

# A CASE STUDY: RAPIDLY DEPLOYING COTS ARCGIS IMAGERY STK SERVER IN ESRI'S IDM SOLUTION PATTERN

## Solution | ISR

### Challenge:

Esri wanted to integrate STK into its new imagery data management (IDM) solution to rapidly deploy COTS ArcGIS imagery capabilities.

### Solution:

Implemented AGI's STK Server software.

### Results:

AGI products extend Esri IDM capabilities to support mission and acquisition planning, enhanced imagery discovery and collection tasking.

The enormous growth of imagery collection platforms has spurred a need for fast access to ISR products, including still and full motion imagery and video. At the same time, there has been a migration to next-generation, services-oriented architecture (SOA)-based imagery workflows. GIS commercial off-the-shelf (COTS) software producer Esri's new Imagery Data Management (IDM) solution contains software, hardware, reference data and implementation services for fast, dynamic access to imagery assets. The IDM is powered by Esri's ArcGIS products, and extended through AGI's STK Server software.

"Our customers are dealing with a large growth of imagery, both still and full motion, from a large range of collection platforms that they have to manage. They need to quickly bring new imagery into

their collection environment and make it available for exploitation within their organization," said Mike Tait, Esri. In response to these customers, Esri developed the IDM. Solution highlights include:

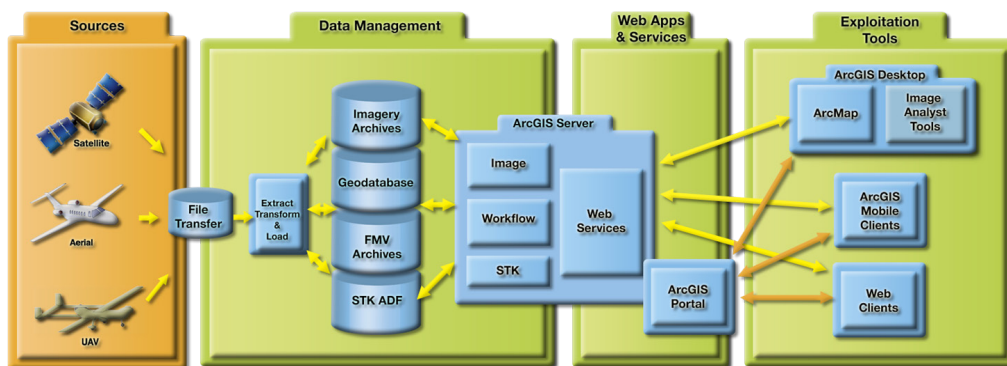
- Very large image management and dissemination platform
- Imagery ingestion, web service publishing, workflow management, discovery and exploitation capabilities
- Up to 99.9% availability

The IDM workflow is a multi-step process. First, the user must collect still and/or full motion imagery from satellites, aerial vehicles, unmanned vehicles, etc. Next, the imagery is loaded into the IDM's ArcGIS geodatabase using Esri's geoprocessing tools. Once the content is there, the information can be published—both as file-based content or web services—through the ArcGIS Server framework. The imagery services are then registered within a private ArcGIS Portal instance delivered with the IDM, and once registered, users can discover imagery through desktop or mobile clients and bring them into their exploitation environment to perform analysis. "In many cases, users employ STK for new tasking and new collection to drive even more products and exploitation activities," Tait said.

Using STK, IDM users can design, build and edit analytical models (such as aircraft, satellites, sensors and communications systems) which are then stored in the AGI Data Federate (ADF), part of the IDM implementation. Then, IDM users can publish ADF models to STK Server to further analyze collection scenarios. AGI's STK Server software aids in creating, managing and distributing STK mission

models and analytic services over the web or enterprise network. STK Server extends the IDM by adding capability such as airframe/satellite flight planning, query and collection feasibility.

As imagery collection platforms proliferate, the imagery user communities have even more information to retrieve, analyze and exploit. Esri's new IDM solution pattern provides these communities with fast access to imagery to support next-generation imagery analysis workflows.



GENERAL INFO & SALES  
Phone: 1.800.220.4785 | 1.610.981.8000  
E-mail: info@agi.com

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.