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Thirst for Integration

NEW WORKFLOWS HAVE MADE IT EASIER FOR USERS TO QUICKLY CREATE, ANALYZE AND DISSEMINATE THE INFORMATION PRODUCTS THEY NEED.

BY RICHARD COOKE

As defense and intelligence information needs become increasingly geospatially centric, there has been an almost unquenchable thirst for integration of the software platforms the community uses to derive, analyze and deliver this information. Combined with a growing need to reduce the costs of developing, operating and sustaining the systems used in these applications, technology companies throughout the geospatial information industry have been highly motivated to adopt software standards, build more flexible, open and extensible architectures, and make their products enterprise capable to ensure their off-the-shelf solutions will meet the needs of the DNI community. While it is not likely that we will achieve the nirvana of one COTS package that meets all needs, we will see a definite consolidation of products, and the products of choice will be those most interoperable with core desktop and enterprise platforms.

At ITT Visual Information Solutions, we have believed for some time that the ESRI ArcGIS platform was a key platform for defense and intelligence geospatial applications. This is why in 2007 we started down the path of developing a strategic partnership with ESRI aimed at making ENVI, our tool for deriving geospatial information from high resolution imagery and other remote sensing modalities, seamlessly integrated with ArcGIS.

We began this integration by making ENVI capable of sharing data in the form of raster, vector and metadata with ArcGIS through the geo-database. However, we decided to take our level of integration with ArcGIS even further. Last year we delivered a new version of ENVI as well as a new product tailored specifically for the GIS community, ENVI EX, both of which now operate side by side with ArcGIS in the Arc ecosystem to seamlessly share raster, vector and metadata. Both ENVI products also inherited ArcGIS functionality for map composition and output.

We are now announcing the third phase of our integration with the ArcGIS platform, which will be made public at the ESRI International User Conference. This phase introduces the ENVI tool box for ArcGIS desktop and a new product, ENVI for ArcGIS Server.

This release is the culmination of three years of hard work aimed at making ENVI functionality accessible natively from within the ArcGIS platform. With this phase, ENVI functionality is now available as tools that can be called directly from the ArcGIS tool box, used in ArcGIS models, and also published to ArcGIS Server. Watching users access an ArcGIS Web map application from a remote device, retrieve an image and execute an image analysis process conveys a powerful message of how this integration delivers geospatial information to field users more quickly and easily than ever before.

WORKFLOW PARADIGM

We are pleased with the results of our integration with the ArcGIS ecosystem, but it should be pointed out that integration for the sake of integration isn't all that exciting. It was clear to us that the DNI community had a growing need to train analysts how to use imagery to derive meaningful geospatial information. ENVI, which was historically tailored for users with more than a passing understanding of image science, had to change in order to meet this need. We quickly recognized that ENVI had to shift its workflow paradigm, and it seemed to make the most sense to us to adapt ENVI to a workflow approach with which users in DNI were already very familiar: the ArcGIS workflow model.

In making this move to shift our workflow paradigm and integrating with ESRI, we have been able to significantly improve the user experience of ENVI for our customers. The workflows we have created throughout this process have made it easier for users to quickly create, analyze and disseminate the information products they need. Much of this ease of use has come from changes to ENVI's core architecture, but we have also derived considerable benefit from being tightly integrated to ArcGIS, as we have inherited considerable functionality from ArcGIS that users needed but we didn't have to replicate. Coming full circle, this will now allow users in the DNI community to create and manage much more relevant geospatial information in a platform that is flexible, extensible and scalable, while saving them considerable amounts of time and money through deployment of off-the-shelf capabilities.

We believe the path we have taken in partnership with ESRI will be of great benefit to our customers, both from an upfront cost and a productivity enhancement perspective. And we aren't finished yet; we have a lot of great ideas of how to build upon what we have accomplished thus far, and we are excited for what the future of innovation holds for us as we continue to serve this very important customer community. ✶

Richard Cooke is president of ITT Visual Information Solutions.