

EE 492 Progress Report 4

MAY 15-26

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/Key concept holder)

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

Summary

The main goal this period was to get the RF module communicating with each other and also connected the Wixel shield to the Arduino board to wirelessly give command from computer. We also wrote a power point of our project, preparing to present to our course instructor.

Meeting notes

03/25 Group meeting with advisor

Duration: 60 min

Members Present: All

03/27 Group meeting with group

Duration: 60 min

Members Present: All

04/01 Group meeting with advisor

Duration: *60 min* **Members Present:** *All*

04/03 Group meeting with group

Duration: *60 min* **Members Present:** *All*

Purpose and Goals:

We gave a presentation to our course instructor to give him a overall idea of our final project and the instructor gave some advice for our power point. We also presented our personal progress for the previous week and seek some advice from our advisor to see what is the problem about our module.

Achievements:

1. Found ways to solve the module issue
2. Had our side linear actuator arrived and ready to test

Pending issues

1. Test the linear actuator
2. Design and build proper support part for grap the cord of the coil

Plans for next period

Jessica: Get the rotational actuator working with the set up.

Saurabh: Continue simulations on SEMCAD and rotations.

Anqi: Help to test the side linear actuator and assemble the actuator to our system to see if it is fit.

Yixiao: Receive the new structure and assemble that see if it will meet our requirements.

Contributions (individual)

Jessica Staley: Troubleshoot the rotational movement, ordered an H-bridge to connect it to the system.

Saurabh Minocha: SEMCAD simulations for rotations 25, 30 and -5 degrees.

Anqi Deng: Attended the meetings, test the side linear actuator, draw a 3D graph for the structure of holding the side linear actuator and write progress reports.

Yixiao Shen: Attend the meetings, give idea of the design. Draw my structure design picture for Anqi, and let her make a 3D graph. Send the graph to electrical shop, talk my idea with Lee and let him do that for me.