EE 491 Weekly Report   MAY1612   Week 3 (9/15/15-9/22/15)

Advisors: Mani Mina, John Pritchard   **Client:** Minnetronix
Members (roles):   Brandon McDonnell, Group Lead; Justin Long, Web Master
                        Timothy Dee, Key Concepts; Corey Wright, Communications
Project Title: Remotely Connected Electric Field Generator for Particle Separation in a Fluid

Weekly Summary

This week we meet as a team to review and do a small trail on some advanced designs that we could use for the signal process section of the project. We meet in the TLA at one of the electronics stations and used the equipment there to test old designs from EE 230 that pertained to what we doing, notably a wave sine wave transformer and rectifier.

Meeting notes:

At 3:00 pm on Thursday the 17th a meeting was help between our group here at Iowa State University in the TLA room in Coover hall. There we made use of the electronics station to test and transformer and rectifier circuit. This was an ideal model for a rectifier circuit and we discussed ways this could be implemented into out design to complete the sine waveform that we are looking for. We considered have a microcontroller connected to a non-local source that is toggled at high speeds to produce something of a pulse function. This would dictate the frequency of our wave. We would then use amplifiers to take this function and to create the higher voltage sine wave that is required.

9/17   Group Meeting with team

Duration: 1.5 hour   **Members Present:** All

Purpose and Goals:
Test a circuit for viability in our particular project. Meet and discuss possible solutions to what type of components we would need and how they would be connected.

Achievements:
We found a useful circuit that we may use in the long term and tested its viability. This circuit was modeled on a bread board and worked relatively well. Further test will be needed.

Pending issues

1. We now need to continue doing research into how exactly we can accomplish our goals and through what means
2. We need to have a block diagram ready by the time we meet with John Pritchard again on the 24th
3. We need to learn what sort of products are available to be used, particularly the function generator part of our circuit
4. It would be good to start setting out what systems we want to use with what parts of the project (coding languages, programs, etc.)

Plans for next week

Describe who will do what …..
1. All: brainstorm ideas on how to build our circuit and look into what products could fit our needs
2. All: Complete the block diagram and have it ready to present by this Thursday, the 24th
3. Brandon: Facilitate further meetings with John and Prof. Mina

Individual Contributions (this week)

Brandon McDonnell	(1.5hr)
Justin Long	(1.5hr)
Tim Dee	(2.5hr)
Corey Wright	(1.5hr)

Total contributions for the project

Brandon McDonnell	(3.5hr)
Justin Long	(3.5hr)
Tim Dee	(4.0hr)
Corey Wright	(4.0hr)