sdmay23-29: Building blocks and sub-circuits with magnetic field generators
Week 4 Report
October 6 - October 12

Team Members

Andrew Murphy — *Circuit and Optical Design*
William Nichols — *Circuit and Optical Design*
Michael Lopez — *Circuit and Optical Design*
Steven Huynh — *Circuit and Optical Design*
Umair Sarwar — *Circuit and Optical Design*

Summary of Progress this Report

For this week, we were asked to read and look into specific research articles, create NI Multisim simulations, and MATLAB Simulink simulations. We were asked to use NI Multisim to create a transient simulation with component values that are optimal. Also we were asked to create a Simulink simulation using an ideal coupler.

Pending Issues

We have no pending issues from last week's report. Our client wants us to fully understand the NI Multisim and Simulink simulations. So, we will spend the next few weeks on the same tasks.

Plans for Upcoming Reporting Period

Next week we plan on exploring different types of MOSFETS and inductors for our circuit. We will also keep learning and exploring with our Simulink designs. Lastly, we plan on learning about Comsol and using the program to simulate the optical portion of the project.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Andrew Murphy	This week, Andrew primarily focused on NI Multisim and Simulink. Andrew came up with values for each component in the Multisim circuit and experimented with each component's value. Andrew also explored with a directional coupler in Simulink for the optical design and did some individual optical research.	14	48
William Nichols	This week, William primarily focused on NI Multisim and Simulink. William came up with values for each component in the Multisim circuit and experimented with each component's value. William also explored with a directional coupler in Simulink for the optical design and did some individual optical	10	41

	research.		
Michael Lopez	This week, Michael primarily focused on NI Multisim and Simulink. Michael came up with values for each component in the Multisim circuit and attempted to calculate the rise time based on the values through MATLAB. Michael also explored with a directional coupler in Simulink and did some individual optical research.	8	41
Steven Huynh	This week, Steven primarily focused on NI Multisim and Simulink. Steven came up with values for each component in the Multisim circuit and spent time on understanding each component. Steven also explored with a directional coupler in Simulink and did some individual optical research.	15	48
Umair Sarwar	This week, Umair primarily focused on NI Multisim and Simulink. Umair came up with values for each component in the Multisim circuit and experimented with each component's value. Umair also explored with a directional coupler in Simulink and did some individual optical research.	12	43

Gitlab Activity Summary
Nothing to report.