



# OBCSW sub-team

End-of-Semester Meeting Presentation



# Completed & In Progress tasks/subtasks at the Mid-Semester meeting

## • Experiment tasks

### • Nanoprop:

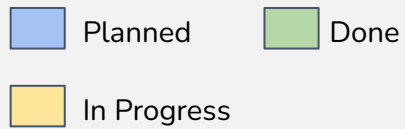
- Read gyro values
- Manual abort
- Abort based on gyro readings
- Delays for Nanoprop API
- FDIR review
- uint8 datatype fix
- FDIR test methods
- TM/TC
- HK

### • SEUD/Camera

- Semaphores/Mutexes
- Add more TM queues
- LEGS & CUBES tests
- Initialization phase FDIR:
  - Automatic I2C speed adjustments
- Add new TM sources in accordance with M154\_035:
  - Add parts of the ADCS library HK to the basic HK beacon
- AntS deployment

## Assigned to new students:

- Add/remove exectime for TCs
- Define authenticated/troubleshooting TCs
- Remove unused TCs or note that they are unused in the description
- Separate HK interval for realtime/stored
- TM\_S160\_ADCS\_LIB\_HK to realtime HK
- Be less dependent on SD card
- Strange macro TC bug (manual memory allocation/bit rotate bug)
- Elveti module improvements



# Planned, In Progress & Completed tasks/subtasks



## Experiment tasks

### Nanoprop:

- Read gyro values
- Manual abort
- Abort based on gyro readings
- Delays for Nanoprop API
- FDIR review
- uint8 datatype fix
- FDIR test methods
- TM/TC
- HK
- Testing NanoProp & gyro code on simulators
- NanoProp automatic heater usage for the thermal tests

### SEUD/Camera

- Unit test coverage report generation for the OBCSW code
- Elveti real time HK visualization
- Semaphores/Mutexes
- Add more TM queues
- LEGS & CUBES tests
- Initialization phase FDIR:
  - Automatic I2C speed adjustments
- Add new TM sources in accordance with M154\_035:
  - Add parts of the ADCS library HK to the basic HK beacon
- AntS deployment
- EPS Dedicated WDT (discussions & decision)

## Assigned to new students:

- Add/remove exectime for TCs
- Define authenticated/troubleshooting TCs
- Remove unused TCs or note that they are unused in the description
- Separate HK interval for realtime/stored
- TM\_S160\_ADCS\_LIB\_HK to realtime HK
- Be less dependent on SD card
- Strange macro TC bug (manual memory allocation/bit rotate bug)
- Elveti module improvements

## Misc:

- Move MIB gitlab runner to MIST GS BACKUP laptop
- Add linter for YAML files on the MIB repo
- Add linter for C files on OBCSW repo
- Remove telemetry debug logs in initialization phase (#235)
- Ensure no timed C task uses return and delete tasks gracefully
- Remove redundant FRAM bootcounter (!180)
- Revised altbootcommand (!180)
- Move OBCSW gitlab runner to MIST GS BACKUP laptop



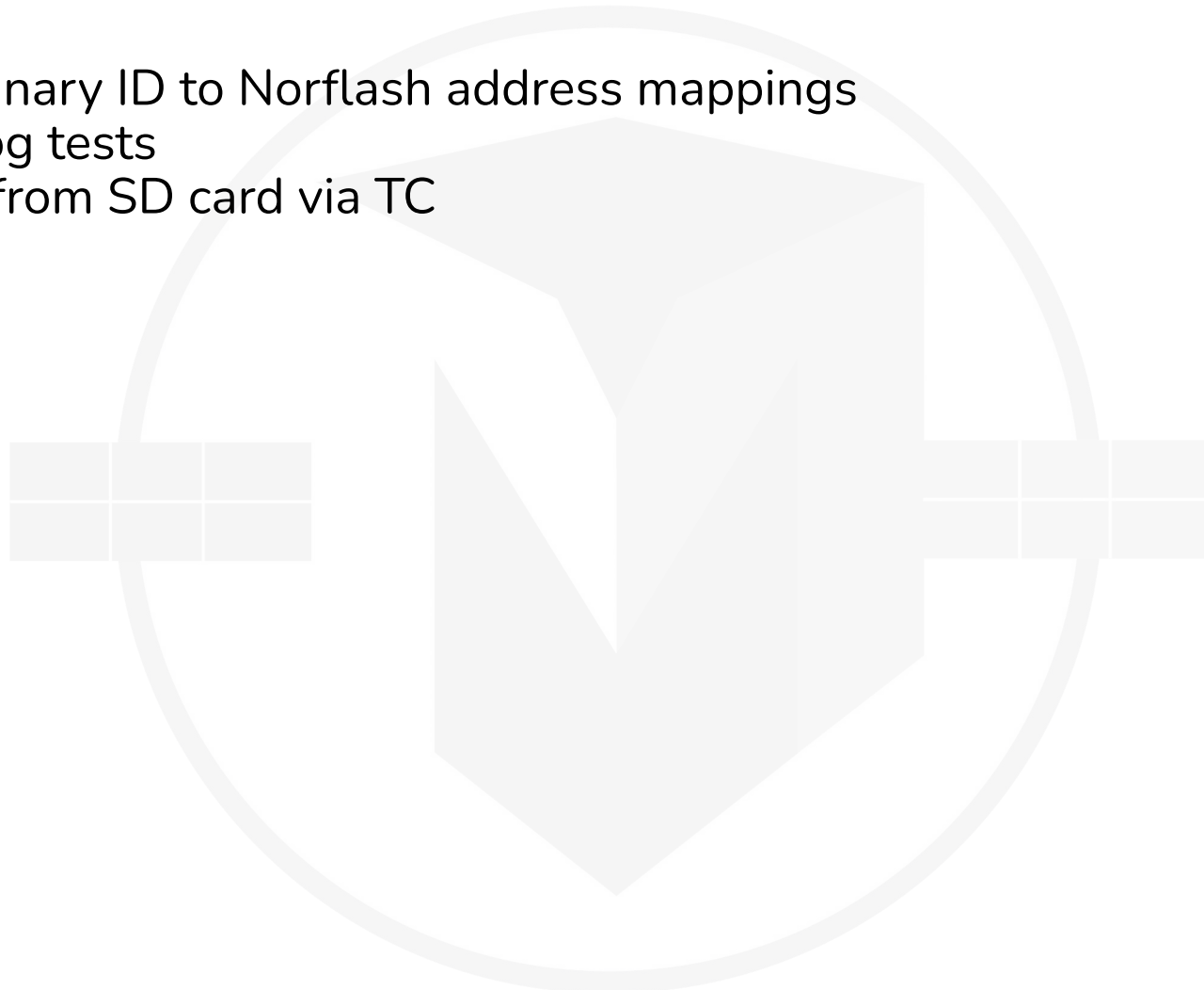
# NanoProp simulator by Olof Helgesson





## Future work

- More intuitive Binary ID to Norflash address mappings
- U-boot watchdog tests
- Delete binaries from SD card via TC





Q&A

Thank you!  
Any questions?