

sdmay18-17 MicroCART (Microprocessor Controlled Aerial Robotics Team)

Week 12 Report

Reporting Period: 11/27/17 - 12/3/17

Team Members

Blake Pries -- Communications Lead

Dane Larson -- Ground Station Lead

Matthew Kelly -- Documentation Lead and Webmaster

Tyler Imboden -- Quad Software Lead

Jakub Hladik -- Test Lead

Kyle Trost -- Team Lead

Peter Thedens -- Repository Lead

Austin Rohlfing -- Controls Lead

Summary of Progress this Report

Generals Tasks for entire team:

- Design Document v3
- Preparation for presentation

Quad Software - Tyler and Kyle:

Summary for progress this report:

- Worked on duplicating working directory to enable workflow but untested
 - See pending issues for why I cannot test

Pending Issues:

- Somehow the quad is not flyable even using our "golden" boot files
 - I suspect something in the physical hardware is broken

Plans for upcoming reporting period:

- Understand what is wrong on the quad and fix it ASAP

- Vivado transition

Controls - Austin and Blake:

Summary for progress this report:

- Met with Andy Snawerdt and discussed a few questions we had about the simulink model and matlab scripts
- Merge requests created for matlab documentation and simulink model update

Pending Issues:

- New simulink model needs documentation

Plans for upcoming reporting period:

- Practice presentation

Testing - Peter and Jakub:

Summary for progress this report:

- Emailed Eric Middleton about server credentials (Peter)
- Continued work on Makefile documentation (Peter)
- Create branch for MATLAB work (Peter)
- Optimized JSBSim simulation loop code to take in controls input (Jake)
- Updated to the newest JSBSim dev version from JSBSim git

Pending Issues:

- Simulink simulator vs. JSBSim (Jake)

Plans for upcoming reporting period:

- Work more on Makefile documentation (Peter)
- Look at infinite loop tests (Peter)
- Find place for information received from Brendan (Peter)
- Sort through MATLAB files related to "DataAnalysisTool" (Peter)

Ground Station - Matt and Dane:

Summary for progress this report:

- Started adapter for crazyflie (issue 43).
- New command implemented for switching trackables (issue 44).

- Started changes to backend to allow for writing to adapter sockets rather than Quadcopter (issue 44).

Pending Issues:

- None

Plans for upcoming reporting period:

- Finish Implementation of CrazyFlie adapter into the ground station by the end of the semester.

Name	Role	Contribution	Hours worked	Total
Peter Thedens	Repository Lead	Makefile explanation	5	75
Austin Rohlfing	Controls Lead	Worked on simulink model	12	78
Kyle Trost	Team Lead	Presentation; Tried to figure out what wrong with the quad	8	118
Matt Kelly	Documentation Lead	Modifications to Ground Station files.	5	95
Dane Larson	Ground Station Lead	Worked on adapter for crazy flie. Discussion on exactly how to implement with backend	8	78
Jakub Hladik	Test Lead	Worked on JSBSim code, upgraded to the newest version. Met with controls team-JSBSim vs. Simulink.	10	78

Tyler Imboden	Quad Software Lead	Work on presentation, work towards pushing some doc changes to git	6	86
Blake Pries	Communications Lead	Final figured out Git and submitted merge requests for matlab documentation and simulink model. Worked on presentation and documents	13	65