sdmay18-17 MicroCART (Microprocessor Controlled Aerial Robotics Team)

Week 13 Report

Reporting Period: 12/4/17 - 1/15/18

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:

- Team meeting planning

Quad Software - Tyler and Kyle:

Summary for progress this report:

- Got Vivado project building, however not functioning correctly. I need to do some further testing

Pending Issues:

- Vivado build
    - Motors don't like the wave they are getting
    - Not communicating with Ground station

Plans for upcoming reporting period:

- Test and resolve issues being faced involving vivado build

Controls - Austin and Blake:

Summary for progress this report:

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Pending Issues:

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Plans for upcoming reporting period:

- Talk with Matt to set a plan for this semester.
- Go through the model files on Git and clean up unused files.

Testing - Peter and Jakub:

Summary for progress this report:

- Provided feedback to Ground Station documentation update merge request (Peter)
- Attempted to upgrade to the latest version of JSBSim (Jake)

Pending Issues:

- Upgrade to the latest version of 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)
- Finish upgrade to the latest version of JSBSim and start experimenting with control algorithms (Jake)

Ground Station - Matt and Dane:

Summary for progress this report:

- Sample adapter created and communication files created. (Matt and Dane)
- Backend modifications for changing trackables complete. (Matt)
- Backend modifications for communicating to adapters and quad almost complete. (Matt)

- CLI changes for multiple trackables complete. (Matt)

Pending Issues:
- With multiple Quads do we need an additional controller?
- (Quad Software) Does the Quad actually provide the access point (needed for dual Quad flight planning)?

Plans for upcoming reporting period:
- Further update backend modifications to support future expandability rather than just supporting crazyflie. (Matt)
- Fly crazyflie and quad together (video will be provided). (Matt and Dane)
- Start on GUI updates for these changes. (Matt and Dane)
- Make sure that VRPN updates are sent to both objects during flight. (Matt)

Name	Role	Contribution	Hours worked	Total
Peter Thedens	Repository Lead	Provided comments on merge request	3	78
Austin Rohlfing	Controls Lead	Worked on fixing XSDK build errors w/ Kyle	7	85
Kyle Trost	Team Lead	Got XSDK building the vivado build correctly. Stated Vivado documentation.	10	128
Matt Kelly	Documentation Lead	Working on Backend changes to support adapters.	12	107
Dane Larson	Ground Station Lead	Continued work on adapter	1	79
Jakub Hladik	Test Lead	Tried to fix and emailed JSBSim's	2	80

		creator to resolve compile issue of the newest version.		
Tyler Imboden	Quad Software Lead	Looking into manual assist mode from software perspective	2	88
Blake Pries	Communications Lead	Saw someone fly a quadcopter in Utah	0	65