

## Case Study



### Sanborn Map Company, Inc.

Leader in geographic solutions wins multi-million dollar government contract using GeoExpress with MrSID

#### Business Profile

With a rich tradition of mapping dating back to 1866, Sanborn offers end-to-end spatial solutions to government and commercial GIS and photogrammetric mapping customers. Sanborn was recently awarded a multi-million dollar aerial photographic mapping contract by the U. S. Department of Agriculture (USDA) as part of its National Agriculture Imaging Program (NAIP), which specified delivery of image datasets in LizardTech's dynamic MrSID® format.

#### Situation

The NAIP project represents an initiative by the USDA to create a comprehensive base of digital aerial photography of American farmlands — along with an integrated geographic information system (GIS) — to replace the analog photo collections that have served government agencies for decades.

Besides enabling quicker and more efficient disaster relief, this GIS will provide information for the administration of the nation's farm programs. The NAIP contract requires that aerial photography collected by image contractors be delivered in MrSID format, making image distribution to — and use by — government agencies quicker and easier.

Like many companies in the geospatial and GIS industry, Sanborn had been using GeoExpress for years to create MrSID-formatted imagery for delivery to its clients. Prior to winning a portion of the NAIP contract, Sanborn was already running GeoExpress 4.0 on 2GHz dual-processor Windows XP computers.

#### Increasing Throughput

Because LizardTech's highly compressed MrSID image format makes georeferenced imagery easier to distribute and to manage within GIS applications, it has become an industry standard often requested by local, state, and federal government agencies, as well as other beneficiaries of GIS imagery. Sanborn's clients frequently request MrSID imagery for cost-effective storage and rapid delivery to end-users over the Internet. So it was no surprise that the USDA required orthorectified imagery in MrSID as well as raw format for its agricultural mapping program. But the NAIP contract required a higher rate of MrSID image output than Sanborn's current workflow could achieve.

"Sanborn produced 20 gigabytes' (GB) worth of data photographing Arizona's agricultural corridors alone, and we will have compressed 875 GB by the end of the project," says Phil Merrill, Sanborn's digital imaging manager. "We needed to quickly convert that raw TIFF data to mosaicked MrSID images. With only two machines running GeoExpress, we knew we would need to increase our throughput if we were to meet the USDA's tight delivery schedule."

#### Solution Overview

##### Company

The Sanborn Map Co., Inc.

<http://www.sanborn.com>

##### Customer Profile

Sanborn provides a full range of mapping and GIS products and services to government and commercial customers.

##### Industry

Mapping and Geospatial Information

##### Business Situation

The NAIP mapping project required delivery of imagery in MrSID format. To satisfy the requirements, Sanborn needed to convert high volumes of images to MrSID format immediately.

##### Solution Description

Sanborn implemented GeoExpress in a distributed processing scheme using a networked MrSID encoder data cartridge. Multiple computers ran concurrently for fast, automated conversion of raw images to MrSID format.

##### Technology Link

<http://www.lizardtech.com/solutions/geo>

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### Shortening the Process

The issue facing Sanborn was one of time rather than complexity. “The imagery simply needed to be converted to MrSID and mosaicked,” says Merrill, “but we had a lot of imagery to be encoded by county and not enough manpower to manually load each county’s image set.”

### Solution

To increase MrSID image output for the NAIP project, Sanborn took advantage of LizardTech’s GeoExpress new bundle for data providers who handle terabytes of MrSID imagery. For much less than the previous price of three separate encoders with unlimited encoding, Sanborn installed three additional GeoExpress licenses on 3.8 GHz single processors and ran all five computers on a distributed processing network. The networked computers ran concurrently and all accessed a single MrSID encoding data cartridge. GeoExpress’ command line functionality enabled Sanborn to write a script automating the entire image conversion process from input as raw TIFF files to output as MrSID images.

“Compression for all the counties we’d photographed up to that point was scripted out in advance,” says Merrill. “With the conversion scripting done, we simply queued images of the photographed counties for automated mosaicking and conversion to MrSID format at a compression ratio of 50:1. When one county was finished the next one in the queue was pushed to the next available computer. There was no manual intervention except for writing or executing a script.”

### Benefits

#### Bundled Pricing for Significant Cost Savings

LizardTech’s bundled pricing for data providers makes it less expensive to buy additional encoders, so Sanborn’s throughput was increased dramatically at a lower cost than was possible even with LizardTech’s previous unlimited encoding model.

#### Easy Scripting for Automating Redundant Tasks

The flexibility and simplicity of GeoExpress’ command line functionality enabled Sanborn to save many labor hours and process imagery around the clock by scripting automated compression, mosaicking and conversion of raw imagery to MrSID format.

#### Scalable Processing for Higher Throughput

By distributing the conversion process among a network of computers, Sanborn greatly reduced the time it took to convert TIFF images into mosaicked MrSID images.

#### High Compression for Reduced Storage and Bandwidth Requirements

GeoExpress’ high compression ratios enabled Sanborn to store and deliver its completed image sets — either on disc or over the Internet — in the most cost-effectively manner.

“GeoExpress gives us efficiently transported, easily managed MrSID datasets that we can fit onto one or two DVDs instead of 50 to 75, or even hundreds.”

Phil Merrill, Digital Imaging Manager  
Sanborn Map Company

GeoExpress with MrSID is flexible enough to automate the image compression process and scales to handle increased project demands.

#### For More Information

For more information about LizardTech products, contact LizardTech at (206) 652-5211. In Europe, call LizardTech UK, at 44 (0) 870 922 0239. Outside the 50 United States, please contact your local LizardTech sales manager. To access purchase information using the World Wide Web, go to: <http://www.lizardtech.com/purchase>.

For more information about LizardTech GeoExpress, go to: <http://www.lizardtech.com/solutions/geo>  
For more information about Sanborn products and services, visit their Web site at: <http://www.sanborn.com>

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