

sdmay23-29: Building blocks and sub-circuits with magnetic field generators

Week 3 Report

September 29 - October 5

Team MembersAndrew Murphy — *Circuit Design*William Nichols — *Circuit and Optical Design*Micheal Lopez — *Optical Design*Steven Hyunh — *Circuit Design*Umair Sarwar — *Circuit and Optical Design***Summary of Progress this Report**

For this week, we're asked to look into research articles, perform Simulink simulations, and NI Multisim Simulations. We were asked to create constructive and destructive systems of the MATLAB Simulink simulations of the coupler block within MATLAB. The research article helped us understand the optical simulations being performed. The NI Multisim simulation will be based on our circuit design capabilities to create a valid simulation.

Pending Issues

We have no pending issues from last week's report. Our client wants us to fully understand our circuit, so we will spend multiple weeks expanding on the same tasks. The same goes for the optical simulations.

Plans for Upcoming Reporting Period

Next week we plan to ask questions about the research article we read about this week, fine tune our circuit analysis in NI Multisim, and build upon our Optical Simulation of splitting of the signals.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Andrew Murphy	This week Andrew primarily focused on MOSFET choice. He came up with prime options for the MOSFET. He also did some individual research regarding optical systems.	10	20
William Nichols	This week William focused on our optical simulations in Simulink and circuit design. He also worked on creating a simulation of our MFG circuit with Micheal Lopez. He also spent some time looking and potential MOSFETs and did some individual research on optical systems.	10	18
Micheal Lopez	Michael spent the majority of his time working in Simulink to make a working	15	23

	simulation of our optical simulation and MFG circuit in Simulink. He also spent some time looking for potential MOSFETs and researching optical systems.		
Steven Hyunh	Steven spent the majority of his time this week looking for potential MOSFETs and performing individual research on optical systems.	10	20
Umair Sarwar	This week Umair spent most of his time looking for potential MOSFETs. He also spent some time working in Comsol working on simulating our MFG circuit. Lastly, he spent some time doing individual research on optical systems.	10	19

Gitlab Activity SummaryNothing to report.
