EE CprE 491 – May 20 - 49
CySat Senior Design Team
Week 10 Report
October 26 – November 1
Faculty Advisors: Phillip Jones

Team Members:
Bryan Friestad — *Team Lead / EPS Lead / OBC Secondary*
Ryan Hansen — *SDR Lead / Payload Secondary*
Chase Kirchner — *Ground Station Lead / CI Testing Lead / UHF Antenna Secondary*
Kyle Muehlenthaler — *UHF Antenna Lead / Ground Station Secondary*
Talon Stromgren — *GitLab Master / Payload Lead / SDR Secondary*
Xiangzhu Yan — *ADCS Lead*

Past Week Accomplishments
- OBC: Got hello world working on discovery board over UART to the PC via VCP. Redid the project without RTOS for the time being.
- ADCS: Email Dr.Lee to to ask in-depth questions about ADCS. Understand the code-base of OBC_SDK for communicating over UART and I2C based on the libraries and code they have provided. Read ADCS manuals to learn other parts of ADCS.
- SDR: Attended Board review meeting to get clarity on SDR dependent components. Reviewed radiometer_app code with dependency scripts for UART development. Setup timeline outline for SDR component and related communication. https://docs.google.com/document/d/10fjkxUHT6OTa0ARVko5kGjYog7dCFAZVEuCDWe-enBA/edit?usp=sharing
- EPS: Tried interfacing with EPS via micro-usb connector. Detected on PC as a virtual COM port. No way to send it messages as of now.
- Ground Station: Met with Matt Nelson to go over some hardware components in 'penthouse' with HRD. Watched demo of brief functionality of the application
- UHF Antenna: found documentation helping with I2C understanding
- Boost Board: Matthew and everyone else came to the agreement of going with the ribbon wire to connect the boost board to the LNA board. No changes need to be made on the boost board, it can be ordered as is.
- LNA Board:

Pending Issues
- Confusion with using HAL timers (obc)

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours	Attend Gen. Meeting?
Bryan Friestad	Got Hello World working on OBC. Organized meet to develop tasks for meeting deliverables. Redid Hello World project without RTOS.	10	25	yes
Ryan Hansen	Reviewed current dev scripts for cont. dev.	4	16	No
Chase Kirchner	Met with Matt Nelson to go over HRD, planning to ping ISS when it has a pass overhead, and began looking over UHF documentation	4	15	Yes
Kyle Muehlenthaler		4	12	No
Talon Stromgren			14	
Xiangzhu Yan	Email Dr.Lee and try to go further on ADCS.	4	17	No

Plans for Coming Week

- OBC: Figure out how timers work in the HAL. Try to get I2C wrapper functions.
- ADCS: Read ADCS manuals to learn other parts of ADCS. Try to go further on ADCS by the advice of Dr.Lee.
- SDR: Further development needs input and setup from Bryan Bradford
- EPS: Figure out how to get the software version of the EPS manually in preparation for sending I2C commands to it for retrieving such information.
- Ground Station: Ping ISS when it has an overhead pass (not urgent), begin planning/research for 'ground station' application. Waiting on Matt Plewa response for hardware components at high-level
- UHF Antenna: Advice on how to test would be appreciated.
- Boost Board: Finalize schematic, test in KiCad??? Not sure after finishing the design.
- LNA Board: