

EE CprE 492 – May 21 - 27

MicroCART Senior Design Team

Week 11 Report

April 5 - April 11

Faculty Advisor: 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

For the past two weeks, we have been working on the PID tuning for the drone be tested on the test station. Currently, the game plan is to measure the yaw-based from the drone and record any measurements from the sensor in test station.

Past Week Accomplishments

- Theodore - Pushed updated UART code to git repo along with an example that controls a motor via uart. Updated the template with the new middleware. Updated the doc for getting started with Microchip Studio. Created PID to motor functions.
- Alfonso - Finished Prototype 1 & tested motors. They all run 100% :)

Pending Issues

- Might need to fix wiring issues on prototype drone.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Alex	Analyzed our design document and made notes on what needs changed. Assigned these to team members. Other documentation discussions. Worked on our drone's modular main function.	6	114

Alfonso	Finished Prototype 1 & tested motors. They all run 100% :)	14.566	158.15
Amith	Tried to fully transition the code to calculate roll pitch and yaw from gyroscope and accelerometer. Fixing a new bug found in the code.	6	140.5
Grayson	Got platforms printed. Talked with group about documentation standards and getting rough drafts of documentation started.	8	136
Hannah	Stopped working with PCB that fonzy wants. Start doing the rough documentation for hardware.	3	89
Russ	Assisted with printing.	5	92
Theodore Davis	UART code, Docs, PID to motor functions	10	136
Trent	Worked on the debugging issue on gui	3	80.5

Plans for Coming Week

- Theo - Testing of the prototype drone and PID tuning if possible.
- Alfonso - Work on Paperwork & Final Documentation.
- Grayson - Collaborate on final documentation and testing of drone systems with team members during the week.
- Amith - Write a temporary full functioning code with accelerometer and gyroscope, so Alex can combine it with PID.