

sdmay23-13: Prosthetic arm

Week 11 Report

October 31 - November 6

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**

Mechanical hand models officially completed. Work began on the touch sensing aspect of the project with the thought to use similar aspects to that of a tens unit. Measurements of surface EMG signals on all members began. PCB design of the BMS circuit is near completion with a few aspects still in need of work. The motherboard schematic is still in development but advancements have occurred. The motor driver circuit schematic is finished and PCB design has begun.

Pending Issues

Timing issues with group meetings have continued to be an issue but have gotten better as the weeks continue. Integration of all electrical boards with the motherboard could become an issue since the final dimensions of the rest of the arm have yet to be decided. Issues with connectivity to a computer are a potential that the group is hoping to overcome in the next couple of weeks.

Plans for Upcoming Reporting Period

Sending the CAD files for the hand to get 3D printed. BMS PCB completed along with motor driver board. The motherboard to hopefully be in the final stages of development. Plan of attack for computer connectivity at the minimum.

Not Finished need to fix soon*Individual Contributions**

Team Member	Contribution	Weekly Hours	Total Hours
Erik Raman	Developing high level software solution for microcontroller	4	38
Jack Vetsch	Signal processing progress and EMG testing	3	34
Jacob Eisbrenner	3d model design as well as motor	10	68

	and electrical work		
Scott Bolek	Amplifier and battery system design	4	38
Sean Gray	Developing high level software solution for microcontroller	6	40
Jeremy Wallace	Amplifier design and document management	6	48
Leo Forney	Developing high level software solution for microcontroller	8	40

Gitlab Activity Summary

Nothing to report.
