

Weekly Status Report 6

Dates: 3/18/2018 - 3/28/2018

Group Number: sddec18-02

Project Title: Steam Heat Controller Retrofit

Client/Advisor: Lee Harker

Team Members - Role

Sarah Coffey - Reporting Lead

Ken Wendt - Webmaster

Liz Wickham-Kolstad - Design Lead

Jevay Aggarwal - Technical Lead

Joe Filbert - Client Lead

Thomas Devens - Planning Lead

Summary

We have obtained the boards we are considering for the project. We began creating code for each board so we could do benchmarking; each board needs to be configured for it's protocol and set up to receive/transmit. We were able to get each to connect to a PC, but not transmit data. The hardware group tested the motor and encoder with a power supply and verified that it is operational.

Pending Issues

Order decided microcontroller. Get the remanufactured motor mount from Lee.

Going Forward

Sarah, Liz, Thomas, and Jevay: Solder and program the alphanumeric display with the microcontroller, figure out how to communicate with UART over WiFi and Bluetooth, and benchmark the results.

Joe and Ken: Drive the motor through the H-bridge and research using the Raspberry Pi to generate PWM for the H-bridge. Create circuitry for the thermostat.

Individual Contributions

Name	Contribution	Hours Worked	Total Hours
Sarah	Obtained the BLE board and began programming the WiFi and BLE boards to connect to the Raspberry Pi.	6	43.5
Ken	Worked with Joe to verify the motor and encoder work.	12	46.5

Liz	Researched batteries for the thermostat, bluetooth command line utilities, and fixed the Pi that's collecting data that was taken down.	10	50
Jevay	Soldered the alphanumeric display to the I2C backpack. Helped troubleshoot the BLE code so it pairs.	8	43
Joe	Ordered the rest of the supplies for the motor mount through Lee and verified the motor and encoder with Ken.	7	47
Thomas	Updated Project Plan for V2 and started planning for web interface.	5	32.5

Meeting with Client/Advisor

Not applicable.