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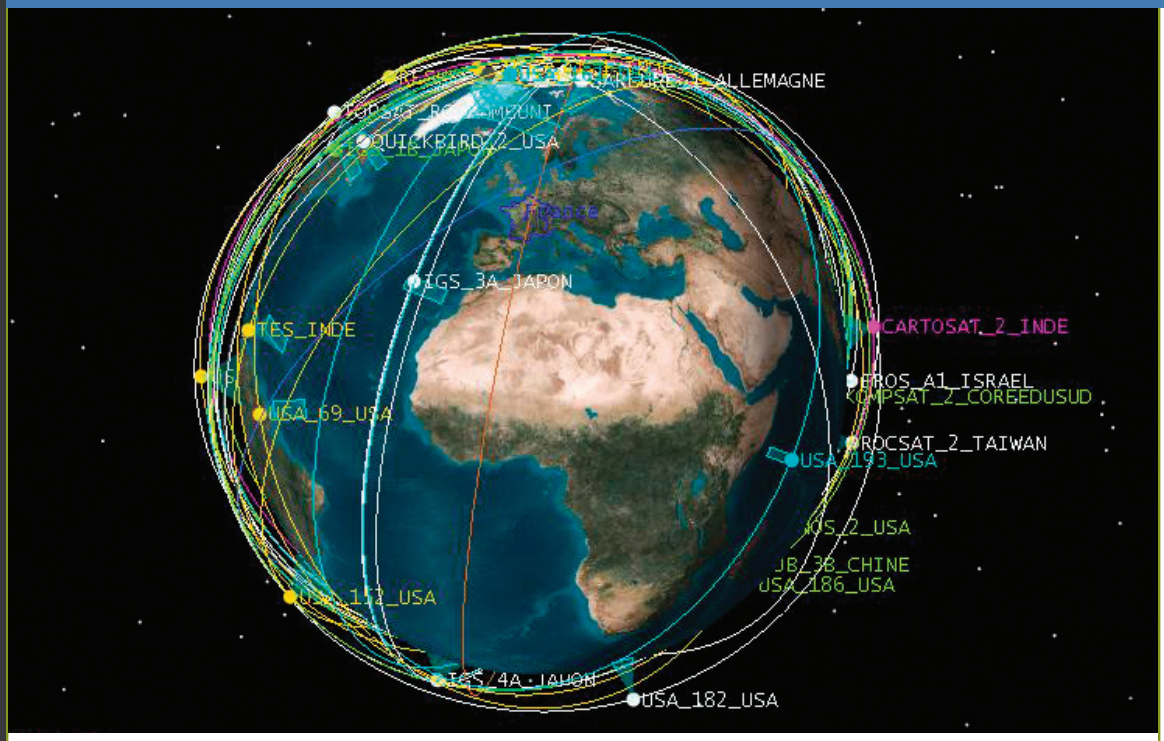

French Air Force ASSESSES THREATS

THE FRENCH AIR FORCE, TO PREPARE THE NATO'S Response Force (NRF) 12 Alert, held a homeland scope military exercise codenamed Airex 07-01 at Mont-de-Marsan AFB in May. Airex 07-01 was an air operations Command and Control (C2) training, with live flights over French airspace focused on air operations and mission planning. AGI's business partner in France, Agenium, supported the French Air Force's use of AGI software for the C2 exercise.

The NRF is made up of land, air, sea, and special forces components that NATO can deploy quickly wherever needed. Facing raw Two-Line Element Sets (TLEs); a brisk, action-packed schedule; and small staff; the space situational awareness group of the C2 exercise was tasked to:

- assess space-related threats;
- provide space expertise for the Joint Force Air Component Commander (JFACC);
- alert the JFACC to space and satellite warning information; and
- accurately forecast GPS and space weather.

STK modeled space order of battle from TLEs provided by the radar-based space surveillance system GRAVES and other various TLEs sources. AGI Viewer software was employed for visualization and sharing of thematic scenarios among persons of varying STK skill levels, from operators to the JFACC. STK was also used to assess space systems and orbits for pre-mission planning, real-time modeling, and post-mission analysis of space-related threats.

With dynamic space situation exercises, real-time threat assessment is essential to accurately adapt warfighter course of action focusing on new objects of interest. The team provided timely, accurate satellite warning information, satellite overflight forecasting, and customizable GPS accuracy forecasting throughout the exercise. GPS accuracy forecasts allowed air operations planners and mission commanders to determine optimal timing for missions which relied heavily on GPS data, such as GPS-aided weapons delivery. After mission planning and creating a clear space picture, operators' real-time analysis included constraint conditions such as weather, sensor modeling, and geospatial data (digital terrain models). To address the growing amount of sensor data moving forward, the space situational awareness group is working to automate scenarios and prediction calculations.

The French Air Defense and Air Operations Command deployed space-related expertise, supported by STK, which allowed for efficient computations, analysis, and depiction of the space situation. They have effectively used STK for space surveillance for more than a decade for space situational awareness purposes.

Agenium continues to provide technical expertise for French Air Force operations. As a long-time AGI partner, Agenium engineers lend training and technical support throughout France and Luxembourg to help AGI software users optimize the use of the technology for applications such as GPS accuracy and real-time visualization. For more on Agenium, visit *www.agenium.eu*. ▲