

sddec18-02: Steam Heat Controller Retrofit

Week 2 Report

January 28 - February 3

Team Members

Liz Wickham Kolstad — *Design Lead*

Jevay Aggarwal — *Technical Lead*

Sarah Coffey — *Status Reporting*

Joe Filbert — *Client Lead*

Ken Wendt — *Webmaster*

Thomas Devens — *Planning Lead*

Summary of Progress this Report

We decided to begin collecting temperature and valve position data to be used later in our project for the feedback system programming. We decided to implement a digital temperature sensor; however, with none on hand, we attempted to prototype a system using an analog sensor, so that we could start data collection sooner. Through failures in this experiment, we decided to shelve the analog sensor idea, and wait to begin collecting data until a digital thermometer is shipped.

Our team also white boarded a project timeline with goals and deliverables. This information will be reported in our Project Plan v1.

Pending Issues

We are still working on establishing a formal parts request system with our advisor.

Plans for Upcoming Reporting Period

Sarah, Liz, Jevay, and Thomas: Once we have the digital temperature sensor in hand, we will hook it up to a Raspberry Pi and begin our data collection. We will also come up with a strategy for the Raspberry Pi's to communicate with each other.

Joe and Ken: We will also begin researching appropriate motor configurations once we have more data on the torque requirements for the valve.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Liz Wickham Kolstad	Created a Bash script to automate the Raspberry Pi. Worked with UART on the Raspberry Pi. Began outlining the design document.	8	
Jevay Aggarwal	Worked on UART and ADC code on the Tiva M-series microcontroller.	7	15
Sarah Coffey	Worked on UART between the Tiva M-series microcontroller and Pi. Documented decision	7	15

	to use digital thermometer.		
Joe Filbert	Created and tested circuit using LM35 temperature sensor. Began setting up the formal part request system.	7	
Ken Wendt	Researched analog temperature sensors and helped create circuit using LM35 temperature sensor. Began modeling the circuit in Multisim for potential SPICE simulations. Assembled team bios and pictures for the website.	8	
Thomas Devens	Began creating the project plan document.	5	13