Sharing Best Practices Around the World

Intelligent communities in Canada and other countries are showing others how to transform themselves.
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Spring is here, which means the annual MISA Ontario conference is right around the corner. The annual conference, whose host this year is the Region of York just north of Toronto, is one of MISA’s most successful events. And, as our recent survey Serving Municipalities shows, it’s also our second most popular service. (The first is the publication you’re reading.)

When I first became involved in MISA five years ago, it seemed we were always chasing down host municipalities for the next annual conference. Since 2001, we have had a waiting list of municipalities. Windsor is the destination for the 2005 conference; then it’s Ottawa in 2006 and the City of Waterloo in 2007.

Last September, the MISA Ontario Executive members held a full-day strategic planning session. They were asked in advance of the session to suggest one or two ideas for how our organization could improve service to its members.

Several respondents expressed praise for the annual conference. Resulting from the strategic-planning session were a number of priorities. The Executive gave careful consideration to all of these priorities and selected seven as the ones that deserved immediate attention.

Sub-committees have been formed to develop the terms of reference and an action plan for seeing them through to fruition for the following priorities:
- Enhancing value to municipal IT professionals and municipalities
- Fostering collaboration and building a strong relationship with the Province of Ontario
- Taking MISA to the next level as a professional organization
- Creating a vibrant MISA Canada
- Adding value to mid-sized communities
- Creating a sustainable funding model
- Initiating communication and marketing and associate-members initiatives.

As I mentioned earlier, a survey was recently conducted to assess the value of MISA Ontario’s services to municipalities. The survey revealed that, while the annual conference was regarded by the Executive, the associate members and the municipal members as a very important event, it was not assigned a priority since it was already such a success!

Don’t miss the full results of the survey when they’re presented at the conference.

This year’s conference and trade show takes place at the Sheraton Parkway Hotel in Richmond Hill. The trade show is expected to feature more than 50 vendor booths.

The conference features keynote speakers Paul Hoffert and Steve Dotto. Hoffert, theme keynote speaker, is the author of several best-selling books including The New Client, in which he shares his insights on how technology is affecting all areas of our lives.

Because this year’s conference theme is “e-Citizens – Serving Their Needs,” Hoffert’s keynote address should be a great segue to the many related workshops during the following three days.

Don’t miss Steve Dotto’s very humorous keynote address on Tuesday morning as he takes a more practical approach to technology’s applications in the home and office.

Last October, the City of Ottawa was host for the first annual MISA Security Conference, which turned out to be a very successful forum combining a good mix of technical and management issues. Since security continues to be a high profile topic, the Security Conference is once again planned for October 21st and 22nd, 2004, in Ottawa. The theme is “The Threats from Within.”

To find out more about either conference, click on www.misa.on.ca

kbulko@toronto.ca
Electronic Voting Comes to Ontario Conference

Delegates attending the 2004 MISA Ontario Conference and Trade Show will get a taste of town-hall democracy and electronic voting on June 1, when they will be invited to vote on their choice of top-priority initiatives to be undertaken by the chapter’s Executive.

President Kathryn Bulko of the City of Toronto has arranged for wireless handheld keypad units to be available for delegates attending the Tuesday luncheon during the conference.

Delegates will be invited to vote on their preferences for a series of proposed initiatives, developed by the Executive following a strategic-planning session last fall and an online survey of member representatives conducted in March and April.

The survey generated 17 pages of data reflecting the opinion of respondents on the value and relative importance of various MISA Ontario services and activities.

Also featured at the conference will be a high-level presentation about the Government of Ontario’s democratic renewal agenda for e-government and e-citizen engagement, as well as its plans to establish a federation of portals to provide seamless access to government.

The conference will be held May 31 through June 2 at the Sheraton Parkway hotel on Highway 7 in Richmond Hill.

Theme of the conference is “eCitizens: Serving Their Needs.” The Region of York is the host municipality.

Keynote speakers will include: futurist Richard Worzel, author, academic and musician Paul Hoffert and technology broadcaster Steve Dotto.

MISA BC Plans Fall Conference at Whistler

The annual fall conference of MISA BC this year will be a high-level affair.

Early online registrations are already coming in, at www.misa.bc.ca, for the 2004 conference, to be held September 14-17 at The Westin Resort & Spa in Whistler.

The theme of the conference is “Climb Your Own Mountain” – and delegates will do exactly that on Friday, September 17, when they will take the Whistler gondola to the top of the mountain for lunch.

A MISA golf tournament will be held in advance of the conference on Tuesday at the Whistler Golf Club.

On Wednesday, delegates will attend morning breakout sessions organized by size of municipality. They will also hear from keynote motivational speaker Dave Rodney of Calgary, the only Canadian to climb Mount Everest twice.

Wednesday afternoon will be devoted to presentations from municipalities entering the Municipal Showcase competition for innovative projects. There will be three streams of program sessions on Thursday and Friday morning.

The trade show will be open for all three days. The conference committee, led by Robert Surtees of the Resort Municipality of Whistler, is already negotiating with sponsors.

Entertainment highlight of the conference will be the annual banquet on Thursday night on the Westin patio, followed by a dance.

Louis Shallal Moves to Region of York

Louis Shallal, who has led the IT departments of two of the largest Ontario municipalities, has now joined a third.


A member of the MISA Ontario Executive, Shallal previously directed information-technology services for the cities of Hamilton and Ottawa.

While at Hamilton, he led the development of an IT strategy and a series of major projects, which were recognized when the city was selected as the 2003 Showcase Municipality for Showcase Ontario.

The Region of York is one of Ontario’s largest municipalities, with a population of 850,000 that is growing by 40,000 annually. Shallal says one of his objectives at the Region will be to create stronger relationships with the IT departments of the nine towns and cities within it.
Hansen Canada is proud to be a Platinum Sponsor at the 2004 MISA Conference May 31 - June 2, 2004, at the Sheraton Parkway, Richmond Hill, Ontario. For more information on how Hansen’s solutions can help your municipality, come see us at booth 116 in the Grand York Ballroom.

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MISA BC Celebrates 10th Anniversary

On the 10th anniversary of the founding of MISA BC, delegates gathered for their spring conference at Harrison Hot Springs Resort to share old stories and new insights.

The one-day conference on April 14, with the theme of “Guiding Technology Changes,” drew many of the people who led the creation of MISA BC in the spring of 1994.

One of them was Rob Carnegie, director of corporate service and city clerk for the host municipality of the conference, the City of Chilliwack. Carnegie, who was IT manager for Chilliwack when he led MISA BC as its first president, was the keynote speaker at the conference.

“He gave a very funny presentation, packed with good information, on the view from the other side,” reported Vic Morcom of the City of Abbotsford, a member of the current MISA BC Executive.

Carnegie, Brian Sameshima and Shauki Jiwa received certificates as founding executives from current President Kathy Yung of New Westminster.

The conference program, organized by a committee led by Gerry Matte of the District of Saanich, included presentations from two cities—Calgary and Coquitlam/Port Moody. The program also included a session by associate members Tempest Development Group and Vadim Software. This session focussed on the acceptance of electronic signatures for online processing of homeowner grants.

“Excellent conference,” Morcom summed up. “Good wine and cheese get-together on the prior Sunday night. And then I had a nice run along the beach on the Monday morning followed by a dip in the hot springs, where I bumped up with a few digs about working hard on City money!”

The photographs and captions below have been scanned from a 1994 issue of what was then MISA’s Ontario newsletter.
Security Conference Calls for Presenters


You name it, you’re doing it. But are you doing it right? Are you doing enough?

The second annual MISA IT Security Conference promises to give you some answers. The City of Ottawa will be host for the conference on October 21 and 22, 2004, at Ottawa City Hall, 110 Laurier Avenue West.

Under the theme of “The Threats From Within,” the conference will feature a variety of general, management and technical sessions, building on the successful first conference held in the fall of 2003.

Conference organizers are seeking presenters from municipalities – and particularly from MISA members across Canada. If you are interested in being a presenter, panel speaker or workshop leader, please send an e-mail as soon as possible to the conference mailbox (itsecconference@ottawa.ca).

Potential presenters are asked to provide an abstract of approximately 200 words by May 31. Their presentations will be confirmed by June 21.

The security conference will follow immediately after GTECWeek, which will be held October 18-20 at the Ottawa Congress Centre.

For information, please contact David Kelly, IM/IT Security Services, City of Ottawa, 613-580-2424, x 23517, or david.kelly@ottawa.ca.

Registration details as they become available will be posted at www.misa.on.ca.
The Regional Municipality of York is honored to be the host of the 2004 MISA Conference and Trade Show from May 31 to June 2, 2004.

To effectively respond to the varying needs of citizens, this year’s conference theme will focus on how to serve their needs electronically.

We will take a look at such topics as:

- Immediate access to information on proposals, public notices etc.
- Broadcasting useful citizen information, transaction and services
- e-Payments
- e-Democracy (citizen participation in policy formulation)
- Online service requests
- Enhanced & effective citizen-to-Government interaction
- And much more...

With the participation of keynote speakers, informative workshops and networking with peers, you will be sure to leave the conference with many innovative ideas!

Who Should Attend:
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- Associate MISA Members
- Municipal IT Professionals
- IS Managers
- Network Support Personnel
- DBA’s
- Project Managers and Leaders
- WEB Support Teams
- Those affecting technology directions and business processes in your organization
- IT professionals and consultants from the private sector

To receive more information on the 2004 MISA Conference & Trade Show please e-mail misa2004@region.york.on.ca or visit our Web site at www.region.york.on.ca/misa

We look forward to welcoming you to the Regional Municipality of York.

Conference Chair: Bernadette Searle, PMP
Conference Coordinators: Kelley Mitchell-Tugwell, Lesley Forbes, Myra Hay
Serving E-Citizens: Communities Share Best Practices Around the World

By John Jung
Intelligent Community Forum

Sharing best practices is a concept that e-citizens in intelligent communities, and those that aspire to become intelligent communities, understand well. In Canada, the 12 smart community demonstration projects have transformed their communities, helping others to better understand what they need to do to transform their own.

Cities such as Toronto learn from Chicago and New York in developing a comprehensive 311 non-emergency, call-centre system. In Europe, 18 cities have agreed to pool their experiences and best practices in e-governance systems to develop a common platform as a basis for the development of an integrated open-system city platform. This platform will be able to provide each of these cities with new, more enhanced and more accessible e-government services.

The Intelligent Community Forum (ICF) has led the way in recognizing intelligent communities around the world by identifying those communities that have best helped their citizens and businesses turn broadband into prosperity — through education, training, innovation, e-government, technology access programs and efforts to stimulate a creative and vibrant business culture.

These communities know that “being wired” is not enough. They are communities — towns, cities or regions — that view broadband and information technology as essential new utilities, as vital to economic growth as clean water and reliable power. ICF annually selects the world’s top seven intelligent communities, and on June 11 in New York City, at its Intelligent Community Conference and Awards program (ICCA2004), the world’s top intelligent community will be selected from this initial list.

Smart Communities

Canada’s 12 smart communities (smartcommunities.ic.gc.ca), selected in 2000 to create world-class demonstration projects across Canada, have been in the forefront of transforming their communities, leading to economic, social and cultural benefits from information technologies and deployment and use of high-speed Internet services.

These communities have learned to work collaboratively and undertaken a wide range of innovative online services meeting community needs, with the result that they now share their experiences for the benefit of other Canadian communities. Their insights cover the need for leadership, building collaborative processes, and the development of alliances and partnerships. They encourage us to aspire to excellence as a way to build sustainable communities, especially in the sectors of health care, education, business, and government and social services.

These insights also underline the value of using Canada’s strengths in advanced communications technologies as an effective way to enhance competitiveness and attract prosperity. They also support greater access to broadband and recognize its importance in developing sustainable communities.

The 12 demonstration projects have accumulated impressive hands-on experience and knowledge, much of which can be shown and promoted abroad as Canadian excellence, as well as used as a model for other communities across Canada.

Last year the Smart Communities Program completed a preliminary study of Canadian companies and their commercial broadband applications, documenting 33 commercial broadband applications and more than 100 research projects. Since the program ended only recently, in March 2004, we will probably
SERVING E-CITIZENS

see benchmarking and evidence of best practices from these communities for some time to come.

Pooling of Knowledge

In the United States and Canada, the experiences of the 211 and 311 systems are being shared among communities. The cities of Toronto, Calgary, Halifax and Gatineau as well as Halton Region in Ontario have applied to the CRTC for 311 services and are awaiting its approval.

But the sharing of these experiences among the North American communities cannot compare to the intensive process being undertaken by the IntelCities project in Europe. Just launched, this project (Intelligent Cities: www.scri.salford.ac.uk/intelcity/, www.intelcitiesproject.com) is pooling advanced knowledge and experience of electronic government, planning systems and citizen participation from across Europe, with the goal to eventually create new, innovative and interoperable e-government services that will provide information to all its citizens and businesses about “all aspects of city life via interactive, city-wide Internet-based applications.”

Its goal is to address poor quality information that prevents the effective use, management and planning of cities. This project will support the everyday needs of citizens and business through deploying 24-hour access to transactional city services. But more important will be its ability to develop more efficient city-management systems by integrating services across city, regional, national and even EU government agencies, utility and transport system providers, non-governmental organization networks and citizens.

Through authentication protocols, innovative and comprehensive systems will enable e-citizens and businesses to play a far more participative and inclusive role in city-building processes. For instance, there will be access to social, cultural, and urban and regional-planning decisions via more reliable city modelling, predictive planning, and advanced visualization technologies.

Eighteen intelligent cities have agreed to pool resources and more than 100 participating agencies and advisers from all over the world are involved in this unprecedented urban-planning exercise supported through European Commission funding.

Intelligent Community Forum

Intelligent Community Forum (ICF) is a global, non-governmental organization that focuses on the uses and application of broadband technology for economic development in communities around the world. In addition to its research, conferences and publications, it announces its annual top seven list of intelligent communities. This list helps communities to become the best they can be, inspires others, and helps to profile intelligent communities.

Last year, Calgary was a co-winner with Seoul, Korea, as the top intelligent community of the year. This year’s seven communities include Glasgow (Scotland), Spokane (Washington), Sunderland (UK), Taipei (Taiwan), Victoria (Australia), Western Valley (Nova Scotia) and Yokosuka (Japan). The winning community for this year will be announced at ICCA2004 in New York City on June 11.

ICF has developed a list of five intelligent community indicators that provide the first global framework for understanding how communities can gain a competitive edge. The indicators demonstrate that being an intelligent community takes more than being wired. It involves creating a culture that encourages the use of information technology and high-speed broadband networks, including a combination of the following:

• Significant deployment of broadband communications to businesses, government facilities and residences, with government providing a catalyst through regulation, e-government initiatives and even network construction when necessary;
• Effective education, training and workforce development that builds a labor force able to perform knowledge work;
• Government and private-sector programs to overcome the digital divide and ensure that all sectors of society benefit from the broadband and information revolution;
• Local or regional access to risk capital that can provide funds for the development of new businesses, which are the engine of economic growth;
• Effective economic development marketing that takes advantage of the community’s broadband, labor and other assets to attract new employers.
Of course, communities also need to demonstrate innovation and creativity, a sense of leadership and stakeholder involvement, and a degree of community support, especially through a regulatory and public policy framework for making their intelligent communities sustainable.

Here are some snapshots of this year’s top seven intelligent communities.

**Western Valley, Nova Scotia, Canada**

Over three years, the Western Valley Development Authority (WVDA) and its local communities introduced innovations in nearly every critical area for the intelligent community. As described in the March 2004 issue of *Municipal Interface*, an initial 44-kilometre network provides Web-enabling public information and other services, including county library catalogues, creating a new local software company in the process. In a traditional rural economy, WVDA has paved the way for major change in how local cultures and economies interconnect with the rest of Canada and the world, to their mutual benefit.

**Sunderland, England**

Out of frustration and a sense of crisis, this depressed former shipbuilding and mining city in the north of England launched a multi-pronged initiative to create a knowledge-based economy using information technology and high-speed broadband services to transform it from one of England’s worst economies to one of Europe’s top model intelligent communities.

Today, Sunderland provides a private peering point on the BT backbone network. It interconnects with such regional networks as the e-foundations Business Network and the Northern Metropolitan Area Network. Brand-name companies are flocking to Sunderland, from call centres to data hotels.

**Glasgow, Scotland**

In 1998, when the British government published a Competitiveness White Paper that set out a commitment...
to make the UK “the best environment in the world for e-commerce,” the Scottish Enterprise engaged a wide range of stakeholders in transforming the Glasgow region into an e-commerce hub.

By 2002, at least half of Scottish small- and mid-sized enterprises had Internet connections, and one-third were engaged in e-commerce.

Spokane, Washington, USA

The city was struggling for economic vitality when the software boom in the last decade attracted a mix of private-sector and far-sighted public-sector investment to install broadband, from fibre to XDSL and cable modem service.

Public-sector investment followed with Spokane’s Educational Metropolitan Area Network, a gigabit ethernet connection to all classrooms in more than 53 schools and colleges, and development of Spokane’s 30-block triangular region around the downtown core, offering one of the densest concentrations of high-speed connectivity in the US.

Taipei, Taiwan

Mayor Ying-jeou Ma introduced a far-reaching initiative to transform Taipei into a “cybercity,” increasing the use of the Internet to decrease congestion and viewing Internet services as public utilities, creating a ubiquitous network. Work has focused on e-government, e-schools and the creation of e-communities by investing an average of US$75 million a year.

Victoria, Australia

In 1999, the state government published the white paper “Connecting Victoria,” which recognized the fundamental social and economic changes being created by new technology and established a vision for harnessing them, in order to tap what it saw as enormous potential for growth.

By 2000, it began to implement the six themes of the initiative with a A$663 million fund: building a learning society, developing industries of the future, boosting e-commerce, connecting communities, improving infrastructure and access, and promoting a new style of government.

Yokosuka, Japan

The city published its Yokosuka Intelligent City Plan in 1986, subsequently gaining the support of the powerful Ministry of Posts and Telecommunications, which created the Yokosuka Research Park (YRP) in 1998, an international research development base for the world’s most advanced ICT technology.

While all workers have access to broadband at speeds of up to 100 Mbps, nearly 400 times faster than typical consumer broadband in most countries, the impact of YRP extends to the rest of the community and beyond.

For more details on these communities, please look up the following: http://www.intelligentcommunity.org/art/pdf/Top_Seven_IC2003.pdf.


John G. Jung, chair of the Intelligent Community Forum (ICF) and vice-president, international marketing of the Greater Toronto Marketing Alliance, is an international adviser to the IntelCities Project. He can be reached at jgjung1@rogers.com. Themes in this article will be explored further at a presentation during the MISA Ontario annual conference in York Region on May 31.
Small and rural municipalities know that the odds have tipped against them in their struggle to compete with larger towns and cities. In recent years it has become apparent that no community can hold on to its industries and educated people without an information technology and telecommunications infrastructure. The universal challenge of small municipalities is to build and maintain such an infrastructure. To many, it’s overwhelming.

Some smaller municipalities, though, have found their way. They have pooled their resources and built a common vision, almost always under the leadership of someone who has appeared in the community with extraordinary determination and strength of purpose. One such place is Elgin County in southwestern Ontario. The experiences and insights gained by the County and the municipalities within it may be encouraging, even inspirational, to other communities in similar situations.

Community Meeting

On a sunny afternoon in April, about 50 people gathered in a basement meeting room of Elgin County’s administrative building. The County Building is located just south of St. Thomas, a separated city of 35,000 that is surrounded by Elgin County. The County Building, four stories of yellow brick, resembles a factory but sits in the middle of a large field. Its next-door neighbour is a farmhouse.

Elgin County, population 81,000, has a mixture of many kinds of buildings, all of which appear to be sitting in the middle of farm fields. Some of them are very large, such as the Ford plant that employs 3,000 people. But this flat, green county, with Lake Erie as its southern border, has always been farm country. The question is, what will it become?

The meeting in the County Building was part of a project to help answer this question. One thing that Elgin County, its seven constituent municipalities and the City of St. Thomas will certainly become is networked. A new community portal, www.elginconnects.ca, will begin to deliver information and services to residents this fall, via a high-speed telecommunications network.

In the words of consultant Kevin Clement, Elgin County/St. Thomas is set to “move from a collection of communities to a neighbourhood community within the global village – a world-class location on the World Wide Web.”

Many other communities might like to do the same, but don’t know how to meet their citizens’ needs – or even determine what those needs are. Elgin County began its learning process four years ago. Clement, together with three colleagues, told residents on April 14 a little more about themselves and what they want from the Web.

Clement is a principal with the solutions consulting group of EDS, which bid successfully to build the portal. EDS is preparing to create the portal content by finding out what kinds of Web services and functions that people believe are important.

In March, the firm conducted a series of eight workshops, facilitated by Lanark Network Associates, with various sectors of the community – agriculture, health, education, business and so on. Results of the workshops can be viewed at www.elginconnects.ca.

Key Users, Key Tasks

Clement’s colleague Richard Harris summarized the workshop results for the April meeting. EDS now knows who the key users of the portal will be: residents, businesses, government staff, tourists and visitors, farmers and researchers such as job seekers.

The key tasks for which those people will use the portal will fall into four broad categories of information and services: community, government, business and tourism.
Within those categories, the workshops produced a long list of information and services that residents would like to see delivered via the portal.

For example, Harris noted that, under the community category, a common theme that emerged from the workshops was the desire for recreational-facility booking through the portal. A community calendar also emerged as a priority. Other things on the wish list included: maps and directions to locations of government, social services and local points of interest; posting of alerts, such as for road or school closings; public transportation schedules and routes; services for new residents; a section for local heritage and history; and a variety of other services.

Similarly long lists appeared when people at the workshops were asked to tell what government, business and tourism services they would like to see on the portal.

“Our next step will be to catalogue all of these requirements and decide what is realistic, within our budget and time constraints, to deliver to you,” Harris told his audience.

His colleague Mark Dietrich described how the portal is shaping up. It will have three core components:

- Within a “federated” portal structure, each of the participating municipalities will have its own site. Each will have the ability to manage its own brand and content, within a common information structure. Search capabilities will extend throughout the portal, as will links to other sites and the ability of individual users to design personal views of the portal.
- Online rentals of facilities will be available within each municipal site, using the parks and recreation application from Class Software Solutions Ltd. Malcolm Reeve of EDS demonstrated the system and explained that family PIN numbers and individual barcodes will be issued to all county residents, enabling them to register or withdraw from programs and pay by credit card.
- The third core component of the portal will be transactional services. There will be three such services in place at the time of the portal’s launch in the fall. They will be selected from among various types of requested services, including payment of bylaw fines and property taxes, and the purchase of permits and licences.

Dietrich presented a mock-up of the portal’s proposed home page. It featured prominent text blocks in the middle of the page for news and events, as well as alerts in bold red type. On the left was the community calendar; on the right were links to federal and provincial services sites, with the weather report at the bottom right.

At the top, below the main heading and graphic, were nine tabs leading to the individual sites of St. Thomas, Elgin County and the seven smaller towns and townships. Below that were tabs to facilitate items of interest to various sectors: residents, visitors, business, and county or municipal staff.

The design appeared to be attractive and understandable at a glance. Dietrich said EDS was moving into the development stage for the portal, and “undoubtedly questions will come up” before the design is made final.

During breaks between presentations, conversations revealed that design disagreements among the project partners are likely to be less over content and more over who pays for what, and whose name gets more or less prominence on the portal.
Years of Effort

Disagreements aside, the partners in the Elginconnects project have clearly moved their community into a new era. How did they get there?

It’s a story of hard work, determination and vision, with a dash of luck and good timing. It began four years ago as a research project of the Elgin Community Futures Development Corporation (ECFDC).

ECFDC is a not-for-profit corporation supported by Industry Canada, with a mandate to deliver federal economic-development programs and services including loans to small businesses. Four years ago, the corporation, together with the neighbouring County of Middlesex, hired Donna Lunn, a local dairy farmer and consultant in rural economic development, to conduct a survey to determine the needs and capacity of the counties for information-technology services.

For six months, Lunn visited every hamlet in the counties and talked to everyone who knew or cared anything about IT. Her study determined that there was great need, and great potential, for the use of IT and broadband among all sectors, but few resources. Broadband was becoming essential for medical purposes and to meet the needs of farmers and other businesses, but some areas of Elgin County still had party lines.

Lunn’s study found a need for a coordinated effort to manage information within Elgin County. (Middlesex had developed its own strategic plan). In an interview after the April 14 meeting, she said that standard models for economic development don’t work in rural areas.

“The models are urban based,” she said. “We have the same issues, but it’s the rural factors that surround the issues that affect the implementation of any solutions.”

“You can’t just take an urban model that is successful in Toronto or Ottawa and place it upon a rural community. A rural community has to define itself. There are smaller amounts of cash resources, smaller populations and larger geographical bases that affect a lot of the IT implementation, especially for infrastructure.

“But we also have many assets. In a rural area there is a high rate of volunteering, so a huge amount of in-kind contributions can be given to the effort. If you aggregate the assets and the needs, instead of having an industry or a sector moving forward on its own, you move the whole community forward.”

Lunn’s study of 2000 gave the ECFDC the impetus to move forward by forming the Elginconnects project as a consortium of 15 partners, including municipalities, institutions and private-sector businesses, and business organizations. The timing was just right. In the fall of 2000, the Ontario government introduced IT funding programs called Connect Ontario and GeoSmart. Suddenly there was something to campaign for.

The Elginconnects steering committee, led by Lunn and Cathy Bishop, chief librarian of Elgin County, organized the campaign: the letter of intent, the business case, the implementation plan, the raising of matching funds, the meetings, the changes in the government programs, the changes requested to the proposals.

“The paperwork has been a nightmare,” Lunn said.

Success finally came in July 2003, when Elginconnects was awarded a Connect Ontario grant of $1.1 million to build a community portal. Encouraged, the group applied successfully for further grants from another Ontario program, COBRA (Connect Ontario Broadband for Regional Access), and a federal program, BRAND...
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(Broadband for Regional and Northern Development).

Funds from the latter two grants are paying for the extension of a fibre-optic network to the west end of Elgin County from an existing ring in the east. The contractor is Amtelecom Inc., a partner in Elginconnects, based in the Town of Aylmer, one of the seven Elgin County municipalities. Amtelecom expects to have the fibre-optic infrastructure completed by August. Spaces in between will be connected by a wire-less network being built by Eastern Independent Telecom.

Lunn said the County is fortunate to be able to build its infrastructure on the basis of knowing how it will be used. The portal, and the services it will deliver, have influenced the structure and location of the fibre-optic network.

“In many areas where they’ve built a high-speed infrastructure, there has been no development of applications, no sustainability – nobody knows what to use it for,” she said.

“With our funding programs, we can build the infrastructure and build the portal at the same time, and that makes us unique. We can integrate our work as we move forward.”

Emergency Services

One of the highest-priority services identified in Lunn’s study in 2000 by residents who wanted broadband capability was an improvement in emergency services. Volunteer firefighters who responded to 911 calls found that, too often, they did not have the proper location or direction to farms on their paper maps.

With grants from Agriculture Canada and Human Resources Development Canada, Elginconnects carried out a two-month project in the fall of 2003 to locate every farm driveway in the county, using hand-held GPS devices.

That data will reside in a database on the fire department’s server, along with results of a survey of farmers that asked them to identify the location of any potential hazards, such as propane tanks or manure pits, on their properties. Firefighters will soon be able to consult such data on their way to a call.

“Our application can easily be replicated by any community,” Lunn said. “We can share all the information as to how we did it, with anyone who inquires.”

Groundbreaking Study

The achievements of Elginconnects are being recognized locally as well as by provincial and federal governments. Lunn, who wrote all of the grant proposals and RFPs for vendors to assist Elginconnects, was appointed in January 2002 as the project’s full-time manager. On March 18 of this year, Industry Canada’s Ontario Region held a Smart Fair as a showcase for best practices in municipal IT and chose Aylmer as its location. Now, another initiative arising out of the Elginconnects project may produce a model for municipalities.

The Province of Ontario’s Management Board Secretariat and Elginconnects have jointly commissioned a study to measure the economic impact of Elgin County’s investments in IT and broadband infrastructure. The study is intended as a pilot project that could give
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Partners and stakeholders in the Elginconnects project have attended a series of workshops to determine how their new portal will be structured to deliver services to various types of users.

“People attending the meeting at the Elgin County Building listened intently as the project was explained by consultant Michael Curri. Curri is president of Ottawa-based Strategic Networks Group (SNG), which began work on the study in February this year.

SNG has completed the first two phases of the project: a usage and awareness study and an economic gap analysis.

The usage and awareness study, a detailed examination of business data following up Lunn’s study of 2000, provides a baseline against which the affects of IT and broadband investments can be measured. It shows, for example, that usage of the Web by industries in Elgin County is only half that of the national average. The study shows detailed analysis of IT and broadband use by industry. Broadband usage by every industry sector in Elgin County is below the national average except for transportation.

Opportunities Identified

The economic gap analysis, as described by Curri’s colleague Tom McGuire, revealed details of the number, type and employment of businesses in Elgin County, showing where opportunities exist for expansion of various sectors.

SNG will use the results of the first two phases to create an economic-development plan for IT and broadband in Elgin County. It will identify where IT and broadband investments can be used most effectively.

“This ground-level of analysis is becoming increasingly important as difficult choices need to be made with limited infrastructure budgets,” SNG says in its report on the first phase, Awareness and Usage of IT and Broadband in Elgin County, which can be viewed in the publications section of www.elginconnects.ca.

“It will help reduce the risk of poor investments and focus on business sectors where returns on IT and broadband investments can be maximized. The goal is to help build a stronger local economy.”

On-the-Spot Analysis

Curri and McGuire spent about an hour-and-a-half describing their findings to the Elginconnects stakeholders on April 14. At the end, they asked their audience to do a bit of analysis themselves.

The consultants have found that the most important economic drivers of Elgin County comprise five clusters of industries. The clusters include primary producers or institutions, plus their suppliers and customers. The five clusters are: accommodation and food services; agriculture; construction; manufacturing; transportation and warehousing.

The consultants divided the audience into three groups and asked them to rank the clusters by importance to the County’s future economic development. After half an hour of discussion, each of the three groups reported their conclusions – and each one was different. Curri, however, facilitated a further discussion that concluded that agriculture and manufacturing are the most promising sectors for IT and broadband investments.

More consultation with stakeholders will take place before SNG completes its economic development plan this spring. In future years, the success or failure of that plan will be measurable against the findings of the original 2004 study.

All this has been the result of the strategy employed by Elginconnects to make Elgin County a connected community: gather funds and support on the basis of understanding the community, and aggregating its needs and resources.

“You need to be inclusive, so everybody is at the table and is heard,” Lunn said. “That includes the municipal sector, who are key players in all of this.

“If we didn’t have the municipal sector’s involvement, we couldn’t have gone forward with this kind of effort.”
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Common E-Commerce Module Improves Customer Service at Abbotsford

By Victor Morcom
City of Abbotsford, BC

An e-commerce payment module has succeeded in improving customer service in Abbotsford.

It all started when Abbotsford introduced mapping on its Web site in 2002. The application was well received by its development community, and then Jay Teichroeb, the City’s economic development manager responsible for the Web site stepped in. He recognized an opportunity to not only serve citizens by downloading GIS data, but earn revenue for the City at the same time.

WebMap Screen

This was the beginning of Abbotsford’s common e-commerce payment module.

The City’s Internet Web mapping is driven by Intergraph’s GeoMedia WebMap application, but staff knew that a payment module able to communicate with multiple vendors’ software was necessary.

Work began on the project in late 2002, when the City contracted with Telus Web Solutions to design a common module and the Soltrus/Verisign e-commerce service was selected as the vehicle. Soltrus charges are $300 for an account startup and $30 a month for up to 500 transactions processed.
The design instructs the calling application to pass specific data to the e-commerce module where the transaction is verified against a product table and obtains the cost centre and account to credit. The module then connects to Soltrus, and customers enter credit card information and an e-mail address. The transaction is verified, and Soltrus passes back to the e-commerce module an accept/reject notification. Soltrus also e-mails a confirmation to the customer.

The completed transaction is logged within the e-commerce module, and the accept/reject notification is passed to the calling application to complete the customer's request. An automated batch process is run at night to extract the day's transactions from the transaction table to update SAP, the City's financial system.

In the case of WebMap, Intergraph enhanced its product to permit our customers to purchase the data residing within the viewing window. The layers for the depicted area are converted to a DXF file and charged at a rate of $100 per megabyte. The average cost for a purchase is $35 to $65, with a minimum of $25.

Layers available include contours, parcel and street lines, water, storm and sanitary mains, zoning, catch basins and hydrants. Orthophotos are excluded from the process. The customer can modify the request by adding or removing layers, which changes the file size and cost.

Once the customer accepts the purchase, WebMap passes the transaction data to the e-commerce module, and the process just described takes place. When an accept notification is returned from the e-commerce module, the customer is presented with a file download. This application went live in early 2003.

The City's next application was to provide a means for our customers to purchase timely standard reports without visiting City Hall. Popular business-licence analysis reports are run on an automated nightly/weekly/monthly basis in the backend system, converted to PDF format, and moved to the Web site. Customers then select the report they wish, pay through the e-commerce module, and download the report.

Report prices range from $10 to $110 and are priced less than the “over-the-counter” cost. The plan is to add more reports, such as new building starts, for the building industries.

Later in 2003, the City implemented business- and animal-licence renewal payment on the Web. Both applications reside in CSDC’s Amanda software, which also manages the City’s property database.

The City had previously purchased Net.Connect ($10,000), a Web-based tool for real-time access into Amanda, for our Web property and permit-status inquiries as well as the secure customer login process. Renewal notices were sent out in the normal manner with a note describing the Internet payment process.

The customer simply enters the licence number, Net.Connect retrieves the licence data from Amanda with the payment amount and, if the customer accepts, the e-commerce module does the rest.
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The development team decided that, for this initial attempt, the licence would continue to be mailed and the payment update to Amanda would be conducted through a batch process. There were already batch processes in place to update Amanda with transactions from the POS, so it was simple to extract the day’s transactions from the e-commerce transaction table and append them to the existing batch process.

Nevertheless, one amendment was made to the animal-licence process to remove the need for manual entry of the assigned tag number after payment. A series of tag numbers was pre-assigned to the e-commerce process and applied to the licence as the payment was accepted, updating Amanda through the batch process.

Our customers enthusiastically accepted this new service, which was also gratifying considering that very little marketing had occurred. Of all the licences, 23 per cent of the animal licences and 13 per cent of the business licences were purchased online, with the majority of these coming shortly after receiving the invoice. We expect these percentages to rise next year.

Applications for the e-commerce module this year include City account top-ups for lawyers and notaries for their Web tax certificate process, garbage sticker sales, new animal and business-licence applications and simple permit applications.

All in all, Abbotsford’s initial foray into e-commerce has been a positive one. Our flexible e-commerce module is enabling the City to provide 24/7 service to its customers for several applications.

The initial consulting cost of $13,000 to develop the module is spread over multiple applications, which makes it easy to justify. What’s more, City IT staff are broadening their skill sets and are enthusiastic about the new technologies.

The customer self-serve approach reduces the workload for user departments. With the module in place and staff’s expertise increasing, the turnaround time to add a new application is shortening – so there’s more time for the 45 projects we haven’t started yet this year!

City staff contributing to the e-commerce applications are:

Colleen Spitzig
Software Support

Eric Hoogenraad
Mapping and Survey Manager

Sylvia Brice
Collections Manager

Heidi Stewart
Administration Manager, Inspection Services

Jay Teichroeb
Economic Development Manager

Bill MacLeod
GIS Analyst

Willie Rempel
Business Analyst

Vic Morcom
IS Manager

Victor Morcom, IS manager for the City of Abbotsford, is also a member of the MISA BC Executive. He can be reached at VMorcom@city.abbotsford.bc.ca.
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City of Kingston Exceeds Expectations With Electronic Service Delivery

By Marielle Laplante-Wheeler
City of Kingston, Ontario

Citizens in Kingston, Ontario, will never look back, now that electronic-service delivery (ESD) has changed the way they do business.

Since the City launched its first set of e-services in January 2004, more than 5,500 online payments have occurred, exceeding its first-year objective to move five per cent of all transactions to self-serve channels.

The ESD Strategy

Through a strategic-planning process, the City of Kingston identified access to information and services as one of its priority areas. We saw effective use of technology as the key to successfully responding to community needs and increasing knowledge of municipal services.

As a result, an implementation plan for automating municipal services and information was developed by the Corporate Services Department through its Client Services Division.

An electronic services-delivery strategy document, prepared in late 2001, identified a number of opportunities for electronic services and provided staff with a clear sense of direction for the project.

The strategy document recommended that the core ESD platform contain the modular engines of e-services likely to be reused by multiple individual applications. The core services include authentication, online payment, notification and ESD platform-management services. Closely allied with the above core services are the initial front-end gateways to the ESD system, the Web server and telephone interactive voice-recognition (IVR) server.

With an eye to delivering tangible public services in several stages, the ESD strategy prioritized the many ESD opportunities and identified service groups using the following criteria, including:

- Service rankings identified in meetings with City stakeholders
- A requirement for customer service improvements
- A desire to automate routine services
- Results of vision and priority discussions with a project steering committee
- A desire to experience “quick wins.”

The ESD Solution

Following an RFP in December 2002, CGI Information Systems and Management Consultants were chosen to design, develop and implement the infrastructure and software required for the ESD strategy. CGI offered the City a unique product called gBIZ, which had been successfully implemented in New Brunswick.

The gBIZ product provided a scaleable infrastructure that would permit the City of Kingston to meet its needs today and in the future as the City expands its ESD infrastructure. The product uses an open-standards approach, which permits multiple applications supplied by multiple vendors to effectively communicate with it.

The gBIZ solution gives the City of Kingston the ability to maintain and upgrade the product internally. This includes adding new services, fixing problems, customizing reporting, and creating enhancements.

“CGI has been thrilled to see the results that the City of Kingston has been experiencing with their ESD roll-out,” says Doug Watt, director, consulting services, CGI.

“These results are a testament to the City’s approach, hard work and commitment from day one. It’s extremely satisfying to once again be part of a successful ESD project, and we’re proud to be working with the City of Kingston as they move forward with the implementation of their strategy.”

The ESD Project Scope

The initial project scope was to implement six service groups over a three-year period. Considering the number of other priorities the City deals with, a preliminary group of services was selected in 2003 for phase 1 of the project:

- Payment of parking tickets over the Internet and IVR: The City of Kingston issues an average of 10,000 parking tickets a month.
- Renewal of parking permits at municipal lots over the Internet and IVR: The City operates 16 municipal parking lots and issues 1,200 parking permits a year.
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• Payment of Provincial Offences Act fines over the Internet: The Kingston Provincial Offence Act office issues an average of 800 fines a month.

Beginning in the summer of 2003, the City began working with CGI in designing, building and implementing the infrastructure and the initial set of services. Phase 1 of the project consisted of several major tasks:

• Analysis and determination of specific ESD services to be offered
• Identification and implementation of ESD infrastructure
• Security assessment of ESD infrastructure
• Development and implementation of initial services
• Knowledge transfer of ESD fundamentals to City staff.

“A key success of the project was to design, build and implement the hardware and software infrastructure that will enable future online services to be deployed,” says Shawn Peters, project manager, electronic services delivery.

“This secure infrastructure is completely scaleable and will accommodate up to 5,000 transactions daily, which will enable us to deploy future services in a cost-effective manner.”

Results Achieved

In January 2004, the City launched its first set of e-services. In its first three months of operation, more than 5,500 payment transactions were performed using online channels.

The high adoption rate, particularly for parking ticket payments, exceeded the first-year objective of moving five per cent of all transactions to self-serve channels. An analysis provided by the City’s Parking Services Division indicates that between 20-30 per cent of all parking tickets issued are paid through self-serve channels.

“The City of Kingston Parking Services Division recognizes that citizens need access to government services outside of regular business hours,” says division manager Paula Nichols. “We needed a solution that would meet these needs without requiring additional staff resources.

“In the month of March, 27 per cent of parking tickets were paid online. This is remarkable, considering this new service has only been available for three months. This is a great example of how convenient it is for residents to connect to municipal services in the City of Kingston.”

The City’s Web site (www.cityofkingston.ca) provides a convenient, simple payment screen for customers to complete while permitting the resident to access information about municipal services, programs and events.

The City’s Customer Service Centre number permits customers to pay their parking tickets and renew their parking permits over the telephone. Thanks to the existing Mitel voice recognition system, callers can access e-services by calling the telephone number and saying, “payment.”

The customer service contact component has also proved to be successful. All inquiries resulting from an ESD transaction are automatically routed to the City’s municipal call centre where a customer service representative resolves the issue (95 per cent of the time) or generates a trouble ticket to be resolved by appropriate operating area.

A multimedia communications plan to improve adoption rates and generate positive press coverage was also introduced. The progress of communications is monitored and adjustments are made based on the effectiveness of the program, as well as the need to meet seasonal and operational requirements.

The City’s Client Services Division is working with the ESD steering committee to develop an implementation plan for the next set of e-services.

Marielle Laplante-Wheeler is manager, Client Services Division, Corporate Services Department, City of Kingston. She can be reached at 613-546-4291 ext. 2212 or MLaplanteWheeler@cityofkingston.ca.
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Efficiency Rises, Costs Decline As City Calgary Leaps Into Linux

New Operating System Supports a Growing List of Web Applications

By Dan Ryan
City of Calgary, Alberta

This article is based on a presentation to the Real World Linux Conference and Expo in Toronto on April 15, 2004.

Calgary is a fast-growing city of approximately one million people – all served by a municipal government that has approximately 11,000 employees and is stretched to capacity.

As a key enabler of front-line public services, our information technology (IT) department helps to ensure that Calgarians receive the municipal help they need, everything from water management and recycling to transportation and environmental management.

City business units have several initiatives under way to improve efficiencies in core service delivery, aimed at better handling the challenges presented by the city’s recent growth. (In 2003 alone, more than 17,000 people moved into Calgary.)

An interesting trend in Calgary’s demographics, and one that is likely to be mirrored in other cities, is that more than 85 per cent of its citizens have access to the Internet, with more than 62 per cent of them using it daily.

As a result, the City of Calgary has worked hard at delivering a growing list of services and information through its Web strategy. One of our recent success stories was the research and implementation in 2003 of Linux operating systems and hardware. This major change has led to new efficiencies and will substantially lower costs to the IT department and others.

The Need for Change

In the local government’s IT environment prior to 2003, there were some 5,000 desktop computers, 7,500 Windows NT accounts, 200 Windows servers and 140 Unix servers, all spread out among more than 175 locations.

The IT department is responsible for serving more than 40 lines of business, including transit scheduling, emergency medical services and parks facilities.

The City’s early approach was to place its high-profile applications – such as PeopleSoft, POSSE (used for building permits), geographic information systems and Oracle databases – into a Unix environment. The reason was that these critical applications relied on the robust basis of Unix to provide high availability.

Unix servers, however, tended to be very expensive, often costing more than $80,000 each, with annual maintenance of approximately $20,000.

Over time, as the Unix environment grew, it became more and more difficult to consider normal life-cycle replacement of these devices. As a result, many of the servers were kept in the production environment well past their recommended five-year life cycle.

Total Costs Too High

In the fourth quarter of 2002, the IT department agreed that the time had come to consider serious changes. Our IT infrastructure was aging, but funds for life-cycle replacement were hard to come by as the rapidly growing city faced other priorities. We had very expensive maintenance costs – and all the while, there was downward pressure on our IT budget.

The bottom line was that the total cost of ownership (TCO) for the City’s Unix systems was too high. The status quo was no longer an option. By way of comparison, the City was paying less than $100,000 for maintenance of more than 200 Windows servers, versus more than $650,000 for 140 Unix servers.

We looked for an alternative. Through our research, we learned that Linux-based system sales had risen sharply and were expected to double in 2003. The Linux TCO was confirmed to be substantially lower than that of Unix. In addition, major industry players such as Hewlett-Packard and IBM were investing significantly in Linux-based technologies.

The turning point for the City of Calgary, however, was when Oracle was certified on
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At right, Dan Ryan sits in the IT department, where the time needed to process transactions and notices to citizens has dropped dramatically with Linux. Below, the team that completed the Linux migration.

Red Hat Linux. This told us that Linux was ready for the enterprise. And, it didn’t hurt that several large organizations such as the US Department of Defense, US Postal Service, Boeing, Cisco, VeriSign and Daimler-Chrysler had already made the jump.

As a result, we entered into discussions with vendors, developing a business case and establishing a potential proof of the concept.

With Unix, the operating system and the hardware were both proprietary – and thus expensive. With Windows, the operating system was proprietary, but the hardware was open, resulting in a lower cost. With Linux, however, both the operating system and the hardware were open, which meant the lowest TCO of all three options.

We ran four test applications late in the first quarter of 2003. They took approximately three months to complete and led directly to Linux implementation.

We found that using City staff to conduct research helped motivate early buy-in. The first two pilot projects, led by consultants from Hewlett-Packard (HP), were fast-tracked and helped get us off the ground quickly. The knowledge transfer was particularly fast, and City staff were able to take over the Linux project smoothly.

Results

Summarizing and judging the revised infrastructure’s performance once it was up and running, we found several notable improvements. While we had initially begun our proof-of-concept research hoping to have Linux break even on performance comparisons with Unix, we found instead that batch processing was 200-500 per cent faster in many cases.

The following are some specific examples of applications with positive “before and after” comparisons:

- The property tax installment payment plan (175,000 records) ran in 73 minutes under Unix (eight-processor central processing unit, or CPU) and in 31 minutes under Linux (two-processor CPU).
- The annual property tax account balance (329,000 records) ran in 60 hours under Unix (eight-processor CPU) and in 13.59 hours under Linux (two-processor CPU).
- The data warehouse application ran in three hours under Unix (six-processor CPU) and in less than 30 minutes under Linux (four-processor CPU).
- The parks-booking application online screens refreshed in 30 to 40 seconds under Unix (six-processor CPU) and in only a few seconds under Linux (four-processor CPU).
- Oracle database import/exports were roughly six times faster than before.

Other comparisons told essentially the same story. Applications previously requiring a large, Unix-based server costing upwards of $175,000 could instead run much more quickly on smaller, Intel-based servers ranging from $10,000 to $40,000 in price. In some cases, our capital and operating costs were 75 per cent lower than before.

To ensure that we were not missing anything, we reviewed the migration plan for the remainder of our IT environment, with help from senior Linux experts from HP. This process helped validate our plan and persuade senior management to accelerate the migrations to Linux.

As a result of the success of the original pilot projects and subsequent applications that were migrated to Linux from Unix, we have been able to establish a life-cycle plan for both the Windows and Linux server environments.
All of the new servers were acquired under a full-service, five-year, prepaid maintenance plan, with the intention of making the change-out during year five. Unix has been put into “containment mode” – no new applications will be created to run in that environment unless all other Windows or Linux options have been exhausted.

The experience has been significant proof of the benefits of Linux. The City is continuing to move forward, with the IT department helping other units. We are accelerating the deployment of the operating system and are migrating an application to Linux from Unix approximately every seven to 10 days.

As mentioned earlier, with an increased focus on the Web presence we are directing a growing list of applications to the Internet. As a result, we have moved to a CPU licensing model to help manage database hosting costs.

The success story has only become better – having database hosting take place on inexpensive two-processor CPU Intel boxes running Linux in most cases, compared with six- and eight-processor CPU Linux boxes, has significantly helped out the IT bottom line.

In closing, here are three thoughts to consider:
1. We did our pilot work using the formality of a project and brought in outside expertise to helped speed the effort.
2. We involved our staff in the planning effort and committed to make the transition from the consultants to our staff at the end of the first two pilots.
3. Developing a clear understanding of your total cost of ownership is crucial to help account for all of the business benefits of Linux in your organization.

Dan Ryan is manager of infrastructure and desktop management for Calgary’s local government, working within IT services. For more information, please contact him at dan.ryan@calgary.ca or visit www.calgary.ca.
Alberta’s Strathcona County Builds Service Strategy on Enterprise GIS

By Heather Adams
ESRI Canada

An enterprise-wide GIS has become a pillar of Strathcona County’s corporate IT strategy – thanks to a shared database that took years to build and is now used throughout the organization.

Located just east of Edmonton, Strathcona is Alberta’s third largest county by population, with 70,000 residents, and one of Alberta’s fastest growing municipalities.

In a municipal setting, 80-90 per cent of data relates to location. In an effort to manage and use this data more efficiently, the County was prompted to begin building a GIS four years ago. Now, shared access to the databases and integration of a number of software applications are key features that are making GIS a valuable resource for the County.

Data is the foundation of any GIS and, if it does not already exist in digital format, building the necessary datasets requires a commitment of considerable time, expertise and finances. Under the leadership of IT manager Ivan Bering, Strathcona made this commitment, with the result that it is now a prime example of a municipality experiencing excellent return on investment.

“The first three years of the GIS project focused on building the base datasets and creating a light-weight data viewer (called the GIS wizard) to give more than 400 County staff access to this new data,” says David Dubauskas, GIS coordinator.

“Today, there are more than 80 datasets in the central database, which can be accessed by departments across the organization.”

The central spatial repository where this data is stored is powered by ArcSDE and Microsoft SQL Server, and is maintained using ArcInfo and ArcView.

The last year has been a busy one, as many departments within the organization have started to use the datasets for various GIS-related projects. These groups have established partnerships with outside organizations specializing in particular areas to build and deploy GIS applications to be used by non-technical staff.

Keeping Strathcona’s Streets Safe
The Collision, Traffic and Road Inventory System (COTRIS) was established through a partnership between the Sherwood Park detachment of the RCMP and Strathcona’s Engineering and Environmental Planning Department.

GDS & Associates Systems developed this application using MapObjects, along with SQL Server and Visual Basic.

COTRIS is an integrated solution that uses GIS to link together collision, traffic volume and road condition data. Using this system, traffic engineers and RCMP traffic services employees can summarize collisions by location and compare collision statistics between locations. They can also define areas that have a high priority for improvements by investigating collision patterns, determine if completed improvements are effective, and select areas for RCMP enforcement.

Bob Horton, County engineer and manager of engineering and environmental planning, says that, before the COTRIS system existed, high-collision locations were identified by inserting pins into a paper map of the county.

“The RCMP can now view an electronic interactive map of the County, where the data can be classified in many different ways,” Horton says.

“The result is a better system for identifying problem traffic areas for enforcement and engineering. This will help us find solutions to make our streets safer.”

The New Face of Emergency Services
Since the Emergency Services department implemented the system in May 2001, more than 15,000 E9-1-1 calls have been logged using a computer-aided dispatch and routing application. This dispatch application was developed by FDM Software and is powered by MapObjects and NetEngine.

The system includes datasets such as the street network, station location, fire hydrant location, property information (address, owner and building name) and other landmarks.

Data accuracy is extremely important when routing emergency vehicles to incidents – getting to the scene quickly is imperative. The datasets must be up to date and, at Strathcona County, maintaining the data in the system is a cooperative effort. The GIS Services,
Engineering and Planning departments share the responsibility of adding new information to the street network file.

Brian Parker, deputy fire chief, says, “When an E9-1-1 call is received, the caller’s address is already contained in the telephone system and is automatically passed to the computer-aided dispatch system, which then locates the incident on the map and determines the closest emergency units to respond to the call.

“The quickest route to the incident is created, and travel directions are printed at the station for the crews to take with them en route to the scene.

“In the past, the operator would have to ask a number of questions simply to determine the exact location of the caller, then find it on a map,” continues Parker. “This system dramatically reduces the chance of error, providing a more timely and accurate response.”

Introducing the Public to GIS

The Economic Development and Tourism department has recently launched an extension to its existing Web site. The Property Locator permits the general public to locate buildings and properties available for lease or purchase and produce demographic and existing business reports for the surrounding area.

Developed by INFORM Network for Management Systems, the locator uses ArcIMS and relies on three main databases for information: a broker database that contains details of the available properties, a business inventory database, and a spatial database of 1996 Statistics Canada demographic data.

“This locator gives our clients access to an up-to-date list of land and building space available in the area,” says Marion Jennings, coordinator, business development and marketing.

“Clients can search by required land size, building square footage and type of space. They can also view properties for lease or for purchase. The system searches the appropriate database and returns the information to the Web application for viewing.”

Once a property has been selected, the user can find out more about the surrounding area, such as how many and what type of businesses are within a certain distance of the site, and how many people live within five kilometres of the chosen site.

The Future of GIS at Strathcona

Strathcona County has made a strong commitment to GIS. New datasets are being created and added to the database on a regular basis, and new applications are planned for the coming year, as more departments begin to realize the benefits of the vast central database and GIS.

To date, the main function of the GIS has been to support internal business processes. Strathcona is now looking toward building more applications like the Property Locator, to permit the public to interact with and use the GIS.

A new application called My Neighbourhood will enable residents to locate events in the County that affect them. This includes everything from street cleaning and garbage pickup to development permits and construction.

“We see this initiative as a way to provide personalized service to the residents of a neighborhood,” explains Ivan Bering.

“This type of service is an integral part of our electronic county hall, which is Strathcona’s latest technology direction. It aims to make it a whole lot easier for residents to do business with the municipality.”

Heather Adams is a communications specialist with ESRI Canada, an associate member of MISA Ontario. She can be reached at hadams@esricanada.com.
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GIS as a Paradigm: A Way of Managing Municipal Business

By Greg Duffy
Woodfield Consulting

This article is based on a presentation to the GeoTec Event, held March 28-31, 2004, at the Metro Toronto Convention Centre.

When municipal IT professionals get together at conferences, one subject often comes up – the relationship between GIS and IT departments. There isn’t a universal view of how GIS technologies fit into IT strategic plans, or even into municipal operations as a whole.

It’s valuable to examine what I call the GIS “method” as a way of doing business, a paradigm if you like. That way, the question of return on investment takes on a more supportive and fundamental importance. One-off projects don’t do that.

In most organizations, the GIS implementation is seen as a hardware, software and data project. It has a start and a finish, with an expected return on investment (ROI), a net present value (NPV) and a payback period. While this is certainly true for segments of the system, the overall goals and benefits derive from following GIS as a method, or a paradigm.

Municipal applications of GIS are often driven by narrowly defined goals, often tied to critical infrastructure and to long-lasting physical plant assets. The ability to link to other data and systems calls for the GIS project to fit into the corporate IT architecture but, just as importantly, into the corporate psyche and thus the corporate paradigm.

Considering this, it’s beneficial for all stakeholders to be involved and buy into the GIS method of managing assets and operations through their geospatial inter-relationships and connectivity.

The essence of a GIS paradigm is one in which an organization behaves in a geospatially enriched manner throughout its operations. It has knowledge of where assets are located, where events occur, and how and where they affect people, which is fundamental to all systems and processes. It’s the common elements of place and geography that create actionable connectivity, productivity and knowledge in the municipality.

The GIS Method

For a typical GIS program, there are the basic topics of scope, costs, benefits and financials. Each of these varies according to the schedule. Let’s use residential solid waste collection as an example.

The scope of the GIS program relative to waste collection would, at the very least, be stated to identify the homes and roads to be covered, the optimal routes for the trucks to take, and the number of routes, trucks, workers and trips to the dump site that would be involved, based historically on crew feedback and route averages, recycling goals and waste separation rules.

The initial costs for IT hardware, appropriate GIS and routing software, data creation or licensing and manpower would be estimated. The manpower costs and hardware/software upgrades over the life of the project would be factored.

The direct program benefits would be estimated and measured, based on financial and non-financial benefits. These include savings of fuel, equipment and workers, as well as delays in requiring more of these resources. Other benefits might include citizen satisfaction when the waste is collected as expediently as expected and the city remains clean and tidy.

The financial calculations would net out the dollar costs and the dollar savings over the time of the project, and then be quantified in ROI, NPV or payback-period terms. Any or all of these measures may give Council the proof they need to support the GIS waste collection program.

This particular example would no doubt work well because the fuel savings alone would likely support a geo-routing application. It is often said that a 15-per-cent savings for a
vehicle fleet can be expected with any geo-based routing process.

Historically, most GIS-based projects have followed this model and have worked well. The major problem with this narrow, project-based approach is that typically the financials have taken many years to prove their wisdom. That is, the payback period can be long, the ROI, while positive, can be low, and the NPV can be only a little positive.

So what can be done?

**The GIS Method as Paradigm**

It can be suggested that many organizations concentrate on what is clearly the narrow definition of ROI, the simple percentage return forecast by the investment. If X dollars are spent on the project, what Y savings do we obtain in years 1, 2 and 3? Or, in narrow payback terms, when do we get our invested money back – in three years, five years or more?

By embracing GIS not so much as a useful stand-alone tool but as a catalyst for other programs and as a door to secondary and tertiary benefits, the GIS method can go a long way to mitigating the approval challenge.

As a paradigm, GIS leads all employees, councilors and citizens to see where their tax dollars are having an effect. Additionally, all stakeholders can share in the oversight of the particular service. By thinking and behaving geospatially, all participants can do more and get more.

Let’s revisit our sample project – the GIS-based waste-collection application.

The project scope must include the above basics of identifying pickup areas, routing and resource management. But these are all internal to the Works Department. Add in forecasting of loads by week, month or season plus designing routes based on demographics and housing densities, and your forecasts become much more valuable.

Now is the chance to see the scope improve to assist councilors and citizens alike. Why not post the routes on the civic Web site? Why not equip the employees in the call centre with the routes? Why not model the demand each quarter and for many years based on the demographics of households (waste volume for each single, married or family person), or by dwelling (waste volume for each single, semi or multiple dwelling), or based on season (waste volume around Thanksgiving and Christmas, or around spring gardening and fall cleanup)?

Citizens can access the Web maps to see when their collections take place, what rules are involved, and what limits are placed on volume. For those citizens who like to watch their taxes at work, the good defence is often the better offence by managing their expectations through Web-based information.

For those councilors who strive for positive feedback from their constituents, let the Web-based information demonstrate the Works priorities. Let the collection information be accessible so that the routing challenge is made more transparent and better understood.

When the town is ready, equip waste trucks with GPS transceivers and publish status Web reports on the collection routes. Plan to permit the financial department of the town to access the collection and route data to manage cumulative costs and to forecast future expenditures. It can even determine future revenues if your town has bag limits and fees or fines for excess.

**The Return on Investment**

The project costs probably remain the same with the exception of any Web improvements that may occur to provide citizen access to collection information.

The benefits will now include citizen access, councillor satisfaction and cost/revenue forecasts along with improved financials from load balancing the routes, not just distance balancing them. These can be valued and factored into the ROI equation, as are more simple factors such as fuel and labour costs.

As the financials improve, the project becomes more attractive, and soon additional scope and added benefits are determined. Work management and asset management applications are so much easier to apply and so much more beneficial when they can benefit from geospatial data and processes. Some industry observers suggest that up to 75 per cent of work- or asset-management systems are geospatial in nature, and therefore a GIS investment becomes a key catalyst for these critical programs.

When the stakeholders are comfortable thinking geospatially, as part of a paradigm, a number of other projects will emerge that build on the first one. The ROI and NPV of the added projects are likely more positive as they use, but don’t pay for, the costs incurred in the first GIS or routing project.

After all, in Accounting 101 we learn that the foundation costs of the GIS program become sunk costs, thus positioning for the success and ROI forecast of subsequent programs.

A GIS paradigm leads to future savings and efficiencies in serving citizens better.

Greg Duffy is principal of Woodfield Consulting, based in Oakville, Ontario, and is a member of the boards of the Ontario Chapter of the Geospatial Information and Technology Association (GITA) and GITA International. He can be reached at g.j.duffy@sympatico.ca.
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Enabling Technologies:
Windows Server* 2003, Windows SharePoint Services, Rights Management Services

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City of Nanaimo Pushes Data to Staff Using Hand-Held Devices

By Mary Ellen Callaghan
City of Nanaimo, BC

The City of Nanaimo has gone the extra mile in helping staff and citizens find information online, by providing it via hand-held devices.

While many municipalities are using applications that help staff and residents find information by extracting it from various databases and making it accessible via the Web, Nanaimo has developed a new way to view data about business licences – not only on the Web, but on the screens of hand-held devices. This is a major step toward making data accessible to staff, wherever they go in the city.

First Phase
In the fall of 2003, the Information Technology Office embarked on a joint project with the Finance and Economic Development departments to make business-licence data more readily available to staff and users of the City’s external Web page.

Phase One of the project was the Internet Business Search – Visitors View. This application extracts data from our property information system, Tempest, and presents it to viewers so that they can generate maps showing the locations of various types of businesses.

This phase went into production March 22, 2004, under sponsorship of the Economic Development Office.

Here is how it works:
A sub-set of the data available in Tempest is extracted every night and ported to the City of Nanaimo server that hosts our Web page, external to our network. This data essentially supports the MapGuide interactive maps on both the intranet and external sites.

For business-licence searches and mapping, the nightly extract has been modified to include additional data elements. Data presented to the visitor in the search result is subject to freedom-of-information considerations.

Users can search the Nanaimo’s business-licence database by several key parameters, report on the results, and map the search results in the CityMap application. Initial search criteria include business name, street name, postal code, business sector and business category.

The business search is accessed via the CityMap Bar on the top of the front page of the City of Nanaimo external Web page – www.nanaimo.ca.

Within the business search window, users are presented with the
results of their search in the search results section. Results are sorted alphabetically by business name and, in the “postal code” and “street” searches, they are grouped by their postal codes and streets respectively.

All of the results that are selected can be displayed on a map. If a user clicks on the zoom button, the map zooms to the individual record and highlights the appropriate property.

Second Phase
Phase Two of the project was a business-licence lookup for staff using the Blackberry, a hand-held device (model 6750) used by Council and City management for cell-phone services and real-time access to e-mail and appointment schedules. (This model is pictured on page 36.)

The Finance Department expressed a need for business-licence inspectors to have ready access to licence data, including calls for service, in the field. The IT Office saw this as an opportunity to make use of the work already completed for the Economic Development Office, providing the inspectors with access to the data extracted from Tempest nightly but with more data fields able to be displayed.

The application that City staff have developed for Finance staff provides access to business-licence data that is current to the end of the prior day. Staff had requested the following search capabilities in the field:

• Look-up by business name (including wildcard search)
• Look-up by owner name (including wildcard search)
• Look-up by civic address (to include all the licences on the whole street or just a single address)
• Calls for service by business and civic address (all types required, restricted to current and two prior years)
• Open and closed businesses (by civic address, by business name and by owner name).

The application resides inside the City firewall and communicates with our production MapGuide server to access data.

The application is delivered through the Blackberry browser icon. A bookmark has been set up within this browser to point to the business-licence search application.

When the bookmark is selected, the application launches and presents the main search screen. A search by business name is the default.

For each business returned in the search result, the application permits the user to review business details (including licence number, licence-approval date, business owner and business phone numbers) and review calls for service. An additional feature of the application is the ability to review selected details for all calls for service (which may or may not be related to a business address), for any civic address, or for all addresses on a single street. The calls for service are presented in reverse-date order.

The application was delivered to business-licence bylaw officers for field testing, but it is also being tested for use in the field by other bylaw officers. The application is expected to be in production this spring.

The project team members for this project are Mary Ellen Callaghan, Jason Birch (senior applications analyst), Tom Rothoehler (senior technical analyst) and Guillermo Ferrero (Island Internet Inc.).

Mary Ellen Callaghan is manager, business services, for the City of Nanaimo. She can be reached at maryellen.callaghan@nanaimo.ca.
**ASSOCIATE MEMBER’S VIEWPOINT**

**Planning of Purchases: Is Obsolescence Absolutely Necessary?**

*By John Breakey*

*UNIS LUMIN Inc.*

If most technologies evolve every six months and large projects usually span one year, you can assume that, by the time your project implementation rolls around, the product you initially chose will no longer be the best solution.

Many IS groups will focus on product features at the beginning of a new project and, in doing so, will select a particular product as their standard.

Of course, this ignores product enhancements, which the user will most likely adopt to keep the system current.

The point is, because product features are only valuable for a short time, one could argue that a user should not put so much emphasis on product features when selecting a system. Particular care and attention should be directed to the development and rollout of improved functionality after the initial installation.

Again, if we assume that a capital investment should have a life span of four to six years, then the initial product evaluation criteria, which your staff spent so much time on, will have disappeared long before this. To prove my point, just look at a system installed one or two years ago. You will cringe and say, “Why did they choose that obsolete solution?”

Of course, users need a model by which to evaluate and justify equipment purchases. The difficulty is that the traditional model does not stand the test of time.

So where does this leave the poor user? Taxes, death and technological change are inevitable, but what remains constant is the organization’s functional needs, albeit scaled for upward growth.

Setting the criteria for functional needs establishes a constant (or predictable) basis for the evolution around us. Once an organization has set the standards for its communications, then it can look at products which best meet those needs, both for the initial rollout and inevitable migration to enhanced functionality.

But this should not lead the organization to decide that one product is the standard. Let me confuse you for a minute. I don’t mean you should mix and match for the sake of it; that has its own pitfalls. The real message is, “Don’t stop the evaluation process after the first purchase.”

If your functional business needs are well defined and understood by the evaluators in your organization, then the job of picking the best product will be easier, because you are matching your real needs against the product features.

Because the industry is full of leapfrogging, the timing of a purchase can do much to affect the selection of a product or vendor. Remember, continual upgrades will be part of the equation. Municipal IT purchasers should look at the track record of vendors to see whether their products are capable of feature enhancement and additional integration. Basing your standards not on products, but on functionality, will go far to change your attitude, thereby enabling you to develop a critical eye for the best solution.

This decision method is only one element of a matrix logic, which can guide you to a system purchase. The matrix should consist of service, vendor stability, cost and compatibility, as well as continual feature and functional enhancements. By constantly reviewing the matrix, the selection process of these elements should deliver a better decision.

On a final note, we should realize that the needs of an organization also change. Don’t despair! As with many elements in life, we can be sure of users looking for enhanced functionality throughout the life cycle of their enterprise systems!

John Breakey is president and CEO of UNIS LUMIN Inc. of Oakville, Ontario, a technology outsourcing and systems integration company and an associate member of MISA Ontario. He can be reached at jbreakey@unislumin.com.
Transformation Project Proves Successful

By Ralph Blauel
Halton Region, Ontario

In a successful joint effort, three levels of government have tested a new methodology that promises to streamline government services to business.

Common challenges and priorities face all levels of governments in the delivery of seamless services to businesses – including improving the client experience, integrating programs and services, and obtaining efficiencies through rationalization and harmonization.

In 2003, a three-government team from Industry Canada, the Ontario Ministry of Consumer and Business Services, and Halton Region was established to apply the Business Transformation Enablement Program (BTEP) to the process of starting a restaurant business. This sector was selected due to the high number of permits and licences required from all three government levels.

The BTEP methodology standardizes the mapping of services, providers and clients across jurisdictions. It is administered by Treasury Board of Canada Secretariat, Chief Information Officer Branch as a major means to enable and align business transformation initiatives.

The first step in the methodology is to understand which government services affect the client so that they can be bundled in a user-friendly way.

The specific objectives of the project were:

- Develop strategic service models of current services to new business startups
- Develop a business-problem statement, transformation vision and strategy based on the service visions from each jurisdiction
- Prepare a high-level business design of the proposed services after transformation
- Identify at a high level the differences among jurisdictions to be addressed and aligned
- Agree on recommendations for going forward with one transformation opportunity

Bundling Services

BTEP is based on the Zachman Framework for Enterprise Architecture. It provides methods and best practices for business-problem assessments, visions, strategies, designs, business cases and plans. It also provides alignment reviews of individual initiatives within a whole-of-government context.

The team discovered, through services mapping, the nature of the bundling that would be required to fulfill restaurant start-up licences and permits in a user-friendly way. The team also assessed inter-jurisdictional strategic alignment and stakeholder readiness.

And the result? The team identified what we labelled an inter-jurisdictional service initiation opportunity. This would address the restaurant entrepreneur’s concerns – namely, that meeting government requirements to start a new business is time consuming, confusing and inefficient.

The new scenario would include services to provide the restaurant entrepreneur with information about, and access to, services across and within jurisdictions – and all as a single package.

These clients would receive this information through a single point that can be accessed from any jurisdiction and service-delivery channel (including phone, walk-up, e-mail and Web).

Proposed BTEP Next Steps

With the first stage of the project completed, the team is recommending the following next steps:

- Validate the identified opportunities with users and service providers via concept demos
- Map the work into inter-jurisdictional initiatives of the Public Sector Service Delivery Council and Public Sector CIO Council
- Continue service mapping to include other industry sectors and jurisdictions via BTEP methodology
- Report to the 2004 Lac Carling Governments’ Congress.

The BTEP opportunity analysis framework was successful in understanding current service-delivery processes and identifying how services can be further streamlined, and it will be used in future inter-jurisdictional initiatives.

Ralph Blauel is director of technology services with Halton Region. He can be reached at blauelr@region.halton.on.ca.
MISA Members Invited to Showcase Ontario

Now is the time to mark your calendars and plan to attend Showcase Ontario – the single largest public sector education event in Canada.

Once again hosted by the Province of Ontario, Showcase is expected to attract more than 5,500 people to the Metro Toronto Convention Centre on September 13-15, 2004. All broader public sector employees, including staff of municipalities, hospitals, school boards and post-secondary education institutions, are invited to attend.

“Showcase Ontario 2004 is about working together across jurisdictions and functions to serve Ontario citizens better,” says Bob Kennedy, the event’s director. “It’s a great opportunity for members of MISA to exchange ideas and network with their counterparts in the provincial and federal governments.

“This year we’re celebrating the ‘Power of Possibility.’ It’s a theme that highlights the power of technology to enhance the lives of the people of Ontario – and its inherent potential to do even more.”

Showcase features an exhibit floor and valuable training opportunities. Plus, the Showcase Awards recognize public sector innovation, collaboration and excellence in technology solutions.

Last year, London’s Building Inspection Interactive Voice Response System won a Merit Award in the category of Serving Ontario’s Citizens Better. The system enables contractors and builders to obtain information about multiple permits and inspections seven days a week.

Halton Region also received a Merit Award in the Technology Innovation category for its use of digital video and a Closed Circuit Television Information Management System to inspect the condition of wastewater pipes.

Public sector employees registered for Showcase have access to three days of workshops, lectures and conference sessions led by industry practitioners, in addition to four keynote speakers (including behaviourist and humourist Dr. Lauren Woodhouse and Stuart McLean, host of CBC Radio’s Vinyl Café). All sessions and presentations are held on the exhibit floor.

“The exhibit floor plays host to leading-edge public and private sector technology exhibits in a comprehensive solutions environment,” says Kennedy. “Last year we had 110 private sector exhibits and 260 government applications on the floor. Showcase is truly an event not to be missed.”

Visit www.showcaseontario.com to obtain more information.


Sudbury Plans Community Portal

The City of Greater Sudbury, Ontario, is building a community portal for launch this fall, designed to be a one-stop resource in both official languages for more than 900 community groups.

Navantis Inc. is building the portal using its Community Municipal Portal Solution. Greater Sudbury Mayor David Courtemanche, in a release from Navantis, said the Smart Sudbury portal, www.e-sudbury.com, will provide one point of access for community information.

Halifax System to Aid Public Safety

Halifax Regional Municipality has announced that it will soon have a single 9-1-1 emergency call centre and be able to dispatch all police and fire services from the same combined dispatch centre.

The new computer-aided dispatch/records management system (CAD/RMS) is expected to be fully operational by next spring. It will significantly increase the municipality’s ability to respond to emergency situations and increase the potential for streamlining service delivery to the two police agencies in Halifax.

Today there are two 9-1-1 emergency call centres, one operated by the RCMP and one by the regional municipality. The new CAD/RMS system will combine the two centres, reduce staff and enhance public safety protection, George McLellan, chief administration officer, said in a release.

Integrated dispatching will permit the closest patrol car to be dispatched. The records-management system will also enable both Halifax Regional Police and the RCMP to manage records in a single system.
The most recent meeting of the National CIO Subcommittee on Information Protection (NCSIP) was held in sunny Victoria, British Columbia, during the month of February. As you might expect, I was not overly displeased to leave a frigid Ontario winter to spend a few days in Victoria, including a kayaking event in the inner harbour.

The NCSIP meeting was hosted by the Government of British Columbia and was timed to coincide with meetings of the Public Sector CIO Council (PSCIOC) and the Privacy Subcommittee, with whom NCSIP held a joint session to discuss overlapping security and privacy issues.

This was the first NCSIP meeting attended by two MISA representatives, with Michel Labelle of the City of Coquitlam (representing MISA BC) also in attendance. The addition of a second MISA representative on NCSIP parallels a previous decision by PSCIOC.

At the Victoria meeting, we reviewed the status of the various projects that NCSIP is undertaking on behalf of PSCIOC. While not all projects are equally relevant to municipalities, it is worth providing an overview of some recent NCSIP activity.

Common Self-Assessment Tool
NCSIP members have been investigating a common tool to facilitate a high-level self-assessment of security policies and practices that could be undertaken by each jurisdiction. This would build on work undertaken by the governments of Canada, British Columbia, Prince Edward Island and Quebec, all of whom have some form of tool already in place. These tools are all loosely based on the ISO 17799 standard and have many common elements.

Before the Victoria meeting, NCSIP members were surveyed to determine their interest in such a tool, as well as the characteristics that should be included. A report of results was presented at Victoria. While interest was high, it was agreed that the focus would be on a tool that was valuable for internal use (self-assessment), with much less focus on being able to compare results across jurisdictions.

Based on this feedback, a working group will continue to move forward with this initiative. Ideally, a security self-assessment tool, based on the ISO 17799 standard, could be available to municipalities and other jurisdictions in the not-too-distant future.

- Security Classification Guide – After a number of revision cycles, including incorporating feedback from members of the Privacy Subcommittee, a final draft of the Security Classification Guide is to be presented to PSCIOC for endorsement.

As discussed in a previous column, this guide identifies four information security classifications (prosaically defined as high, medium, low and unclassified) and gives examples of the types of information that might be listed in each category. While it is not expected that this new classification will necessarily be adopted by all jurisdictions, this should permit each jurisdiction to map its own unique classifications and terminology to a common standard.

Perhaps more importantly, jurisdictions that do not currently have any such classification in place (which probably includes most municipalities) can be encouraged to adopt a common standard. While the Guide is very good in describing the classifications and providing examples, the next logical step is to suggest various safeguards appropriate to protect information in the various categories (including, for example, which categories require locked filing cabinets, storage only in encrypted form, transmission only by secure e-mail, restrictions on storage on laptops or handheld computers, biometric authentication, and special procedures for erasing information on hard drives before disposal).

Since additional protection comes at a cost, in terms of both required software and inconvenience, it is appropriate to impose such requirements only for information in the more secure classifications.

Security Training
Since advanced security training can be very expensive and may not be available in many parts of Canada, NCSIP members were surveyed to determine their interest in participating in shared training arranged specifically for the Canadian public sector.

The survey requested information on the types of training that were considered most important (or most difficult to obtain locally), as well as preferred locations for training sessions. The results of this survey will be used to develop training options that are tailored to the needs of Canadian jurisdictions.
and barriers currently experienced in accessing the right training. Results of this survey will be shared at the next NCSIP meeting, slated for June in Quebec City.

In this regard, there may be an opportunity for the MISA Security Conference, at the City of Ottawa in October, to become part of a broader national program of security training for all levels of government. Related to security training may be a common or more cost-effective approach to security certification for government security specialists.

At present, a variety of options are available for security certification, including CISSP (Certified Information Systems Security Specialist (see www.isc2.org), GIAC Certified Security Expert (see www.giac.org) and CompTIA Security+ certification from the Computer Technology Industry Association (see www.comptia.org).

**Security Awareness**

In addition to security training, which is typically directed at IT security professionals, there is a need to enhance general security awareness across the broader organization, including senior management and politicians.

Again, there is an opportunity for a joint effort to create a security-awareness communications plan and supporting documentation, which can then be customized to meet the requirements of each jurisdiction.

The Province of Manitoba has taken the lead on this initiative, having developed a security awareness plan for its own use. The Manitoba document identifies common messages to be directed at all stakeholder groups (including passwords, viruses, physical security, e-mail and Internet use, and information handling), as well as specific messages targeted at different audiences (including politicians, executives, managers and supervisors, IT staff, suppliers and consultants). NCSIP members are reviewing the Manitoba documents for more general applicability.

**Security Clearances**

The Government of Canada has taken the lead in coordinating security clearances for NCSIP members. While this is optional for NCSIP members, there may be situations in which relevant information can be shared only with members with the appropriate clearance.

While security clearance has not, to my knowledge, been a hot topic for municipal IT security professionals, part of any security self-assessment will deal with hiring practices and may begin to suggest appropriate security clearances for staff entrusted with the highest degree of access to corporate information and resources.

**Cyber Security Exercise**

A Cyber Security exercise was undertaken in January, with a second exercise planned for later this year. The aim of the exercise was to confirm that security representatives could be contacted quickly in the event of a cyber-emergency and to test processes (audio conferences) to share relevant information. While municipal NCSIP representatives were included in this, the focus until now has been on ensuring effective coordination between the Government of Canada and the provinces and territories.

As discussed in another previous column, a national cyber-alert process, including municipalities, is not yet included in the mandate of the relevant Government of Canada agency – formerly OCIPEP and now PSEPC (Public Safety and Emergency Preparedness Canada). Nevertheless, in parallel with the work on NCSIP, MISA Ontario is working with the Province of Ontario on an enhanced provincial-alert process. Through both NCSIP and the various MISA Chapters, we should be encouraging similar processes in other provinces, at least until municipalities can be involved more directly in a national process.

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