Satellite Tracking & Maneuver Detection Services

Next Generation Satellite Tracking

Real-time, Precise, Global Capabilities

Kratos' Tracking and Maneuver Detection Service provides real-time precision satellite position, orbit determination, and maneuver detection as a data service. It is designed to support on-orbit maneuverers, maintenance, conjunction assessment, rendezvous and proximity operations, and cataloging maintenance.

Kratos uniquely identifies and tracks active objects in space enabling high accuracy, frequent revisit rates, and continuous coverage. This service is made possible through Kratos' own global sensor network that captures and catalogs the RF signals transmitted by satellites around the world. Data is available as a turnkey subscription service delivered through a web-based REST API.

Data products include:

- State vectors
- Two-line Element (TLEs)
- Maneuver alerts
- Raw TDOA/FDOA



Maneuver Detection

In the new space economy, it's critical to understand where objects are going, not just where they are. Kratos proprietary maneuver detection algorithms are sensitive enough to identify both chemical and electric propulsion systems and send alerts within minutes of the start of a maneuver.

The Power of RF Space Domain Awareness

Kratos captures Radio Frequency (RF) signals to locate and track objects in space, understand satellite missions and operations, and provide capability for responding to threats and challenges in space. RF SDA is an emerging technology

that fills key gaps in traditional SDA systems. Electro-optical systems lose custody during the day-time solar exclusion window, and ground-based radar is not cost-effective beyond LEO. Both struggle with cross-tagging objects, and so neither is suited to the proximity operations and interactions that are growing common in the new space economy. While RF solves these key issues, it complements, rather than replaces, these legacy technologies because it can only see active objects, and not inactive debris.

Passive RF Sensing

All weather, 24/7 tracking and support for proximity operations

Global RF Sensor Network

Ground-based Radar

Accuracy fades beyond LEO



Worldwide presence L/S/C/X/Ku coverage 140+ sensors 20+ sites

Electro-optical

Limited to clear sky, nightime observation

Kratos' services are operated and powered by their own world-wide network.

Kratos provides Satellite Communications, Space Domain Awareness, and Space Control Solutions for commercial and government applications. Satellite Tracking capability and other solutions are also available as a customer owned and operated deployment.



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Kratos measures satellite signals from multiple sensors to determine where a satellite is in orbit and to detect when it is maneuvering.