

# CASE STUDY



AFSOC uses images such as this one to support the wars in Iraq and Afghanistan. With LizardTech Express Suite, AFSOC can encode this high resolution image to JPEG 2000 at a 10:1 compression ratio, store it in an Oracle database and serve it out via ArcIMS.

## AIR FORCE SPECIAL OPERATIONS COMMAND

Express Suite Software Gets Government Project off the Runway Four Times Faster



### Background

Recently, the Air Force Special Operations Command (AFSOC) had a need to compress and reproject over 3 terabytes of imagery to the MrSID® and JPEG 2000 format, and to store data as Oracle GeoRaster objects. This imagery would be used to directly support U.S. warfighters in Iraq and Afghanistan. AFSOC already had a workflow pulling imagery from a repository and serving it via ArcIMS. AFSOC came to Smartronix of California, MD (<http://www.smartronix.com>) for a solution.

### Challenges

Initially AFSOC had estimated just over three months (45 minutes per 1GB) to complete the project with its existing configuration. “This estimate was based on past performance experience and testing,” says David Streed, senior geospatial engineer for Smartronix. “But three months was too long to wait for this imagery to be deployed; AFSOC needed to be able to distribute this imagery within weeks. AFSOC wanted to switch to an Oracle database for storage and serve imagery via Oracle MapViewer, but also needed to keep the original workflow in place while the new one was implemented. Ideally, this would mean finding a way to serve imagery via both ArcIMS and MapViewer. We also had to identify bad images (and we had a few out of the thousands of images we processed). Finally, we had to convince the customer to go with a new product that promised to integrate existing and new technologies.”

#### ORGANIZATION

Air Force Special Operations Command

#### LOCATION

Eglin AFB, Florida

#### INDUSTRY

Military

#### PRODUCTS

Global Situation Awareness Tool GeoBlast

#### CUSTOMER

AFSOC Headquarters

#### IMAGE LIBRARY

3 TB of raw image data

#### WEBSITE

<http://www.afsoc.af.mil/>

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## Solution

Smartronix chose to go with Express Suite® software from LizardTech®. Smartronix ended up using GeoExpress® software to reproject, compress and create MrSID or JPEG 2000 imagery, the Spatial Express® extension to Oracle Spatial to store the wavelet compressed images in an Oracle database for distribution via MapViewer, and Express Server® image serving software to distribute the imagery via ESRI's ArcIMS. "Completing the work in the required time with minimal staff required us to run Spatial Express 24/7 for 2 weeks," says Streed, "and it was a very reliable tool." LizardTech's command line tools helped with the task of identifying bad images. With this new configuration the project was completed in just three weeks. This included compressing the entire 3TB of imagery, reprojecting a portion of it, and loading it into the database. That's 4.5 times faster than the initial estimate, saving AFSOC over 1,700 man hours and providing its users with the imagery they needed quickly.

"Our requirements for storage dropped from terabytes to gigabytes, keeping AFSOC's equipment costs down and giving them a smaller footprint."

**David Streed**

Sr. Geospatial Engineer | Smartronix

## Benefits

AFSOC realized the following benefits using LizardTech's ExpressSuite software:

- Mission accomplished – Imagery moved to Oracle database and available via MapViewer
- Reduced storage requirements – 3 TB of imagery reduced in file size to 190 GB
- Time and labor savings – Project completed 4.5 times faster; 1700 man hours saved
- Reduced software costs – No need to maintain products of earlier workflow

## FOR MORE INFORMATION

For more information about LizardTech products, call LizardTech at (206) 652-5211. In Europe, call LizardTech UK, at 44 (0) 870 922 0239. To access purchasing information or find your local LizardTech sales manager, go to: <http://www.lizardtech.com/purchase/purchase/other.php>

For more information about LizardTech Express Suite software, visit: <http://www.lizardtech.com/products/suite/>

For more information about Smartronix, visit <http://www.smartronix.com>

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