

## EE 491 WEEKLY REPORT 1

Date: 2/15/2016

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, Honghao was absent due to illness. Weekly group member meeting was cancelled due to cybersecurity competition. Members worked on individual portions of work.

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

- ❖ Group met with Dr. Bigelow at 9AM on Wednesday to discuss further ideas, needed specifications, and questions. Short meeting. Honghao was absent due to illness.
- ❖ Group decided to cancel weekly team meeting as Zech was working on the cybersecurity competition. In addition group members agreed there was nothing pertinent to discuss.
- ❖ All group members worked on their individual circuit portions and the designs for them. Honghao is working on the splitting of our initial input signal and is researching additional methods to do so. Zech is working on amplifier circuits designs and has obtained a microcontroller kit to simulate the expected inputs to his circuits. Miguel has done further research on low pass filters for the circuits and done research into the necessary op-amps for the project.

✓ **Pending issues (if applicable)**

- ❖ Possible lack of PSPICE modes for necessary simulation work.
- ❖ Midterm tests will result in a lack of time in the coming weeks to expend on the project.
- ❖ !! Not sure what avenue the group should be using to set up group email. Discussed with group members and they also had no answers.

✓ **Individual contributions**

<b><u>NAME</u></b>	<b><u>Individual Contributions</u></b>	<b><u>Hours this week</u></b>	<b><u>HOURS cumulative</u></b>
Honghao Liu	Individual Assignment Research	1	7
Miguel Mondragon	Professor Meeting, Individual Assignment Research	1	8
Zechariah Pettit	Professor Meeting, Individual Assignment Research	2	8

✓ **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 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.

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

Meeting was only a half-hour long. Asked questions regarding specifications for input and output signals at various stages of the circuit. A few discussions regarding testing work.