

May14-10 Weekly Report

MicroCART 2013-2014

Week 2: September 9 - 15, 2013

Advisors: Nicola Elia & Phillip Jones

Name	Weekly Hours	Running Hourly Total
Kevin Engel	8	14
Nathan Ferris	8	14
William Franey	8	13
Michael Johnson	8	12
Kelsey Moore	9	13
Lucas Mulkey	8	12
Aaron Peterson	7	11

Weekly objectives

Completed Objectives:

- Able to get the quad to fly for the scholars fair
- Calibrated flight controls
- Met with James to learn code
- Further Kalman Filter understanding

Next Week Goals:

- Meet with Alex/James/Matt to further the pass off
- Confirm issue with gyro on gu-344
- Link SVN to personal computers
- Explore IR camera system and Quartis tools
- Explore further into old C code
- Research Ardupilot control algorithm
- Research how to interface with electronics on pcb

Individual Accomplishments

Kevin Engel:

- Met with James to learn about his code organization
- Read through parts of wiki
- Participated in quad calibration
- Learned to fly with old GUI before Scholars Fair

Nathan Ferris:

- Presented Quad at Scholars Fair
- Test Flew Quad with previous GUI and mapping directions
- Flew mini quad roughly 4 hours
- Read up to Chapter 5 in Kalman, passed book off the Aaron to catch up
- Showed everyone how to use Battery Charger
- Learned to properly calibrate quad (throttle levels)
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William Franey:

- Read through Ch 10 on Kalman filters and implement a simple Kalman filter in matlab
- learned how to fly with the old gui
- learned how to operate the charging station
- accessed repository

Michael Johnson:

- Learned the old GUI and how to fly the quad
- Scholars Fair
- Accessed and checked out code from SVN, and went over it with James
- Flight training

Kelsey Moore:

- Learned to fly quad with old gui
- Helped in quad calibration
- Looked through more of last years code
- Started design of board replacement

Lucas Mulkey:

- Learned how to fly the copter on old gui
- Continued flight training on small copter
- Learned how to calibrate and reset to default the ESC's
- Looked into MCTController.c
- Scholars Fair

Aaron Peterson:

- Began reading on Kalman filters
- Accessed repository
- Learned flight controls on old system gui

Issues/Concerns

As we found out this week when we were trying to get the copter to work for the scholars fair, it seems the gyro in the gu-344 is off of the center. The copter seems to want to heavily go toward the front and the right. We are planning on looking more into it to confirm this week.