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Welcome

The GeoBase Steering Committee and Secretariat are pleased to issue our second newsletter. We’ve had a busy few months here at GeoBase. New data—National Hydro Network, National Road Network 2.0 and SPOT 4 and SPOT 5 orthoimagery—have been released. Discussions are under way to add more data to www.geobase.ca. Two specific themes are Land Cover and Municipal Boundaries. Read on to see the developments that have occurred since our last newsletter, and to see what we are developing in the near future.

GeoBase in action

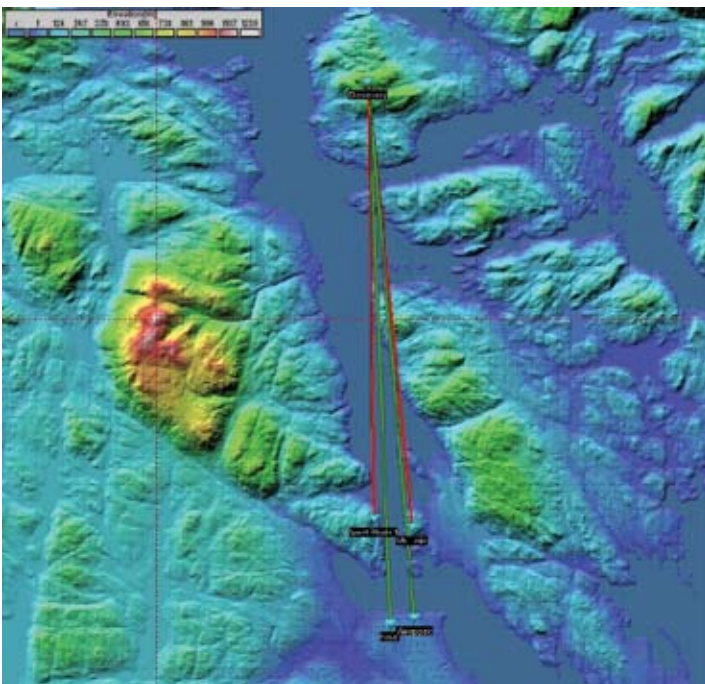
In this edition of the GeoBase newsletter, we are highlighting the work of the Canadian Coast Guard (CCG). In particular, how the Pacific Region CCG Integrated Technical Services uses the GeoBase CDED data layer to find optimal locations for mountaintop radio communication sites.

Using Radio Mobile software and CDED data, the Integrated Technical Services team is able to produce images similar to the one below. This image shows the predicted paths to several proposed sites for remote equipment locations. The profiles in red indicate that the path is obstructed, where the profiles in green indicate an unobstructed path.

“Access to this high quality data is essential to this part of my job,” says Cameron Bremner, of Integrated Technical Services. Bremner explains that the free, unrestricted GeoBase data

allows him “to predict the point-to-point propagation path between two sites. Even though there may be good line-of-sight between two sites, there may be peaks that extend into the radio diffraction paths.” This would indicate that the ground coverage between the potential sites is inadequate for the Coast Guard’s needs.

Once the remote radio sites have been placed (see image), they can be used for a variety of functions. Some sites have VHF repeaters that allow users—such as Fisheries and Oceans Canada—to communicate over great distances using portable radios. Other CCG sites are networked together via microwave broadband links and are outfitted with Marine VHF FM radio equipment that allows watercraft to communicate with the CCG’s Maritime Communications and Traffic Services.



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National Hydro Network

After several years of community effort, National Hydro Network (NHN) data is now available to GeoBase users. In March, on United Nations World Water Day, NHN data for 839 drainage basins were launched on the GeoBase portal. Three additional NHN data releases, of about 100 drainage areas each, will be available in June, October, and December.

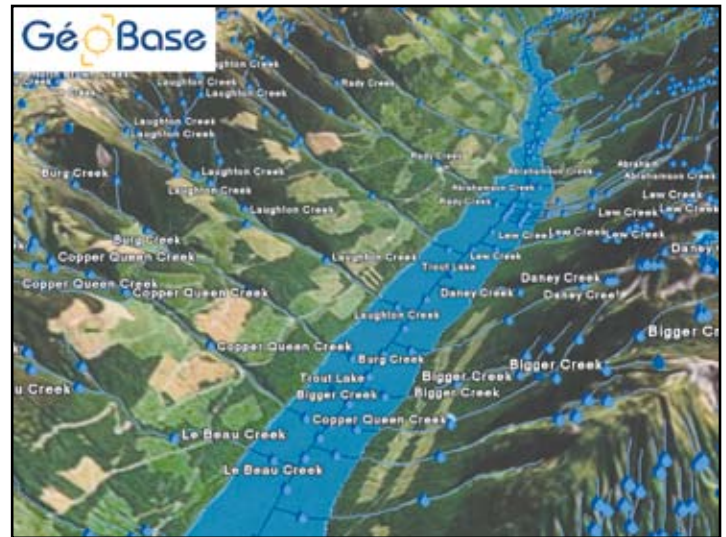
Levels of Completion

NHN data will be delivered in staged 'levels of completion' which describe the content of the data. The first level of completion is the output of an automatic process whereby watershed data is extracted from the federal National Topographic Database (NTDB). The result of this processing is linear networks, including direction of flow and toponymy for more than 80% of the linear network segments. The second level of completion defines all the waterbody areas. The third level of completion will complete the structuring of the linear network into drainage areas. The fourth level of completion will finish and update the

toponymy of the NHN. A detailed description of the NHN levels of completion is available on the GeoBase Web site.

The NHN data standards and data model were developed in consultation between federal, provincial and territorial partners. It is important to note that as delivery and maintenance schedules for NHN data are reached, NTDB data will be replaced by the closest-to-source provincial and territorial data. As provincial and territorial data become available, higher levels of completion will be achieved.

By the end of 2008, close to 1,100 drainage areas will provide complete coverage of at least first level completion for all of Canada. Fourth level completion has been achieved for all of



British Columbia, and for a number of drainage areas in the Yukon, Manitoba and Newfoundland and Labrador, thanks to partnership agreements and inter-governmental projects.

Visualization of NHN Data

Users of the NHN can now visualize the NHN data using the GeoBase viewer on the GeoBase website. This viewer also allows users to combine NHN data with other GeoBase data.

National Road Network

NRN Partnerships

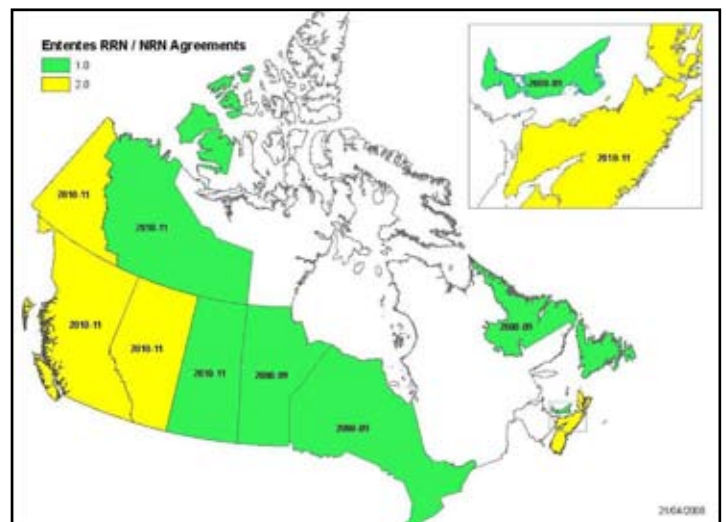
Natural Resources Canada and Statistics Canada continue to develop delivery and maintenance schedules with provincial and territorial partners. Closest-to-source data maintenance is facilitated through GeoConnections co-financing partnership agreements.

NRN 2.0

To date, Nova Scotia, British Columbia, Alberta, and the

Yukon have signed NRN 2.0 agreements. NRN 2.0 discussions are underway with all remaining provinces and territories.

New NRN 2.0 data for Nova Scotia, British Columbia, and Alberta will be available by the end of June, and data from the Yukon will be online by the end of August. Stay tuned to our News section on the GeoBase Web site.

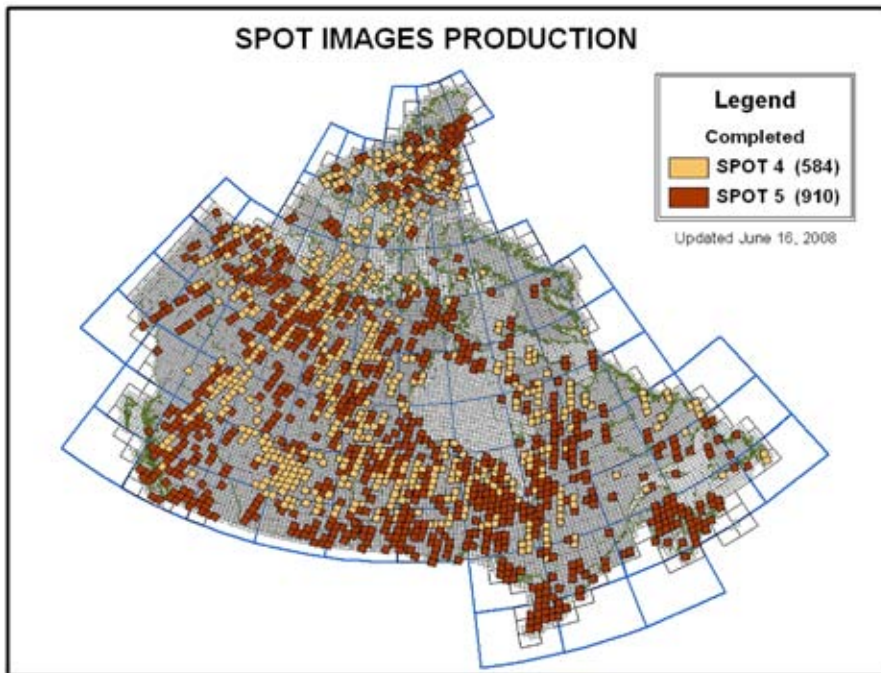


Satellite orthoimagery

One thousand SPOT 4 and SPOT 5 orthoimages were released on the GeoBase portal in January 2008. This first release of new generation orthoimagery improves upon the resolution of the GeoBase Landsat 7 satellite orthoimagery. In addition, five RADARSAT-1 orthoimages were added to the GeoBase orthoimagery collection in the fall of 2007 in order to fully complete the Landsat 7 orthoimagery coverage.

GeoBase SPOT orthoimagery is aligned and can be integrated with other GeoBase products such as the NRN, the NHN, and the CDED data layers. It can also be used in combination with other remotely sensed data.

At the end of 2011, approximately 5,500 orthoimages, providing coverage of all of Canada south of the 81st parallel will be available.



Land Cover

Land Cover will be a new GeoBase data layer. A three phase Land Cover project was put into place in the winter of 2007–08.

Phase 1 – ‘User needs assessment study’ – undertaken early this spring to determine how best to develop this new data set. The results of this study will be tabled early this summer.

Phase 2 – ‘Defining the product’ – which will be determined by the outcome of the user needs assessment.

Phase 3 – ‘Product development’ – to be initiated once the first two phases have been completed. The completion date for the project is scheduled for the 2009–2010 fiscal year.

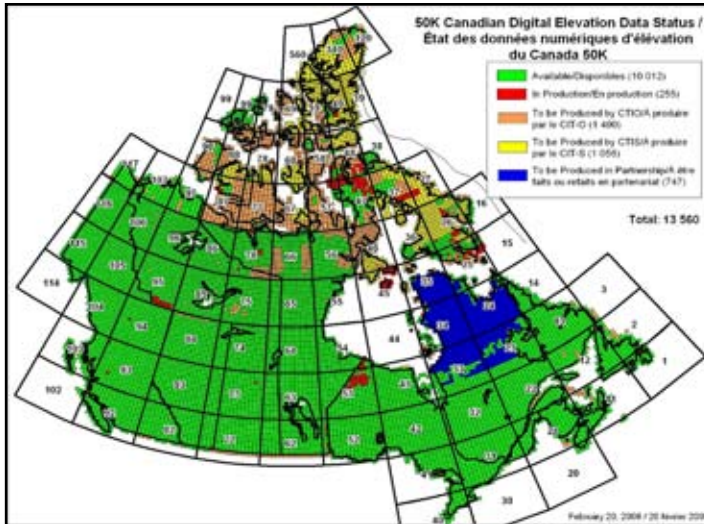
Land Cover data will be compiled from Natural Resources Canada’s

Canadian Forest Service data, Agriculture and Agri-Food Canada data, and from provincial data. The result will be a harmonized database and legend that adheres to international standards, as well as imagery containing a significant amount of thematic class detail. The intent is to meet the broadest possible range of user needs.

To date, contributors to the Land Cover project include: Agriculture and Agri-Food Canada; from Natural Resources Canada, the Canadian Forest Service and the Earth Sciences Sector; the Ontario Ministry of Natural Resources; the Canadian Space Agency; GeoConnections; and the many respondents to the user needs assessment survey.



Sample image of Land Cover in Saskatchewan



Digital Elevation Data

Work continues on completing the Canadian Digital Elevation Data (CDED) set. As shown in the schematic above, most of what remains to be done is in northern Canada.

Having completed approximately 900 new files in the last year, Natural Resources Canada's Centre for Topographic Information in Ottawa will complete an additional 1,500 by March

of 2009, and the Centre for Topographic Information in Sherbrooke, QC will complete just over 1,000 files over the next three years. In addition, a partnership agreement in principle has been reached with Quebec to produce new CDED files for northern Quebec. Using provincial and federal data sources, this CDED production is scheduled to begin later this year.

Municipal boundaries

During the fall of 2007, a working group undertook an assessment of the status of municipal boundary data across the country. This group was led by Canada Post and Land Information Ontario, with strong participation from British Columbia, Saskatchewan, the Department of National Defence, Indian and Northern Affairs, and Natural Resources Canada. The results of this assessment will be used to develop a national municipal boundary data standards and data model.

Next steps, to be taken over the next nine months, include: developing national specifications, conducting workshops with provincial data providers, and developing collaborative agreements for ongoing data maintenance and data delivery. The first release of municipal boundary data on GeoBase is scheduled for the spring of 2009.

If you no longer wish to be on the GeoBase mailing list, email us [here](#) with 'UNSUBSCRIBE' in the subject line.

User satisfaction

Results from a recent GeoBase satisfaction survey show that users continue to be very satisfied with GeoBase products and the services. However, users noted that there is room for improvement. One message we clearly received is that the website is due for a major revamp. From the unavailability of mass downloading options to poor user-friendliness, many users have expressed some dissatisfaction with the current website. Expect some changes to the GeoBase Internet presence in 2009–2010.

You asked us

"Hope we can develop this program more, as it will help smaller companies to get going and create more work. Thanks!"

This was just one of the comments noted in surveys completed by hundreds of GeoBase users throughout 2007.

Typically, after users download data files from the GeoBase portal, they are asked to voluntarily complete a short survey featuring eight key questions, including:

- How do you use GeoBase data in your organization?
- Are you generally satisfied with the delivery of data (e.g. transfer rate, data format)?
- What themes would you like to see added to GeoBase?

Each survey is read carefully with any concerns

immediately addressed, often with a call to the user by members of the Customer Support Group, based at Natural Resources Canada's Centre for Topographic Information in Sherbrooke.

User responses help the GeoBase Steering Committee and program team to make the decisions necessary to improve existing products and develop new ones. The availability of the National Road Network 2.0, the National Hydro Network and the development of the Land Cover and Municipal Boundary layers are the result of user needs assessments, which include responses gleaned from GeoBase portal surveys.

User feedback

The GeoBase Steering Committee and Secretariat are always looking for additional methods for gathering feedback from you—the users of GeoBase data. Let us know what you think by contacting the GeoBase Secretariat. We also welcome your success stories, and we would be happy to publish them in this newsletter and on the GeoBase website.