

EE/CprE/SE 491 - WEEKLY REPORT 11

November 22nd - December 4th

Group number: may25-32

Project title: MicroCART mini: Microprocessor Controlled Aerial Robotics Team

Client &/Advisor: Dr. Phillip Jones

Team Members/Role:

- Daniel Zaucha: Client interaction, Communications Lead
- Jonah Upah: Hardware Lead, Team Secretary
- Ryan Lowe: Technical Advisor
- Yi Hang Ang: Software Lead

Weekly Summary

Some progress has been made in the improvement of lab material logistics. The radio dongles have all been sent down to the ETG to be sealed to the new USB wireport and have their new labels put onto them. The amount of working batteries has been sorted, and the batteries that don't work have been put to the side with their issues clearly labelled. The drone blue-light issue has moved forward, but until radios return, blue light fixes and radio fixes are stalled. This week will largely focus on finishing up the final design document that will be put on our senior design webpage, in addition to the semesters-end presentation for next week.

Past week accomplishments

- Daniel Zaucha
 - Went to Lab on Thursday before break and the Tuesday after
 - Did not work on Thanksgiving break
 - Hardware Logistics briefly when back
 - Gave radios to ETG at their request so that they may vacuum seal it and connect it to a wire USB cable connector

- Prevented actual testing of fixes and implementations
- Jonah Upah
 - Teststand arduino.
 - Connecting it to the pc.
 - Looking at the arduino code.
 - Planning on how to connect it to the back end.
- Ryan Lowe
 - Sick the week before break and then not able to work over Thanksgiving break.
 - Updated website
 - Added all reports
 - Added section for the Lightning Talks presentations and got all of these posted on the website
 - Working on the final design document
 - Working on the final presentation
- Yi Hang Ang
 - Did not work on Thanksgiving break
 - Went to lab on Monday but did no work
 - Unable to log in to the PC
 - Went to lab on Tuesday and did class assignments/documentation

Pending Issues/tasks

- Fix issues on git board
- ETG room fixes for equipment

Individual contributions

NAME	Individual Contributions	Hours this week	HOURS cumulative
Daniel Zaucha	<ul style="list-style-type: none"> • Class assignment & CrazyFlie checkup • Hardware checkup sheet 	R: 2 + T:3	69
Jonah Upah	<ul style="list-style-type: none"> • Arduino 	6	49
Ryan Lowe	<ul style="list-style-type: none"> • Updated website, working on the design doc and presentation 	5	49
Yi Hang Ang	<ul style="list-style-type: none"> • Class assignments and documentation 	R: 1 + M: 2 + T: 1	56

Comments and extended discussion

- Some physical hardware needs some fixings from either soldering connections replacements (potentially) or new components that may have to be ordered from the internet.

Plans for the upcoming week

- Daniel
 - Finalize presentation, CrazyFlie current health sheet
 - Document any previously undocumented changes for what changes we made and why
- Yi
 - Finishing up class assignments (Weekly report/ Lightning Talks)
 - Prepare for final presentation
 - Work on Qt with Daniel
 - Work on Arduino test stand with Jonah

- Ryan
 - Finish design documentation and the final presentation.
 - Get design doc and presentation on the website.
 - Make changes to the website to make it look better before submitting it this Saturday.
- Jonah
 - Learn how to find the usb socket and intake data.
 - Figure out how to edit the GUI.
- Group Plan:
 - Complete Tasks/issues that we are assigning and claiming on the git
 - Observed issues & solutions document sheet
 - PCB Needs document - Part Number replacement specifically as well as other logistics

Summary of weekly advisor meeting

Our group has begun to make progress on what we need to be working on, successfully beginning to switch gears, although we will mostly be unavailable during the course of the Thanksgiving break. We will be continuing to work on the project in our sub-teams and working together as this helps the group make the most progress, some physical repairs may have to be made by the ETG on a few of the hardware parts, and for some items such as the CrazyFlie on/off switches we will need to find the online part number and order it ourselves. Aside from that we have been told to look at some of the past year's videos for the hardware since some of our questions had answers that may be inside.

Website:

<https://sdmay25-32.sd.ece.iastate.edu/#teammembers>