

A CASE STUDY: STK SOLUTION WAS KEY ELEMENT OF WINNING COMPUTER SCIENCES RAYTHEON EASTERN RANGE TECHNICAL SERVICES PROPOSAL

Solution | DoD Space

Challenge:

Implement new technology to reduce the time required to generate instrumentation coverage plans and to eliminate dependency on outdated legacy software and hardware.

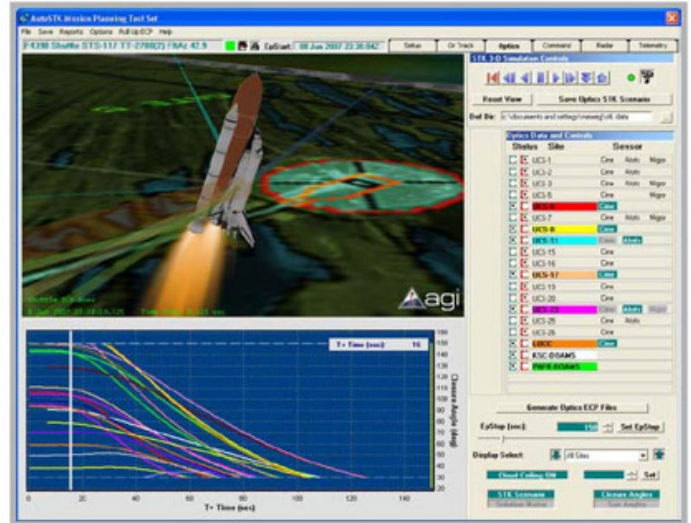
Solution:

Use STK Engine to create a cohesive and flexible PC-based application that used the animation and analytical capabilities of STK to generate coverage plans.

Computer Sciences Raytheon (CSR*) has been the technical services contractor for the Eastern Range (ER) at Cape Canaveral Air Force Station, Florida, since 1988. CSR is responsible for all down-range tracking assets for the ER, including a multitude of radar, telemetry, command destruct and optical sensors. When CSR's ER Technical Services (ERTS) contract with the U.S. Air Force came up for re-compete, the company proposed a solution to eliminate dependency on the 35-year-old hardware and software system that provided instrumentation coverage planning for range safety.

Range safety – protecting people, property and the environment – is the priority for every ER mission, and requires the generation of an instrumentation coverage plan (ICP) for each launch. Producing a set of ICPs is an analytical process based on the evaluation of vehicle performance data, ground instrumentation characteristics and performance data, and theoretical trajectory data. The ICP is the commitment of ER instrumentation necessary to meet both range safety and range customer mission requirements.

To accomplish these goals, CSR chose to embed AGI software capabilities using STK Engine. This allowed them to migrate to a PC platform and consolidate their 10 applications into one easy-to-use desktop application. With the use of this new tool, known as AutoSTK, it now takes less than two hours to create an initial set of ICPs for a mission. This is a savings of approximately



40 hours over the legacy processing applications. Incorporating trajectory and instrumentation revisions can also be completed in minutes. In addition, the simplicity of the application means a reduction of the skill required of the operators and less training.

Using STK Engine made development significantly easier for CSR, and added new analysis and display capabilities that they otherwise would have gone without. AutoSTK has provided CSR, and ultimately the Eastern Range and its customers, a high-quality, easy-to-use reliable tool to generate ICP products.

**CSR is a joint venture partnership of Computer Sciences Corporation (CSC) and Raytheon Technical Services Company.*

“With the use of ... AutoSTK, it now takes less than two hours to create an initial set of [instrumentation coverage plans] ... a savings of approximately 40 hours over the legacy processing applications.”



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