

sdmay18-15: Building wireless lab space on a college campus

Bi-Weekly Report 6

March 23rd - April 6th

Team Members

Alec Sauerbrei — *Curriculum Lead*

Colin Ward — *Communications Manager*

Hope Scheffert — *Documentation Manager*

Omar Taylor — *Software Design Lead*

Tyler Much — *Physical Design Lead*

Dalton Handel — *Networking Lead*

Summary of Progress this Report

The team has OpenBTS working on the SDR, which is quite the milestone. The faraday bin has been outfitted with the power and network cabling, and the team has the materials to mount the components to the inside of the bin. Nothing has been mounted yet though since it will be a quick process and it is much easier to test components when they can be moved individually. The server has a virtual machine loaded onto it, and is connected to the iastate.edu network. The server can be accessed off campus at sd-may2018.ece.iastate.edu when connected to the iastate VPN. There you can see the ESXi VM that is running (if the server is on at the time).

Pending Issues

While OpenBTS works on the SDR, there is still the issue of getting our phones to communicate across it. It may be a SIM card issue, and it may not be. This is the only large issue facing the team right now. The other items on the teams todo list include the final report, poster, spraying on the copper shielding, testing the bin with components, and polishing up the curriculum.

Plans for Upcoming Reporting Period

The team's plan is simply to finish strong. The final todo items have been outlined as told in the pending issues section, and while the final reporting period comes with a heightened sense of urgency, the team believes they have positioned themselves in a way to complete all the items left.

Individual Contributions

Team Member	Contribution	Week 1 Hours	Week 2 Hours	Total Hours
Alec Sauerbrei	Researching wireless attacks and PIRM review things and looking again into hackazon. Acquiring power drill. Working on the esxi server setup and first vm on the server for a template for student users. Drilling holes and setting up phones. Looking at accessing the gsm network from adb through the phone.	1.5	7	38
Colin Ward	Got the Faraday bin set up with the powerstrip and ethernet cable. This involved a small hole in the outer bin, and a power-strip shaped hole in the inner bin so that the power strip and cables can rest in the space between the shielding and the inner bin. We'll now have a single power cable and two ethernet cables coming out of the bin instead of all of the power cords, which allows the hole in the bin to be significantly smaller.	3	6	41
Hope Scheffert	Spent a ton of time trying to find a browser for the pi that can downgrade the ssl for the POODLE lab but no luck so far. Started revising Design Document 3.0. Also began working on the Final Report and Poster work. Helped Alec set up the server and install the student template VM. Also started working on Admin VM and helped drill holes in the cage.	4	6	41
Omar Taylor	Researched cellular attacks. Made attempts to connect our OpenBTS virtual machine to the SDR. While I was unsuccessful thus far, Dalton was ultimately able to get it working.	2	1	35
Tyler Much	Went to ace hardware to have them hold more recycled screens for us. reached out to industry sources to find better blocking material. made a list of the new stuff to order. arrived today. Configured the network connection on the server. Submitted MAC address to ETG to get it registered in .ece. I verified that it is online.	4	5	38
Dalton Handel	Set up bridged connection between VM and SDR through ethernet port. Can now	3	4	39

Senior Design Bi-Weekly Status Report

	run OpenBTS and transmit signal. Now just need to receive signal from phones. Contacting Doug to order SIM card materials for phones and looking for old SIM to test in meantime.			
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