

Geomatics military style

The Mapping and Charting Establishment (MCE) of the Department of National Defence uses GIS technology to support military operations, exercises, and staff work in Canada and around the world – places such as Bosnia and Herzegovina, Croatia, Eritrea, Haiti, Kosovo, Mozambique, the Sinai, and Afghanistan. Integrating geospatial information with other types of data and intelligence, MCE supports all branches of the Canadian military, both in training and operational environments, from bases in Ottawa, ON, Halifax, NS, and Esquimalt, BC and through deployed Geomatics Support Teams. Every major Canadian Forces operation now includes at least one dedicated geomatics support team – typically consisting of four Canadian Forces members ranging in rank from Master Corporal to Warrant Officer – which uses the Deployable Geomatics Support System. The system consists of high-end, commercial-off-the-shelf hardware mounted in transportable boxes built to withstand rugged conditions. ❧

Readers for RFID tags

In early September the US Patent Office granted SAMSys Technologies Inc. a patent (number 6,617,962) titled “A System for Multi Standard RFID Tags,” one of a series of patent applications SAMSys has submitted. The patent outlines a system with reader architecture that can read a wide variety of RFID tags, regardless of their frequency or protocol. Flexible readers are key to the broad adoption of RFID technology, allowing customers to choose from the full range of RFID tags and lessening the worry that their choice will be unreadable at any point along the supply chain. According to SAMSys, “The concept of multi-protocol, multi-frequency RFID reader systems has gained general industry acceptance through the acknowledgement that many of the targeted supply chain management applications likely to be installed in the near term will have to accommodate tags operating with diverse protocols, with some utilizing a plurality of frequencies.” ❧

CANPASS-Air launched in Vancouver

The July launch of the CANPASS-Air program at Vancouver International Airport marked the first North American implementation of iris recognition technology to screen air passengers. The federal government plans to install CANPASS-Air kiosks at Toronto’s Pearson International Airport this fall, and at Montreal’s Dorval International Airport in the spring of 2004, to allow program members to clear customs and immigration more quickly.

To prove their identity, members go to a kiosk and look into a camera that scans the iris of their eye, a unique identifying feature. Working with other new technologies, CANPASS-Air also checks travellers against a security system as if they were meeting a customs officer in person. Members can then enter Canada without further interaction with Customs unless they are randomly selected for inspection.

The CANPASS-Air program may be expanded to a joint program with the United States, which would be piloted at Macdonald-Cartier Airport in Ottawa. ❧

GeoSmart provides smart funding

In order to make reliable and cost effective decisions, communities across Canada are using information technology to deliver services more efficiently. Land information and geographic information systems (GIS) are seen as essential tools for doing business.

The Ontario municipality of Chatham-Kent and its partners recently won three prestigious awards for a GIS-based project, which involved the development of highly detailed and user-friendly online topographical maps and databases.

The project was funded in part by GeoSmart, an Ontario government program, launched in 2000. A \$32-million SuperBuild initiative, GeoSmart may fund up to 50 percent of eligible costs, but usually not exceeding \$500,000 per project. Remaining funds may come from the city or town itself, the federal government and the private sector. According to the website (www.geosmart.gov.on.ca/aboutgeosmart.cfm), projects can address a wide variety of business areas including: economic development, land use planning, asset management, public health and safety, emergency services and data warehousing. ❧

Recycling words reduces work

Translation software took another step forward in late August with MultiCorpora R&D Inc.’s (www.multicorpora.com) release of expanded client-server and Web-server technologies – optional add-ons to *MultiTrans*™, their translation support and language management software solution. The ability of *MultiTrans* to search and retrieve examples of previously translated text in order to recycle it, has helped government and governmental organizations such as UNESCO improve the consistency of their translation and shorten the translation process.

MultiCorpora says, “The new client-server and Web capabilities enable additional gains in consistency and cycle time by allowing authors, translators, terminologists, reviewers and content readers to easily access and share a centralized multi-

lingual content repository,” through either an internal network or the Internet.

Inconsistent translation can lead to inaccurate or ambiguous information. A central repository of pre-approved material should reduce both inconsistent translation and the time it takes to do the translation, resulting in cost savings and a more consistent corporate image.

For governments considering translation software, MultiCorpora offers the Language Management Opportunity Assessment (LMOA) – a short term consulting engagement that reviews an organization’s translation activity, builds a proof-of-concept multilingual repository with their own documents, statistically analyzes the repository, and quantifies the expected return on investment – the sort of detailed information which can help streamline the evaluation and approval process. ❧

Headliners

GeoConnections stimulates government and business

GeoConnections (www.geoconnections.org) is a national partnership, led by Natural Resources Canada, to build the Canadian Geospatial Data Infrastructure (CGDI) – the technology, standards, access systems and protocols needed to harmonize Canada's geospatial databases so they are easily available over the Internet. GeoConnections also coordinates the investments and developments of the various partners – federal, provincial, territorial and private sector – and the increasing volume of geospatial data.

Geospatial data defines a thing, a concept, an idea, a direction or a trend, its interrelationship with other things and concepts, and how the interrelationship is affected by the dimension of time. A geospatial data set is a collection of information that can be located, allowing people to research, analyze and plan.

For example, emergency services could use geographic data to pinpoint the location of an emergency, monitor traffic and team availability and determine how best

to respond. Police can model and track criminal activity; local and regional governments can plan more effectively based on information about their population, business distribution and traffic patterns; public health and safety can be enhanced by comparing health data against hazards like toxic waste dumps to assess impacts on nearby communities. Not only actual, but virtual events can be prepared for as geo-software allows for “what if” scenarios.

According to the website, “all levels of government use geospatial services to monitor the environment, manage natural resources, deliver programs and conduct long-term analysis. Municipal governments use geospatial information to manage such services as 911 (emergency), health and recreation. Provincial and territorial governments use geospatial services to plan and implement policy with respect to such responsibilities as forest management, transport and business expansion. Federal agencies use geospatial services in such areas as national defence, biodiversity and environmental monitoring.”

However, the GeoConnections program is also beneficial to the companies involved, stimulating the development of situation specific software such as FloodTrack – developed by Vantage Point International Inc. in partnership with GeoConnections and RADARSAT International – and providing the opportunity to develop enhancements and improvements to existing software solutions. As recently as August 12, 2003, DM Solutions Group Inc. (www.dm-solutions.ca), announced several of its contributions to Version 4.0 of MapServer – an open source Web-mapping technology. Many of the new features DM Solutions provides in MapServer are the direct result of the company being contracted to build interactive mapping tools for the CGDI. The new features include the capacity to output vector-based maps, support for Shockwave Flash and Adobe PDF, and Open GIS Consortium GML output. DM Solutions will continue to support the PHP scripting environment, a widely adopted MapServer development environment. *nm*