

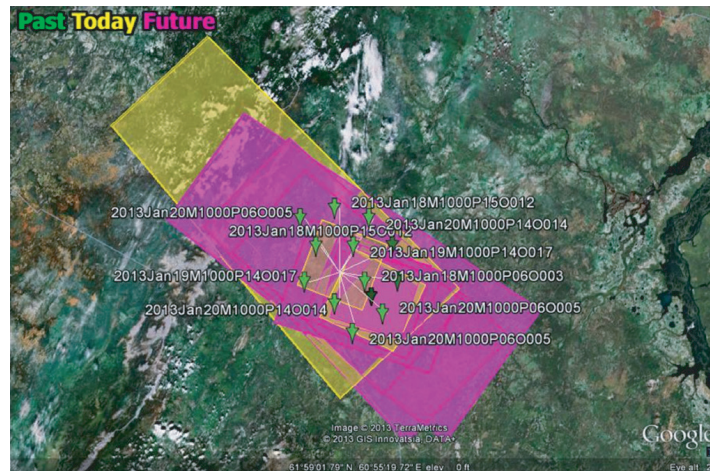
Riverside Research Introduces a Web-Based Collection Feasibility Tool Built Using STK Components from AGI

STK Provides Modeling, Analysis, Acquisition Capabilities

IDENTIFYING NEEDS: Riverside Research provides technical, advisory, and engineering support in national security and intelligence. Seeing a need for a web-based collaboration on collection feasibility, they developed the Enterprise Collection Research Tool (eCRT). The tool uses STK Components to provide the capability to model and display sensors, analyze terrain impact and field of view, perform intervisibility calculations, determine vehicle position, and compute acquisition times.

BUILDING TOOLS: Integrating CHRONICLE—an extensible web-based application—allows users to search past collections and identify images that encompass a specified search point or overlap a search box and review past collections in the area of interest. Key features are a precision-access calculator, communications planning, custom reports, and charts. The tool can account for land-cover type, lunar profiles, terrain obscuration, climatic and forecasted weather, exclusion times, and exclusion zones. Other features include satellite-propagation, collection-sensor, and collection-requirement modeling. Near-term enhancements include support for mobile devices to calculate acquisition opportunities, assess schedule competition, and ultimately plan the collection.

Riverside Research developed the Enterprise Collection Research Tool (eCRT) in response to a need for a web-based environment to collaborate on collection feasibility. The tool lets users model and display sensors, analyze terrain impact and field of view, perform intervisibility calculations, determine vehicle position, and compute acquisition times.



To develop a feasibility environment for satellite, sensor, and target modeling—Riverside Research used STK to model and display sensors, analyze terrain impact and field of view, perform intervisibility calculations, determine vehicle position, and compute acquisition times. They have created accurate textual and 4D immersive collection feasibility reports for space-based remote sensing systems with full computational, analytical, and visualization capabilities.

MAXIMIZING CAPABILITIES: Users of eCRT can perform collection feasibility research for both submitted (existing) and research (notional) collection requirements with accurate textual and graphical collection feasibility reports that account for collection and illumination geometry, ground sample distance, environmental thresholds, and other factors. These calculations can be used to tailor existing or future nominations to capitalize on the system capabilities. The extensive application-programming interface gives users full access to the computational, analytical, and visualization capabilities of STK.