

# CySat Senior Design Team

sdmay21-25

Report Period: October 19 – November 1

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## Team Members:

Alexis Aurandt - OBC Lead and Payload Sub-Lead

Alex Constant - Ground Station Front-End Lead and Voltage Boost Board Sub-Lead

Chandler Jurenic - Payload Lead and OBC Sub-Lead

Jeffrey Richardson - ADCS Lead/Team Lead

John Lenz - Radio Lead

Scott Dressler - EPS Lead and Voltage Boost Board Sub-Lead

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## Summary of Progress in this Period:

### Team

- Completed Standards Reflection

### OBC

- Merged OBC fixes to master
- Updated pin-out document
- Reviewed “Mock mock launch”
- Created handler for I2C and UART interrupts
- Finished Pin-Out diagram
  - ADCS, EPS, UHF share same I2C bus
  - Merged to master on GitLab and added to CySat Cybox
- Started master-list of commands

### Ground Station Front-End

- Began testing the current functionality of the Ground Station Front End
- Reviewed and tested OBC merge requests

### Payload

- Worked on “Hello World” program for SDR

### EPS

- Continued with I2C updates

### Boost Board

- Reviewed boost board documentation Radio
- Reviewed the datasheet of the Ground Station Kenwood radio
- Set up communication between the UHF and Kenwood

ADCS

- Met with Dr. Lee and discussed possible sensor errors and potential corrective measures
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**Pending Issues:**

OBC

- ADCS, EPS, UHF, SDR, and Ground Station must add all applicable commands and requests to the CommandsAndRequests.xlsx

ADCS

- Currently there is no way to remotely connect to ADCS to my knowledge.
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**Individual Contributions:**

<b>Team Member</b>	<b>Contributions</b>	<b>Hours Worked</b>	<b>Total Hours</b>
Alexis Aurandt	Standards Reflection, Pin-out document, master-list of commands, I2C abstraction, testing, etc.	10	45
Alex Constant	Standards Reflection, reworking the codebase of the Ground Station	4	40
Chandler Jurenic	Got the Raspberry Pi and started setting up the equipment to get started	3	18
Jeffrey Richardson	Standards reflection, I2C commands	3	20
John Lenz	Went into M2I to setup radio to be programmable, I2C Review for command list	5	29
Scott Dressler	Standards reflection, reviewed boost board documentation, continued with I2C updates	7	30

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**Plans for Upcoming Reporting Period:**

OBC:

- Finish updating the pin-out document

Ground Station Front-End:

- Document current state of Ground Station functionality
- Implement missing commands
- Complete and merge rework of Ground Station Front End codebase
- Stretch goal: reach out to M2I in order to start user testing and receiving feedback

EPS:

- Finish I2C updates Boost Board
- View board and component KiCad files

Payload:

- Set up the “emulation” with Raspberry Pi in order to finish Hello World/communication with OBC Radio:
- Set up the UHF radio to be programmable

ADCS

- Testing hello world code with ADCS and disco board