

CprE 491 WEEKLY REPORT 6

Date: February 29, 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 found that RSSI via Wifi may be harder than we thought. In result, we are exploring alternatives such as bluetooth. We finally received our order of devices from ETG and tested the devices successfully. We also set up the routers as a mesh network.

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

- ❖ MR3020 routers setup and successfully creating a mesh network.
- ❖ Shikhar Completed the service for SMS sending and receiving

✓ Individual contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Jason Wong	<ul style="list-style-type: none"> ● Retrieved ordered devices from ETG ● Rooted Nexus 6 and confirmed it worked with serval mesh in ad-hoc mode ● Rooted HTC One M8 and confirmed it worked with serval mesh in ad-hoc mode ● Setup 3 routers with OpenWRT and Serval Mesh software ● Successfully setup mesh network with routers 	6	35
Brad Anson	<ul style="list-style-type: none"> ● Completed local Debian/VirtualBox installation to enable client-side building ● Working with Eric to combine our projects so far, to launch the camera application through services 	3	23
Adit Kushare	<ul style="list-style-type: none"> ● Researched security of inter application communication ● Working on background sensor collection api ● Tinkered with website for class. 	2	22
Erik Fetter	<ul style="list-style-type: none"> ● Looking into combining the service app with the sensors and trying to find ways to prove the data or alternative architectures that will meet our needs. 	2	18
Matt Gerst	<ul style="list-style-type: none"> ● Worked on understanding the protocols used by serval mesh, and how to integrate our project ● Assisted Brad in installing Debian/Virtualbox to enable him to do local builds 	4	18
Shikhar Vats	<ul style="list-style-type: none"> ● Completed the SMSservice for sending and receiving sms activity. 	2	19.5

	● started working on finding rssi for direct neighbours in the network, using BluetoothAdapter class in Android		
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✓ **Plan for coming week (please describe as what, who, when)**

- ❖ Research customizing OpenWRT to involve authentication via a password.
- ❖ Find RSSI using bluetooth for not directly connected neighbours.

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

We informed the advisor that RSSI would not be possible with existing tools such as iwspy, iwlist, iwconfig, etc. In result, this task will be assigned to the PhD student helping us out. We were tasked to explore alternatives such as bluetooth RSSI. Additionally, we received our order of devices from ETG which included 2 Nexus 6 devices, 2 HTC one M8's, and 3 MR3020 routers. We were tasked to get the routers up and running a mesh network.