



Ministry of Natural Resources
Ministère des Richesses naturelles

Published Quarterly by the
Ministry's Land Information
Ontario (LIO) Program

July 2001, Volume 1, Issue 1

Inside this Issue ...

- 1 Ontario Parcel
- 2 Differential GPS
- 2 Municipal Boundaries
- 2 Building National Standards
- 3 Ontario GeoSpatial Data Exchange
- 3 LIO's Eye in the Sky
- 4 Ontario Road Network
- 4 Township Improvement
- 5 Access Infrastructure
- 5 NR&E Project
- 6 Ontario Gets GeoSmart

Land Information Ontario
99 Wellesley St. W.,
Room 5440, Whitney Bldg.,
Toronto, Ontario
M7A 1W3

To comment or request information on
other topics please contact the editor,
[Stephen Straughan](mailto:Stephen.Straughan@lio.gov.on.ca) at (416) 314-3414.

Land Information Ontario does not
resell or publish its confidential e-mail
lists. To unsubscribe send request to
lio@webmail.mnr.gov.on.ca.

LIO Spatial News



It's Our First Issue!

Over the past three years the Land Information Ontario (LIO) team has been working non-stop to design and deliver the components that make up Ontario's emerging Land Information Infrastructure (OLII).

During that time you may have seen our booth, heard us speak or talked with us at various industry and trade association conferences and conventions.

These opportunities continue to be important in helping us meet and hear our stakeholders - however with the OLII now developing fast and furious there is a pressing need for us to start getting more, and better, information about our initiatives out to you, our stakeholder, as quickly as possible!

We hope that this short newsletter will help fill the bill. It has been designed to build your knowledge of LIO's various initiatives and keep you up-to-date on current and future activities.

For those of you who need more background on the LIO program or the OLII, detailed descriptions of our initiatives can be found at www.lio.mnr.gov.on.ca.

Delivering the Parcel

Negotiations continue with the Ontario Property Assessment Corporation and Teranet to build

and maintain a parcel database for the Province. Significant progress has been made in describing the product, services and obligations of all parties. Although an agreement is expected soon, negotiations with respect to service level expectations continue.

Ministries and Schedule 1 and 3 Agencies will be happy to hear that the Ministry of Natural Resources (MNR) has signed an interim license allowing them to use Teranet's ownership parcel data for the Ontario Government's internal non-commercial purposes.

Similar in format to what is expected in the final ownership product, this data contains polygonal ownership parcels labeled with parcel identifier number (PIN) as well as supporting data such as street names and subdivision plans.

Long term availability of these data is conditional on an overall Ontario Parcel agreement being signed. If that date is not met all data must be returned.

Ministries or Agencies who would like to access this ownership data should contact [Carla Jordan-Cooke](mailto:Carla.Jordan-Cooke@lio.gov.on.ca) at (705) 755-1451.

Additional information about the Ontario Parcel can be found in our recently released [Q&A document](#), posted in the "stakeholders' Library" section of the LIO web site.

Differential GPS ? It's on its Way !

The Ontario Government is partnering with the other provinces, the Federal Government, and Nunavut to implement the Canada-Wide Differential GPS (CDGPS) correction service.

All parties have now signed an agreement and contributed towards funding the creation of a new service which will provide affordable and highly accurate real-time positioning information to all Canadians.

CDGPS will improve on the accuracy and consistency of existing GPS positioning information - ultimately producing real time accuracy of 1 to 5 metres depending on equipment and conditions.

Geographic Data British Columbia is managing the project on behalf of the partners and have entered into a contract with **SiGem** (an Ontario based company) to build the terminal to receive and

transmit the corrections to your GPS receiver as well as the components to send the corrections to the satellite.

Natural Resources Canada, who track the GPS satellites and generate corrections data, is on schedule to provide this info.

SiGem has completed the preliminary component design and is preparing for a comprehensive design review. Beta units are expected to be delivered late this fall.

Delivery had originally been planned for December of 2001, however, SiGem has been granted an extension until spring 2002 to accommodate additional work.

For additional information check out the CDGPS web site at www.cdgps.com or contact [Morgan Goadsby](#) at (705) 755-2132. 🌐



Marking Boundaries

From July 1996 to January 2001 the boundaries of Ontario's municipalities underwent major revision. Lines which had stood on maps for over a hundred years no longer were relevant as amalgamations and annexations quickly reduced Ontario's 815 municipalities to less than 450.

The fact is that municipal boundaries are now driven by economic, rather than cultural or traditional rationale. We can therefore expect that they will continue to evolve, although possibly at a slower rate, into the future.

Municipal boundaries are used for a variety of purposes by a large number of Ontario's public and private sector organizations. Yet until recently Ontario had no accurate and comprehensive digital record of these boundaries.

Granted municipalities themselves often maintain boundary records, however, this information often conflicts with their neighbours data.

Similarly Statistics Canada has, for some time, maintained a set of municipal boundaries for its use, as have a number of Provincial Ministries. Regrettably this data does not correlate well with other provincial information, and in recent years its accuracy and currency have declined significantly.

Project Status

The initial phase of the project, began in late 1999.

LIO Helps Create National Standards

GeoConnections is a national initiative to organize Canada's land information and make it available electronically.

Because GeoConnections and LIO share many of the same problems and issues, LIO staff have become active participants on many of its committees helping lead the way to the development of national standards and approaches.

GeoConnections is helping fund the development of the Ontario Road Network (see page 4), components of the Ontario Land Information Warehouse, and geodetic improvement within the City of Toronto.

To find out more about GeoConnections, visit its web site at [www. http://cgdi.gc.ca/](http://cgdi.gc.ca/) 🌐

Continued on Page 3

Marking Boundaries Continued....

At that time a wide range of stakeholders with an interest in municipal boundaries were interviewed. This was followed by the creation of a Steering and Technical Committee.

The Ministry of Municipal Affairs & Housing (MMAH) subsequently agreed to become the data custodian for this project provided that the Ministry of Natural Resources (MNR) assume responsibility for providing technical & analytical assistance.

Recent Developments

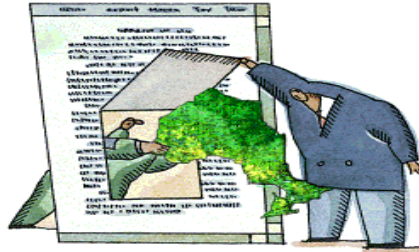
A framework for the new dataset has recently been signed off by MMAH and will soon be transformed into a physical design. This new framework defines the appropriate data standards and attributes and establishes maintenance requirements.

When complete, this seamless, provincial Municipal Boundary dataset will be both current to Jan. 1, 2001, and compatible in accuracy and scale with the MNR's Ontario Base Mapping (OBM) program – 1:10,000 in the south and 1:20,000 in the north.

The target completion date for this project is late this summer at which point all data will be loaded into the Ontario Land Information Warehouse.

Subsequent updates to this dataset will be required due to ongoing municipal amalgamations and locally driven restructuring. These will be handled on a regular basis by MMAH in its role as custodian.

For further information, please contact: [Shawn Kelleher](#) (MNR) at (705) 755 – 1296 or [Matthew Ferguson](#) (MMAH) at (416) 585 – 6285. 🌐



Quid Pro Quo - Public Sector Exchanges Data

Are you having difficulty getting the geospatial data you need?

Spending more time finding data & negotiating for it then actually working with it?

Land Information Ontario has the solution - the Ontario Geospatial Data Exchange (OGDE).

A multi-party agreement, OGDE will eliminate barriers which impede effective data sharing in Ontario's broader public sector making negotiation and administration of multiple data-sharing agreements a thing of the past.

The Exchange will draw its members from Ontario Government Ministries and Agencies, the Federal Government and Ontario municipalities.

Membership is also available to First Nations and aboriginal communities as well as broader public sector entities such as conservation authorities, school boards, and post-secondary educational institutions.

The Exchange's umbrella agreement and use of a centralized Internet - enabled distribution facility, ([the Ontario Land Information Warehouse](#)) will make it simple for members to share Ontario's geospatial data amongst themselves for non-commercial purposes.

To find out more about the benefits of joining OGDE check out our [Frequently asked Questions](#) on the LIO web site, or contact [Mike Robertson](#) at (705) 755- 1280, or [Derick Yorke](#) at (705) 755-1669. 🌐

LIO's Eye in the Sky

LIO has licenced a seamless series of digital-ortho images of the greater-Toronto area from **Triathlon** for the use of the Ministries of Natural Resources, Transportation, Municipal Affairs and Housing, Health and Long Term Care, Tourism, Culture and Recreation, and Attorney General.

Files containing this series of orthophotos are available in TIFF format which should be readily useable by most ministries.

We are in the process of acquiring high-resolution **IKONOS** satellite imagery to cover gaps in the Triathlon coverage. Expected to be available this summer this imagery will be compatible with the Triathlon product.

Recently Natural Resources Canada agreed to complete a coverage of **LANDSAT 7** over the entire Province during the next five years. Several scenes have been acquired and are available for use by OGDE members.

For information contact: [Richard Mussakowski](#) @ (705) 755-2154

Tracking The Elusive Ontario Road !

The Ministry on Natural Resources has partnered with Natural Resources Canada (NRCan), to implement a plan to replace Ontario's existing fractured, multi-standard, road data with a single province-wide standardized and maintained roads and civic addressing database.

Funding for the Ontario Road Network (ORN) will be provided by the Ontario Government's GeoSmart program, using SuperBuild funds and by the Federal Government. Data maintenance will be supported through partnerships and by various government jurisdictions.

Data Collection

The first step toward completing the ORN, the "National Core Build" was taken in January 2001 when our contractor, commenced work gathering some 40,000-km of road data in Eastern Ontario.

The second element of the ORN , the "Provincial Core Build", has yet to begin. During this phase MNR will expand the base data collected as part of the National Core Build, adding over 25 descriptive attributes, ranging from road names and civic addresses through to speed limit.

When possible the project will integrate existing attribute data & high quality geometry sourced from

municipal, provincial and federal bodies.

The "National Core Build" is targeted for completion in spring 2002. The "Provincial Core Build" is



expected to commence this Fall or during the winter of 2002.

Next Steps

In the coming months LIO plans to select a contractor to integrate and maintain the ORN. Specifications and RFP documents will be released within the next few months. This integration work is expected to take about a year.

With data sharing principles now in place and the draft data sharing agreement under development, it's time to broaden the municipal provincial dialogue.

In a series of business and technical meetings with municipal, provincial and federal officials, we have been working towards establishing common data sharing principles and agreements which ensure that all three levels share common standards for road geometry and attributes, as well as the associated intellectual property rights.

So far this project has enjoyed excellent municipal participation and contributions. More meetings and workshops are being planned

for this summer in an effort to expand the network of municipal partners who have agreed to contribute information needed to maintain the database.

For further information on this exciting project check out the [ORN Technical Overview](#) posted in the "Stakeholders' Library" section of the LIO web site, or contact [Tom Malone](#) at (705) 755-2130. 🌐

Collecting Lots and Concessions

When Ontario first began investing in digital mapping geographic township boundaries were viewed only as a cartographic backdrop. As a result the existing geographic township data (including lots and concessions) are not positionally accurate in many locations.

The Township Improvement Project will resolve this problem by improving the mapping accuracy of the digital cadastral information now incorporated in the MNR's Natural Resource and Values Information System (NRVIS).

Funding for this project is being provided by the Ontario Government's GeoSmart program, using SuperBuild funds

Progress to Date

Initially an internal review of all subdivided geographic townships in the province was completed to determine the overall need for improvement.

Subsequently LIO has contracted with various Ontario Land Surveyors to secure survey data which can be put to work to -

Continued on Page 5

Collecting Lots and Concessions Continued ...

accurately establish the position of certain township lot corners.

To date, contracts have been let with over 30 Ontario based survey firms to provide data on 330 sub-divided townships.

Additional contracts are expected to be issued for another 150 townships. This new data will be incorporated though the Ontario Parcel project and will be ultimately reflected back into NRVIS.

A pilot project is presently being prepared to determine the best method of aligning township data with existing Teranet parcel mapping.

When complete the updated Geographic Township dataset will be placed in the [Ontario Land Information Warehouse](#) and be available to members of OGDE.

For more information about the Township Improvement Project contact [Carla Jordan-Cooke](#) at (705) 755-1451. 🌐

Taming Wild Geo-Data

The Warehouse

Long-awaited the [Ontario Land Information Warehouse](#) (OLIW) has been operational for over a year !

Predefined views of certain data, are presently browsable through both a public and a secure Internet connection and have met with very positive feedback.

The Warehouse now houses more than 200 different geospatial data-

sets, all of which are being kept current, accurate and complete.

A major enhancement, a new module which will allow geospatial data to be securely deposited and extracted remotely is presently being beta-tested and will be on-line late this summer.

This module will support the operations of various data sharing arrangements and will be used by the Ontario Geospatial Data-Sharing Exchange (OGDE) to manage and supply its member's data.



LIO is presently working on improving the performance of the Warehouse and will be migrating to a new hardware environment this fall. We expect these upgrades will improve connection and download speeds considerably - helping us serve you better!

The Directory

Every library has a standardized card catalog. Without this resource patrons would be reduced to searching randomly through the stacks hoping to find the information they need.

The [Ontario Land Information Directory](#) (OLID) is the catalog for Ontario's "geospatial metadata" (information about Ontario's land information).

Available to the general public for more than one year now OLID is becoming quite popular among a broad range of users as an important research tool.

OLID's Metadata input tool is now being put to good use by a growing number of LIO's stakeholders who are using it to create and update geospatial metadata records, the number of which increases by dozens each week.

Sys-X Corp was recently awarded a contract to introduce improvements and respond to requests for changes over the next year.

For more information about the Warehouse or the Directory contact [Raphael Sussman](#) at (416) 314-1103. 🌐

Making Sense of Natural Resources & Enviro Data

The Natural Resources and Environmental (NR&E) Land Information Infrastructure Project will instill order in the rather chaotic jungle which currently hampers the collection and dissemination of core natural resources, environmental and geophysical data .

Project staff and stakeholders are working hard to ensure that this important information is reliable, timely, relevant and accessible in support of land use and resource planning in Ontario.

Designed to act as a catalyst this project aims to achieve broad-based cooperation and collaboration in the access, collection, maintenance and -

Continued on Page 6

Making Sense of Natural Resources & Enviro Data Continued

distribution of natural resource, environmental and geophysical data.

From its inception in 1998 the project has achieved a number of important milestones, including;

- Formation of the Natural Resource & Environment Data Steering Committee.
- Contribution to the Environet Project Data Architecture.
- Contribution to the Water Resource Information Project Data Architecture.
- Introduction of standardized methodology for establishing sustainable data management models which are compatible with the OLII.

This latter approach was employed to improve a number of key databases, including:

- Soils Ontario
- Water Wells:
- Constructed Drains
- Municipal Boundaries
- Abandoned Mines & Hazards 1
- Sedimentary Geoscience Observations
- Quaternary Geology
- Provincial Groundwater Monitoring Network
- Climate/weather Monitoring Stations
- Forest Cover
- Aquatic Resource Areas
- Breeding Bird Atlas V2

This project will produce many beneficial outcomes, including:

- An improved return on the public sector's substantial investment in this information.
- A reduction in duplicated effort in the collection & management of the this data.
- Stakeholders equipped to assume leadership in the management of NR/E data.
- Common data standards and maintenance procedures.

For additional information on the NR&E project contact [Rob Parry](#) at (705) 755-2158. 🌐

Ontario Gets GeoSmart!

Funded by SuperBuild, GeoSmart & Connect Ontario are complementary programs, administered by the Ontario Ministries of Natural Resources (MNR) and Energy Science and Technology (MEST).

Led by the MNR, GeoSmart will invest up to \$32 million to help community partnerships introduce new geospatial (land information) technologies which will stimulate economic development and provide job growth. GeoSmart funding will be split between:

Community Led Projects: which will fund broad-based community-led solutions designed to break down the technical and financial impediments which hamper the delivery of geospatial information at the local level ... and;

Directed Projects: which address the general lack of province-wide standardized geospatial base datasets and access to these data. These 'backbone' projects will help

remove the barriers which impede the linkage, sharing and integration of geospatial data.

Connect Ontario & GeoSmart use a common, three step approach to funding projects. This means that whether your broad-based regional community is interested in establishing an internet presence, or developing new applications to serve up geospatial information, or both, its single application will follow exactly the same process, use the same forms and be scrutinized by one independent review panel.

Since inception, the program has experienced an overwhelming demand for funding from communities across the Province, including 66 Notices of Intent, 19 Business Plan funding requests and 9 Project funding requests! Stay tuned for announcements.

In the same period, GeoSmart's directed projects component has invested in partnerships which are building province-wide base datasets. These projects include the Ontario Roads Network, the Ontario Parcel and the Township Improvement Project. Other directed projects will be announced over the next five years and will be delivered through RFP, VOR and partnered approaches.

For more info call [Stephen Straughan](#) at (416) 314-3414 or check [GeoSmart](#) on the web. 🌐

Have a suggestion? Need more info? We want to hear from you!

Contact the editor at (416) 314-3414 or lio@webmail.mnr.gov.on.ca