

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

Report 9

November 12th - November 16th

Client: Danfoss/ Radek Kornicki

Advisor: Craig Rupp

Team MembersRyker Tharp — *Database Design* - BackendCollin Vincent — *System Engineer* - NetworkingColton Smith — *Project Manager* - BackendGage Tenold — *Engagement Lead* - FrontendCody Lakin — *Software Developer* - Hardware InterfacingWill Paul — *Lead Architect* - Hardware and Frontend

Summary of Progress this Report

Got the UI up and running in electron with push notifications.

Received PiCAN hardware from our client, Radek.

Pending Issues

- Waiting on a decision from the Database team about how they will pass of our data.
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Plans for Upcoming Reporting Period

- Have SQLite databases be able to transfer information to different machines, which will translate to the network nodes. (Ryker)
 - Begin linking data collection to storage in database / prepare for final presentation (Cody)
 - Be able to grab most recent data from tables to send to other devices. (Colton)
 - Start to try to replace our CSS with Photon, tweak the UI more. (Gage)
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Gitlab Activity Summary

- Pushed the current UI build up
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Past Week Accomplishments (Week 9)

- Got a basic UI up and running in electron featuring triggerable push notifications
- Read CAN bus values into JSON

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Ryker Tharp	<ul style="list-style-type: none">● Began planning for project presentation.● Assisted with setup of scripts into NodeJS.	6	59
Collin Vincent	<ul style="list-style-type: none">● Traded sd cards with some of the other team members● Copied the image to the traded cards	3	59
Colton Smith	<ul style="list-style-type: none">● Started implementing NodeJS API● Imported SQL scripts into NodeJS API● Started Pi to be test bench for API	5	60
Gage Tenold	<ul style="list-style-type: none">● Made our front-end in Electron● Configured push notification to work on windows● Found a new weather API to use	10	64
Cody Lakin	<ul style="list-style-type: none">● Worked on reading the values into JSON, making a new file	6	52
Will Paul	<ul style="list-style-type: none">● Received Picans from our client, begin reading documentation on them, and attaching them to the Pis.● Researched using a pican to emulate a construction vehicle with J1939, will need a DB9 cable to connect the PiCANS	7	52