

sdmay19-30: EE 448 Stroboscope

Week 9 Report

November 14 - November 22

Team MembersKatrina Choong — *Chief Hardware Engineer / Timeline Manager*Meghna Chandrasekaran — *Chief Software Engineer / Meeting Facilitator*Seth Noel — *Chief Hardware Engineer*Kyle Zelnio — *Project Manager*Jessica Bader — *Chief Software Engineer / Communication Manager / Scribe***Summary of Progress this Report**

This week the hardware team (Kyle, Katrina, and Seth) spent time working on improving the brightness of the LEDs. They tried adding capacitors up to 300uF, and changing the pulse width. They then decided to research new LEDs and work on meeting a middle ground where the LEDs were bright enough and the stroboscopic effect happened. Software team (Meghna and Jessie) worked on the PWM output signal. They were able to make the waveform look as expected and try it with the current circuit and it worked to the circuits ability.

Pending Issues

The hardware team (Kyle, Katrina, and Seth) have been seeing an issue with getting both the stroboscopic effect and reasonable brightness to work. By adding too much capacitance the LEDs were bright but not flashing quick enough, and the opposite without the capacitors. The software team (Meghna and Jessie) will need to finish figuring out how to use the Python GUI to interact with the Tiva board or execute a command on a button press.

Plans for Upcoming Reporting Period

We got our circuit boards in for v.01 and the hardware team (Kyle, Katrina, and Seth) is going to make one as a demo for the presentation. The software team (Meghna and Jessie) are going to return to work with the GUI. They hope to figure out how to successfully execute a command on the button press instead of on initialization. If they figure that out, they will work on sending a command from the GUI to the Tiva board. The whole team will also be planning on working on the presentation as it is closing in on us fast.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Katrina Choong	This week I tested different values of capacitors in our circuit to add brightness to the LEDs. I also tested different pulse widths to adjust for the increased time delay added by the capacitors.	9	65.5
Meghna Chandrasekaran	This week I worked on fixing the PWM mode signal. We were able to get an output that looked the way we were expecting it to.	9	68

Seth Noel	This week I tested adding capacitors to the circuit, first we tried the 300uF capacitor then bumped it down to 10's of uF to no avail. We found that the brightness looked good but the time the LEDs were on was too long so we still couldn't get a bright strobing effect with the current circuit.	10	70
Kyle Zelnio	This week I spent more time researching the differences in LEDs and fine tuning our current circuit to produce a better strobing effect with a reasonable brightness.	9	63
Jessica Bader	This week I worked with Meghna to fix the waveform output. We were able to resolve the issue which was causing our waveform to look different than we expected. We then took a guess at the proportions to the waveform and tried it on the circuit board to see if it would work for the stroboscope.	9	71

Gitlab Activity SummaryNothing to report.
