How to build a harmonious regional development based on Space assets.

ESEC - Redu

02.06.2022

Implantation in Belgium

Telespazio's activities in Wallonia started in 1982 with the Maintenance and Operations contract at the ESA ESEC station of Redu, at that time known as ESTRACK.

Over the years, with the support of the Wallon Region authorities including regional and provincial agencies such as AWEX and IDELUX, Telespazio Belgium has developed many activities in the space environment in the area of Redu and Transinne in the following domains.

❑ Ground Systems Operations and Exploitation.

❑ Space Operations, System's Engineering & Consulting.

❑ Ground Data Systems.

❑ GNSS Infrastructures. Participation and contribution to the deployment and operations of the GNSS Ground Infrastructure

❑ Research and Development.

Ground Systems Operations and Exploitation.

End to end Operational Management of complex sites and technical infrastructures.

❖ Eutelsat ATS ground stations.

❖ Belgian MOD (Marche-en-Famenne military base and portable stations)

❖ Customized solutions for ESA and other space operators (Equaleops).

❖ ESA Redu Ground facilities infrastructures (Galileo GSS Station).

SPACE OPERATIONS, SYSTEM'S ENGINEERING & CONSULTING

Operations and Engineering Services performed in the framework of the missions and activities of the European Space Agency and other costumers.
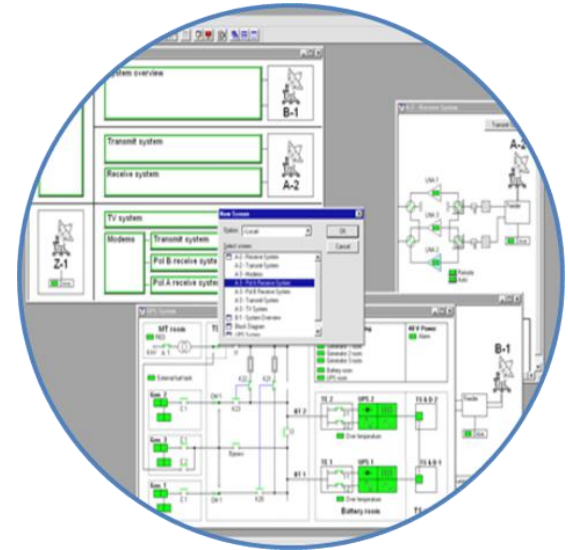
❖ ESA – ESTEC: Engineering support to ESA projects.

❖ ESA – ESOC: Operations and engineering support for ESA missions,

❖ Airbus Defence and Space: Support for Payload Mission & Integration Engineering for ISS

❖ CNES: Engineering support

❖ DLR: Engineering support

❖ ESO: Software Engineering support

GROUND DATA SYSTEMS

Conception and development of software suites and systems for different areas of Ground Data Systems: Mission Control System, Automation System, Electrical Ground Support Equipment, ILS.
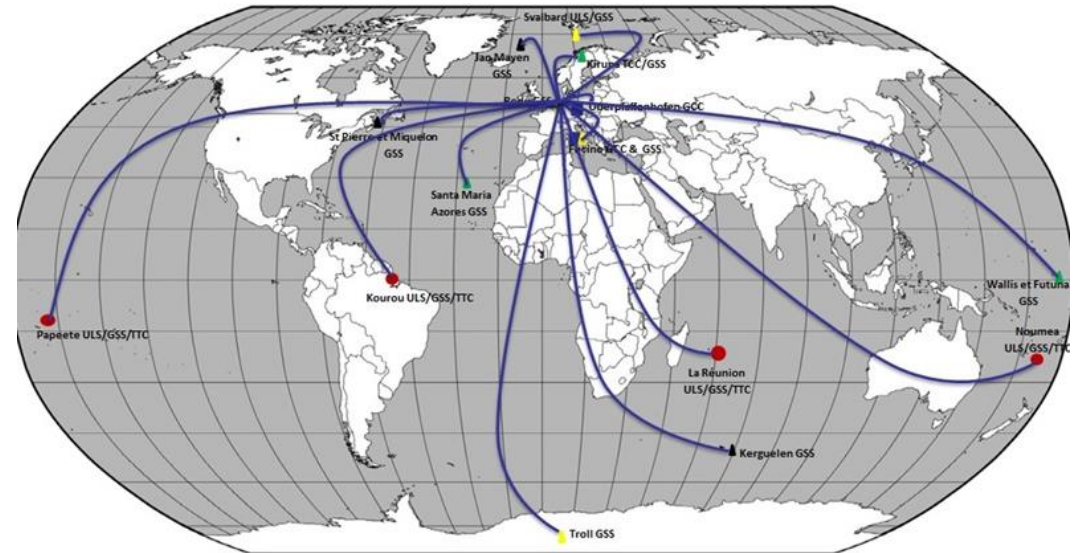
❖ EGS Common Core: Development of a Common framework Software to build Ground Data Systems to be proposed to other European agencies and integrators. TPZB was an important player as developer of EGS-CC

❖ ESA ASE5: The Automatic Scheduling Execution system (ASE) built by Telespazio provides automation capabilities for managing both the spacecraft and the ground segment. The automation language and automation environment are based on the PLUTO ECSS standard.

❖ Eutelsat NIMBUS: NIMBUS is a Web oriented application for the configuration management of complex hardware systems such ad a ground stations network.

GNSS Infrastructure

Participation and contribution to the deployment of the GNSS Ground Infrastructure.

❖ Spaceopal: GSOP – Galileo ILS Center management (fully financed by the regional Ministry of Economy Industry and innovation) , Remote Sites Management and Operations, new sites EMI and Multipath site surveys (Bonaire and Terre Adelie) and deployment of the infrastructure of new sites (Wallis and Futuna, Kerguelen new site).

❖ Thales Germany and France: Galileo WP2x (Galileo Mission Segment - GMS) – Deployment of the Galileo GMS and Associated network Interfaces.

❖ SES-TechCom: Galileo deployment of the Ground Data Dissemination Network (GDDN).

❖ GSA: Frame Contract for EGNOS V3 Site Surveys

RESEARCH AND DEVELOPMENT

Wallonie as the Telespazio Innovation Hub in Benelux

❖ Collaborating with Universities
   ❖ Preventive maintenance research through PhD funded by the region (Win4Doc)
   ❖ Master students from European Universities hosted in Belgium
   ❖ Parthership with UniNamur

❖ European R&D Programmes
   ❖ ECHO - Collaboration with Belgian partners for developing cybersecurity initiative in EU
   ❖ a4ESSOR - Feasibility studies on SATCOM for EU/EDA
   ❖ NAV-SSHE - Improved navigation systems security through hybridisation and interference mitigation with ESA
   ❖ H-Gear - Novel eCall and anti-theft system for moped based on Galileo and inertial sensors with EUSPA
   ❖ Profumo - Innovative Maritime downstream applications for sustainable transport with ESA

❖ Internally funded research activities
   ❖ Secure Comms Lab – securing space communications
   ❖ Digital Tech Lab – exploit computer technologies for space

THANK **YOU**
FOR YOUR ATTENTION

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