

# Weekly Status Report 9

**Dates: 4/10/2018 - 4/17/2018**

**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**

The team moved forward and made sufficient progress for the software and hardware goals. The hardware team finished coding the Raspberry Pi for PWM functionality and worked on adding encoder feedback to the code. This subteam also created the circuit that will interact with a button for powering the Feather board on and off, with optional control from the program. The software team continued trying to get the Bluetooth communication code functional, but decided that since battery life would no longer be a concern with the current design, that we could switch to the WiFi Feather Board. This communication protocol is a little easier to implement, so we can move forward on the design past the protocol issues.

## **Pending Issues**

Since switching protocols, we will need to get the communication going between the Feather board and the Raspberry Pi.

## **Going Forward**

Software team: Finish the WiFi code between the Feather board and Raspberry Pi. Integrate the display and button code and circuit with the WiFi Feather board.

Hardware team: Wrap up the motor and encoder control code for the Raspberry Pi and begin putting together controller box.

## **Individual Contributions**

<b>Name</b>	<b>Contribution</b>	<b>Hours Worked</b>	<b>Total Hours</b>
Sarah	Continued troubleshooting using Bluetooth for communication; evaluated the existing issues and decided to switch to the WiFi board. Began hooking up the thermostat circuitry to this new board.	6	60.5
Ken	Tested encoder feedback to the Pi and worked with Joe on the power circuit for the thermostat.	5	58.5

Liz	Programmed PWM and Encoder control on pi, helped develop the power control circuit for the feather board.	6	66
Jevay	Researched BLE connectivity to troubleshoot the communication issues and decided to switch to using the WiFi board. Helped work on connecting the WiFi board with the existing thermostat circuitry.	5	53
Joe	Connectorized motor cable, started perf board for i2c temp sensor, repaired motor connection.	5	62
Thomas	Not applicable for this week.	0	41

**Meeting with Client/Advisor**

Not applicable.