

# End-to-End Missile Defense Simulation for Analysis, Design and Test



## STK OVERVIEW

Missile defense effectiveness is a system-level metric. Therefore all designs and investments should be measured and communicated in terms of end-to-end benefit.

STK is commercially available and widely accessible software for end-to-end system simulation. STK guides and enables:

- Intelligence analysis
- Business development
- Acquisition decisions
- Engineering design and test

STK includes a fully integrated set of missile defense models including:

- Threat missiles
- Sensor platforms (satellites, aircraft, ships, etc.)
- Radars
- Electro-optical/infrared sensors
- Communications
- Interceptors

## WIDELY TRUSTED

STK is used by 40,000 space, defense and intelligence professionals across 700 government and industry organizations to model, analyze and visualize complex system architectures. Examples include the following high-profile missile defense activities:

**Engineering:** The U.S. Army Aviation and Missile Research Development and Engineering Center (AMRDEC) has integrated STK software into its EC2BMC test bed to model and analyze airborne infrared sensor systems. The Precision Tracking Space System (PTSS) program is using STK as one of the primary tools to support system design.

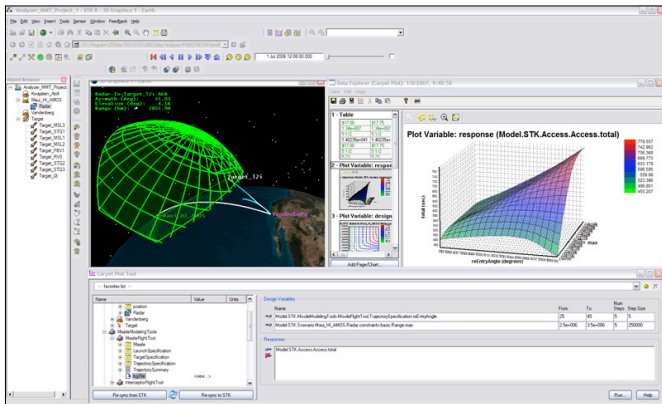
**Test:** STK is used within the MDA's GME-A lab (formerly the STEPAL) and the test directorate (DT) to plan, execute and perform post-event reconstruction and analysis. STK has also proven invaluable in communicating test objectives and results to stakeholders.

**Operations:** STK has been used within the Missile Defense Space Experimentation Center (MDSEC) for nearly a decade and has supported the design and flight of the Space Tracking and Surveillance System (STSS), the predecessor to PTSS.

## DRIVES AFFORDABILITY

STK's breadth of capability, ease of use and immediate availability lets users effectively respond to the DoD affordability and efficiency initiative. With STK, less time is spent building, maintaining and operating tools, leaving more time to fully explore trade spaces and identify the most cost-effective solutions. STK has been proven to deliver up to 4 times increase in productivity and up to 48% return on investment, making it a smart efficiency investment.

Get more information and request a software evaluation at [agi.com/md](http://agi.com/md).



These models are accessible in a single, extensible analysis environment with an intuitive user interface and integrated 3D visualization. Users can quickly compose and analyze a full spectrum of engagement scenarios to study, optimize and communicate overall system effectiveness and the system-level contributions of any architecture element.



Delivers an immediate system-of-systems modeling framework that illustrates how the performance of any one element affects overall defense performance.



Models custom missiles; simulates threat trajectories; analyzes engagements, defended area and other system-level metrics.



Models detection, tracking and imaging performance of electro-optical and infrared sensors.

220 Valley Creek Blvd., Exton, PA 19341 • Tel: 610-981-8000 • E-mail: [info@agi.com](mailto:info@agi.com) • Web: [www.agi.com](http://www.agi.com)

SOFTWARE FOR SPACE, DEFENSE AND INTELLIGENCE

