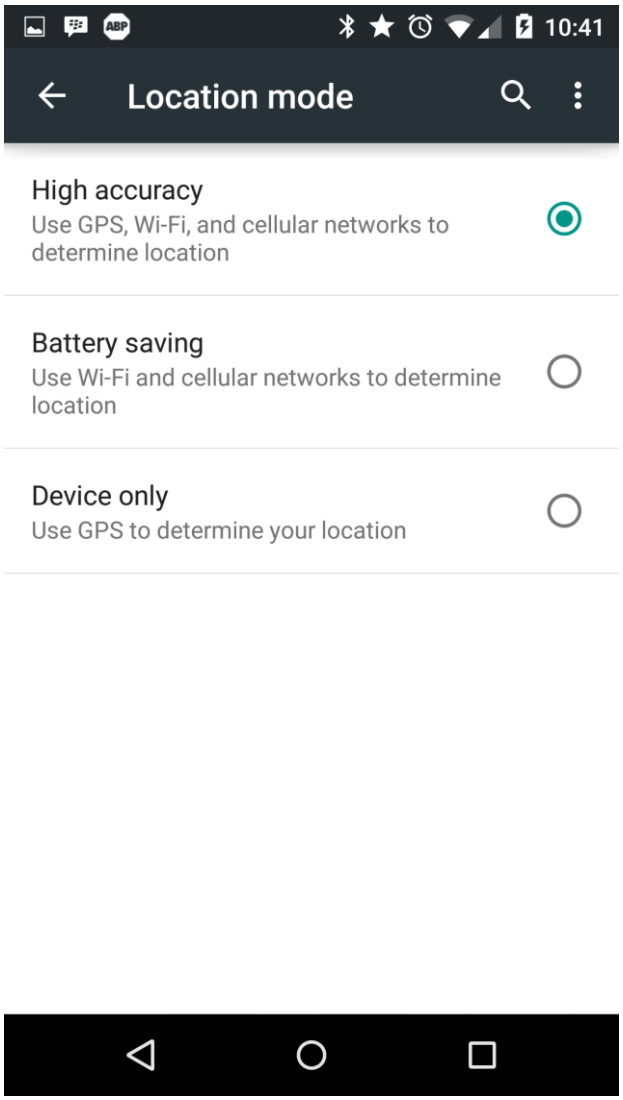
Loading the web view:



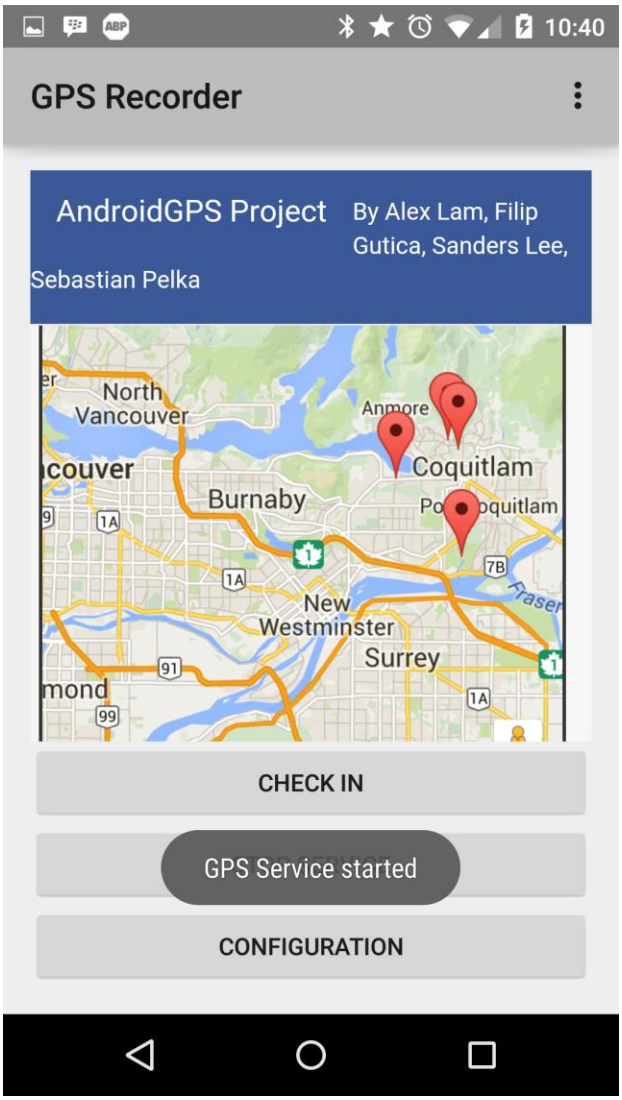
Configuration Fragment



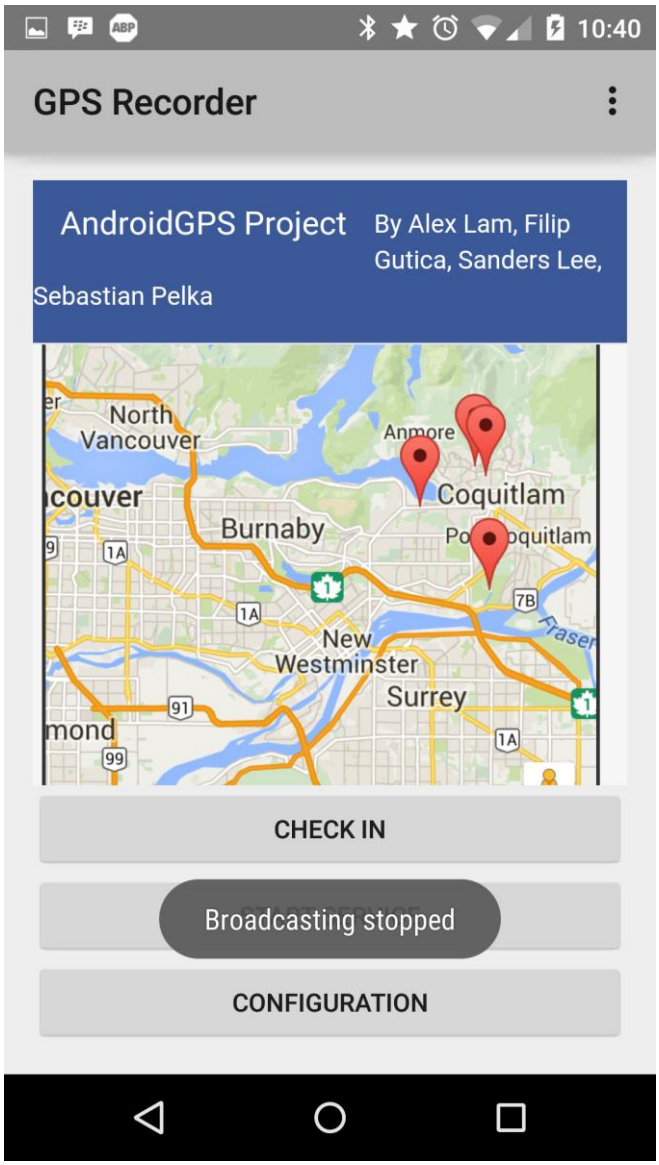
LOCATION MODE SETTINGS



STARTING THE SERVICE

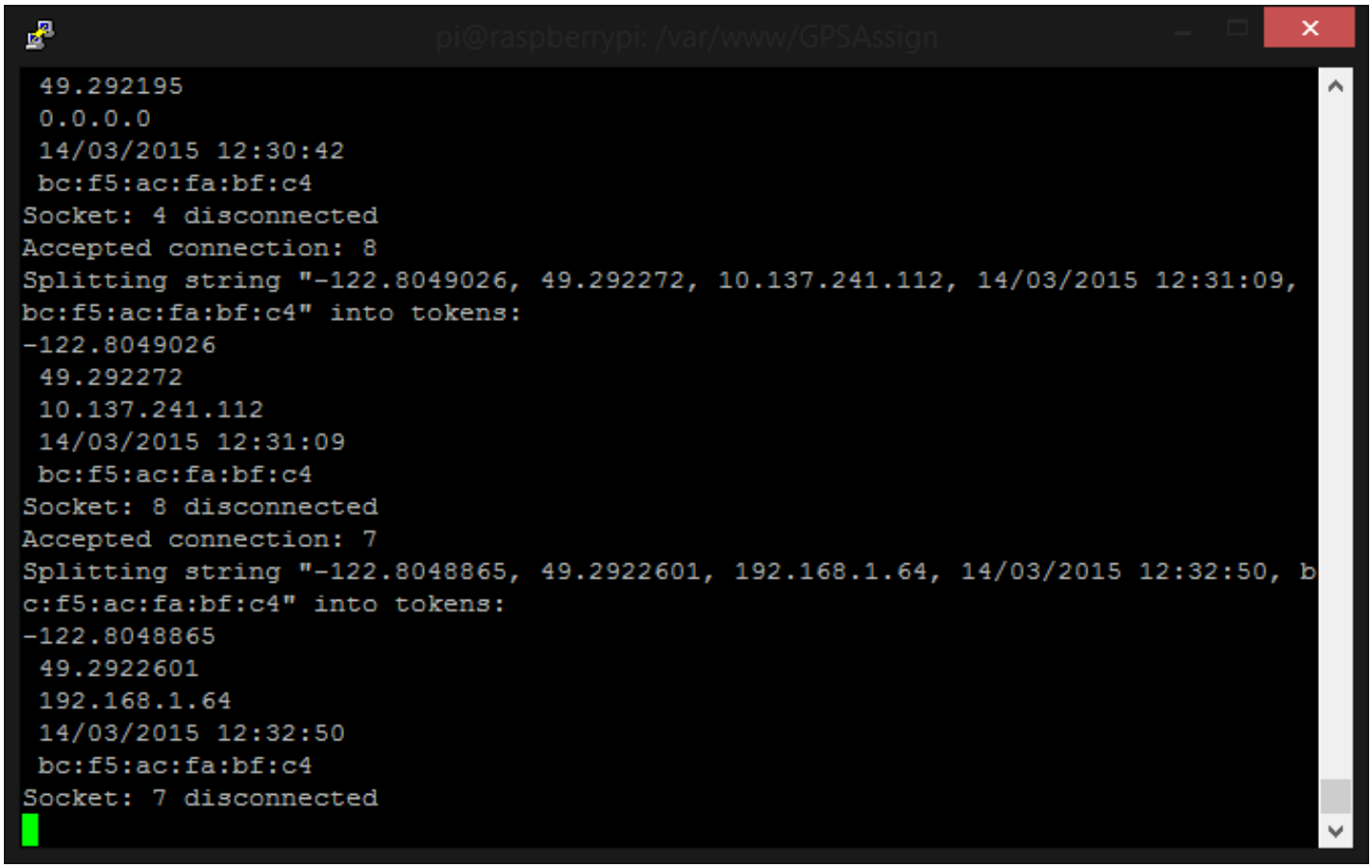


STOPPING THE SERVICE



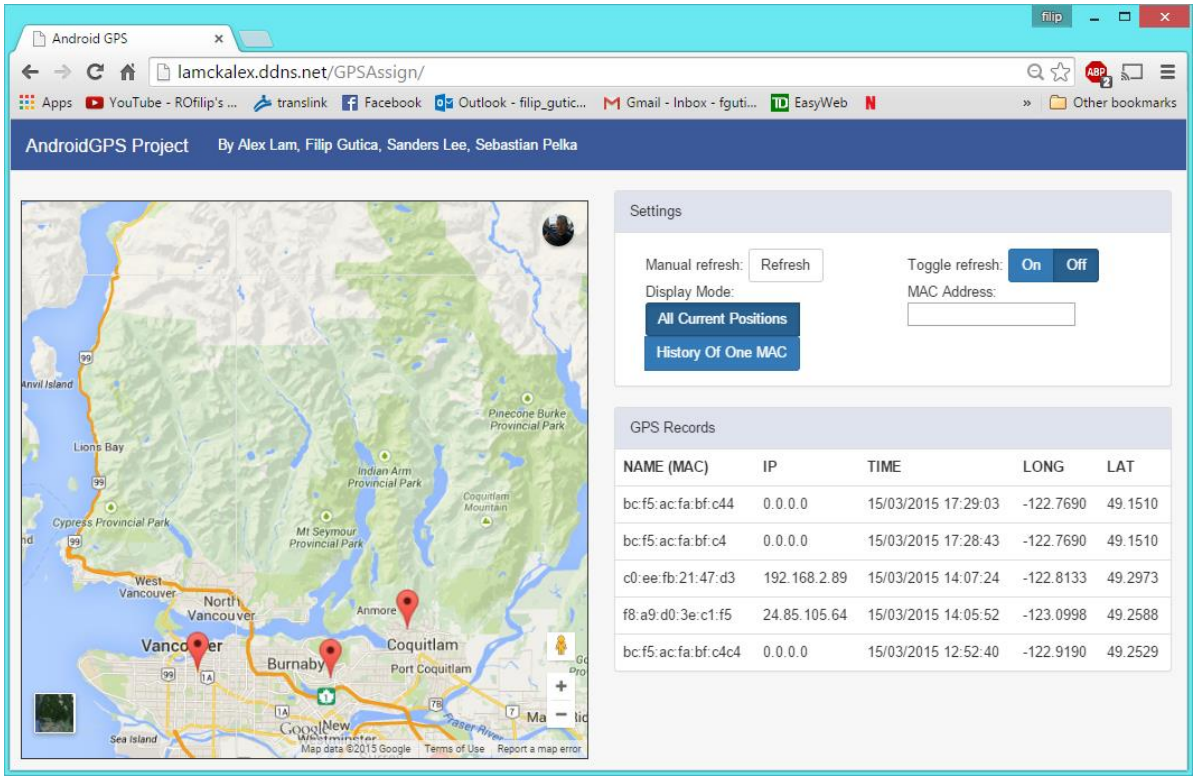
Server Testing Screenshots

RECEIVING CONNECTIONS AND PARSING:



Website Testing Screenshots

VIEW ALL CURRENT POSITIONS:



HISTORY OF ONE MAC ADDRESS: