Bi-Weekly Status Report 2

Dates: 9/9/2018 - 9/22/2018
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

During the last two weeks, we encountered several technical challenges; some we were able to mitigate and solve, and other we were not. The hardware team has experienced some delay in ordering the PCB due to unavailability of resources. The software team discovered a design and planning error with the remote control unit (RCU) that greatly impacts the battery life. The hardware team has been working to help come up with a solution for the issue. The web team was able to create the database and begin working with it on the website within the last week; this team is now ahead of schedule.

Pending Issues

The RCU has to last an entire semester with a single charge; our team solved this problem last year through experimentation and calculation with a combination of microcontroller choice, software capabilities, and battery. We discovered this week that those calculations were incorrect. We are now working to find a solution that will work. The current solution needs approval from our faculty advisor. We also need to get the PCBs created as soon as possible to stay on track for the rest of the semester.

Going Forward

We will be focusing on getting our presentation for the PIRM complete this week, and through the next two weeks, our main priority will be finding the solution to the RCU battery life issue. We will also be channeling efforts into completing the PCBs.

Individual Contributions

Name	Contribution	Hours Worked	Total Hours
Sarah	Helped tie the server side code to the database and added functionality to route pages correctly from the server. Added correct data to the html pages and return certain variables from the html to the controllers.	12	27

Ken	Helped get the MCU PCB finalized. As well as currently working on our power consumption problem on the RCU.	14.5	20
Liz	Supported RCU circuit design, working on MCU control algorithm to take temperature from database and sensor and adjust the temperature accordingly	12	23
Jevay	Worked on getting the deep sleep part of the thermostat. Realized that won't work and so switched to using OR gates to turn off/on thermostat. Looking into other ways to do this.	10	20
Joe	Finalized MCU PCB, gathered bill of materials preparing to setup purchase with Lee	5	15
Thomas	Setup database and connected it to the website Created simple site navigation using floor plan image Started displaying relevant info on block page	10.5	15.5

Meeting with Client/Advisor

Not applicable at this time.