

**sdmay19-21: Distributed mesh network for data collection and predictive analytics**

Week 3 Report

September 24 - September 28

Client- Danfoss (Radek Korinicki)

Advisor- Craig Rupp

**Team Members**Ryker Tharp — *Database Design*Collin Vincent — *System Engineer*Colton Smith — *Project Manager*Gage Tenold — *Engagement Lead*Cody Lakin — *General Software Development*Will Paul — *Lead Architect*

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**Summary of Progress this Report**

Finished Project Plan

Created a rough Deliverables Document

Made the decision to go with a Wi-Fi based network and received Raspberry Pi's from the Client

Continued researching technologies (CAN bus, Electron, more Wi-Fi feasibility research)

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**Pending Issues**Waiting on additional hardware from the client for the Raspberry Pis'

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**Plans for Upcoming Reporting Period**

Acquiring Micro SD cards for each of the six Raspberry Pis, and Installing Arch or Alpine on each one. (Will, Colton, Collin)

Further research into CAN bus documentation (Cody)

Install and experiment with Python-can library, try to find data simulator (Cody)

Start building a base front end experiment Electron to test feasibility. (Gage)

Experimenting with rqlite (Ryker)

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**Gitlab Activity Summary**Added files for project website to repo.

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**Past Week Accomplishments (from Week 3)**

- Created Project Plan
- Began breaking into Hardware/Software Teams
- Planned out the new Design Document that will need to be submitted week 8
- Lots of Research followed by some basic adjustments to the Pis

## Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Ryker Tharp	<ul style="list-style-type: none"> <li>Worked on Project Plan, primarily sections 1 and 2.</li> <li>Started researching installation of RQLite on both node devices and central hub app.</li> <li>Started researching how to use RQLite.</li> </ul>	5	18
Collin Vincent	<ul style="list-style-type: none"> <li>Created arch linux arm micro sd</li> <li>Worked on project plan</li> </ul>	5	17
Colton Smith	<ul style="list-style-type: none"> <li>Experimented with Alpine Linux setup on Raspberry Pi</li> <li>Worked on Project Plan documentation</li> <li>Researched dynamic dns for potential uses</li> </ul>	4	17
Gage Tenold	<ul style="list-style-type: none"> <li>Worked on Project Plan and Deliverables Doc</li> <li>Started looking into possible technologies for the front end (primarily Electron)</li> </ul>	4	17
Cody Lakin	<ul style="list-style-type: none"> <li>Read about python-can, a Python CAN bus library</li> <li>Read about CAN bus purpose, uses, format</li> </ul>	4	15
Will Paul	<ul style="list-style-type: none"> <li>Continuing research on possible Linux Distributions for Raspberry Pi 3 B, and realizing the libraries needed for operation</li> <li>Continuing testing &amp; setup of distros in virtual machines, until SD cards are received</li> </ul>	4	16