

OUF TI - 1

Status update
& Mission control software



Alain Collette
Amandine Denis – ON4EYA



12 May 2012
Louvain-la-Neuve

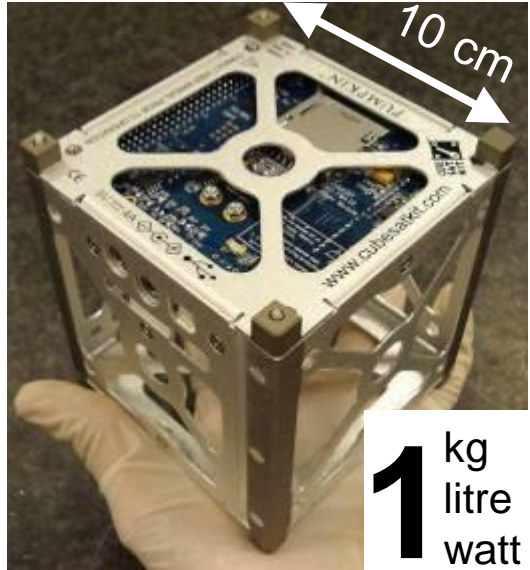


Part I: Status update

1. OUFTI-1 in a few words
2. Subsystems status
3. Schedule

Part II: Mission control software

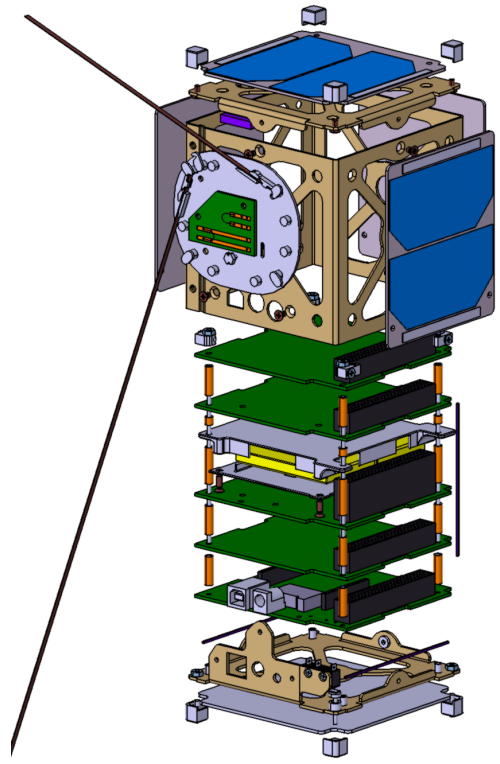
1. OUFTI-1 in a few words



CubeSat standard



Three payloads

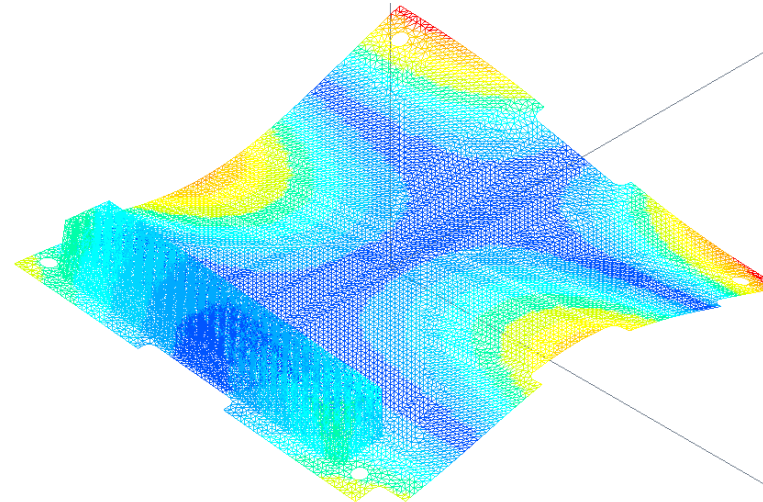
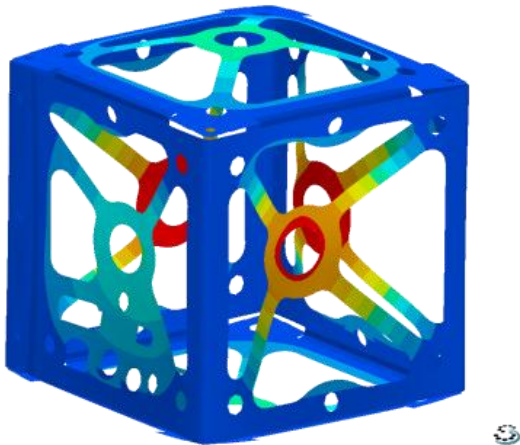
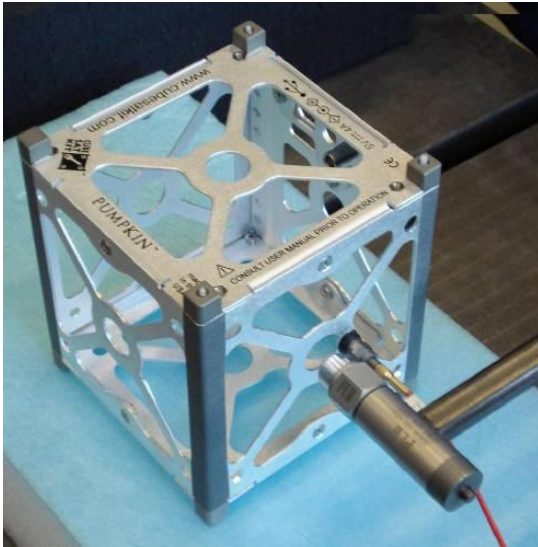


Subsystems developed by students

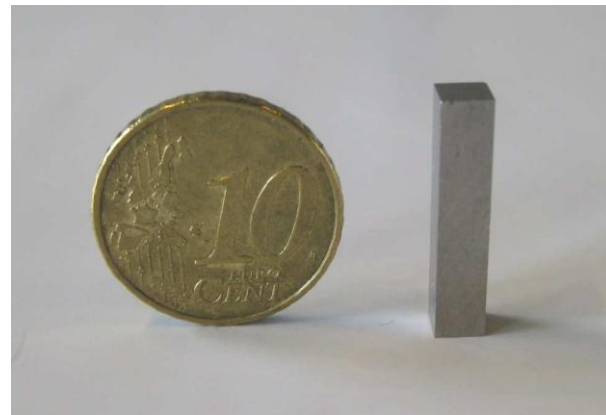
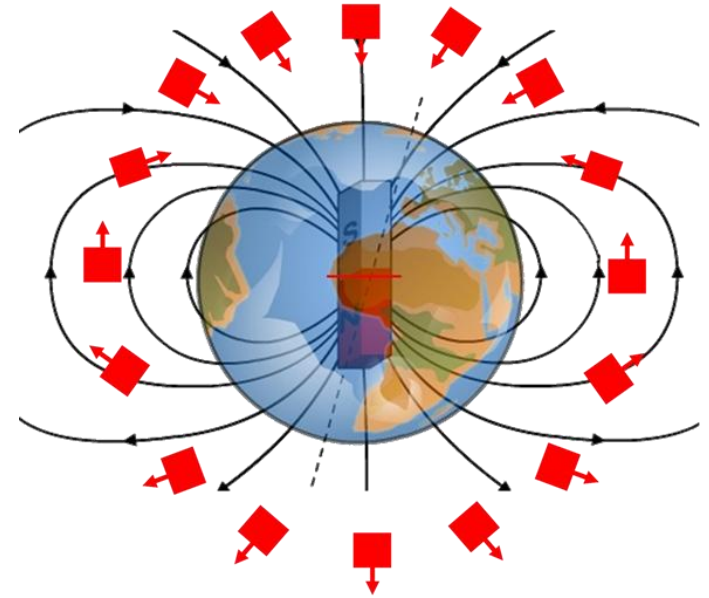
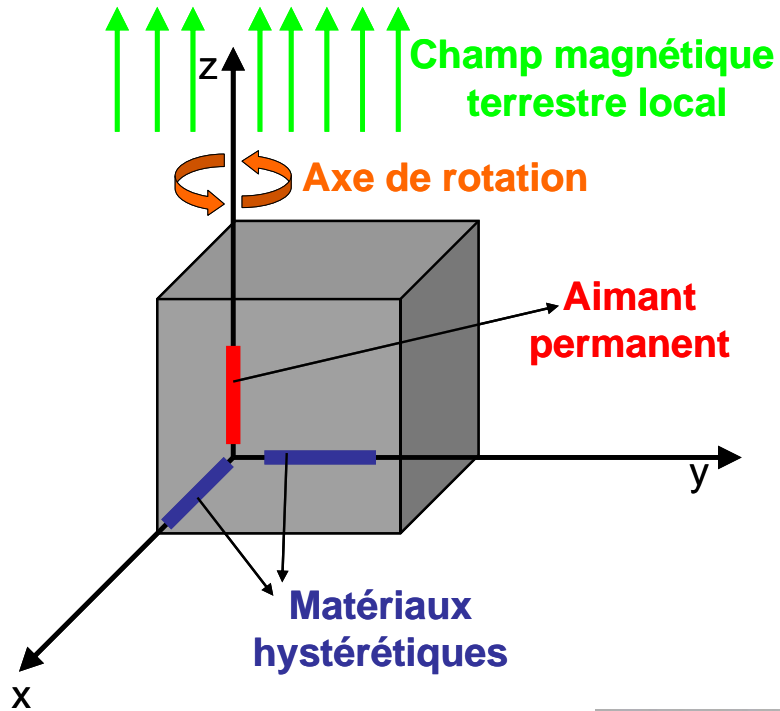


2 universities + 3 engineering schools

2. Subsystems status - STRU



2. Subsystems status - ADCS



2. Subsystems status - EPS

3,3 V

5 V

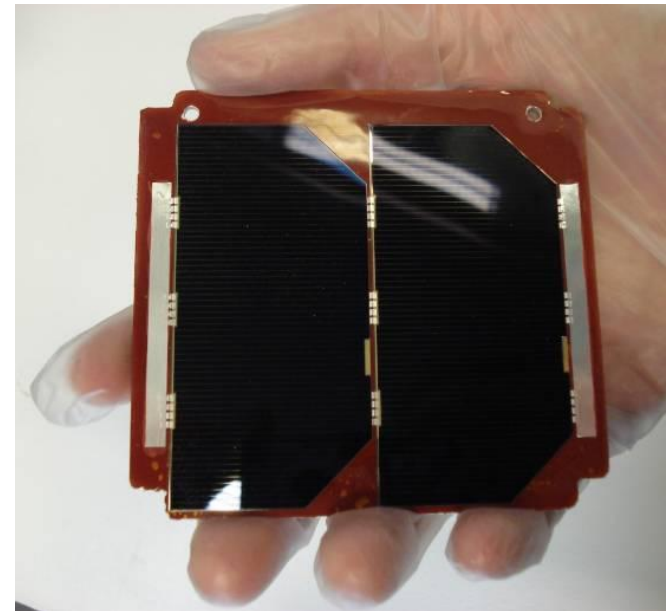
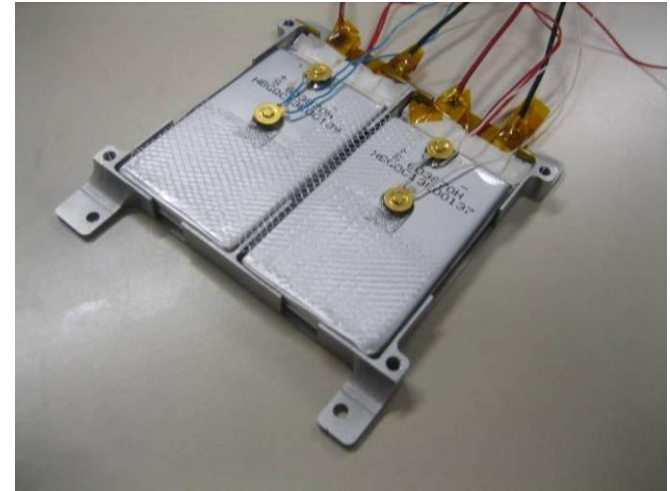
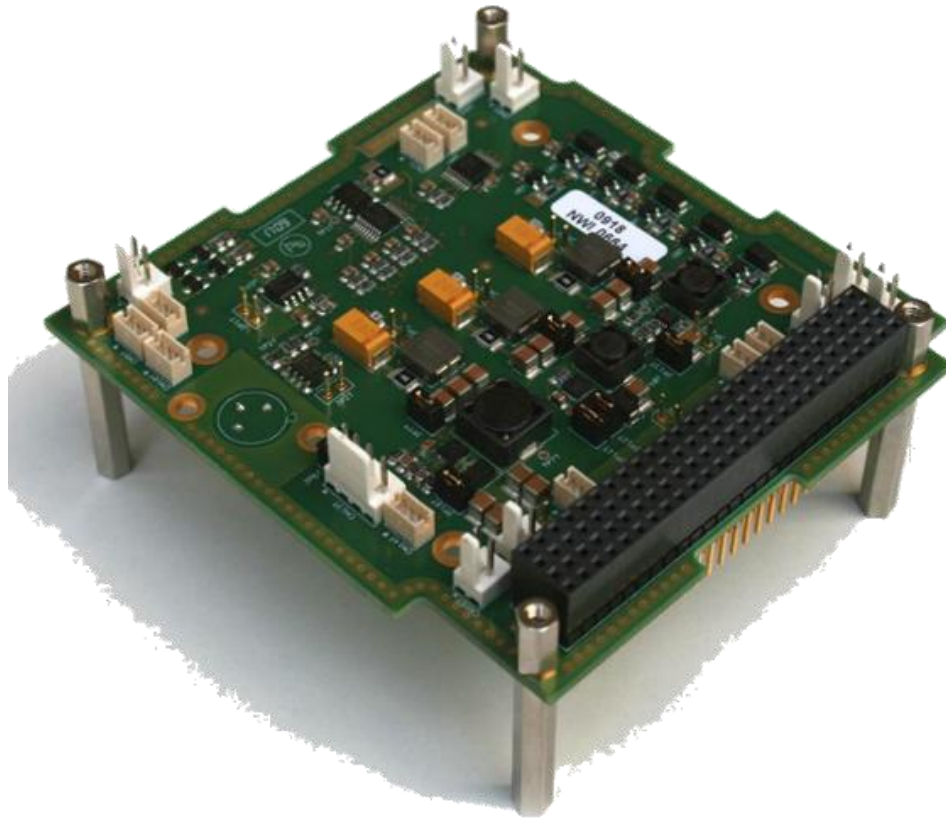
7,2 V



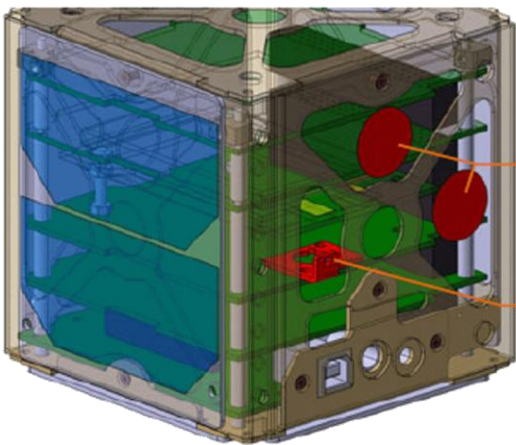
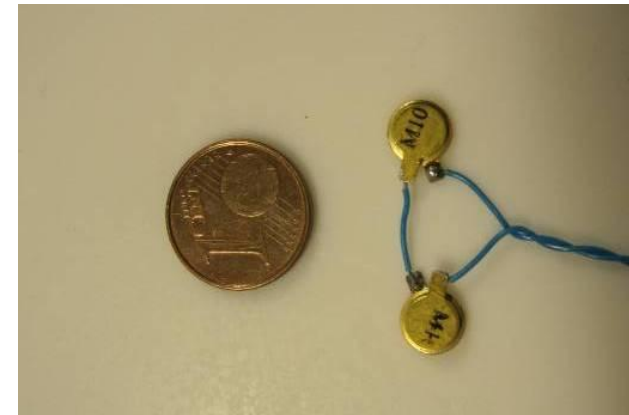
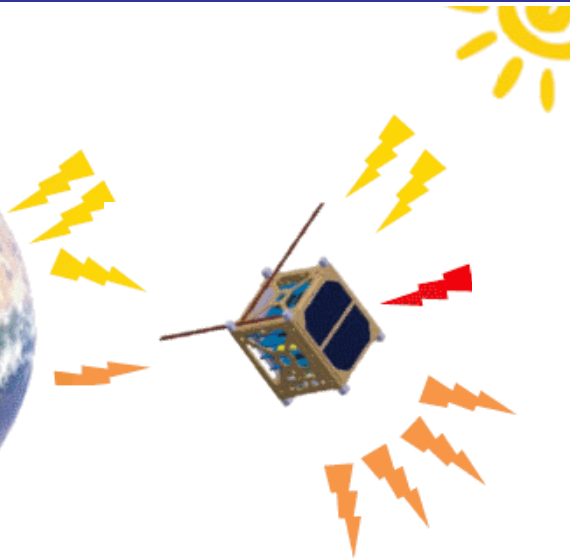
3,3 V

5 V

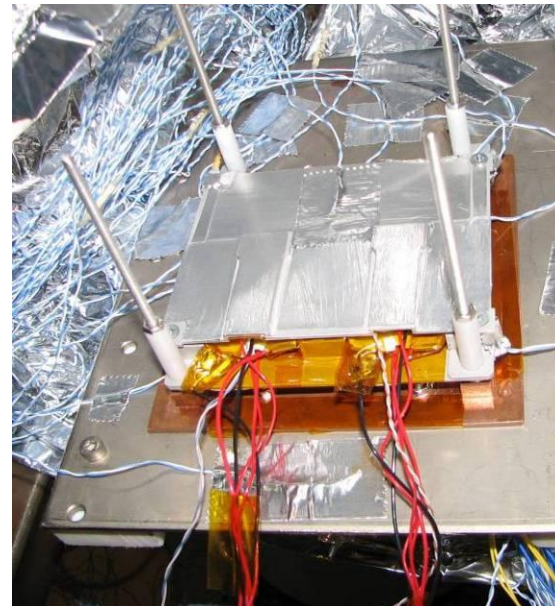
3,3 V



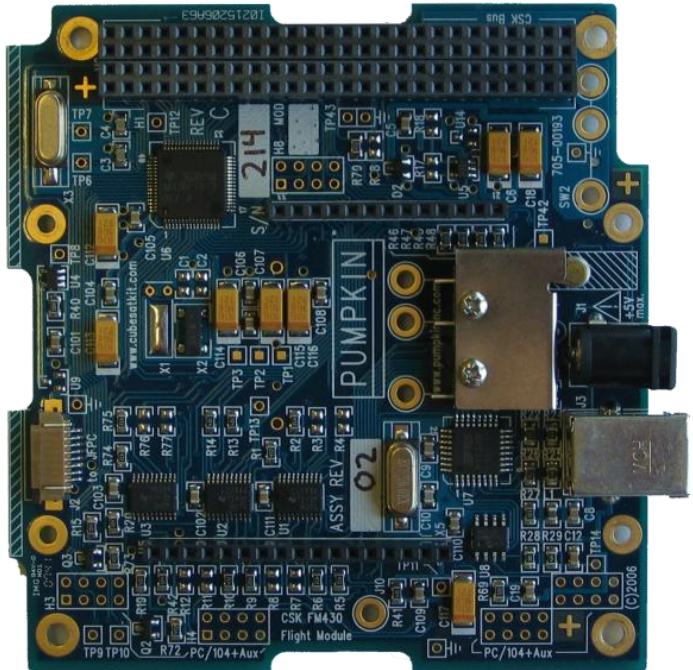
2. Subsystems status - THER



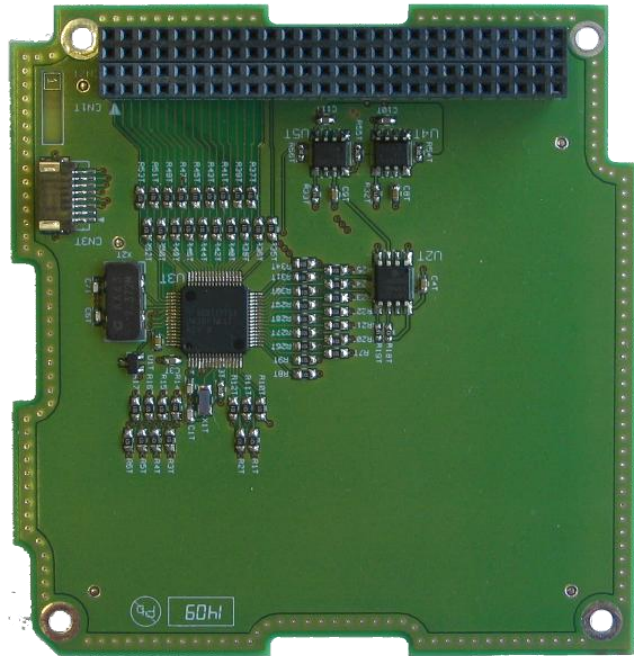
Resistances in parallel
Thermal strap (Angle bracket)



2. Subsystems status - OBC



+



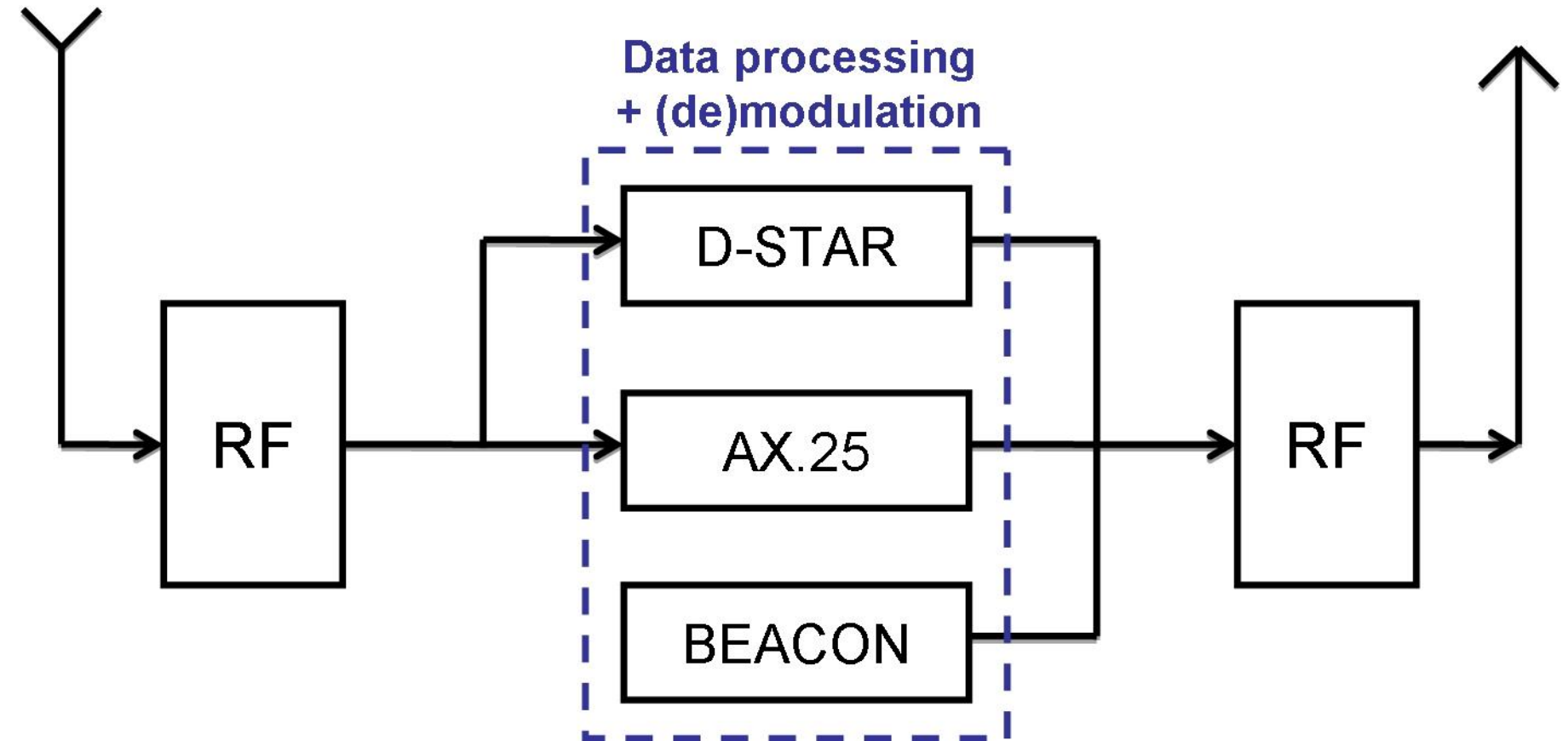
2. Subsystems status - OBC



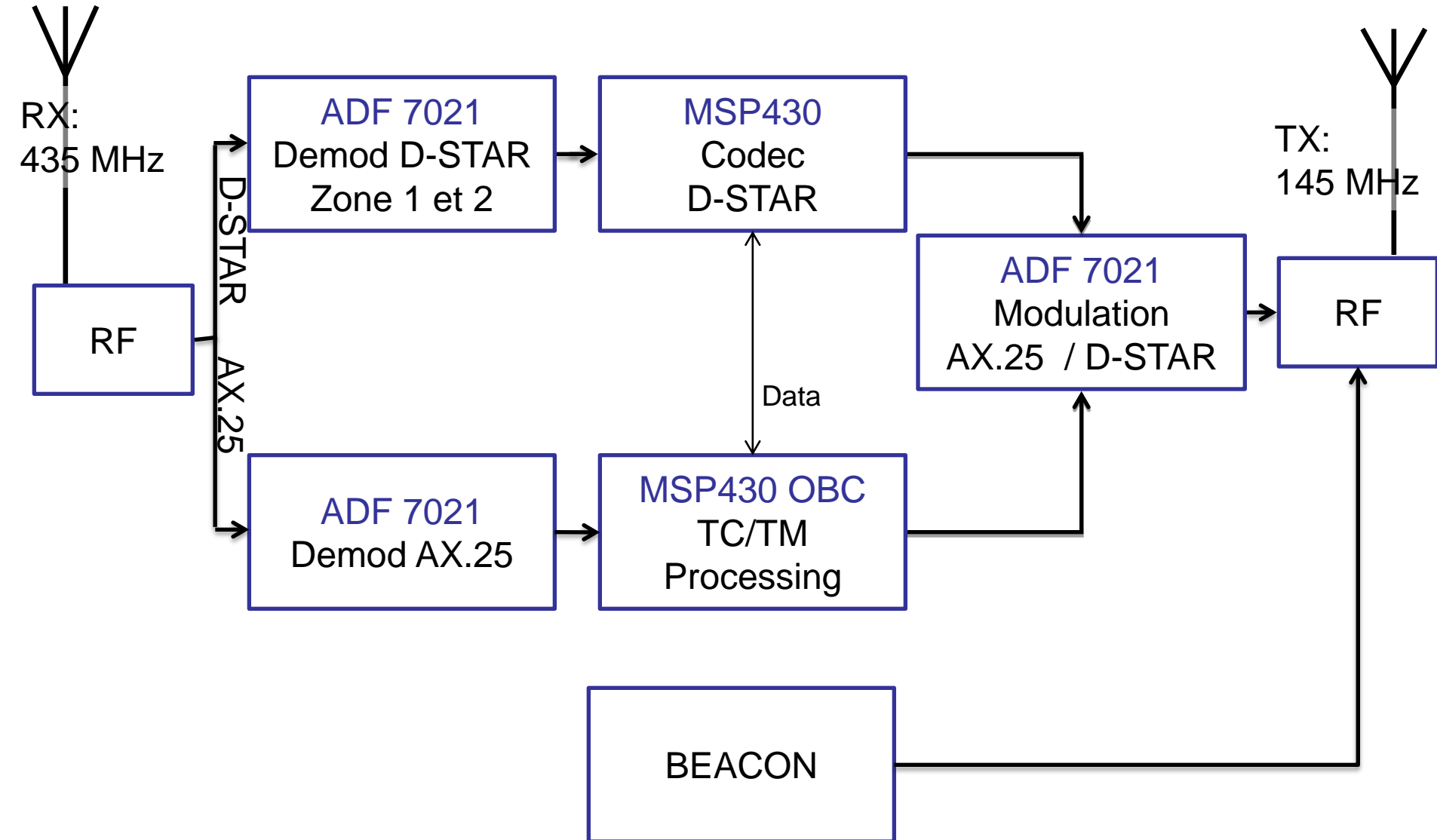
Modules:

- COM Rx
- COM Tx
- Sequencer
- Measurement
- Monitor
- Log
- Ground

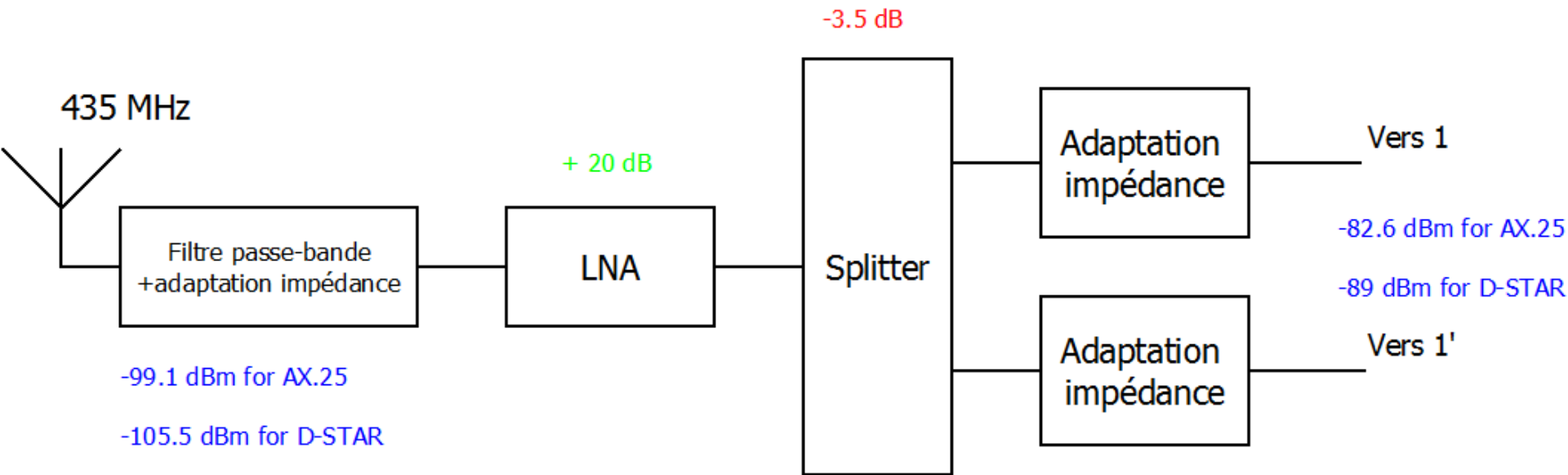
2. Subsystems status - COM



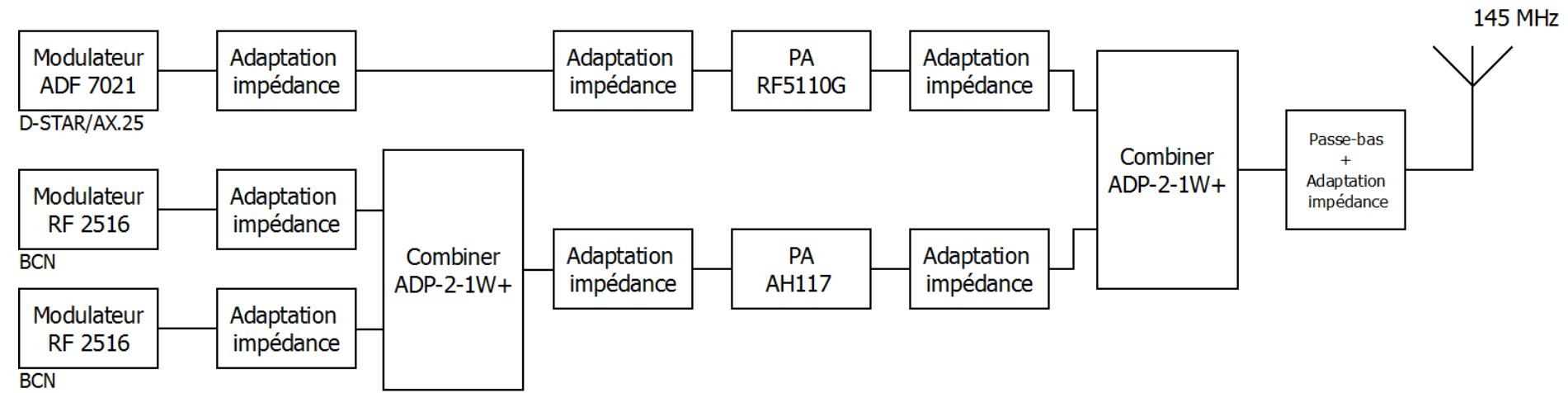
2. Subsystems status - COM



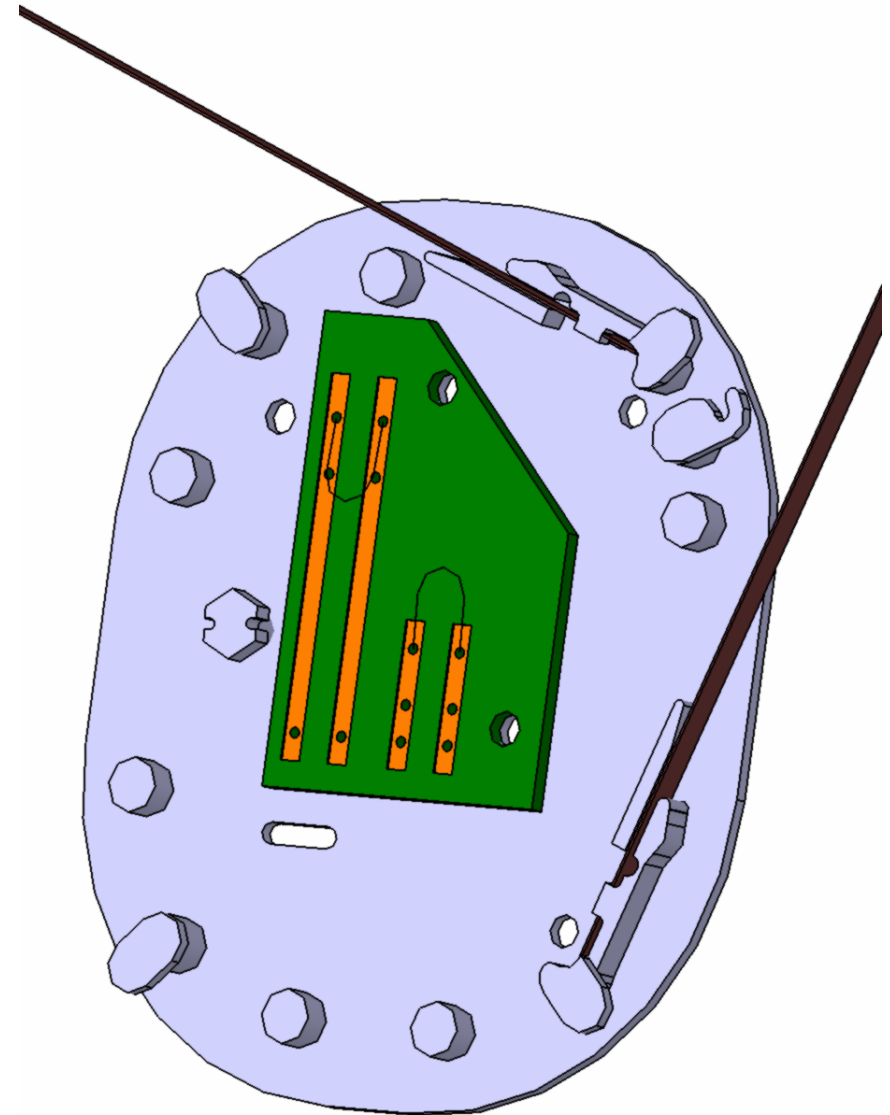
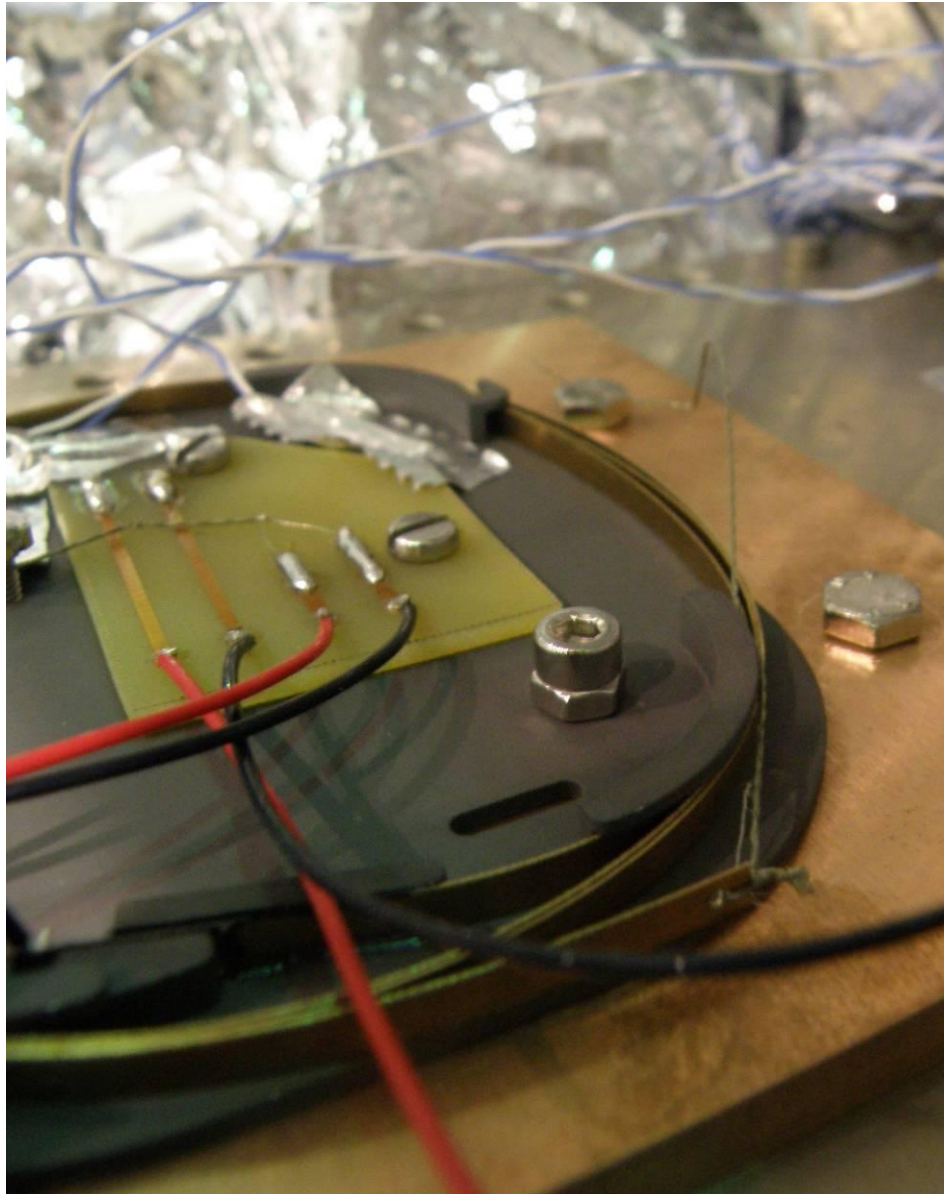
2. Subsystems status - COM



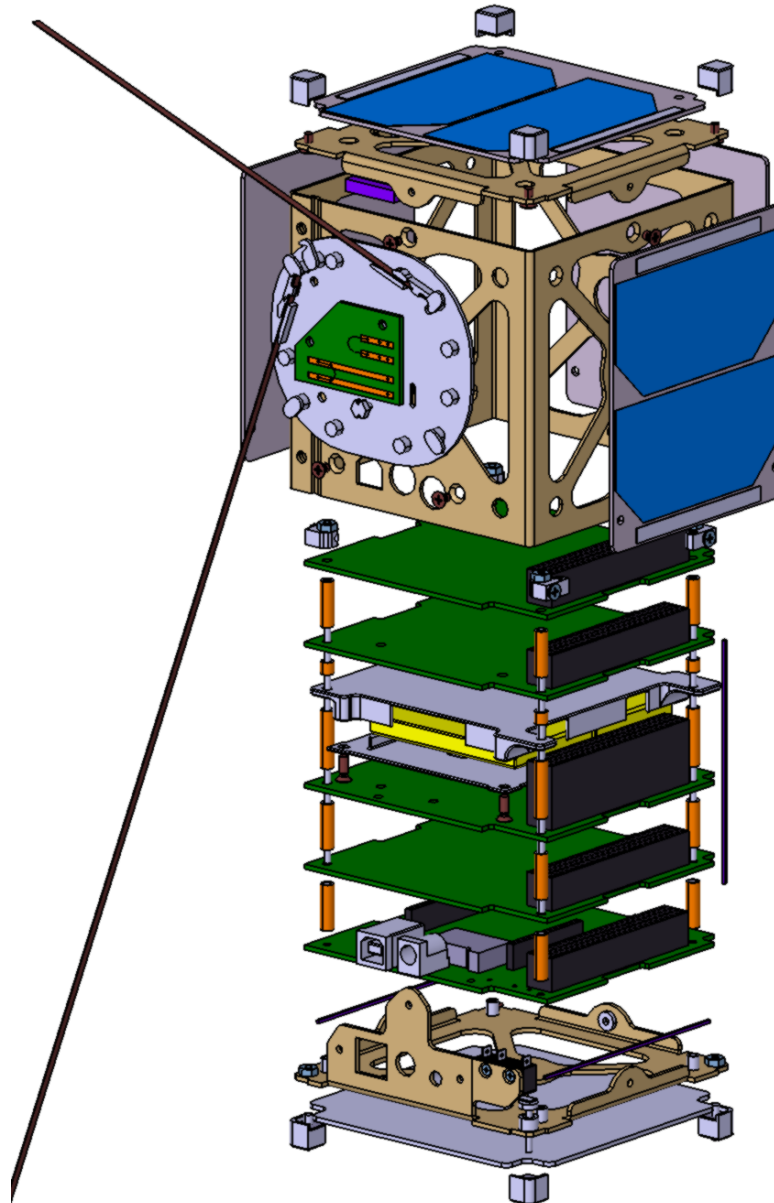
2. Subsystems status - COM



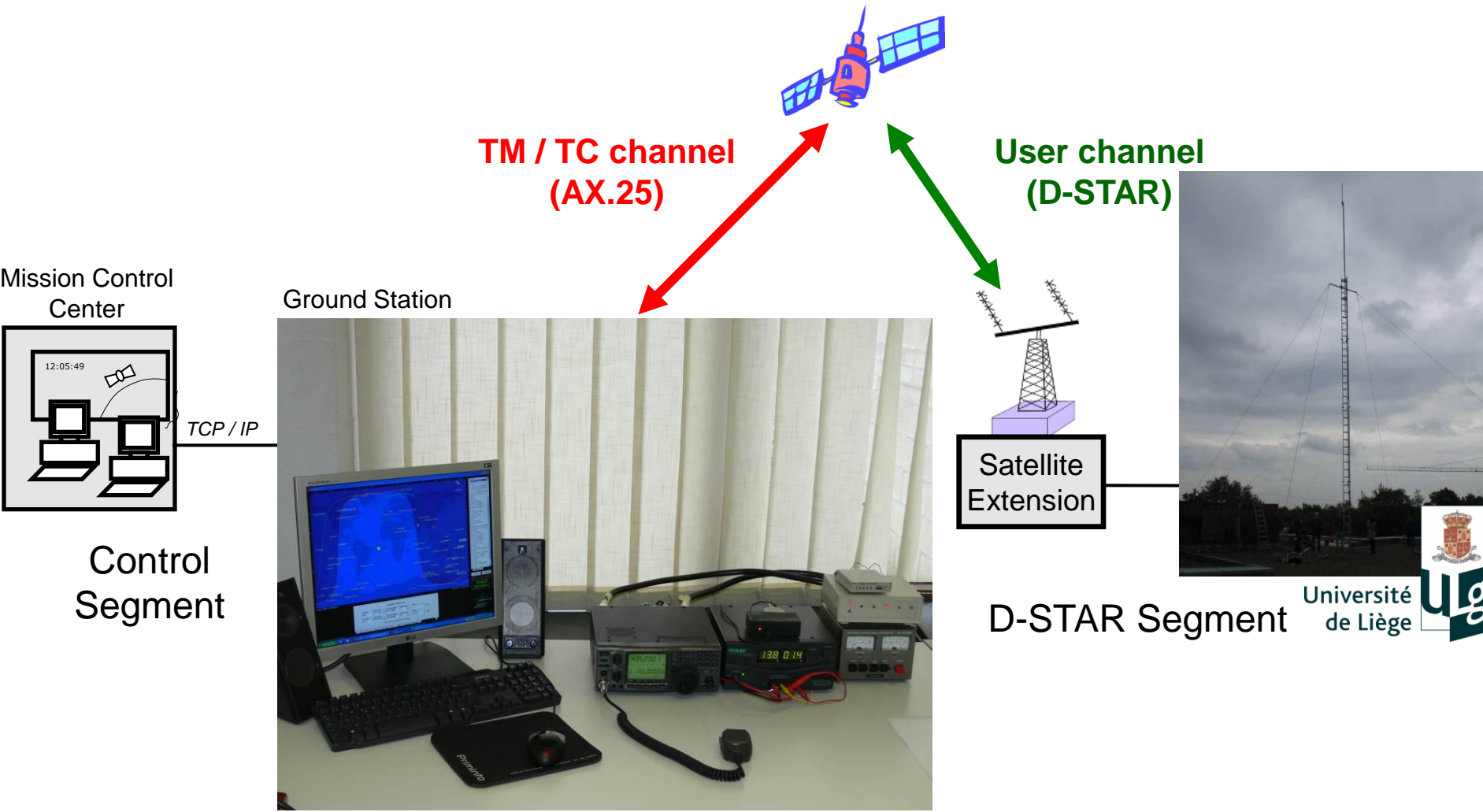
2. Subsystems status - MECH



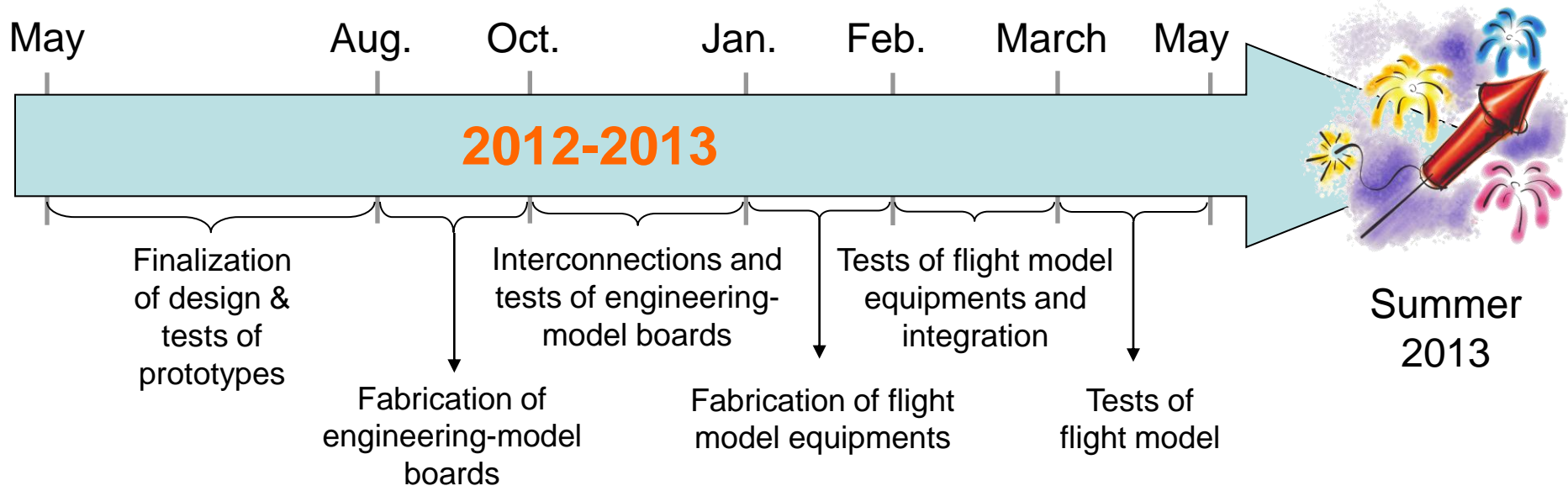
2. Subsystems status - Configuration



2. Subsystems status - GND



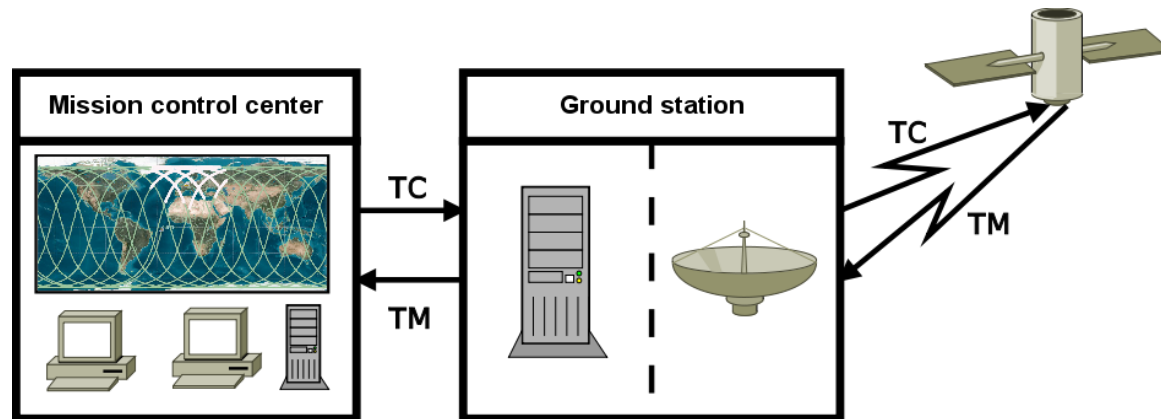
3. Schedule



Part I: Status update

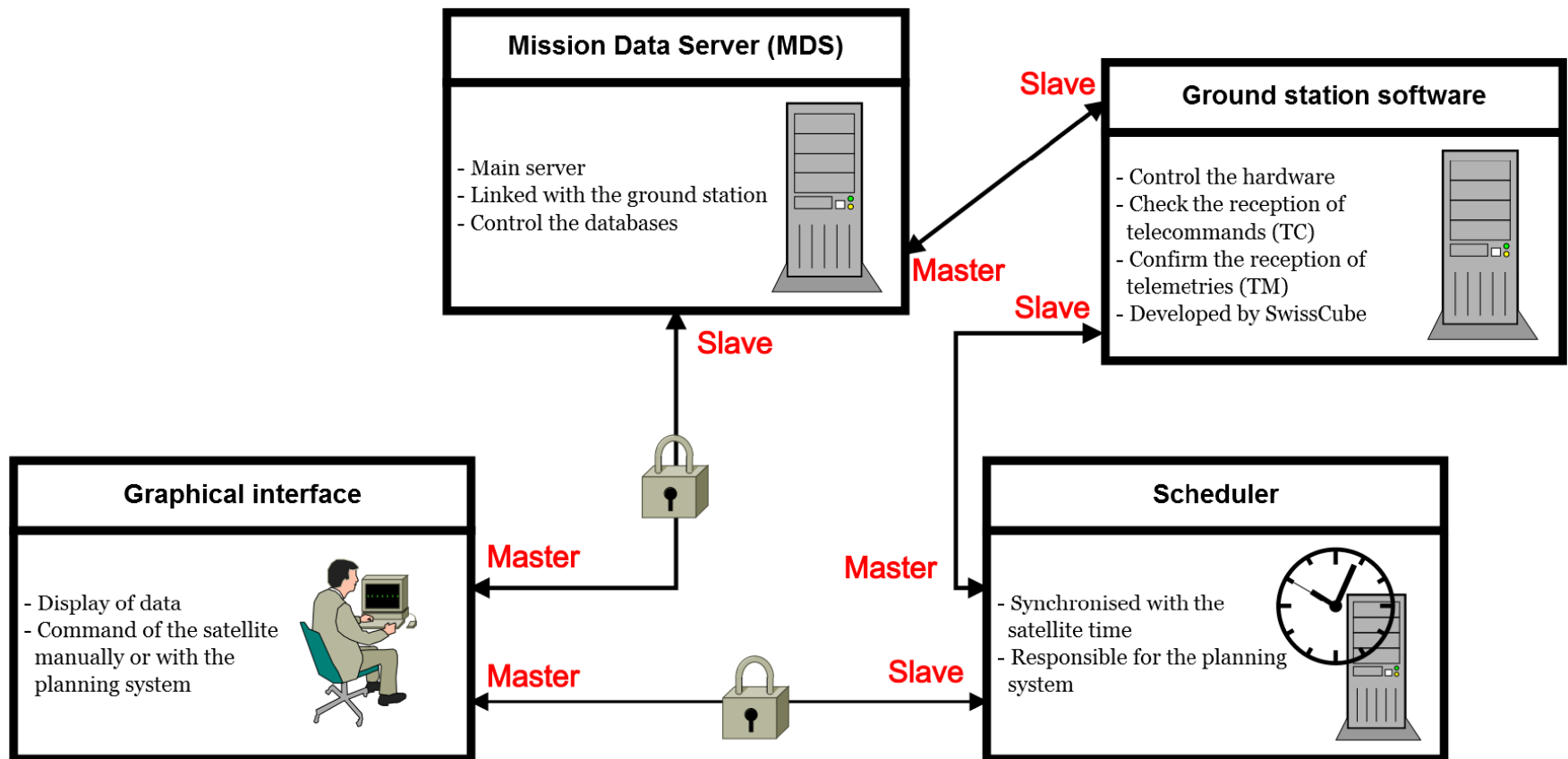
Part II: Mission control software

- Goal of the project:
 - Create an easy way to plan the mission
 - “User friendly” interface for commanding the satellite



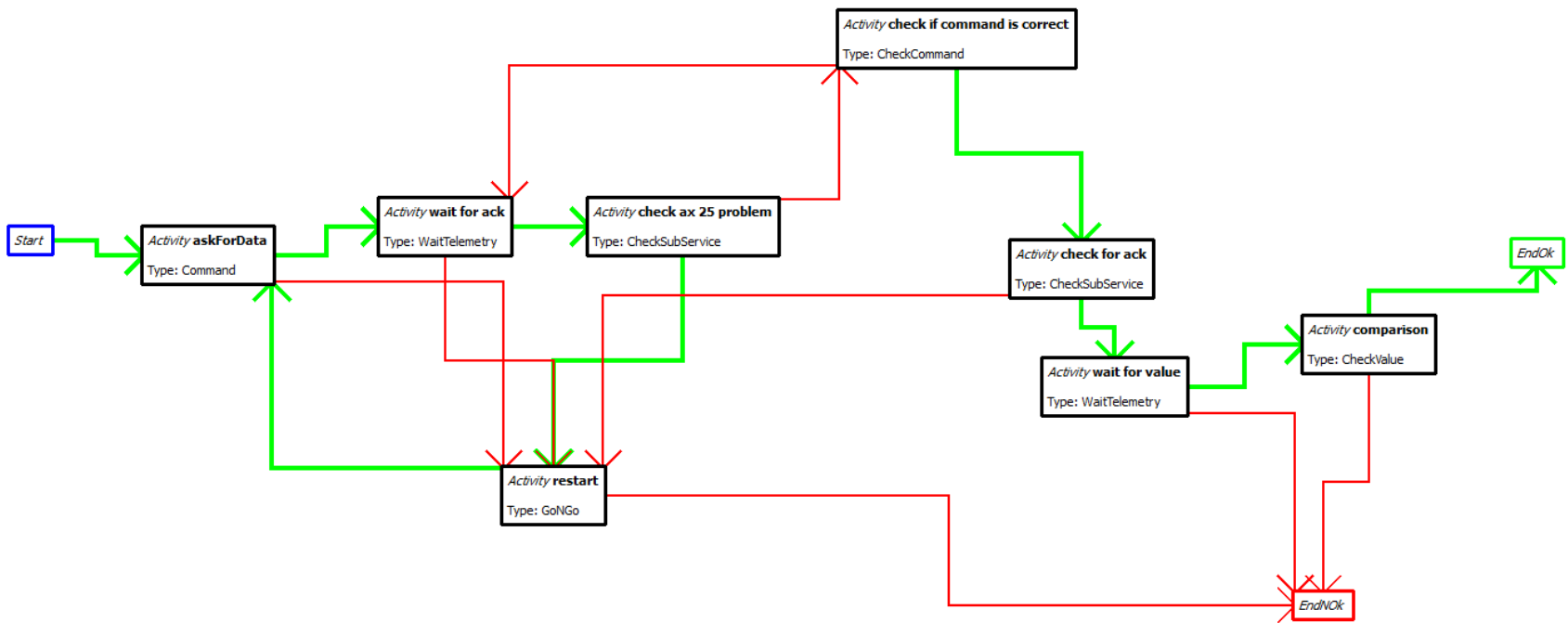
- The software developed allow the user to:
 - Create a “script” to execute at the pass time (planning)
 - Manually command the satellite
 - Visualize the historic of the mission
 - Visualize the passes time

- Architecture:



II. Mission Control Software

- Demonstration with a simulation of the satellite and a test planning:





www.oufti.ulg.ac.be



Thank you for your attention !

