sdmay18-22: Adaptive Wireless Wearable Neuro-Stimulator
Week 5 Report
October 1 - October 7

Team Members

Kevin Wang — *Meeting Facilitator*
Kevin Simons — *Test Engineer*
Matthew Stephenson — *Report Manager*
Patrick Walsh — *Communications Manager*
Brian Weber — *Chief Engineer*

Summary of Progress this Report

This week, we had a meeting with our client to go over some new developments in our project from the previous week. Last week, we had discussed with our faculty adviser the feasibility of creating our own custom printed circuit board. After this discussion, we figured that it was not a possibility in the time frame that we had, and that a proof of concept would be a better idea. During our meeting with our client, we proposed the idea of just creating a proof of concept circuit on a breadboard connected to an evaluation board. The client OK'd the idea, and we are moving forward with that in mind. Also, during the meeting we nailed down more specific specifications for each piece of the project. We established what readings the client wanted from the device, the components he desired to have in the device, the amount of data he wanted stored in the device, and many other things that we will be adding in our project plan. We also got more specific requirements for the android app and web app so that we produced exactly what the client wants.

In the middle of the week, after the lightning talks, we decided to restructure our project timeline so that it fit the updates. On that day, we ended up completely re-doing the timeline. We also assigned official tasks to each group member and created an issue to reflect that in git lab. As a group we made sure that everybody knew what they were to get done, and made sure that everybody gets to do a piece of what they want.

We have also begun to do the Design document, and are hoping to have the first draft done by this coming Wednesday.

Pending Issues

Design. We need to work on our design document as a team to better hash out our project design. Additionally, we need to work on designing our web app as well as android app and circuit design.

Plans for Upcoming Reporting Period

This week after meeting with the client we discovered that we were working on the wrong data, so we will be looking into getting graphs for the appropriate data. Additionally we will work on building a design document for the project as a whole. We also are looking into the correct parts to order. We have a list of possible parts we found, but we are going though and looking at the power consumption as well as size of those components to try to find the best power, performance, and size balance. Once we do that, we will look into developing a circuit.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Kevin Wang	Worked to help out to make sure project timeline was still feasible with the changes made. I will be taking on working on the Android application design along with Pat. I've started on some very preliminary sketches on paper, which will need refinement.	4.5	18
Kevin Simons	After giving our client an update about where the data processing is, figured out the graphs I was creating, although helpful, were not the data he was looking for. The low frequency wave files were the matlab and binary files which I had incorrectly assumed to just be the raw data for the ascii files. So now I am working with the client and the source of the data to create graphs for the correct data. As well as discussing design direction for our database, and what data we will be displaying on the web app frontend.	6	25
Matthew Stephenson	Submitted reports as well as started refreshing EE knowledge. It has been a long time since I had an EE course so I was refreshing my basic circuit calculations. I then used that knowledge to start pouring over data sheets with the goal of calculating power consumption of different components we had selected as possibilities for use in our circuit so that we can compare them. I additionally found a couple more parts to consider. I will continue looking at that in the next report period.	4	24.75
Patrick Walsh	This week I set up a meeting with the client, made sure that all necessary points were covered during the meeting, I made significant changes to our project timeline, created multiple issues in the project backlog, assigned issues to group members, updated the project plan, wrote my section of the design document, updated our faculty adviser with the group's activities for the week, set up android studio project for android app.	4.5	23.5
Brian Weber	Worked with Matt with calculating and viewing the data sheets of circuit parts for our prototype. We calculated the power	4	16.5

	consumption and price of the parts to find the best parts for the prototype.		