EE 492 Biweekly Report 3

Timeframe: 2/09/18 – 2/23/18

Group: 38

Project: Sensors for Measuring Chemical Content in Soil

Client and Advisor: Dr. Liang Dong

Team Members – Broken down into 3 group roles (Control Box, Sensor, and Software).

Colin Cox – Software

Jarrod Droll – Sensor

Rachel Hoke – Sensor

Wage Miller – Control Box

Scott Rowekamp - Software

Tyler Thumma – Control Box

Summary:

Control Box – Client wanted a temperature sensor as well as switch (in order to control the power) added onto the circuit. Also, some parts were unavailable through our vendor. Completed part update to accommodate for parts being unavailable.

Software – Tested version one of the app with existing software. Defined api for data syncing to server and added logic for the temperature sensor. Made some inquiries about server hosting options.

Sensor – The sensors have been ordered and are scheduled to be in by the end of next week. Prepared finalized sensor files for future steps of printing shadow masks onto sensors. Continued with training for future steps of the sensor process.

Accomplishments:

Control Box – Added temperature sensor with voltage divider and switch to circuit in both Multisim and Ultiboard. Changed appropriate parts in Multisim and exported to Ultiboard.

Software – Colin Implemented the temperature readout and a rough implementation of the client side api to sync server. Scott Researched the best hosting provider to use for the project.

Sensors – Jarrod and Rachel completed lab safety training with Lee and have requested key access to the lab, as well as continued training for the laser printer lab. To prepare for the sensors coming in we reviewed again, the finalized design going through the steps for each layer of the sensors.

Pending Issues:

Software – We are waiting on some feedback from our client about how to display the nitrogen data over time. Waiting for ETG to respond about hosting a server for us and what it would cost. After that we can decide what hosting option we will use.

Individual Contributions:

Name	Contribution	Hours	Cumulative Hours
Colin Cox	Added Temperature sensor logic and client side api	4	14
Jarrod Droll	Lab safety training with Lee. Laser lab training online. Finalization of sensor files for printing shadow masks on sensors	6	16
Rachel Hoke	Lab safety training with Lee. Laser lab training online.	6	16

	Finalization of sensor files for printing shadow masks on sensors		
Wage Miller	Added temperature sensor and switch to circuit	5	15
Scott Rowekamp	Researched best hosting provider to use and developed rough api.	5	15
Tyler Thumma	Updated parts list. Changed parts in Multisim and updated new parts in Ultiboard design	5	15