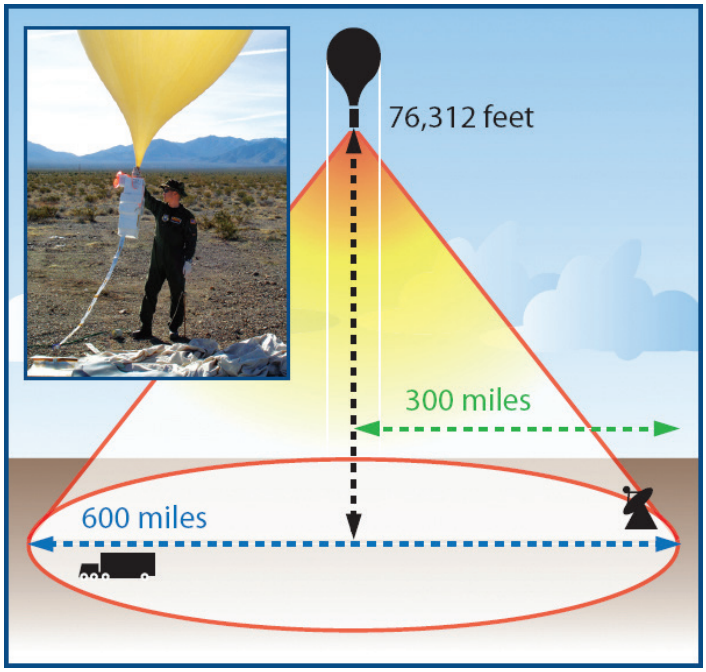
U.S. Joint Expeditionary Force Experiment Benefits from STK Engine Technology from AGI

AGI Enhances Combat SkySAT and NSAT Software Packages

THE EXPERIMENT: Combat SkySAT is a joint Army and Air Force experiment that examines near space operations. For Joint Expeditionary Force Experiment (JEFX) 2006—a demonstration of new technologies for network-centric warfighting—the Army Space and Missile Defense Battle Lab-West showed the viability of a Near Space wireless communications relay system carried by a high-altitude weather balloon.

THE DEVELOPMENT: The Army Battle Lab needed to evaluate pre-flight planning, live tests, and post-flight briefings. Existing Army and Air Force software collected necessary data for 2D maps. To enhance understanding of Combat SkySAT's capabilities, the Battle Lab wanted all information shown in a 3D display. They used AGI's STK Engine software tools to create the Near Space Analysis Tool (NSAT). This software package performs complex calculations while taking into account environmental constraints such as terrain masking and wind direction. The information appears in a 3D display showing the range of the balloon's footprint and areas where mountains or other obstructions prevent line-of-sight communications.

Using STK Engine technology from AGI, JEFX performed real-time, pre-flight, and post-flight analysis quickly—thanks to a 3D situational awareness display easily integrated into a powerful software solution suitable for a number of real-world situations.



The joint forces used STK to model a balloon-carried comm relay system.

When the Army Space and Missile Defense Battle Lab-West needed to demonstrate the viability of a Near Space wireless communications relay system carried by a weather balloon, they used STK Engine integration software tools—leading two organizations involved to purchase the NSAT application for real-world applications.

THE SUCCESS: Combat SkySAT and NSAT proved successful. NSAT assessed launch sites and potential flight tracks for an optimal flight plan. Live situational awareness positioned the balloon and payload. At the conclusion; joint forces shared, reviewed, and analyzed flight data in a 3D format. Joint forces quickly performed and displayed pre-flight, real-time, and post-flight analysis. Following the demonstration, several organizations purchased NSAT for real-world situations.

AGI delivers mission-proven software for timely and cost-effective development and deployment of advanced space, defense and intelligence applications. AGI products are used for modeling, engineering and operations in the areas of space, cyberspace, aircraft, missile defense, C4ISR and electronic systems. They can be purchased as ready-to-use applications, development tools or turnkey solutions.

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