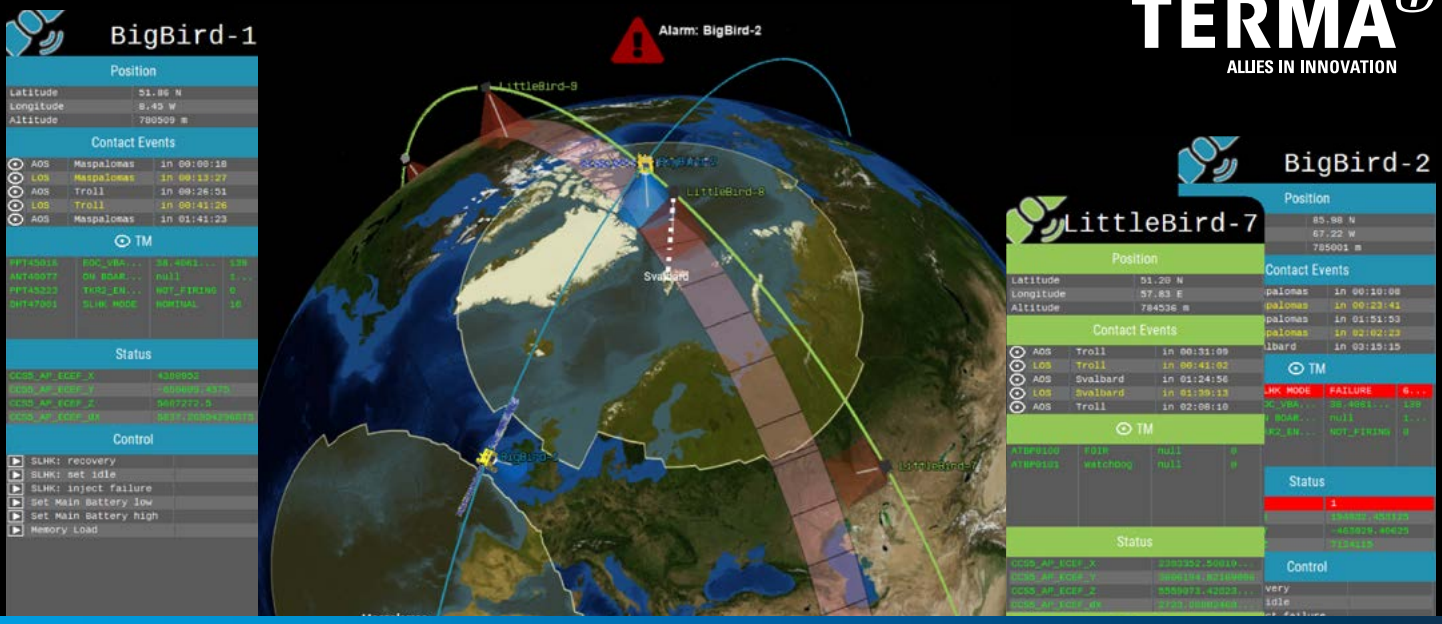
TERMA
ALLIES IN INNOVATION



TRACK

ADVANCED MISSION VISUALIZATION

TERMA'S TRACK IS AN ADVANCED MISSION VISUALIZATION SOLUTION DESIGNED FOR SITUATIONAL AWARENESS, OPERATIONAL PLANNING, AND SCIENTIFIC DATA INTERPRETATION. TRACK ENHANCES SPACE MISSION MANAGEMENT BY PROVIDING PRECISE, REAL-TIME ORBIT VISUALIZATION AND ANALYSIS FOR SPACECRAFT AND SATELLITE CONSTELLATIONS.

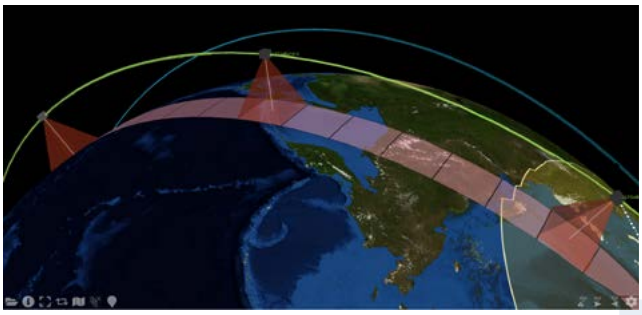
TRACK integrates dynamic 3D and flat maps, terrain data, offering mission operators a comprehensive and interactive visualization of spacecraft dynamics, orbit tracking, communication links, and event planning. When connected to a satellite control system such as CCS5, TRACK extends its capabilities to real-time monitoring and control, making it a vital tool for constellation operations. TRACK can expand the functions of a Mission Planning System for Earth Observation missions.

Interactive Graphical Environment

3D visualisation: Interactive 3D Earth Globe.
2D Flat visualisation: Interactive Flat Earth Map.
Interactive Cards: satellites and ground station static and dynamic information are reported in dedicated movable cards

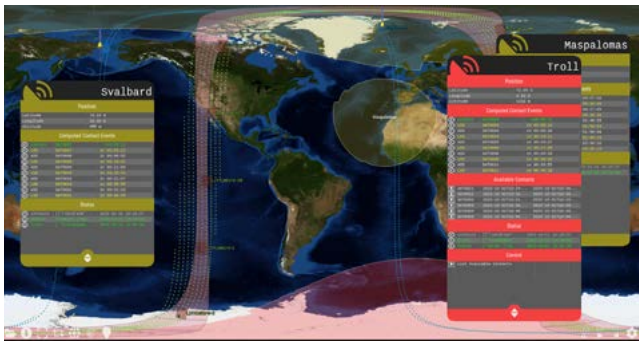
ORBIT Visualization and Propagation

Tracks rendering: Orbit and ground track of spacecraft.
Constellation Support: Support for spacecraft constellation visualization.
3D Model Support: Satellite and ground station 3D models rendering.
Instrument Field of View: FOV oriented with the spacecraft's instruments (Antennas, Sensors, etc.).
Swath Path: Swath path for instruments looking down from the orbiting body.



Ground Stations Visualisation

Location and elevation masks: Rendering of visibility areas, adjusted to satellite altitude.
Spacecraft visibility contact: Determination of Acquisition of Signal (AOS), Loss of Signal (LOS) events.
Ground Station status information: Status information from the G/S equipment or GSaaS provider reported in real time.



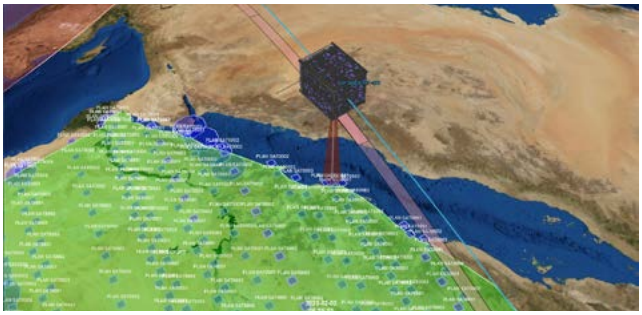
Realtime Monitoring and Control

When connected to a satellite control system:

Live Monitoring: shows real-time telemetry data and alarms for a satellite or a constellation with cards
Constellation Control: cards include commanding capability
Relay and Communication: visual representation of communication between ground and spacecraft.

Mission Planning for Earth Observation Missions

AOI rendering: Areas of Interest are represented on the Earth surface
Imaging footprint: planned acquisition footprints shown on the map.



ORBIT File Formats

TLE: Two-line element sets.
CCSDS OEM: Orbital Ephemeris Message.

Supported Data Sources

CCS5: Terma Spacecraft Control System.
ORBIT: Terma Flight Dynamics suite.
PLAN: Terma Mission Planning system
SIMSAT: ESA Simulator infrastructure.
Custom sources: TRACK offers public APIs to enable communication with customer-owned systems.

Operating Systems

Windows®: works on all recent versions.
Linux®: works on all recent distributions.

Software Platform

Java, based on NASA WorldWind and Orekit frameworks.
IPR owned by Terma, no export restrictions.

Upcoming Feature:

Migration to a web-based user interface (UI)

SUPPORT

Standard license price includes 1 year warranty & email support. Standard training packages available on request.

More information from http://tgss.terma.com

If you have any questions, please contact our team, terma.space@terma.com.

www.terma.com

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