

Fast, Compact, High Strength Magnetic Pulse Generator

EE 491 Weekly Report

May 15-30

Week 13 (11/24/14-12/01/14)

Advisors: Mani Mina, John Pritchard, Robert Bouda
Client: High Speed Systems Engineering Lab
Members: Team Leader – Adam Kaas
Team Webmaster – Gregory Fontana, Meiyong Himmtann
Team Communication Leader – Brittany Duffy
Team Key Concept Holder – Megan Sharp, Brandon Dixon
Team Commissioner – Alain Ndoutoume
Website: <http://may1530.ece.iastate.edu>

Weekly Summary

This past week, Iowa State was on Thanksgiving break. The majority of the break consisted of members working on the Project Plan, Design Documentation, and PowerPoint presentation for the panel. Our circuit parts for the prototype were ordered this week, with hopes that we will get all necessary parts in by the beginning of this week.

Meeting Notes

No meetings this week. Iowa State was on Thanksgiving Break.
Our team has ordered the following components for our design:

Quantity	Digi-Key Part Number	Item Description	Cost Per Unit	Total Cost
10	399-3677-1-ND	0.1uF Capacitor (Tantalum)	0.329	\$ 3.29
10	497-6085-1-ND	Diode	0.722	\$ 7.22
4	718-1945-1-ND	220uF Capacitor (Tantalum)	10.88	\$ 43.52
10	490-1312-1-ND	0.01uF Capacitor (Ceramic)	0.012	\$ 0.12
10	SM6227FT50R0CT-ND	50 Ohm Surface Mount Resistor	1.26	\$ 12.60
2	MP725-0.050-FCT-ND	0.05 Current Sense Resistor	9.13	\$ 18.26
2	ED2675-ND	Wire-to-Board Connector (30A/300V Rating)	1.04	\$ 2.08
4	J716-ND	Coaxial Connector	4.84	\$ 19.36
			Total Cost	\$ 106.45

Pending Issues

N/A

Plans for Next Week

Adam: Complete Design Doc and Project Plan and start finalizing the presentation so it is ready to show to Taichi if he wants to see it. Meet with John if possible to discuss our presentation.

Greg: Help with presentation and be comfortable with discussing our project.

Meiyong: Help complete Design Document, Project Plan and presentation. Get a new prototype made.

Brittany: Complete Design Doc, Project Plan, and Powerpoint presentation for panel and our “client”, Taichi. Be able to tell the story of our project. Have a complete understanding of components in our circuit design.

Megan: Help complete Design Document, Project Plan and presentation. Finish the physical coils.

Brandon: Meet with John to discuss PCB alterations and finalize PCB layout. Complete project plan and design document.

Alain: work and improve final version of the project plan and design document. Revise the final version of the implementation of the new circuit on eagle with John before create the new PCB on protomat S62, getting ready our presentation.

Individual Contributions This Week

Adam: Design Document and Project plan edits/review (1.5 hrs), Prepare presentation breakdown and for meeting (1 hr).

Greg: Took a Break (N/A).

Meiyong: Website edits (.5hr).

Brittany: Design Document and Project Plan delegations such as what needs to be done where and what needs updating (1 hr), Contribute towards Design Doc and Project Plan content (4 hrs).

Megan: Reviewed design document and project plan changes (0.5 hrs).

Brandon: Created parts on Eagle and recreated schematic to match new circuit design (6 hrs), created layout for new circuit (1hr), worked on design document (0.5 hrs).

Alain: Learned more about Professor Taichi Goto by visiting his website, reading his research, resume, education and background (1hr). Thought about questions Brittany emailed us and made some research about them (1hr)(mostly the pinch off our mosfet I didn't know what a pinch of the mosfet was and whether we were respecting it or not).

Total Contributions for Project (This Week / Total for Semester)

Adam: 2.5 hrs/ 56.15 hrs

Greg: NA /48.75 hrs

Meiyong: 0.5hrs / 54.25 hrs

Brittany: 5 hrs / 75.3 hrs

Megan: 0.5 hrs / 48.5 hrs

Brandon: 7.5 hrs/ 58.25 hrs

Alain: 2 hrs / 49.25 hrs