

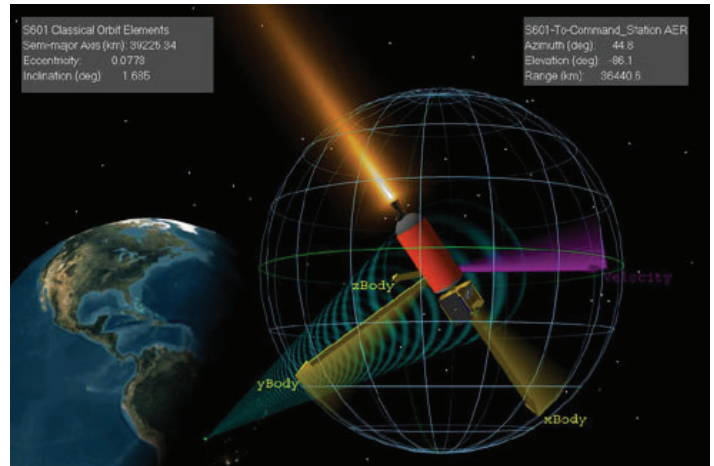
# NAVY NAVSOC Flight Dynamics Receives Operational Software Upgrade Using Suite of AGI Technology

## AGI Engine Speeds Implementation, Operations, and Accuracy

**THE MISSION BRIEF:** The Naval Satellite Operations Center (NAVSOC) at Point Mugu, California operates flight dynamics for Fleet Satellite and UHF Follow-On geostationary spacecraft. Its duties include orbit determination, station-keeping maneuvers, product generation, and collision avoidance. In anticipation of the Mobile User Objective System (MUOS) program, NAVSOC wanted to modernize its flight dynamics system for more accurate orbit determination, quicker recovery after maneuvers, automated processes, and standardized workflows—with the option to run as a fully automated or user-run manual system.

**AN ALL-HANDS ELEVATION:** At the time, the center relied on disparate systems from a number of vendors and contractors. Staff Orbit Analysts had authored custom scripts to streamline some processes—and NAVSOC formally included those procedures in a new, robust enterprise system based on AGI software. Maxim Systems—a company with unparalleled experience in satellite operations, thorough understanding of CONOPS, and a long-standing relationship with NAVSOC—performed the integration. They turned to Applied Defense Solutions (ADS)—a company with extensive experience integrating AGI products—to incorporate Systems Tool Kit (STK), STK Astrogator, STK Conjunction Analysis Tools (CAT), and Orbit Determination Tool Kit (ODTK).

Integrating AGI software into a new, robust enterprise system resulted in operational software—deployed within twelve months—that dramatically improved system accuracy, streamlined operations, and made it easier for NAVSOC to provide reliable satellite services to the warfighter.



When NAVSOC wanted to upgrade its operational flight dynamics software system to integrate telemetry data, create mission-specific data products, and customize operational requirements; MAXIM Systems—working with Applied Defense Solutions—integrated AGI software into a new, robust enterprise system. This resulted in operational software deployed within twelve months. The solution dramatically improved system accuracy, streamlined operations, and made it easier for NAVSOC to provide reliable satellite services to the warfighter.

**SUCCESS FROM THE START:** The result was a custom Graphical User Interface (GUI) based on NAVSOC workflows that provided improved orbit determination, maneuver planning, product generation, and collision avoidance—including the calculation of suggested avoidance maneuvers. Deployed in less than twelve months, the operational software solution offered dramatically improved system accuracy. Ultimately, it would automate and streamline operations in support of NAVSOC's operational mission—providing reliable satellite services to the warfighter.