

A CASE STUDY: CAST NAVIGATION CREATES STATE-OF-THE-ART GUI IN RECORD TIME

Solution | Aircraft Missions

Challenge:

GPS/INS test-equipment software needed upgrade to high-quality visualization in three months.

Solution:

STK Engine 2D and 3D controls added to legacy software Graphical User Interface.

Results:

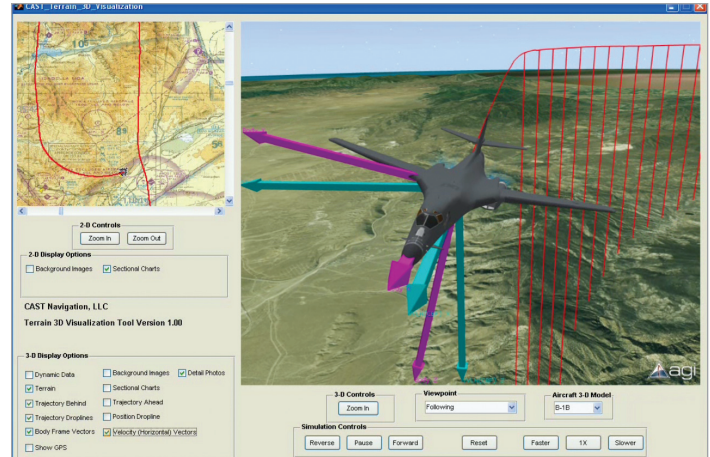
Prompt product delivery; drastically reduced development time; increased potential for new business.

CAST Navigation won a contract to test the new avionics system for a sophisticated military aircraft. After 25 years in the GPS/INS test and simulation business, CAST's expertise and equipment for navigation system simulation was perfect for the job—with one exception. The legacy software used to demonstrate test results needed to be modernized quickly to meet their new customer's requirements.

Ultimately, CAST had three months to produce a state-of-the-art user interface with high-quality graphics that could bring the flight data to life. The customer needed to see what was happening during the flight simulation and understand how the navigation system was affected by other objects in the environment.

At the time CAST did not have in-house 3D graphics expertise and developing the application from scratch could take many years, not 90 days. Furthermore, GIS tools on the market typically did not display motion or altitude well. So CAST chose STK Engine, AGI's development software that lets users tap into STK's analytical and visualization capabilities and package them in custom applications.

"We selected STK Engine to upgrade our user interface because STK could handle all the required data types out of the box. It also modeled 3D views impressively, easily produced custom data flows and, most importantly, could help us deliver the application on schedule," says Bob Addiss, CAST senior software engineer.



CAST Navigation used STK Engine to produce a state-of-the-art user interface with high-quality graphics that brings flight data to life.

Using AGI Engine, CAST was able to:

- incorporate industry-standard terrain, imagery and GPS YUMA almanac files
- display 2D and 3D visualizations smoothly
- provide orientation information in the 3D display
- embed STK Engine components into its legacy graphical user interface framework

STK also freed CAST's engineers to focus on what they do best—provide low-cost, low-risk dynamic navigation simulation systems to military and commercial markets. The customer, impressed by the compelling images and the unexpected smoothness of the interactive visualizations, purchased more units than originally planned, and today CAST is using their new state-of-the-art interface to attract further business in an expanded marketplace.

"Using STK drastically decreased our development time and significantly lowered development and testing costs. It allowed us to deliver the product ...in man-months, not years."

— Bob Addiss, senior software engineer
CAST NAVIGATION



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