

# Municipal World

THE MAGAZINE TRUSTED BY MUNICIPAL DECISION-MAKERS SINCE 1891

JUNE 2004

# Tech



Publication # 40012386  
117378/157  
42/1 xx 8(S)  
SAULT STE MARIE INNOVATION CENTRE  
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# 2004



## Sault Ste. Marie Innovation Centre: EMERGING AS GIS LEADER

Ian Lucas

Changing the way the entire enterprise locates, views and utilizes spatial, asset and work data, Geographical Information Systems (GIS) are quickly becoming an essential asset. Emerging as a leader in implementing a full GIS solution is the Sault Ste. Marie Innovation Centre (SSMIC). A non-profit organization, SSMIC recently won the Urban and Regional Information Systems Association (URISA) Best Municipal GIS Gold Award in the Best Municipal GIS category in the Province of Ontario. SSMIC received this prestigious award for their Integrated Geometric System (IGS).

### Strategic Partnership

SSMIC began the development of their IGS solution by first forming a strategic partnership between the City of Sault Ste. Marie and the Public Utilities Commission of Sault Ste. Marie in order to share information and resources.

"The goal from the onset of the project was to develop a network tool to assist all departments in the efficient retrieval, reproduction and analysis of spatially related municipal infrastructure ... Four years later, all departments are seeing the benefits of the true enterprise-wide GIS solution," says Patrick Planting, Applied Systems Coordinator, Engineering, City of Sault Ste. Marie.

Together with EDS Canada, ESRI Canada and J.D. Barnes Ltd., SSMIC has designed, developed and implemented the proprietary IGS. SSMIC also partnered with Direct IT Canada in order to link their GIS solution directly to their work order management, achieving immediate results for both the city's public works department and the PUC.

### Linking Multiple Systems

At a basic level, the GIS solution links governments' and public utilities' existing corporate systems – such as finance, work management, property assessment and customer information – to



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the IGS database. This database represents information such as land base, building, administration, transportation, water, wastewater, electrical and telecom information.

Taking the GIS system one step further, IGS links work orders directly to the relevant geographical databases, enabling users to also access hyperlinked documents such as engineering plans, digital photos, intersection drawings and sewer service lateral records. This application also allows users to capture data that was previously stored in a number of locations, thus ensuring all available data is available to the user immediately and with much less effort than before.

### Application Cluster

"Several important applications that have been created are having an immediate impact on our day-to-day work activities," says Planting.

SSMIC has developed a logical cluster of applications giving enhanced GIS functionality to all IGS users. The applications designed include: batch plotting, hyperlinks, link manager, geometric network tracing functions, outage reporting for utilities distribution, routing and events management on the transportation model.

"GIS applications in our works department provide us with improved access to the technical information necessary in the repair or maintenance of municipal facilities" reports Jim Smithers, Manager of Systems and Training, Public Works and Transportation Department, City of Sault Ste. Marie.

**Batch Plotting** – Allows for the automatic production of different operational maps used by an organization like topographic, field operation, or zoning.

**Hyperlinks** – A powerful mechanism to attach multimedia files to any geographic feature included in the geodatabase.

**Link manager** – A generic interface enabling linkage to work management software with the IGS.

**Geometric network tracing functions** – Advanced functions that enhance the standard network tracing capabilities of the system.

**Outage reporting for utilities distribution** – Tools to analyze and report on service outage for water, electric and telecommunication distribution.

**Routing on transportation** – Creates routes on the transportation network.

**Events on transportation** – Creates events on the transportation network.

“One important application that was created is our GIS viewer. This basic mapping interface delivers all of our data to all levels of staff and is used on a daily basis for quick information inquiries ... Also our hyperlinking functionality allows users to view scanned documents quickly, and then print them from their location,” says Planting.

### Immediate Benefits

GIS implementation is a long-term investment with a relatively long payback period. With the IGS system, users benefit immediately with the ability to: access data quickly; geographically locate data; integrate different types of corporate data; execute geographical queries; maintain up-to-date data; and cooperate with other strategic corporate solutions.

“Work planning processes are generally improved by the instant and effortless retrieval of information that might be too labourious to obtain manually,” says Smithers.

The workgroup, currently lead by Project Manager Paul Beach, has worked closely with its partners, each one providing a unique expertise to the project.

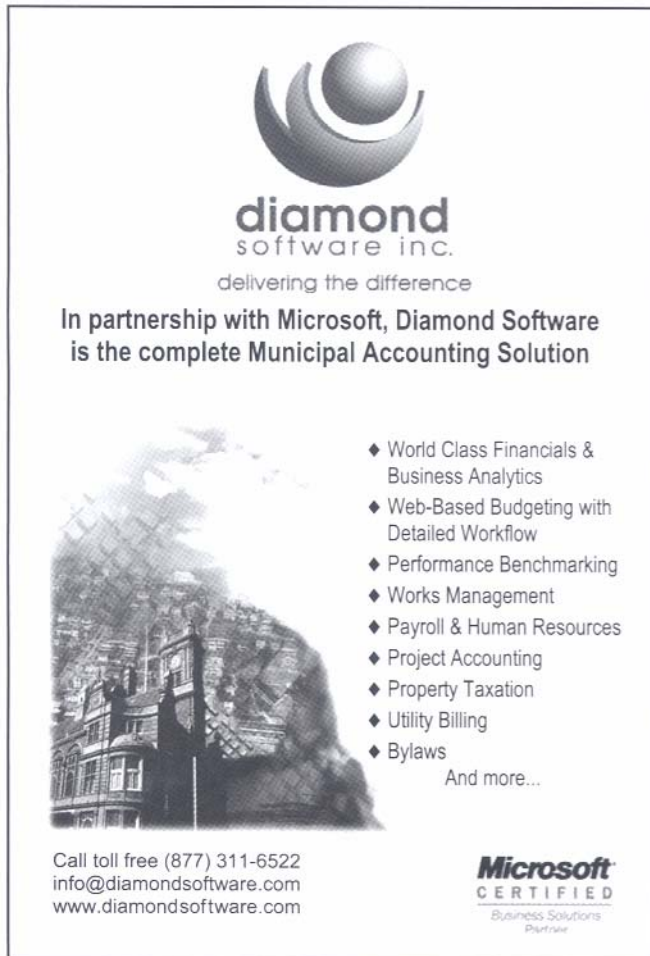
### Addressing the GIS Paradox

The SSMIC has clearly identified the GIS paradox: the absolute need for GIS and the traditionally long payback period. IGS allows local governments and utilities to procure GIS technologies at an affordable cost, bringing immediate benefits to all project participants.

SSMIC and two of its partners have already been retained to assist the Halton Region in the implementation of several IGS data models beginning with water distribution, sewer collection, storm water collection and transportation. As the project resources permit, the scope of implementation will expand across all regional infrastructure classes.

“The SSMIC model allows governments and public utilities to see the benefits of a project, including the ability to maintain up-to-date data, maintain data accuracy, control data security and integrity, and cooperate with other strategic corporate solutions,” comments Eric Boere, Project Manager, Regional Municipality of Halton.

It is important for municipal governments to realize that there is a need to implement GIS at both a strategic level and an operational level, in order to meet everyone’s needs and functionality requirements. SSMIC is committed to continuing the evolution of the necessary partnerships as they pursue the development of new and enhanced GIS functionality within the flexible boundaries of the Integrated Geomatics System. MW




  
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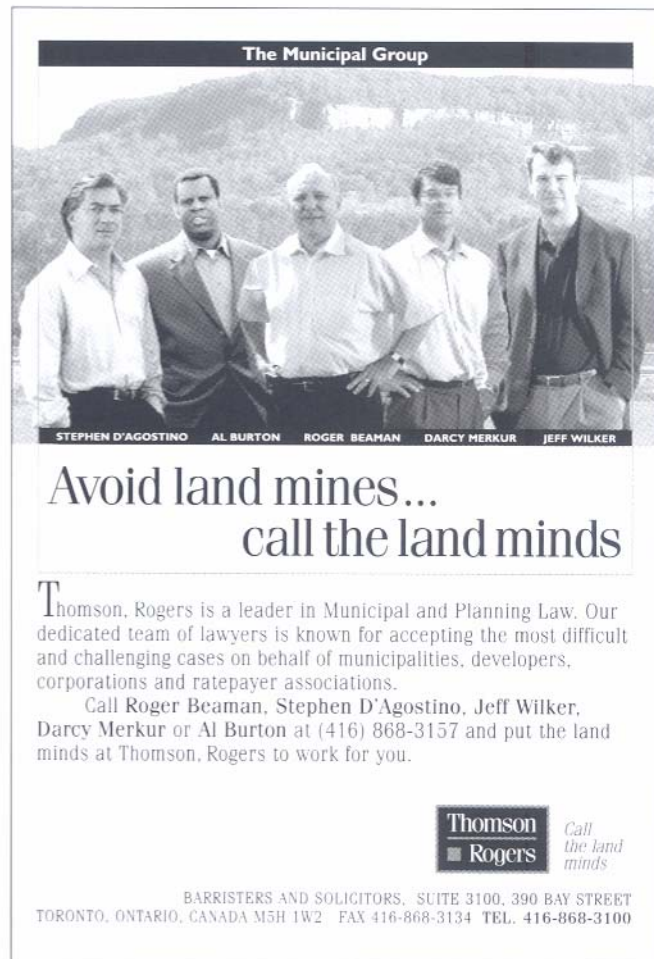
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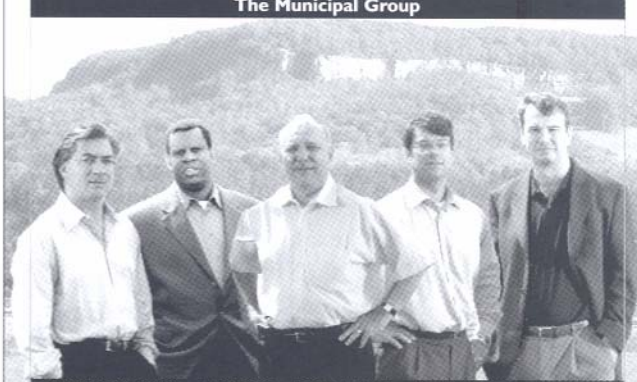
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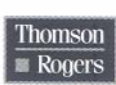
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