

CyWi: Open-Source Wireless Innovation Lab for Smart Ag, AR/VR, and Beyond

Team Number: sddec19-02 **Client:** Dr. Hongwei Zhang **Faculty Advisor:** Dr. Hongwei Zhang

Team Members

Chenye Lim Ryan Cullinan
Jian Chew Shay Willems
Pawel Darowski Tyler Beder

Dates

November 23 to December 6, 2019

Biweekly Summary

Emulab proved to be too much for our time constraints. We opted to move to plan and manage the test bed through SSH. We finished soldering the motes so that they can all use the JSC to SMA cable. Installation of the motes on the ceiling began. Currently sitting at about 20 installed so far, we are waiting for antennas to ship to install the remaining motes.

Accomplishments

- Soldered capacitors and attached antennas to all of the motes
- Communication to motes through the NUC
- Duplicate the same OAI version that is used on other NUCs on the new NUC that is purchased successfully

Pending Issues

- Have to come up with a solution which can take care of the basic functions that are supposed to be offered by Emulab

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
-------------	--------------	--------------	-------------

Chenye Lim	Work on the SDR installation/usage documentation, being able to run SDR outside of testbed	15	103
Jian Chew	Work on the SDR installation/usage documentation, being able to run SDR outside of testbed	14	122
Pawel Darowski	Installed router and switch. Configured server with SSH, FTP, and HTTP services. Created the CyWi website.	14	105
Ryan Cullinan	Designed and 3D antenna mounts, attached them to motes. Soldered motes	8	86
Shay Willems	Flashed code through the nucs, finished adding antennas to all of the motes, identified the serial numbers and programmed in parallel	20	81
Tyler Beder	Soldered motes	8	63

Plan for Coming Week

- Finalize documentation on SDR/TI motes installation
- Finalize on “How to run experiment on our website” wiki page
- Put SDR and TI motes in place on the grid