

# Software architecture for the automatization of the ground segment of the OUFTI-1 CubeSat

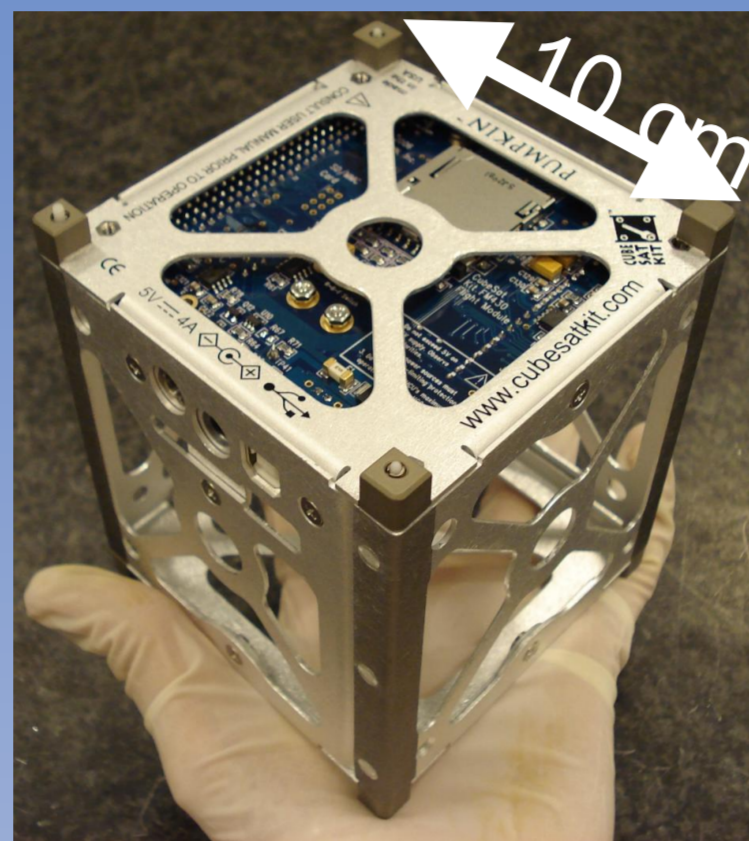


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## OUFTI-1 project

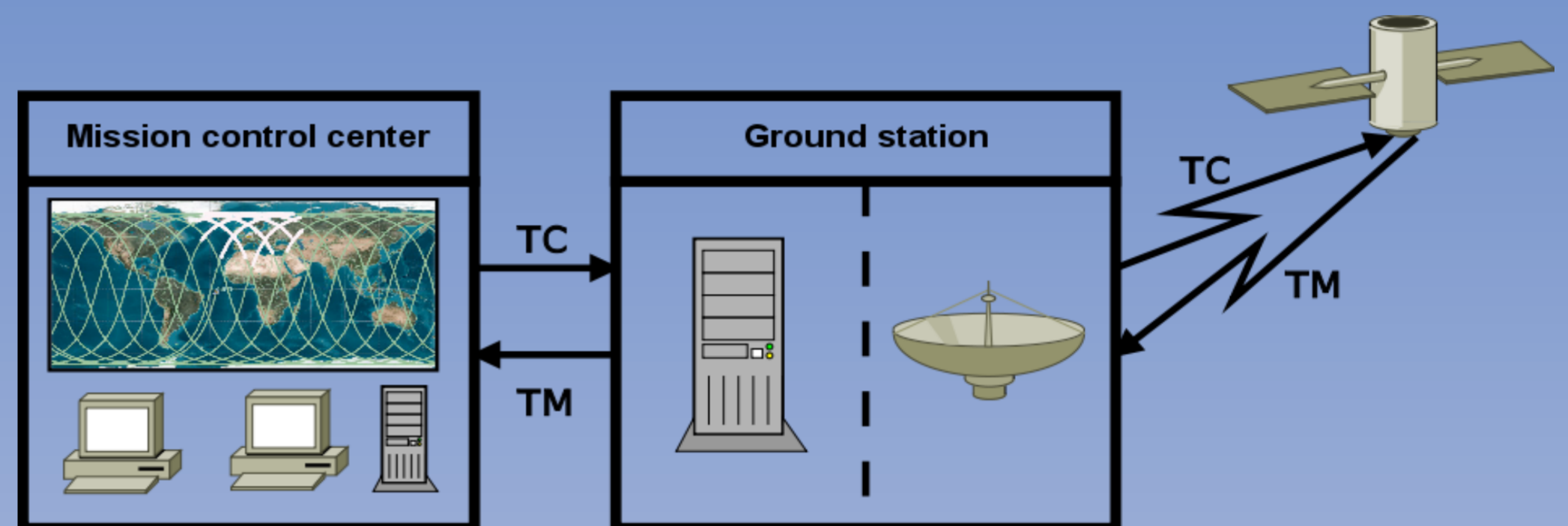
- First CubeSat in Belgium
- CubeSat: a standard for nanosatellites
- Three innovative payloads:
  - D-STAR
  - Experimental EPS
  - New solar cells



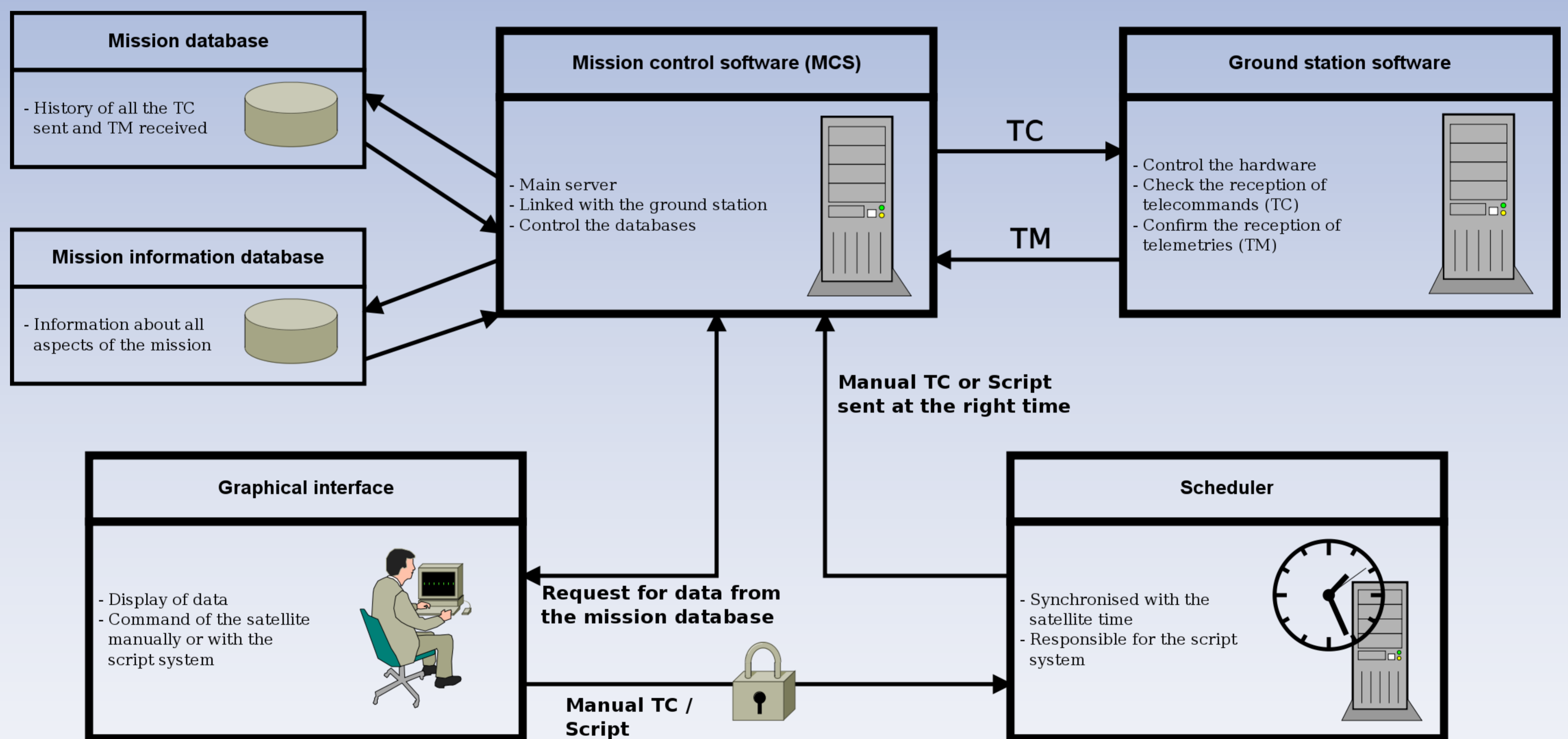
## Problem addressed

The ground segment is divided into:

- Mission Control Center (MCC, mainly consisting of software)
- Ground Station (GS, mainly consisting of hardware, such as transceivers and antennas)



## Mission Control Center



## Technologies used

- Command of the satellite with a script system
- Secure Sockets Layer (SSL) connection between the graphical interface and the scheduler
- Structured Query Language (SQL) used to access the databases
- TCP/IP connection between the graphical interface and the MCS
- Implementation of a login / password system