



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

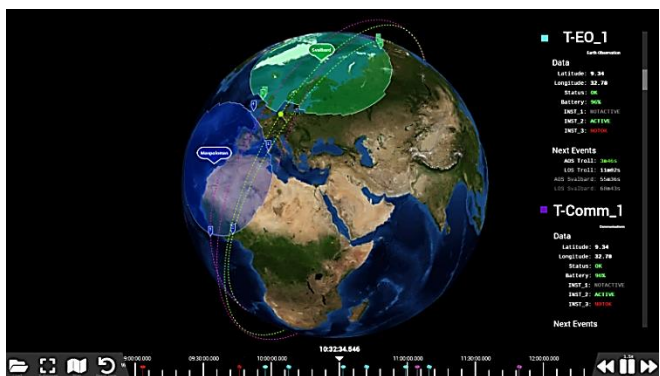
Flat Map: Interactive Flat Map

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

Solar System: Solar system overview for inter-planetary missions

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

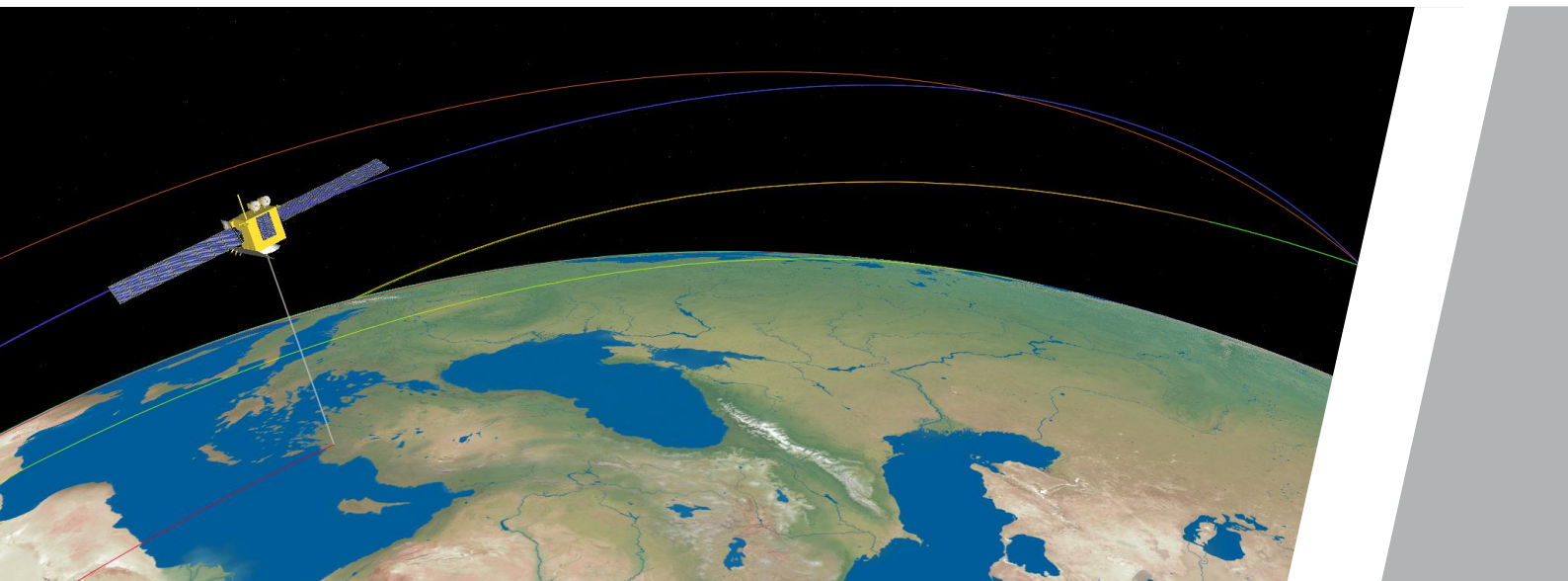
Multiple Map Projection: Support for most major map projections



SPACECRAFT VISUALIZATION

Attitude: Realistic representation of spacecraft attitude

Solar-Panels: Realistic representation of solar panel orientation



TRACK

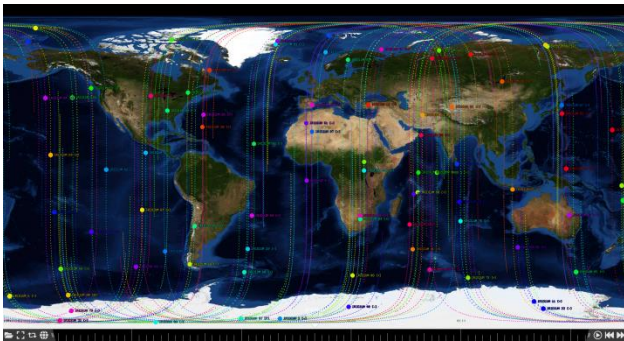
Instrument FoV: Field of View cones oriented with the spacecraft's instruments (i.e. Antennas, Sensors, etc.)

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

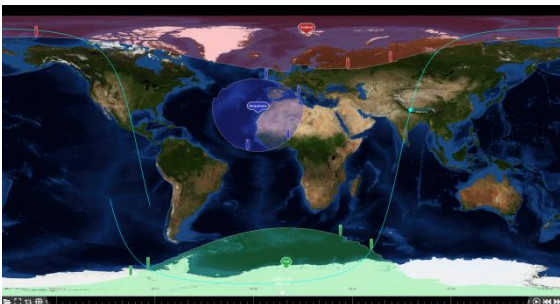
Recording: Orbit recording from live data sources

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.

SOFTWARE PLATFORM

Windows™: works on all recent versions.

Linux™ works on all recent distributions, installed as RPM.

MacOS™ works on all recent distributions

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.