

EE CprE 491 – May 20 - 49

CySat Senior Design Team

Week 20 Report

January 5, 2020 – January 11, 2020

Faculty Advisors: Phillip Jones

Team Members:

Bryan Friestad — *Team Lead / EPS Lead / OBC Lead*

Ryan Hansen — *SDR Lead*

Chase Kirchner — *Ground Station Lead / CI Testing Lead / UHF Secondary*

Kyle Muehlenthaler — *UHF Lead / Ground Station Secondary*

Talon Stromgren — *GitLab Master / Boost Board Lead / SDR Secondary*

Xiangzhu Yan — *ADCS Lead*

Past Week(s) Accomplishments

- OBC: Implemented some additional functions for polling the EPS for data, including battery and BCR bus voltage/current and solar panel x-axis voltage [Bryan].
- ADCS:
- SDR: Moved code written over the holidays onto Raspberry Pi SDR stand in. Did initial testing of new formatting and control flow.
- EPS: Searched through all of the EPS documentation with Kenzie and found lots of inconsistencies. Found a second version of the I2C manual, which is on GitLab now [Bryan].
- Ground Station: Testing logging functionality/making minor changes, walked through the code identifying changes that need to be made in the upcoming week
- UHF:
- Boost: Used a plugin for KiCAD to generate a Bill of Materials. This BOM may or may not be in depth enough [Bryan].

Pending Issues

- We have no official BOM for the boost board
- Waiting to hear from Kenzie or Matthew if the BOM needs to have more detail (eg: digikey links)

Individual Contributions

Team Member	Contribution	Weekly	Total Hours	Attend Gen. Meeting?
Bryan Friestad	Went into lab and spoke with Kenzie and Matthew about EPS software and BOM. Generated interactive BOM using KiCAD plugin. Implemented some more functions for the EPS read functionality	5	83	NA
Ryan Hansen	Moved code written over the holidays onto Raspberry Pi SDR stand in. Did initial testing of new formatting and control flow.	5	73	NA
Chase Kirchner	Tested logging functionality, discussion with Talon about future changes, walked through code to identify changes that need to be made, resolving class structure bug from previous implementation	6	66	NA
Kyle Muehlenthaler			63	NA
Talon Stromgren			63	NA
Xiangzhu Yan			59	NA

Plans for Coming Week

- Bryan Friestad: Talk to Talon about the getting to boost board bill of materials. Facilitate organization of new semester meeting times and catch up with all team members, making sure they are hitting the ground sprinting.
- Ryan Hansen: Copy Raspberry Pi code over to flight hardware SDR and continue testing. Continue development of SDR and OBC control flow.
- Chase Kirchner: Meet with Talon to resolve some current issues with the ground station codebase/pair coding pending features, continue testing/tweaking existing functionality
- Kyle Muehlenthaler:
- Talon Stromgren:
- Xiangzhu Yan: