

EE 491 WEEKLY REPORT 6

Date: 2/29/2016

Group number: DEC1619

Project title: Drive Circuitry for Ultrasound Brain Simulator

Client &/Advisor: Dr. Bigelow

Team Members/Role: Zechariah Pettit – Team Webmaster, Honghao Liu – Key Concept Holder, Miguel Mondragon – Team Leader and Webmaster

✓ Weekly Summary (Short summary about what you did this week)

Had weekly meeting with Professor Bigelow where viability of several ideas was discussed as well as a further discussion the timeline and important dates for the project. Group members did individual work when able. Had team meeting on Saturday.

✓ Past week accomplishments (please describe as what was done, by whom, when)

- ❖ Group met with Dr. Bigelow at 9AM on Wednesday for discussion of project plan, possible microcontrollers for DAC Multiplexer, and general discussion on project.
- ❖ Group met for weekly team meeting on Saturday. Met to determine current progress and plans for work prior to Spring Break.
- ❖ All group members worked on their individual circuit portions and the designs for them. Honghao is researching microcontroller usage to perform DAC Multiplexer function as well as working on a Simulink diagram for the testing of other ideas. Zechariah is working on amplifier circuit designs. Miguel is working on parts research for the individual filters and constructing mock breadboard circuits.
- ❖ Established group email as DEC1619@iastate.edu

✓ **Pending issues (if applicable)**

- ❖ Spring Break will mark an end of work till class resumes.
- ❖ For parts to arrive for use prior to the end of the semester ordering need to occur soon.
- ❖ The process for utilizing our senior design funds is not clear at the moment.

✓ **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Honghao Liu	Individual Assignment Research, Team Meeting	4	13
Miguel Mondragon	Professor Meeting, Individual Assignment Research, Team Meeting	3	13
Zechariah Pettit	Professor Meeting, Individual Assignment Research, Team Meeting	3	13

✓ **Comments and extended discussion**

None.

✓ **Plan for coming week (please describe as what, who, when)**

- ❖ Meet with Dr. Bigelow at 9AM on Wednesday.
- ❖ Miguel Mondragon continues working on physical testing of low pass filter designs with plans to move into PSPICE simulations once final op-amp is decided on.
- ❖ Zechariah Pettit reworking amplifier plans as well as researching new amplifier circuits to reach target signal.

❖ Honghao Liu will continue research for his signal splitting ideas and intends to work on a Simulink model for his theories. In addition he is looking at the use of a specific TI microcontroller.

✓ **Summary of weekly advisor meeting (if applicable/optional)**

Meeting was an hour long. Discussion topics included viable microcontrollers to use, ideal part parameters, and further discussion on specifications.