



Ground Station

Mid-semester meeting



Ground Station: Prioritized Goals



Remote GS:

- Communication test with the Flat-Sat using the Acer laptop, RF-Checkout box and FlatSat
- Install Backup Ground Station at Hillerstorp

Tracking Software:

- Fix bug in Valentina where the program gets stuck when it tries to update TLEs
- Run all systems 24/7 and actively track satellites

Tests and measurements:

- End-to-End communication procedure document
- Hard-Drive failure recovery

Green are complete
Yellow are on their way
Red are not started



Ground Station: Less Prioritized Goals



Tests and measurements:

- Test all telecommands from the GS
- Radiation pattern measurement of Uplink & Downlink antennas (not urgent)

Elveti and TM:

- Telemetry Downloader
- Test simultaneous Rx from Main and Remote GS

Tracking Software:

- Finish Valentina GUI and update manuals
- Re-implement orbital propagator (currently using "Predict" tool. Orekit library is a better option)

GNURadio:

- Make public the MIST beacon decoder using GNURadio

UPS

- Continue to look at UPS solution

Green are complete
Yellow are on their way
Red are not started



Tracking

- Valentina
 - Reset of azimuth limit between satellite passes seems to work
 - Issue discovered when certain file not found, leading to tracking stopping
 - The part of the code where the issue is has been identified, need to figure out how to fix it

Tracking over longer time as soon as Valentina bug is fixed.





Backup GS Laptop



- Name: MIST-GS-Backup
- IP: 192.168.88.6
- Password: Same as client PC
- Temporarily use Teamviewer, password is same as above but twice
- Test between RF checkout box connected to the laptop and the FlatSat need to be performed





Future Tasks for GS in the future



- Test system recovery from a complete shut-down
 - Several problems with this were discovered when a blackout occurred
 - UPS being investigated as possible solution (Power budget completed)
- Prepare for End2End test with integrated satellite
- Do overall system test with other satellites
 - Get telemetry into elveti?
- Update and follow maintenance routine
- Test and Improve manuals of operation of the Ground station.



Questions?



Thank you! Any questions?

