



Data sheet - TRACK

The Terma TRACK product provides accurate, real-time graphical visualisation and analysis of spacecraft or a fleet in orbit around the Earth and ground stations. It can show spacecraft orbits from TLE files as well as real-time sources (satellite control system or simulator). It can perform event determination such as station AOS/LOS or eclipses.

INTERACTIVE 3D ENVIRONMENT

3D Globe: Interactive 3D Globe.

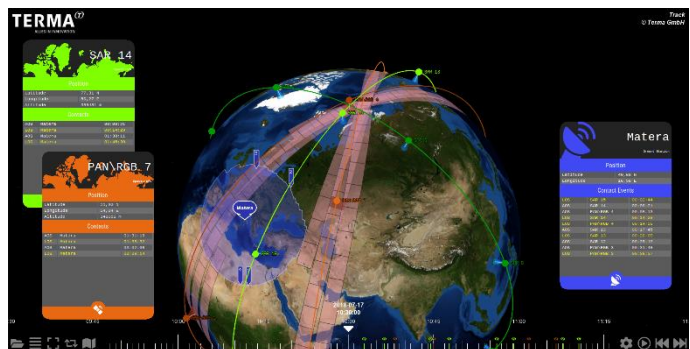
Flat Map: Interactive Flat Map.

Digital Elevation Model support: Support for DEM files representing the terrain of the body in both views.

Solar System: Solar system overview for interplanetary missions.

Solar System Bodies: Every major body of the solar system possible to navigate via globe or flat map.

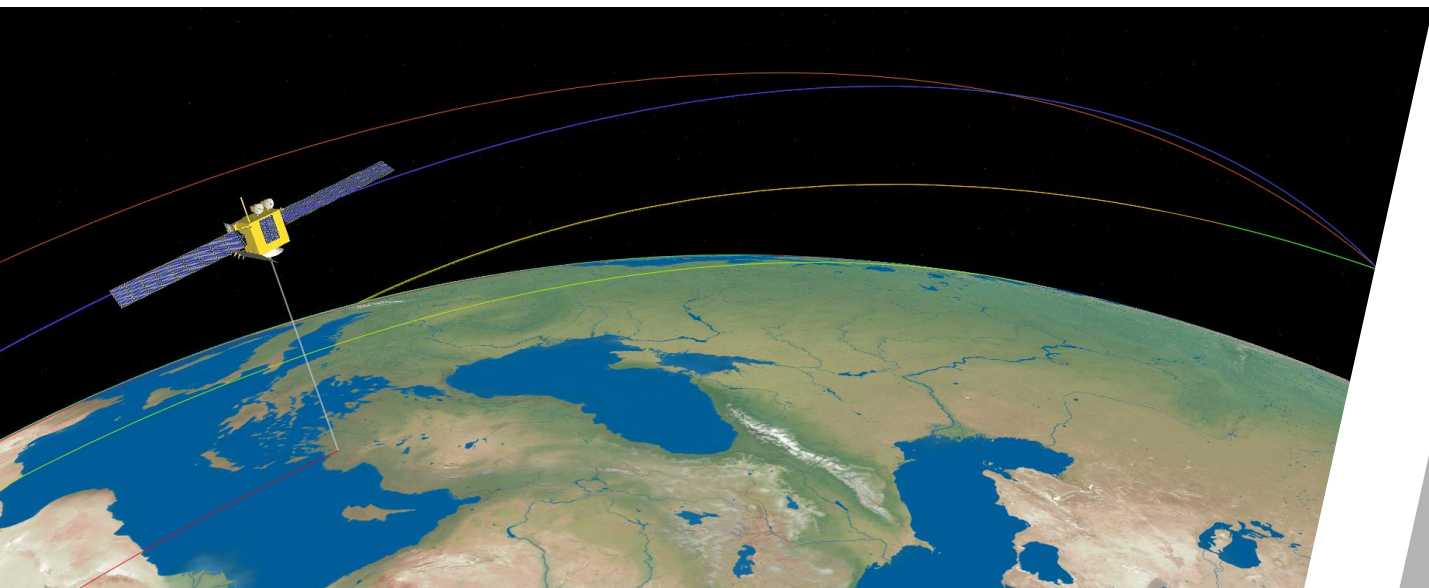
Multiple Map Projection: Support for most major map projections.



SPACECRAFT VISUALIZATION

Attitude: Realistic representation of spacecraft attitude.

Solar-Panels: Realistic representation of solar panel orientation.





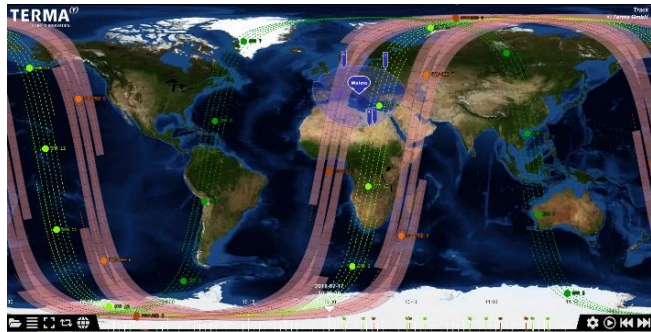
Instrument FoV: Field of View cones oriented with the spacecraft's instruments (i.e. Antennas, Sensors, etc.).

Swath Path: Swath path for instruments looking down from the orbiting body.

Animated Deployable: Support for 3D models with animations to show deployment in real time.

Constellation Support: Support for spacecraft constellation visualization.

S/C Relay Visualisation: Graphical representation of spacecraft communication and relays.



ORBIT VISUALIZATION AND PROPAGATION

Orbit and Ground Track: Track orbit and ground track of spacecraft.

Relay and Communication: Visual representation of communication between ground and spacecraft.

Eclipse Determination: Determination of eclipse conditions in orbit.

Manoeuvres: Plan manoeuvres and burns.

Recording: Orbit recording from live data sources.

Manipulation: Orbit manipulation with real time feedback.

GROUND ASSETS ACQUISITION/LOSS OF SIGNAL DETERMINATION

Ground asset location and elevation masks (e.g. Ground Station).

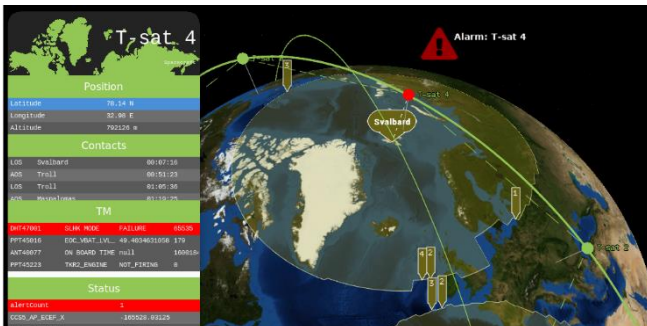
Determination of future AOS and LOS events.

PRODUCT VISUALISATION

Support for scientific product data visualization in a geographic 3D space.

REALTIME MONITORING AND CONTROL

If connected to a satellite control system, shows real-time telemetry data and alarms for a satellite or a constellation and provides commanding capability.



ORBIT FILE FORMATS

TLE: Two-line element sets.

CCSDS OEM: Orbital Ephemeris Message.

STK: Satellite Tool Kit.

SP3: National Geodetic Survey.

SPK: SPICE Ephemeris Format.

SUPPORTED DATA SOURCES

CCS5: Terma Spacecraft Control System.

TEMU: Terma Emulator.

ORBIT: Terma Flight Dynamics suite.

SIMSAT: ESA Simulator infrastructure.

SCOS-2000: ESA Mission Control System.

SPECIAL FEATURES

3D Model Support: Supports 3D models from several standards: COLLADA, 3DS, OBJ, etc.

OPERATING SYSTEMS

Windows®: works on all recent versions.

Linux®: works on all recent distributions.

MacOS®: works on all recent distributions.

SOFTWARE PLATFORM

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

SUPPORT

Standard license price includes 1 year warranty & email support. Standard training packages available on request. More information from <http://tgss.terma.com/> WIKI and access to bug-tracking system available to licensed customers.