May14-10 Weekly Report

MicroCART 2013-2014
Week 7: October 21-27, 2013
Advisors: Nicola Elia & Phillip Jones

Name	Weekly Hours	Running Hourly Total
Kevin Engel	10	49
Nathan Ferris	5	47
William Franey	6	46
Michael Johnson	5	46
Kelsey Moore	8	54
Lucas Mulkey	6	48
Aaron Peterson	6	48

Weekly objectives

Completed Objectives:

- created c code to send commands to quad
- Found a way to send data through bluetooth
- Created dummy data for EE's to look at
- Started looking at camera talking
- Tested motors on the quad and found issues

Next Week Goals:

- Get the quad up and running
- Finish simple camera program
- Finish IMU testing code

Issues/Concerns

The motors seem to be having issues on the left side, especially with the ESCs. More testing and issue solving needs to be done, but it is worrying with the lab walkthrough being this week.

Individual Accomplishments

Kevin Engel:

- Read through UART/PPM VHDL on ground FPGA, determined byte format, and created C code to send commands to quad - with Mike and Kelsey.
- Modified PPM VHDL on ground FPGA to default to low PPM widths for all channels upon reset (throttle will be 0). Programmed the ground FPGA board's PROM with new VHDL.
- Began looking into VRPN in order to parse data sent from OptiTrack

Nathan Ferris:

- Manually calibrated and tested motors and ESCs for PWM (rotations) from quad, collected and plotted data with Aaron. Problems still persist, currently trying to calibrate at different Duty cycle ranges to try and make a solution.

William Franey:

- wrote matlab code for generating camera data
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Michael Johnson:

- Completed simple C program to send commands to the quad - with Kevin and Kelsey
- Fixed bug in Luke's code, it now sends all 2000 bytes of data correctly.

Kelsey Moore:

- Helped debug Luke's code
- Completed simple C program to send commands and debug the commands sent
- Started working on quad copter flying issues
- Looked through IMU data send, haven't started testing yet

Lucas Mulkey:

Aaron Peterson:

- Did motor testing with Nate using DC supply and function generator.
- Looked at oscilloscope readings for arducopter to try to diagnose problem.