EE CprE 491 – May 20 - 49
CySat Senior Design Team
Week 21 Report

January 12, 2020 – January 17, 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 all but 2 (of 48) read commands for the EPS module. None have been tested, but the code does compile [Bryan].
- ADCS:
- SDR: New code written for Raspberry Pi transferred to SDR flight hardware and tested. The code for UART communication works as intended between laptop and SDR hardware. Working on a method for sending the .dat files over UART. [Ryan]
- EPS: Code written listed in OBC section above [Bryan].
- Ground Station: Refactor code, testing, and bug fixing
- UHF: ready for more advanced testing of the kenwood radios. Can set up beacons and hear them on other radios.
- Boost: contacted Kenzie 2 times to get parts ordered

Pending Issues

- Still cannot get the EPS software to work. Waiting for further instructions from EnduroSat.
- Waiting for confirmation for borrowing the second kenwood from Matthew and a meeting time.
- I will need a meeting with Matthew Nelsen very soon to discuss the handling of scientific data. [Ryan]

Individual Contributions

Team Member	Contribution	Weekly	Total Hours	Attend Gen. Meeting?
Bryan Friestad	Met with Kenzie and other M2I leaders and discussed plans/progress. Met with senior design team and talked about winter break progress. Finished nearly all of the EPS read command implementation.	7	90	NA
Ryan Hansen	Worked on OBC Python code. Configured SDR flight hardware for UART code. Tested UART communication with flight hardware.	10	83	NA
Chase Kirchner	Ground station bug fixing, testing, and planning		66	NA
Kyle Muehlenthaler	Ready to work with Matthew to set up for future tests with the kenwood radios and soon to be replaced by the transceiver and ground station.	5	68	NA
Talon Stromgren	worked on ground station	4	67	NA
Xiangzhu Yan			59	NA

Plans for Coming Week

- Bryan Friestad: Finish up the last two EPS read commands. Meet with Matthew and help team members get the info they need to progress. Keep trying to find ways to get the EPS to turn on / connect to the EnduroSat software. Will try to read UART from USB cable somehow and display on oscilloscope.
- Ryan Hansen: Working through issues related to python opening and reading .dat files for data transfer. Looking to add package to SDR that can read data and send over UART.
- Chase Kirchner: Work through connect/disconnect bug issues and test sending message through OBC
- Kyle Muehlenthaler: work with 2 kenwood and meet with matthew over possible plans for ramping up tests.
- Talon Stromgren:
- Xiangzhu Yan: