GeoSig
RF Signal Geolocation

INTEGRASYS
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CAPEX or SaaS

BEST ISR SATELLITE TOOLKIT

Evaluate satellite RF onboard sensing & geolocation in real time. Designed for engineers, system designers & government agencies.

www.integrasys-space.com

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Competitive Advantage

- Advanced RF geolocation performance simulator specifically designed for satellite constellations.
- Real-time estimation of theoretical geolocation accuracy for UHF, L, C, X, Ku, Ka, Q, U, W bands.
- Flexible constellation architecture allowing full control of orbital and satellite parameters.
- GDOP-based geometry evaluation.
- Designed to support RF geolocation mission design, feasibility analysis and proposal preparation.

Features

- Web-based graphical interface for configuring simulations and analyzing results.
- Custom satellite constellation generator with configurable altitude, inclination and satellite spacing.
- Multi-plane constellation configuration for advanced mission analysis.
- Pseudo-TLE generation for satellite orbit representation.
- Real-time geolocation error computation based on constellation geometry.
- GDOP (Geometric Dilution of Precision) calculation or geometry quality assessment.
- Signal parameter configuration including bandwidth and SNR.
- Error modeling including satellite clock errors, position uncertainty, atmospheric effects and Doppler shift.
- Exportable results for engineering documentation and analysis.

Benefits

- Evaluate geolocation performance before deployment through realistic constellation simulations.
- Optimize satellite constellation design to maximize geolocation accuracy.
- Understand the impact of signal quality and environmental effects on localization performance.
- Reduce mission design risks through early system performance validation.
- Support engineering trade-off studies between constellation parameters and signal characteristics.
- Accelerate decision-making during mission planning and system design.
- Provide quantitative accuracy metrics for technical proposals and feasibility studies.
- Improve understanding of geolocation limitations in complex RF environments.

Company Awards

Vision Awards	MOST INNOVATIVE PRODUCT OF THE YEAR	2014
VSAT INDUSTRY AWARDS 2015	TECHNOLOGY INNOVATION OF THE YEAR	2015
VSAT GLOBAL 2017	BEST GROUND TECHNOLOGY OF THE YEAR	2017
WTA	TELEPORT TECHNOLOGY OF THE YEAR	2018
MSUA Mobile Satellite Users Association	GOVERNMENT MOBILE INNOVATION	2022
WTA	TELEPORT TECHNOLOGY OF THE YEAR	2023
MSUA Mobile Satellite Users Association	SATELLITE MOBILE INNOVATION AWARDS	2023
MSUA Mobile Satellite Users Association	NEW SPACE MOBILE INNOVATION AWARD	2024
BROADCASTPRO Manufacturer Awards	BEST CONTRIBUTION TO SUSTAINABLE SATELLITE OPERATIONS	2025
SSPI	BETTER SATELLITE WORLD AWARDS	2025