



## WEATHER SENTINEL ANALYZES MOTHER NATURE

AGI and business partner Trinnovations recently released Weather Sentinel™, new software that imports predicted, real-time, and historical weather data into AGI's STK software for analysis of land, sea, air, and space assets. This unprecedented tool enables mission planners and operational analysts to dynamically visualize how

# Orbit Logic OPTIMIZES Imagery Collection

IN THE AFTERMATH OF HURRICANE KATRINA, the world saw before and after pictures portraying the dramatic changes wrought upon the New Orleans area. The images also demonstrated in all-too-real terms the value of high-resolution satellite imagery, such as that provided by GeoEye of Dulles, VA, and its OrbView and IKONOS satellites. The sophisticated capabilities of OrbView-3 and the next generation of imaging satellites require an equally sophisticated target planning system on the ground to ensure capture of the most valuable imagery possible. Orbit Logic, an AGI business partner and creator of STK/Scheduler, has developed such a planning system as part of its long-standing relationship with GeoEye,

**Orbit Logic uses STK software as part of its Collection Planning System. Louisiana Superdome image courtesy of GeoEye (formerly ORBIMAGE).**

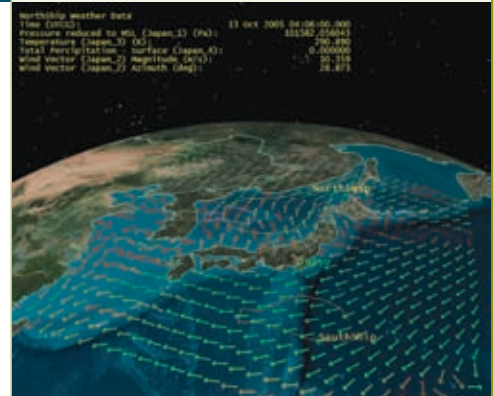


the world's largest commercial satellite company formed in January when ORBIMAGE acquired Space Imaging of Thornton, CO.

The Collection Planning System (CPS) is used daily for OrbView-3 imaging planning operations and is being enhanced to support increased requirements for GeoEye1, a next-generation satellite formerly known as OrbView-5. Leveraging its GeoEye and STK/Scheduler heritage, CPS is now being incorporated into the ground systems of other imaging spacecraft. As a key component of CPS, STK provides collection-plan visualization and verification, as well as ad-hoc order planning.

CPS integrates a high-fidelity spacecraft simulator with extensive constraint computations and optimization algorithms. The system must reconcile thousands of image orders and account for geodynamic, electromagnetic, cloud cover, and spacecraft constraints—all within a matter of minutes. The resulting collection plan, ready for uplink, contains the most valuable of the potentially viable imagery orders in any defined planning window.

For all its sophistication, CPS's goal is quite simple: maximize the quality and quantity of images captured despite limited imaging time and onboard spacecraft resources. Day in and day out, CPS ensures that this goal is realized and that important imagery, such as that of Katrina's impact, will always be available. ▲



**Trinnovations' new Weather Sentinel tool enables users to import predicted, historical, and real-time weather data into STK to analyze its effects on terrestrial and space-based missions.**

weather variables—e.g. temperature, pressure, cloud cover, and wind velocity—affect critical components of terrestrial and space-based missions, such as communications, travel speed, and visibility.

"Demonstrating weather's impact on orbits, facilities, and vehicles is a dramatic innovation that AGI's broad user base can immediately benefit from," says Frank Linsalata, AGI chief operating officer. "Trinnovations has created a software tool that leverages the core analytical strengths of STK, and AGI enthusiastically welcomes them to our business partner program."

For more on Trinnovations, visit [www.trinnovations.com](http://www.trinnovations.com). Further details on Weather Sentinel can be found at [www.agi.com/weather](http://www.agi.com/weather) or by viewing the recording and PowerPoint of AGI's March "How To" webinar on using the product at [www.agi.com/webinar](http://www.agi.com/webinar). ▲