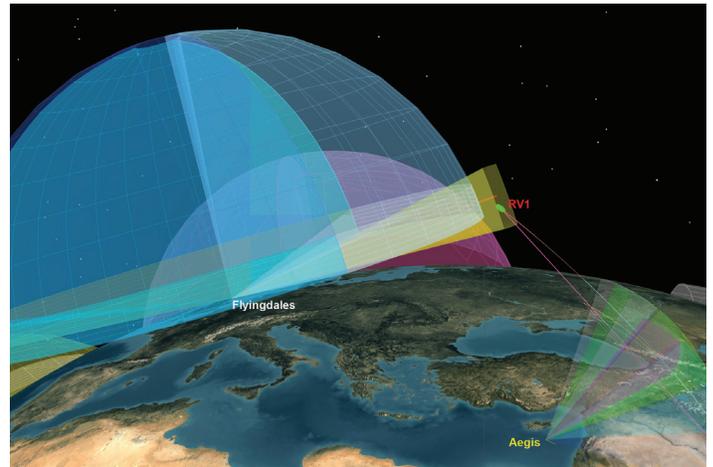# RAF Fylingdales Facility Improves Space Situational Awareness with STK Engine

STK Integrates with Legacy systems for Streamlined Results

THE FACILITY: The Royal Air Force (RAF) facility in Fylingdales, UK is Site III of the Ballistic Missile Early Warning Center and a missile-detection/space-surveillance operation. Satellite-position information interpreted here goes to the Missile Warning Center (MWC) in the UK and USSPACECOM in the US. RAF Fylingdales needed to cost-effectively upgrade its 30-year-old satellite-position system and outdated legacy software.

A MUCH-NEEDED UPGRADE: The system required two days of information gathering and analysis. Operators needed an efficient way to import satellite position data in a legacy file format for analysis. This would allow them to speed retrieval, analysis, and dissemination. With time so critical, they required an interface that minimized training for fast implementation. AGI's commercial off-the-shelf STK Engine integrated physics-based geometry with legacy hardware to mitigate cost and increase productivity. The custom workflow interface displayed calculations in an interactive, 3-D environment for fast, accurate discernment and reporting.

3-D depiction of radar field-of-view for RAF Fylingdales location.

The RAF needed to upgrade their 30-year-old satellite-position system to speed data retrieval, analysis, and dissemination while minimizing transition and training time. Using STK, engineers eased cost and increased productivity. Integrating ATK's physics-based geometry engine into the legacy system let operators produce results in hours versus days—after only 30 minutes of training. In the end, the center became operational in six months at a 90% lower costs.

Operators now produce and disseminate results in two hours rather than two days—a 95% time reduction. Training took 30 minutes on average and the center became operational in six months—all at a cost 90% less than before. AGI's STK Engine met RAF needs, passed preliminary functionality tests, and enabled personnel to easily adapt to the solution.

MISSION ACCOMPLISHED: AGI's task-based software produced results with a 95% time reduction. With reduced transition between systems, engineers can operate the application and generate data with 30 minutes training. The use of commercial off-the-shelf software also allowed for custom integration at a fraction of typical cost. By integrating its legacy system with STK; RAF quickly, effectively, and cost-efficiently transitioned to updated, state-of-the-art tracking.

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