

# EE CprE 491 – May 20 - 49

## CySat Senior Design Team

### Week 19 Report

*December 29, 2019 – January 4, 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: None
- ADCS: Wrote some c functions for Detumbling process.[Xiangzhu]
- SDR: None
- EPS: Found the EnduroSat software [Bryan]. Found some jumpers on the EPS board, which may help with getting it to communicate with the SatPowMon software [Bryan].
- Ground Station: Got Talon up to speed on all of the Ground Station code. Refined the code into separate classes. Added logging feature which is still a work in progress. Additional documentation of the code.
- UHF: Working with the Kenwood to understand the commands and kenwood itself. Sent driver to Chase for when we work together. [Kyle]

#### Pending Issues

- Still have not figured out how to get the EPS software to collect data from the module

## Individual Contributions

| Team Member        | Contribution   | Weekly | Total Hours | Attend Gen. Meeting? |
|--------------------|--|--------|-------------|----------------------|
| Bryan Friestad     | Testing the EPS with the SatPowMon program provided by EnduroSat. No communication thus far. Helping lead Ground Station team and providing support if needed.                       | 2      | 78          | NA                   |
| Ryan Hansen        | Did not have time to work on project this week.  | 0      | 68          | NA                   |
| Chase Kirchner     | Meeting with Talon where I walked him through the ground station code. Discussed moving forward with ground station functionality. Refined code and looked into previous bugs/issues | 3      | 60          | NA                   |
| Kyle Muehlenthaler | Working with the Kenwood I went home with.   | 3      | 63          | NA                   |
| Talon Stromgren    | Worked with Chase to restructure the ground station GUI as well as implement a log.  | 4      | 63          | NA                   |
| Xiangzhu Yan       | Wrote some c functions for Detumbling process.   | 2      | 59          | NA                   |

## Plans for Coming Week

- Bryan Friestad: Write the EPS functions I intended to last week. Keep assisting Ground Station team. Make sure UHF and ADCS progress is being made.
- Ryan Hansen: Possibly have time to go into lab and test new code on flight hardware SDR.
- Chase Kirchner: Test sending commands to dev board with the changes that Talon made, refining logging functionality, continue implementation of features
- Kyle Muehlenthaler: continuation of looking through kiss interactions and plans for testing with 2 kenwoods.
- Talon Stromgren: Nothing, vacation in CO
- Xiangzhu Yan: Keep working on function programming.