

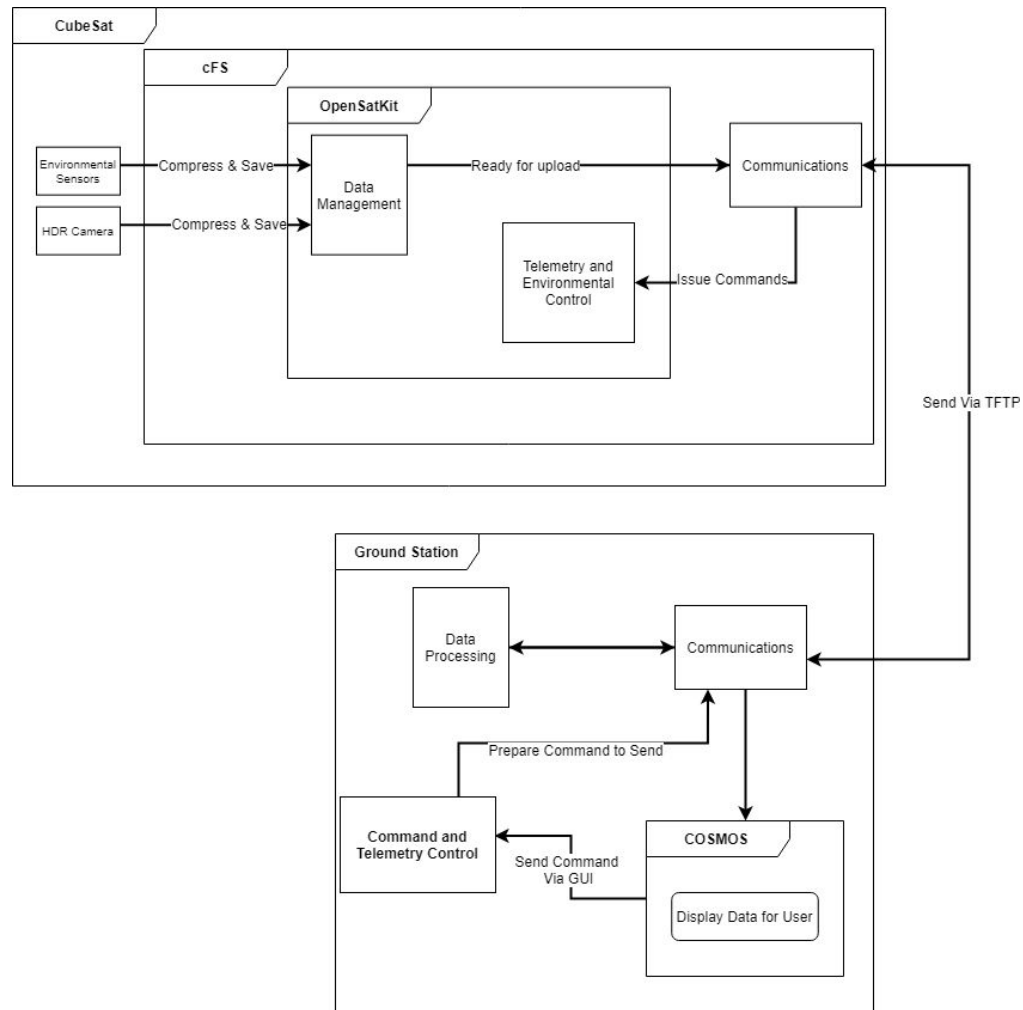
CubeSat - Milestone 2

Jacob Liberman - Computer Science

Milestone 2 Outline

- Finalizing Design
- Finishing Debugging of Test Application
- Get Functional on Raspberry Pi
- Begin Implementation of Final Application
- Continue Work on Simulation

Design



Test Application

Command Sender

File Mode Help

Target: TEST Command: NOOP Send

Description:

Parameters:

Name	Value or State	Units	Description
CCSDS_STREAMID:	6275		Packet Identification
CCSDS_SEQUENCE:	49152		Packet Sequence Counter
CCSDS_LENGTH:	1		Packet Data Length
CCSDS_CHECKSUM:	0		CCSDS Command Checksum
CCSDS_FUNCODE:	0		Command Function Code

Command History: (Pressing Enter on the line re-executes the command)

```
cmd("EXAMPLE NOOP with CCSDS_STREAMID 6275, CCSDS_SEQUENCE 49152, CCSDS_LENGTH 1, CCSDS_CHECKSUM 0, CCSDS_FUNCODE 0")
cmd("TEST RESET_CTRS with CCSDS_STREAMID 6275, CCSDS_SEQUENCE 49152, CCSDS_LENGTH 1, CCSDS_CHECKSUM 0, CCSDS_FUNCODE 1")
```

Packet Viewer : Formatted Telemetry with Units

File View Help

Target: TEST Packet: HK_TLM_PKT

Description: Test App

	Item	Value
1	*PACKET_TIMESECONDS:	1604076586.831574
2	*PACKET_TIMEFORMATTED:	2020/10/30 09:49:46.831
3	*RECEIVED_TIMESECONDS:	1604076586.831574
4	*RECEIVED_TIMEFORMATTED:	2020/10/30 09:49:46.831
5	*RECEIVED_COUNT:	464
6	CCSDS_STREAMID:	0x0883
7	CCSDS_SEQUENCE:	49722
8	CCSDS_LENGTH:	7
9	CCSDS_SECONDS:	1002138
10	CCSDS_SUBSECS:	49185
11	CMD_VALID_COUNT:	0
12	CMD_ERROR_COUNT:	0

Ln 27, Col 1 INS EN Show Screen

Raspberry Pi

- Finally have Ubuntu 18.04 running, after difficulties
- Almost have test application running on Pi



Implementation of Final Application

- Beginning work on final application framework using what I learned from the test application
- Integrating external sensors and physical hardware to design

Milestone 3 Plan

Tasks
Implement test application
Test Plan
Simulation
Final Application Development