CPRE 491 WEEKLY REPORT 08

Project Molecule

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2 WEEKLY SUMMARY

This week we continued to advance through the initial coding challenges of our project. This came in the form of more practice and tutorials with the languages we plan to use. We discussed the network layer more in detail and started work on the design document. We also took so time to discuss legal topics. Lastly we went more in depth on what kind of testing and results we want to see in our project. From there we split off to work on all our different parts as is discussed in our past week accomplishments below.

3 PAST WEEK ACCOMPLISHMENTS

Ryan Wade:
- Continued development of Web Components Library
- Identified Components necessary for Configurable UI
- Brainstormed Configurable UI Architecture

Nathan Volkert:
- Worked through the Redux tutorial
- Looked through the component library
- Worked on design document for UI testing and particle flowchart

Daniel Griffen:
- Finished prototype of Network & Service Discovery Layer
- Created interactive shell to demo network layer

Alex Berns:
- Worked on design doc for particle
- Worked though redux tutorial
- Looked at Ryan's Web Component Library

4 INDIVIDUAL CONTRIBUTIONS

NAME	Hours this week	Hours cumulative
Ryan Wade	12	41
Nathan Volkert	8	34
Daniel Griffen	12	38
Alex Berns	9	36

5 COMMENTS AND EXTENDED DISCUSSION

5.1 WEB UI COMPONENTS LIBRARY

https://github.com/ryanwade/react-foundation-components

This week further testing was performed on the Web-Components library. A prototype UI was developed to use the components and integrate them with our project. Other UI components were identified that are needed to create a configurable UI. After creating the necessary UI components, work will be done to integrate Redux as the backing store for use in the configurable UI

UI Components Demo:

Identified Component Types to be developed

- Menu
- Navigation
- Layout

Features:

- MouseEvents: onClick() – User Interraction – to be integrated with redux
- DataEvents: onChange() – to be integrated with redux

5.2 NETWORK LAYER COMMUNICATION PROTOTYPE

https://gitlab.com/may1739-molecule/molecule-core

This week the network layer prototype was finalized. A preliminary API was created that will allow the management and security layer to transparently interact with other nodes in the system. Thorough testing of the system still needs to be done, but early testing shows that the system is fully functional.

Features

- Device Registration
- Service registration
- System shutdown
- Service message passing
- Transparent routing to devices

6 PLAN FOR COMING WEEK

Nathan and Alex will start working with Ryan to build the configurable UI and should get a demo up and running in the next week. Ryan will continue work on the React Foundation Component library, which will be used to create our UI system.

Daniel will continue work on the Network API and start getting multiple nodes to communicate and get that testing done. We have not been able to boot the Pis yet for testing but hope to have the parts arrive soon so the network API and server can be deployed to them.

Additionally, we will be finishing the Design Document and integrating the parts we wrote into the final document. We also plan to discuss the design document with Dr. Somani. Parts need to be signed off on and validated.

7 SUMMARY OF WEEKLY ADVISOR MEETING

Our Advisor was out of office this week so we did not meet with him. Instead we spent the time working individually on the project