ORC's GeoPortal - Glue for Information Systems, or "G"IS

By: Darko Poletto, O.L.I.P., President, Spatial Knowledge Engineering (SKE) Inc.
Joseph Lin, P.Eng., O.L.S., O.L.I.P., General Manager, Surveys and Geomatics,
Ontario Realty Corporation (ORC)

Those of us who have been involved in GIS for many years often like to remind others of the assertion that "80-90% of all data have a geographic component." We have long understood that GIS can be much more than an expensive mapping tool, and we want others to under-

SKE Inc. is a Canadian information solutions company with over ten years project management, systems design and development, and implementation experience around the world. Generally speaking, we help organizations integrate, publish and access their information.

stand it too. Geography can, in fact, be the glue that integrates different information systems and brings data and information together through a common interface. That message is now a lot easier to explain because it's happening at the Ontario Realty Corporation (ORC). It's called the "GeoPortal."

One of the main challenges organizations face is finding, integrating and using all their information quickly and

Ontario Realty Corporation (ORC) is Ontario's property manager and is one of Canada's largest real estate management companies, with over 6,000 buildings representing some 50 million square feet of space and 90-thousand acres of land. ORC manages real estate assets in approximately 130 communities throughout Ontario.

easily. Today's information solutions are usually based on a "best of breed" approach where different technologies are used to manage different types of data – relational databases for tabular data; CAD for drawings; documents in network file folders or document management systems; multimedia in files and catalogues; correspondence in e-mail; and many others. There is enormous value in being able to go to one place and say, "show me everything I've got on this asset."

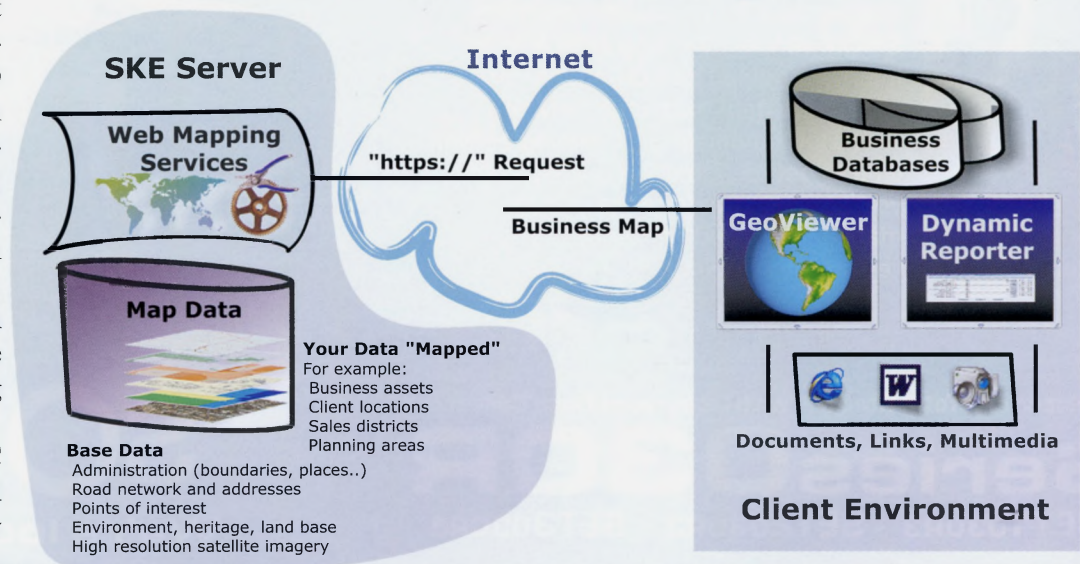The GeoPortal that ORC and SKE Inc. developed and implemented uses geography as the link / glue to all corporate data and information – regardless of system or database in which it may be stored. The GeoPortal uses ORC asset mapping – building footprints and property boundaries - to link all tabular data, online reports, CAD drawings, survey plans, and other information.

The GeoPortal enables users to securely access the information they need through two easy to use, yet powerful web applications called "GeoViewer" and "Dynamic Reporter."

With **GeoViewer,** users find a business asset through a pick-list, an address, a street intersection, a keyword search, a place name, or just by zooming in. Once the asset is found, all associated business data are instantly available. In **Dynamic Reporter,** they find the business assets by posing a question (e.g. "Select all the buildings bigger than 20000 sq. ft in the City of Toronto."), and then click "Go" to get a report listing. From there, the user can map any or all of those assets records through GeoViewer, link to all related business information, or send the whole report to Excel.

The GeoPortal Technology

The GeoPortal is built on OGC (Open Geospatial Consortium) compliant web services – this means GeoPortal can incorporate data and services from other OGC compliant sites (such as the Canadian GeoSpatial Data Interchange and Land Information Ontario). It also means the data are published through the same open services without any technology-specific restrictions or

SKE Server
Web Mapping Services
Map Data

Internet
"https://" Request
Business Map

Your Data "Mapped"
For example:
Business assets
Client locations
Sales districts
Planning areas

Base Data
Administration (boundaries, places..)
Road network and addresses
Points of interest
Environment, heritage, land base
High resolution satellite imagery

Business Databases
GeoViewer
Dynamic Reporter
Documents, Links, Multimedia
Client Environment

licenses, enabling interoperability and data sharing among all users.

In the above diagram, management, staff, clients, and partners use a web browser to access the portal's geodatabase and business data even when the two are separated within an organization or across the Internet. As well, users don't need to know the technical details about the systems, the databases or data formats; how the data should be integrated and presented; or the security protocols. That's all taken care of behind the scenes, allowing users to focus on finding and using the content they need. It's like "Googling" – you just specify what you are searching for, and the system finds it and makes it accessible regardless of its location, format, or the system it resides on.

The diagram also illustrates that the geospatial data do not have to be managed by the organization using them. Unlike ORC, many organizations would be challenged to manage the many gigabytes of spatial data required to provide the backdrop for an organization's assets. In these cases, organizations use the GeoPortal like a "utility" to access the maps and mapping services they need over the web.

The Need for the GeoPortal at ORC

To manage the Ontario government's real property assets, ORC staff and management often need to know the location of an asset, its business details, what's nearby, existing environmental conditions, and much more. Two years ago, ORC

"Geography makes an excellent interface to our corporate information. It's rarely done because of the data and technology barriers. At ORC, we removed those barriers."

James Storozuk,
Chief Information Officer

completed an in-depth Information Technology Strategic Plan that provided the plan for system implementation and for transforming ORC into a "Digital Enterprise."

To be a "digital enterprise" means that anyone at ORC should be able to get the information they need to make a decision - quickly, easily and online. It's a simple concept, but it was a big challenge. It not only meant designing systems to make data accessible, it meant understanding and meeting the data and information requirements of many different users and clients.

The GeoPortal helped ORC become a digital enterprise by tying the business systems together and providing access to their information and data through geography. This approach means that GIS has become "ubiquitous" throughout all of ORC's existing systems. In essence ORC added the "G" to their "IS."

The GeoPortal Next Steps

Both SKE and ORC are now looking forward to see how this solution can help others.

For ORC that means looking at how to better deliver services and information to its Ontario Government real property clients. For SKE it means looking at how to make the technologies more broadly accessible. One option being considered is to put the GeoPortal technologies into the Open Source Community. With the code and concepts broadly available, SKE and ORC expect others will leverage the investment and achieve similar success. Almost any organization could benefit by using geography as the "glue" for their information. Now they can.

BIOGRAPHY
Darko Poletto is President of SKE Inc. and is a trained land surveyor and a Geomatics and IT professional. He can be reached at dpoletto@skeinc.com. **Joseph Lin** is General Manager of Surveys and Geomatics at ORC. He is an active member of AOLS and can be contacted at: **joseph.lin@orc.gov.on.ca.**

Sites to See