



Data sheet - TRACK

The Terma TRACK product provides accurate, real-time graphical visualisation and analysis of spacecraft in orbit around the Earth and ground stations. It can show spacecraft orbits from files and simulated/real sources. It can perform event determination such as station AOS/LOS or eclipses.

INTERACTIVE 3D ENVIRONMENT

3D Globe: Interactive 3D Globe.

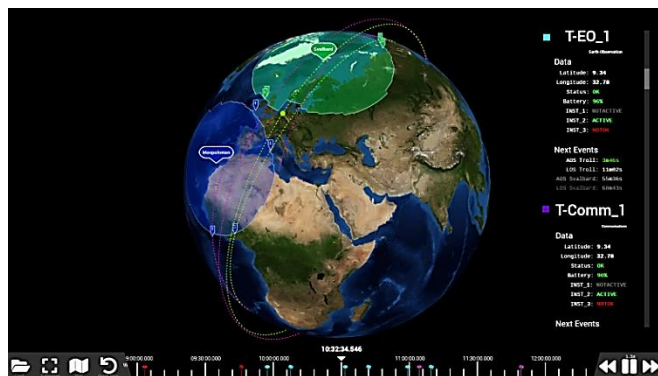
Flat Map: Interactive Flat Map.

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.

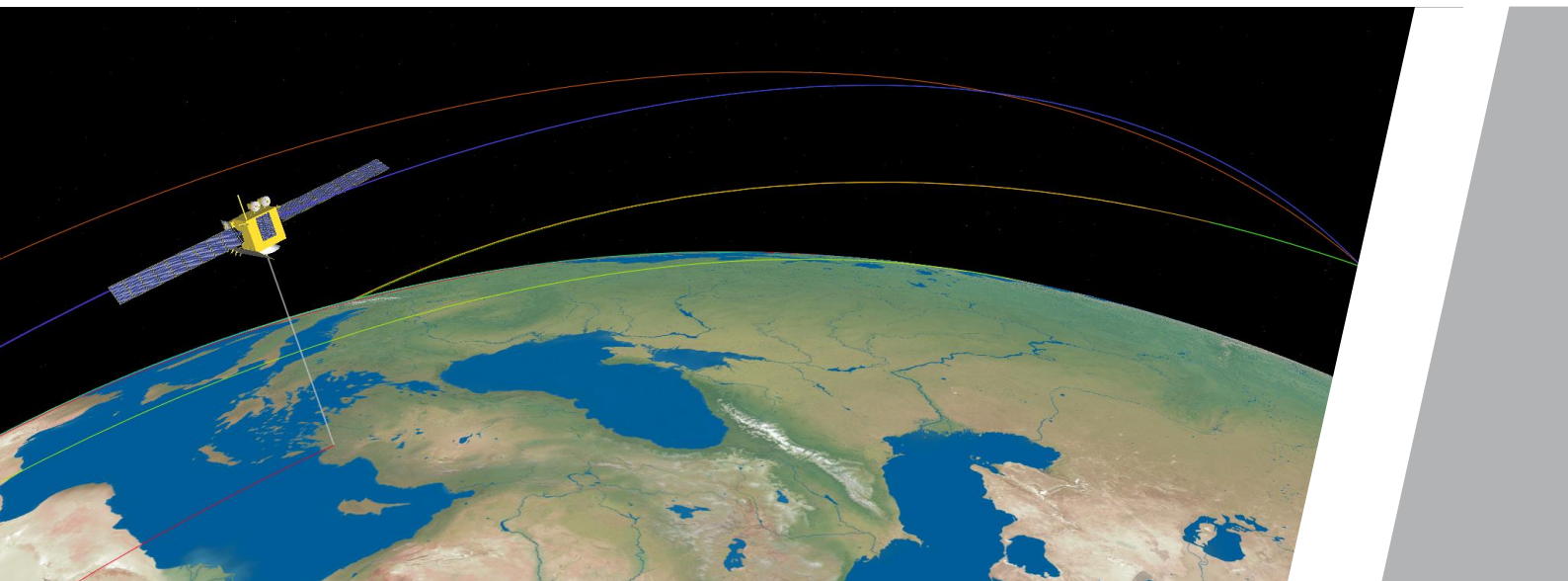
Multiple Map Projection: Support for most major map projections.



SPACECRAFT VISUALIZATION

Attitude: Realistic representation of spacecraft attitude.

Solar-Panels: Realistic representation of solar panel orientation.



TRACK

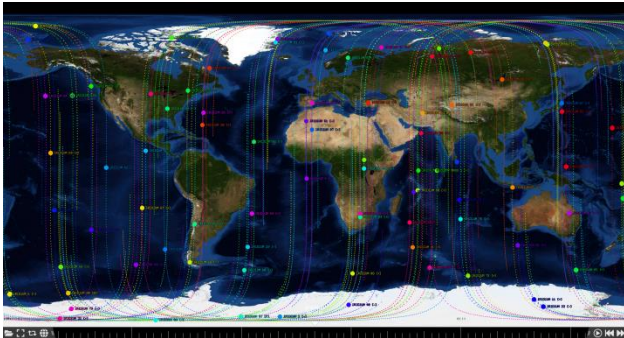
Instrument FoV: Field of View cones oriented with the spacecraft's instruments (i.e. Antennas, Sensors, etc.).

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.

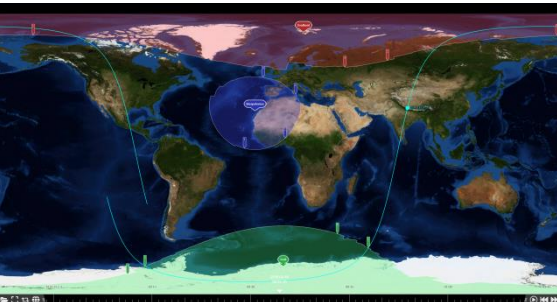
Recording: Orbit recording from live data sources.

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.



VISUAL OVERLAYS

Show textual mission critical information on an overlay directly on the screen or next to configurable positions in space.

PRODUCT VISUALISATION

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

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

SCS5: 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, installed as RPM.

MacOS®: works on all recent distributions.

SOFTWARE PLATFORM

Java, based on NASA WorldWind and Orekit frameworks.

No other free (e.g. GNU) software is packaged.

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.