

CprE 491 WEEKLY REPORT 11

Date: April 11, 2016

Group number: Dec1618

Project title: A Community Awareness System for Android Devices

Client: NSA, Dr. Daji Qiao, Dr. George Amariuca

Advisor: Dr. Daji Qiao, Dr. George Amariuca

Team Members/Role:

- Jason Wong: Team Leader
- Erik Fetter: Communication Leader
- Matt Gerst: Team Webmaster
- Shikhar Vats: Key Concept Holder
- Brad Anson: Key Concept Holder
- Adit Kushare: Key Concept Holder

✓ **Weekly Summary (Short summary about what you did this week)**

We took a step back from developing this week and worked on integrating all of our work together into one single application. Additionally, we did some field testing of our application in addition to using the routers. Overall, our system is working and definitely making great progress.

✓ **Past week accomplishments (please describe as what was done, by whom, when)**

- Adit, Matt, Jason, and Shikhar successfully conducted some field testing of the routers combined with our application.
- Brad added the full functionality of WiFiDirectActivity into our application.
- Shikhar worked on improving the previous Bluetooth RSSI measurement procedure by using an AlarmManager class and

updating the values every 30 seconds. But that might not be the most optimal way for the purpose as it tends to drain the battery much quicker and uses up most resources on the device.

✓ Individual contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Next Week Goals</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Jason Wong	<ul style="list-style-type: none"> ● Successfully tested ad-hoc capability of routers ● Integrated visualization changes into repo ● Fixed some repo issues found after updating application min SDK 	<ul style="list-style-type: none"> ● Prepare application demo for Daji Qiao ● Create UI for visualization on-click options 	5	51
Brad Anson	<ul style="list-style-type: none"> ● Dug into Serval Mesh to find where to update min SDK ● Integrated the WiFiDirectActivity into the Serval Mesh application 	<ul style="list-style-type: none"> ● Clean up WifiDirectActivity ● Have a better idea on how to piggyback MESHMS's services 	4	41
Adit Kushare	<ul style="list-style-type: none"> ● Successfully tested ad-hoc capability of routers ● Worked on integrating Mic sensor into application. 	<ul style="list-style-type: none"> ● Complete Integration of Audio and help the team with further testing. ● Work with networking team to send audio over network and look into streaming of audio over network 	3	35.5
Erik Fetter	<ul style="list-style-type: none"> ● Work on hooking into messages from MeshMS ● Set up access to building on server for batphone 	<ul style="list-style-type: none"> ● Look at ServalDNA ServerControl class to see if we can modify it to hook us in when new messages are received 	5	28
Matt Gerst	<ul style="list-style-type: none"> ● Successfully tested ad-hoc capability of routers 	<ul style="list-style-type: none"> ● Work with the other team to integrate the sensor data into the networking portion 	3	28

	<ul style="list-style-type: none"> • Worked on making sending data to other devices easier 	<ul style="list-style-type: none"> • Plan and start implementing an API for the other components to use the network 		
Shikhar Vats	<ul style="list-style-type: none"> • Successfully tested the ad-hoc capability of routers with Matt, Adit and Jason. • Modified the Bluetooth RSSI measurement process by using AndroidManager to scan for devices every 30 seconds. • Worked on fixing bugs in the RSSI implementation code from the previous version. 	<ul style="list-style-type: none"> • Finalize the Bluetooth integration with the existing Serval Mesh application and implement a distance measurement algorithm based on bluetooth triangulation. • Finalize the application for demo to Dr. Qiao and Dr. Amariucaí 	6	39

✓ Plan for coming week (please describe as what, who, when)

See chart for this info. Essentially we are moving closer to our goal of completing the first prototype of the application by the end of this semester, and we plan to continue the progress. We would need to work on the 2nd version of the Design Document.

✓ Summary of weekly advisor meeting (if applicable/optional)

We demoed our current applications capabilities to Professor Amariucaí and received some feedback. Overall, our project has been making some great progress. Some changes we need to implement include adding a new column to our individual contribution table to include information on upcoming week goals.