

sdmay23-13: Prosthetic arm

Week 14 Report

November 28 - December 4

Team MembersErik Raman — *Software*Jack Vetsch — *Electrical*Jacob Eisbrenner — *Mechanical/ Electrical*Scott Bolek — *Electrical*Sean Gray — *Software/Electrical*Jeremy Wallace — *Electrical*Leo Forney — *Software***Summary of Progress this Report**

Still awaiting 3D printed parts. Redesign of all of the PCBs to reduce the size as well as clear up some electrical issues that were found when testing. EMG testing continued. BOM was generated for all necessary parts and sent off to ETG to be ordered. Testing of motor encoders and attempting to link them to specific pulse widths found in the EMG testing occurred. Sketches of the forearm have been made and dimensions starting to be worked out.

Pending Issues

The short week and the quick turnaround from the break to the final presentation could cause a time crunch. With the time crunch, certain aspects of the project could seem “unfinished” due to the fact that subsystems and components of the project are changing as the designing process continues.

Plans for Upcoming Reporting Period

Finish as much as physically possible hope to receive some parts over break that will get to the team with enough time to assemble small things for testing purposes. Additionally, a Raspberry Pi Zero/3 will be set up for testing purposes, to replicate the setup of the MCU and its motors attached. This will assist the programming by allowing the software team to get a good amount of code set up for when the motherboard PCB is ready to go.

Not Finished need to fix soon*Individual Contributions**

Team Member	Contribution	Weekly Hours	Total Hours
Erik Raman	Developing high level software solution for microcontroller	6	56
Jack Vetsch	Signal processing progress and EMG testing	4	46

Jacob Eisbrenner	electrical integration into the motherboard, sketches/ hand design of forearm, EMG signal testing, motor encoder testing.	14	96
Scott Bolek	Battery system design and basic motherboard prep	2	50
Sean Gray	Developing high level software solution for microcontroller	6	58
Jeremy Wallace	Amplifier design and document management	8	73
Leo Forney	Developing high level software solution for microcontroller	8	64

Gitlab Activity Summary

Nothing to report.
