

Senior Design May 22, 43

MicroCART Senior Design Team

Week 22 Report

April 04 - April 11

Faculty Advisor: Philip Jones

Members:

Ryan - System architect

Zach - Groundstation lead, co system architect

Reid - Test station sub-team

Ellissa - GUI sub-team

Colton - Git manager, Firmware lead

Carter - Web Master, OptiTrack Lead

Brandon - Project Lead, Test Station lead

Links

- [Shared Google drive folder](#)
- [Order list](#)
- [Crazyflie inventory](#)

Summary of Progress this Week

- Updated Test stand wiki, and began documentation of variable infill printing process - Brandon
- Printed housings for new PCBs that arrived - Brandon
- Experimented with using the lighthouse system with our ground station in order to send position setpoints - Colton, Zach, Carter
- Administered lab to 488 students - Colton, Zach, Ryan, Reid

Pending Issues

- Purchase **used** vive pro controller for motion control demo. Approx \$100
https://www.amazon.com/HTC-Vive-Controller-pc/dp/B07QV3VLYJ/ref=asc_df_B07QV3VLYJ/?tag=hyprod-20&linkCode=df0&hvadid=343288438787&hvpos=&hvnetw=g&hvrn

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- Potential control board driver issue on 2041 workstations? CH340 driver not installed?

Individual Contributions

Team Member	Contributions	Hours	Total Hours
Brandon Cortez	- Created new test stand wiki/documentation - Printed new housings for PCBs that arrived	8	145
Reid Schneyer	Helped with 488 lab, brainstored demo	4	130
Colton Glick	- Attended both lab session, helped debugging where needed - Prepared VM version 1.1 and loaded it on lab computers - Helped 488 students understand firmware code better - Assisted Carter and Zach with setting up lighthouse demo	13	217
Ellissa Peterson	-Consolidating poster content	3	95
Ryan Hunt	- attended lab session - tried to crete way to set all PID constants at once - came up with plan for demo	8	149
Carter Irlmeier	- Worked with team on demo ideas - Researched HTC vive wand to purchase - Looked into more python scripts for demo work	3	76
Zachary Eisele	-Attended both lab sessions -Bug fixes for version 1.1 -Helped figure out controller calibration -Started trying to integrate boost serial library into ground station -Began running tests for autonomous flight with lighthouses	15	218

Comments and Extended Discussion

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Plans for coming Week

- Team regroup on Ellissa's progress on the poster to plan the distribution of team resources going forward during the second week of the lab.
- Work on new BetaFPV controllers (not confident they will work). Contribute to the poster. Help with the lighthouse demo. - Colton