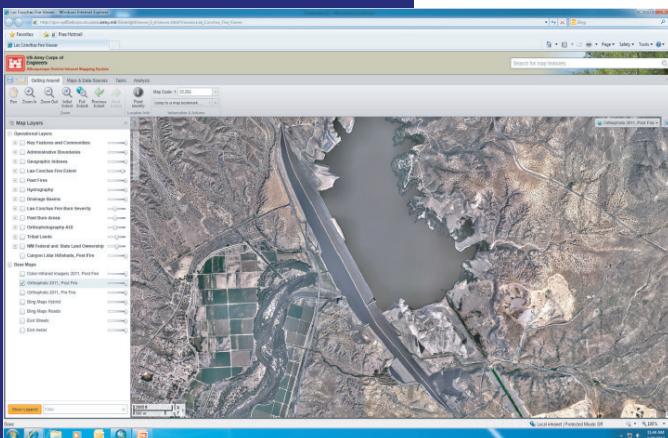


CASE STUDY

Pictured Below: New Mexico's Cochiti Lake in a scene from mosaicked MrSID orthoimagery, delivered by Express Server as a layer in the Albuquerque District's intranet web viewer.



ORGANIZATION
Army Corps of Engineers
LOCATION
Albuquerque, NM
INDUSTRY
Civil engineering and construction
CUSTOMERS
USACE district employees
APPLICATION
GIS viewing
SOURCE IMAGERY
12,000+ raster and image files



**US Army Corps
of Engineers®**

UNITED STATES ARMY CORPS OF ENGINEERS

Albuquerque District Customizes Its Enterprise
GIS Viewer Using Express Server® Software

Background

The Geospatial Unit of the United States Army Corps of Engineers' (USACE) Albuquerque District maintains more than 12,000 raster and image files covering New Mexico, southeast Colorado and parts of southwest Texas, 195,000 square miles in all. Much of that imagery is in LizardTech's MrSID® format, the industry standard for compressed imagery. It includes USGS Digital Raster Graphic hill shade and flat topographic sets, black and white DOQQs, historic photography, and recent orthophotography. The sets include edge-matched tiles and multigigabyte mosaics.

The imagery is used daily by USACE scientists, engineers and other personnel in a custom Enterprise GIS viewer and LAN environment. The USACE builds facilities for the Army and Air Force, provides flood protection, supplies public recreation, protects and restores wetlands and other natural resources, and supports other government agencies with engineering, contracting and project management services.

New Mexico's Cochiti Lake in a scene from mosaicked MrSID orthoimagery, delivered by Express Server as a layer in the Albuquerque District's intranet web viewer.

Challenges

The Geospatial Unit has built its current viewer using Geocortex Essentials version 3.7 designed for ArcGIS Server. This system enables the Geospatial Unit to take advantage of the increasing availability of cloud-cached imagery offered by third-party providers such as Esri Online and Microsoft's Bing Maps.

CASE STUDY

The foundation of the Geospatial Unit's image distribution workflow, however, has always been to serve the thousands of in-house raster files that make up the enterprise's image libraries. "With tools like Esri Online and Bing you get a great service but have to speculate on the dates of the imagery being served," says John Peterson, Albuquerque District Geospatial Unit leader. "Express Server enables us to serve all of our MrSID-formatted data out of the same enterprise web map service as those coming from cloud services, making for a comprehensive distribution environment."

Solution

The Geospatial Unit enlisted LizardTech's Express Server image serving software back in 2006 in conjunction with a Geocortex IMF web GIS viewer running on top of ArcIMS to deliver its thousands of image files. When they switched to ArcGIS and Essentials, they also upgraded to Express Server 7, which added support for reprojecting images "on the fly" to coordinate reference systems used most prevalently in the industry.

Express Server enables us to serve all of our MrSID-formatted data out of the same enterprise web map service as those coming from cloud services, making for a comprehensive distribution environment.

John Peterson

Geospatial Unit Leader | U.S. Army Corps of Engineers
Albuquerque District | Albuquerque, New Mexico

A hurdle arose in the new workflow surrounding the Web Mercator projection, a coordinate reference system widely used in cloud service repositories that has not been standardized, which prevented Express Server from properly reprojecting imagery on the fly for use with Esri ArcGIS Online and Microsoft's Bing Maps. Working with Peterson and his team, LizardTech engineers recreated a coordinate reference system script for the Web Mercator projection that resolved the incompatibilities.

Says Peterson, "Express Server is interoperable with both ArcIMS and ArcGIS Server as well as both GeoCortex IMF and Essentials front-end products and proved to be an indispensable component in a solution made up of software products from multiple providers."

Benefits

- The Albuquerque District's Geospatial Unit is serving both in-house image holdings and cloud based imagery to its USACE-wide audience
- All of the image holdings in the enterprise system reproject on the fly which eliminates having to reprocess existing image libraries
- System remained flexible as Express Server operated both with the new back end (ArcGIS Server) and with the new web application software (Geo-cortex Essentials)

FOR MORE INFORMATION

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