

# CASE STUDY



Pictured Below: MrSID imagery being used in a Versaterm dispatch application in the cab of a fire truck in the Sherbrooke fleet. Updated imagery is pulled to the Datalux Tracer terminal in each vehicle over a wireless network.

## VILLE DE SHERBROOKE, QUÉBEC

Canadian City Uses GeoExpress® Software to Prepare Imagery for First Responder Vehicle Terminals



### Background

The city of Sherbrooke lies at the confluence of the Saint-François and Magog rivers in Québec's Estrie region and is the fourth largest metropolitan area in the province and the twentieth largest in Canada. As part of the Urban Planning and Development group, the City's GIS Division has a mandate to coordinate and manage all aspects of spatial corporate databases, data collection and land management. The GIS Division manages all the corporate GIS tools and surveying activities. It maintains a GIS database containing both privately flown 12-centimeter aerial photography and 50-centimeter GeoEye imagery (IKONOS and high-resolution GeoEye-1).

The City's 80 police cars and 20 fire trucks are all equipped with Datalux Tracer terminals, and the City recently invested in a new dispatch software solution from Versaterm that has an on-board client application enabling officers and firefighters to access the City's GIS database from their vehicles. Before reaching a site, first responders can pull up critical data targeted to specific departments, such as the locations and pressures of the five closest fire hydrants or the law enforcement intervention history at a particular address.

### Challenges

"Updates to the imagery are pulled over a wireless LAN while cars and trucks are parked in the garage or undergoing maintenance," says Michael Howard, Sherbrooke's GIS manager. "To ensure that officers and firefighters always have access to both aerial and satellite imagery, we wanted to keep at least two years' worth of data on each terminal and sometimes three years.

- ORGANIZATION  
City of Sherbrooke
- LOCATION  
Sherbrooke, Québec
- INDUSTRY  
City government
- CUSTOMERS  
Police and Fire departments
- APPLICATION  
Vehicular dispatch
- SOURCE IMAGERY  
50 GB raw TIFFs annually

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But we receive imagery as uncompressed TIFF files, which represent roughly 50 GB annually for the aerial ortho-photos and 15 – 20 GB for the satellite data.” So much uncompressed TIFF imagery, Howard explains, would take up too much space on the terminals and updates over the network would be slow.

## Solution

The GIS Division requested bids from third parties to compress the imagery, and in the meantime downloaded the GeoExpress trial software from the LizardTech® website and compared similarly compressed images in both ECW format and LizardTech’s MrSID® format. “We sent both images to our dispatch center and asked them to choose one without telling them which was which, and they chose the one compressed to MrSID format,” says Howard. “When bids returned for outsourcing the compression work, they didn’t fit our budget. We realized we could buy a licensed copy of GeoExpress for less than we’d pay a third-party for a one-time conversion.”

The City of Sherbrooke purchased a copy of GeoExpress software with a 500 GB data cartridge. Says Howard,

We saved thousands of dollars by using GeoExpress and MrSID to do our own image conversion.

**Michael Howard MS**

Geographer, GIS manager | City of Sherbrooke, Québec

“The aerial data compressed to less than two gigs and we got the satellite sets down to 800 megs, which meant we saved hours in download time for updating the terminals. Officers could even put the satellite data on a memory stick and take it with them. Best of all, we compressed our imagery at a 20:1 ratio for dispatch center and at 50:1 for use in our fleets and we couldn’t see any difference in the visual quality. Out in the cars and trucks you have to really look hard to detect any compression artifacts at all. And With the 500 GB data cartridge, we can do this eight or nine times.”

Finally, Howard anticipates putting GeoExpress to additional uses as the GIS Division deploys other devices with more applications that support MrSID imagery, such as tablet-style computers with ArcGIS and Trimble’s GeoXT GPS unit with ArcPAD.

## Benefits

- Sherbrooke saved thousands in third-party conversion fees
- Savings continue as the City uses GeoExpress to compress future datasets
- The City realized a storage savings of more than 95% on raster imagery
- Police and fire personnel receive critical data sooner
- City saves time updating terminals with new imagery

## FOR MORE INFORMATION

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For more information about LizardTech GeoExpress, visit <http://www.lizardtech.com/products/geo/>

For more information about the City of Sherbrooke, visit <http://www.ville.sherbrooke.qc.ca/>

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