
EE / CprE / SE 492 - Bi-weekly Report 3

2/10/18 - 2/23/18

SDMay18-41

Free Market P2P Energy Trading and Analytics

Client: Sodima Solutions

Adviser: Goce Trajcevski

Team Members/Role:

Arun Sondhi: Embedded Engineer/Hardware-Software Interface Lead

Alec Dorenkamp: Software Engineer (back end)

Noah eigenfeld: Software Engineer (front end)

Brendon Geils: Software Engineer/Technical Lead

Jack Myers: Hardware Engineer/Project Manager

Joe Staudacher: Hardware/Power Engineer

Weekly Summary

The last two weeks were spent implementing many of the initial features of the web application, gathering materials, and creating PCB schematics. On the software side, we implemented the basic functionality for user authentication and account creation. The hardware team ordered and received parts from ETG and drew up schematics for the components of our PCB. Looking forward, we are planning to get our PCB ordered and move into account configuration and basic trading features.

Accomplishments in past two weeks:

Arun:

- Worked on React Native app
 - Learning the structure of the current application
 - Completed initial implementation of the app, which includes the nav element

Alec:

- Worked on Eve for Python authentication implementation
 - Still a bit of work to do

- Familiarized self with MongoDB

Noah:

- Okta account creation complete - still needs some polish
 - Still need to populate the user in the DB, but that should be a simple insert statement
- Getting familiar with React and writing Okta requests

Brendon:

- Worked on trading UI boilerplating
 - Waiting on complete account creation functionality to start implementing trading functionality
- Created new repository for us to work from: github.com/bgeils/openenergy
 - Contains web app, API, and hardware material
 - Old repo only had the web app
- Got settings page working

Jack:

- Performed tests with existing hardware in the lab to determine cause of bad data
 - Reason: we were assuming constant output for voltage, when it's actually more of a sine wave
- Looked into power supplies to figure out how we will safely get to 120V to power the smart meter
- Worked with Joe to put together parts list
- Ordered and recieved parts from ETG and checked that we have everything we need
 - Still a few parts short, as they were on back order; we also need to order a few connectors
 - 95% of the parts - enough to allow us to verify our PCB design more effectively

Joe:

- Tested power clamps in lab with Jack (see above)
- Started learning PCB design
- Worked on base design of PCB with the goal to finish by the end of the week so we can order it

Pending Issues

- Put final touches in to finish authentication
- Implement MongoDB account creation so that we can start working on data analytics and energy trading functionality
- Expand the implementation of existing components in the React Native app

Individual Contributions

Team Member	Contribution Summary	Bi-Weekly Hours	Total Hours
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			(Semester)
Arun Sondhi	Worked on the React Native application, implementing some of the initial components	16	38
Alec Dorenkamp	Worked on web app authentication through Python API	16	38
Noah Eigenfeld	Implemented user account creation through Okta, working on MongoDB account creation	18	40
Brendon Geils	Worked on web app UI and settings page, set up new repository	25	65
Jack Myers	Tested power clamps with Joe, drew up PCB designs, picked up parts for testing PCB	25	67
Joe Staudacher	Tested power clamps with Joe, worked on PCB designs	20	50

Plan for coming weeks

Hardware team:

- Acquire the rest of the parts that we need
- Order PCB
- Start testing the PCB design with the parts that we already have

Software Team:

- Finish Account creation and begin work on account configuration
- Finish authentication functionality
- Begin work with database management/data aggregation
- Start work on basic trading features
- Continue implementing components on the React Native app

Arun:

- Continued work on the React application, mainly focused on implementing the existing features from the web application for the near future

Alec:

- Finish authentication functionality
- Begin work with database management/data aggregation

Noah:

- Finish account creation
 - Implement MongoDB side of account creation
 - Polish up the existing account creation page
- Begin work on account configuration with Brendon

Brendon:

- Work with Noah on account configuration
- Start implementing trading features

- Continue improving settings page

Jack:

- Complete PCB designs
- Order the PCB and begin testing it

Joe:

- Work with Jack to complete PCB designs
- Order the PCB and begin testing it