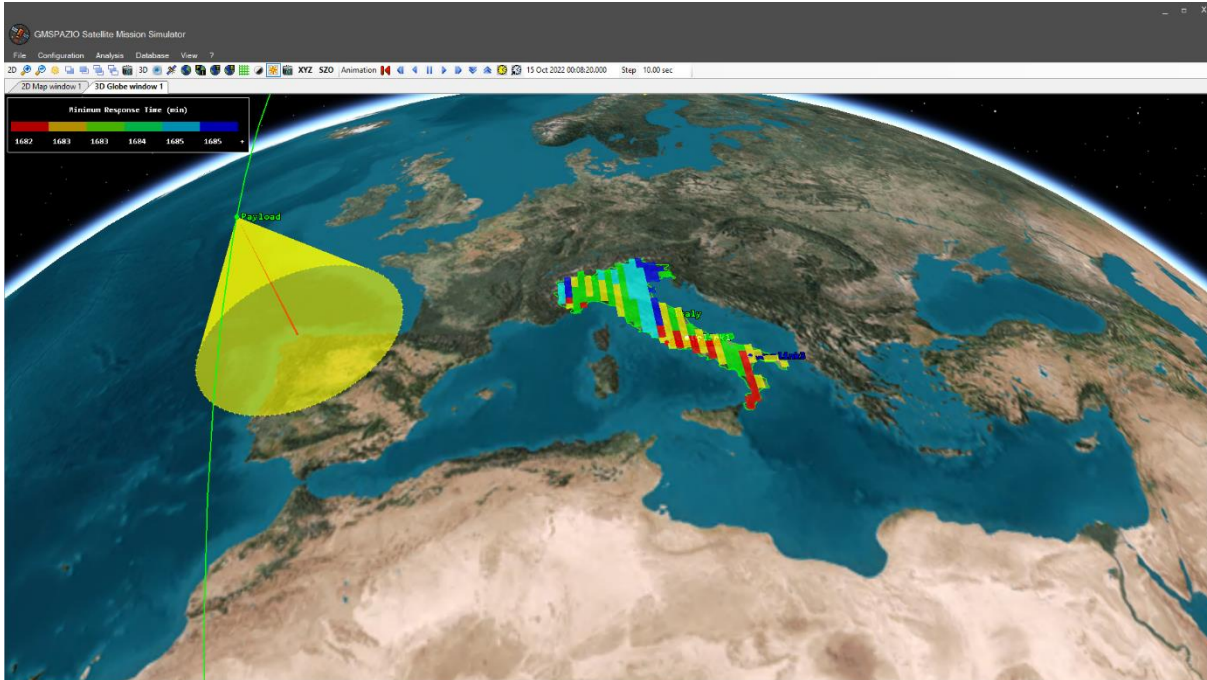


GSMS - GMSPAZIO Satellite Mission Simulator

All-in-One Satellite Simulation Solution

GSMS is a cutting-edge software tool designed to simulate the entire satellite system's behavior from a mission perspective. Built on the AGI STK platform and tailored by GMSPAZIO, to provide an immersive 3D modeling environment for evaluating satellite system performance, mission scenarios, and optimization.



Core Features

- **3D and 2D Interfaces:** Seamless operation in complex simulation environments.
- **Two Primary Analysis Modes:**
 - **System Performance Analysis:** Measures global satellite performance metrics without user constraints.
 - **Planner-Scheduler Analysis:** Assesses satellite performance with real-world constraints, including user priorities and task scheduling.

Key Performance Metrics

- **Response Time Analysis:** Measures time between task submission and image acquisition. Configurable targets include point targets, Areas of Interest (AOI), latitude belts, and region lists. Additional constraints such as maximum Solar Zenith Angle (SZA), time delay, and operational system mode can be set.
- **Revisit Time Analysis:** Calculates the interval required for the satellite to re-acquire a target. Supports various target types.
- **Information Age Analysis:** Determines the time from data acquisition to complete data download, factoring in data rates and selected ground stations. Configurable for whole world, AOI, latitude belts, and regions. Max SZA constraints can also be applied.
- **Graphic Mode:** Visualize scheduled satellite activities in 2D and 3D.
- **Text Reports:** Export comprehensive data on all scheduled activities, including order IDs, acquisition times, and more.

Planner-Scheduler Analysis

- **Acquisition Management:** Handles multiple user requests, prioritizes tasks, and manages usage quotas.
- **Detailed Acquisition Process:** Simulates from task uplink to image downlink and processing.

Output Modes

- **Graphic Mode:** Visual representation of scheduled activities in 2D and 3D.
- **Text Reports:** Comprehensive logs of all scheduled activities, including order IDs, uplink times, acquisition periods, and downlink details.

