EE CprE 492 – May 21 - 27
MicroCART Senior Design Team
Week 9 Report

March 15 - March 28
Faculty Advisors: Phillip Jones

Team Members:

Alex Bjerke –– *Project Manager*

Amith Kopparapu Venkata Boja –– *Embedded Software Lead*

Theodore Davis –– *Embedded Hardware Lead | System integration*

Grayson Goss –– *Technical Lead | CAD Design Lead*

Hannah Mohamad –– *Team Webmaster*

Russ Paulsen –– *Test Station Lead*
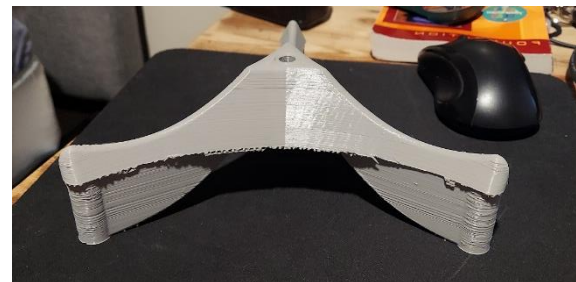
Alfonso Raymundo –– *PCB Design Lead*

Trent Woodhouse –– *High-Level Software Lead*

Summary
Each sub team is working on their parts as shown in the individual contributions. Currently, we are working towards PID tuning which requires a fully drone prototype, test station, communication set up at the ground control.

Past Week Accomplishments

- Alfonso - Fixed/made Pin Layout Image v6.0 & Soldering for Prototype 1
- Theo - Double checked pwm for reasonable period timing. Also testing of ESP for reasonable output
- Ground Control GUI integration progress; ready for first ground control demo
- Printed the Base station platform shown in the right figure.

Pending Issues

- Lost the backup Mosfets & will be MIA on 3-30-21 because getting back surgery & will be laying in bed till Friday (4-2-21).

Individual Contributions

Team Member	Contribution	BiWeekly Hours	Total Hours
Alex	Other than the meetings, I did not make contributions toward the project this week.	5	102
Alfonso	1) Soldered ESP, Long male pins & most of the wiring on Photo Wing. 2) I lost all the Mosfets. 3) Made Pin Layout Image v6.0	23.163	132.913
Amith	Read through the previous year's MICROCart sensor filter algorithm. Tried to partially implement the algorithm.	11	129.5
Grayson	Printed base station Fully modelled the rest of the platforms Prints for platforms failed (resin recommended)	19	124
Hannah	Working on the PCB layout on KiCAD	10	80
Russ	Assisted with needed test station information	8	82
Theodore Davis	Double check pwd period, Testing ESP8266, worked on uart again	10	114
Trent	Added in electron support, began integration work	6.5	73

Plans for Coming Week

- Alfonso - Keep working on Prototype 1 from bed & help out Hannah with kicad if needed. Todo List Soldering NRF on M4, Solder all Parts together for Prototype 1.
- Theo - Work on PID Algo and make sure all different components are working together in our code.
- Hannah- Keep working on PCB and help out Fonzy with the prototype 1 if needed.
- Grayson - Request resin prints of the test platforms from on or off campus printers. Will also need another set of magnetic bushings for the second platform.
- Trent - continue integration of C server with GUI
- Amith - Finish up the sensor filtering. Combine it with UART/WIFI. Work on PID.