EE 491 Weekly Report MAY 15-26   Week 9(10/27/14-11/2/14)

Advisors: David Jiles and Ravi Hadimani

Client: Iowa State University/Magstim Company LLC

Members (roles): Jessica Staley (GUI/Leader), Saurabh Minocha (SEMCAD/Webmaster), Anqi Deng (3D Design & Modeling/Communication), Yixiao Shen (Comsol/3-D Printing/Key concept holder)

Project Title: Design and Development of Adjustable Halo coil for Non-Invasive Treatment of Brain Disorders

Weekly Summary

The main goal this week was to keep track of our Gantt chart and try to be on track with it. We also tried to find the actual part of our new design and figured the whole structure. We continued working on our individual tasks.

Meeting notes

10/6   Group meeting with advisor

Duration: *60 min*   **Members Present:** *Jessica, Saurabh, Yixiao*

Purpose and Goals:

We presented our personal progress for the previous week to our advisor and he gave ideas and suggestions for the coming week.

Achievements:

1.   Figured out what type of connector to use to communicate with the pulse generator

Pending issues

1. Discuss the detail design of our new structure.
2. Continue our research on the suitable parts of the new design.
3. Work on the second version of project plan.

Plans for next week

Jessica: Continue troubleshooting the existing linear actuator, program remote start using rs232, finalize second linear actuator code.

Saurabh: Continue with SEMCAD simulations for different types of coils on heterogeneous head models.

Anqi: Give ideas about the details of our new design, ask advisor if the part idea can be used in our new structure, do research about linear actuators we may use, finish the second version of project plan.

Yixiao: Edit the second version of the project, give ideas of the new structure design. Talk and work with other group members to give a new design about the machine. Do some research about the essential hardware required on websites. Continue work on COMSOL.

Contributions (individual)

Jessica Staley: Attended meeting, worked on design document, began troubleshooting the existing linear actuator movement, researched how to program for the rs232 connector, calculated and coded in the rotation movement. (8 hrs.)

Saurabh Minocha: practiced simulations for aa figure 8 coil bent at an angle of 60 degrees over a homogeneous head model. Found the maximum Electric as well as magnetic fields along all axes and interpreted different slices of results. Continued building the website. (7.5 hrs)

Anqi Deng: Attended the meetings, compiled the design document and weekly report, did research about the coil holder whether it could be used, modified existing parts in Solidworks.(7 hrs)

Yixiao Shen: Attend the meetings, give idea of the design. Do simulation in COMSOL for our new structure design. Doing research about the required hardware. prepare for the second project design document. (8hrs)

Contributions (Total)
Jessica Staley: 60 hrs
Saurabh Minocha: 60 hrs
Anqi Deng: 60hrs
Yixiao Shen: 61 hrs