

GeoConnections

Aboriginal Communities and Geomatics

Canadian
Geospatial
Data
Infrastructure



Infrastructure
canadienne
de données
géospatiales

Canada 

Aboriginal communities strengthen governance with location-based tools in the 21st century

Today, Aboriginal communities are taking advantage of the geomatics technologies that underpin popular online mapping applications and services.

Known as geomatics, these underlying technologies bring together surveying, mapping, remote sensing, geographic information systems (GIS) and the Global Positioning System (GPS). Geomatics allows you to create a detailed picture of the physical world and your place in it.



At the heart of geomatics lies location-based or *geospatial* information. By capitalizing on such information as maps and satellite images, Aboriginal communities and organizations are better equipped to make informed decisions while managing their lands and resources.

The goal of land and resource management is to balance competing needs, such as the environment and the economy, with Aboriginal peoples' connection to the land, their cultural values and their responsibility to future generations.

How Aboriginal communities can capitalize on the use of geomatics

Aboriginal communities and organizations use location-based information to map their lands and resources, allowing them to capitalize on opportunities. This information can be used for a variety of purposes, including

- assessing proposed activities such as tourism, timber harvesting, oil and gas exploration, and mining on Aboriginal lands
- developing emergency response plans
- researching health status in small Aboriginal communities to improve services
- producing multilayered, Internet-based maps to plan developments that minimize environmental impacts and maximize community benefits
- supporting land management decisions that will affect hunting, trapping and fishing by identifying locations of species at risk





- enhancing meaningful participation in land-use planning regarding land dispositions and resource use
- mapping traditional knowledge and land-use activities
- protecting and promoting traditional lands and sacred sites
- researching and preparing land descriptions for treaty negotiations

The common benefit to all these geomatics uses? *More informed decisions* – decisions that can positively affect the management of lands and resources. Geomatics can be instrumental in improving economic opportunities and the overall well-being in communities.

GeoConnections

GeoConnections is a national partnership program led by Natural Resources Canada (NRCan). It focuses on making location-based data and technologies accessible and useful to Aboriginal land managers, community planners and leaders.



Leveraging geomatics to assist decision making within Aboriginal communities

GeoConnections is supporting Aboriginal communities by building awareness, capacity, partnerships and the use of geomatics technologies and information in two priority areas:

- land and resource management and community planning
- geomatics and Canadian Geospatial Data Infrastructure (CGDI) awareness

As Figure 1 illustrates, four activities are essential to achieve these two priorities.

Figure 1: Building activities and priority areas established by GeoConnections in consultation with Aboriginal communities



Land and resource management and community planning:

Aboriginal land managers, community planners and leaders require improved planning tools and information. Why?

To effectively manage communities, Aboriginal treaty and settlement lands, and co-managed lands and resources.

Geomatics and Canadian Geospatial Data Infrastructure

awareness: Aboriginal organizations need to know the benefits, challenges and methods of using geomatics for decision making within Métis, Inuit and First Nations communities.

To support these priorities, the GeoConnections program co-funds projects that help leverage geomatics technologies to assist decision making within Aboriginal communities.

The following projects are examples of activities that support the priority areas.



Cree geospatial portal assists land-use planning and tourism in Eeyou Istchee

The Cree Outfitting and Tourism Association (COTA) and the Cree Trappers' Association (CTA) created a Web geospatial portal (www.creegeoportal.ca) to manage their lands and develop tourism. This portal delivers location-based information to the nine Cree communities of Eeyou Istchee in the Cree traditional territory in northern Quebec. Communities use the portal for planning, discussions, decision making and supporting research related to resource management and tourism.

COTA and CTA can combine pieces of information from the portal with map layers to produce a dynamic view of areas of interest. Therefore, tourism planners, local fur officers or community members can use the portal to retrieve information such as the location of cabins and trap lines or details of outfitting permits. This information is important for providing quality service to tourists, which is key to ensuring that visitors return and recommend similar trips to others.



“The Cree GeoPortal is a secure location for all land-use information to be stored, managed, mapped and used.”

*Robin McGinley, Executive Director,
Cree Outfitting and Tourism Association*

Web-based atlas gives the Yukon Land Use Planning Council an edge

The Yukon Land Use Planning Council helps government, Yukon First Nations and regional planning commissions coordinate their efforts to conduct regional land use planning.

“The Yukon Land Use Planning Atlas provides an outlet for government corporate spatial warehouse contents,” and “can provide access to land-use planning information long after the lights have gone out in the planning office.”

Jeff Hamm, Senior Planner,
Yukon Land Use Planning Council

The commissions compile information on land use, resource assessments, regional culture and local ecology. The Planning Council provides access to this information to project assessors, decision-makers, industry and the public. The thinking behind making this information available

is that well-informed decision-makers are equipped to make better decisions.

With support from GeoConnections, the Planning Council created a land-use planning atlas (www.planyukon.ca) to help

fulfil its mandate. This atlas enables the Planning Council to easily distribute land-use planning documents online to a wide audience. Consequently, the atlas plays an important role in implementing regional land-use plans in Yukon.





First Nations Technology Council looks to improve the stewardship of culture, land and marine resources

With support from GeoConnections, the First Nations Technology Council (www.fntc.info) is working collaboratively with individual First Nations and other First Nation organizations, British Columbia's Integrated Land Management Bureau, Indian and Northern Affairs Canada, and New Relationship Trust to support the information management and information technology needs of the 203 First Nations and 39 tribal councils in British Columbia.

To effectively administer lands and resources, First Nations require accurate, current and well-defined cultural, land and marine information. The First Nations Information Support Services provides First Nations with the technological tools and skills to manage this information, helping them establish stronger governments and economies, as well as protect and assert their Aboriginal Rights and Title.



“Information technology and information management are pieces of the puzzle that will assist First Nations in protecting their territories and entering into various forms of shared decision making.”

**Sue Hanley, Coordinator,
First Nations Technology Council**

GeoConnections – tying it all together

GeoConnections is a national partnership and funding program led by NRCan. This program provides Canadians with location-based data, tools and services over the Internet.

GeoConnections was launched in 1999 as a national collaboration to develop an online resource called the Canadian Geospatial Data Infrastructure (CGDI). GeoConnections was subsequently renewed to 2010 to maintain, operate and expand the CGDI in four key areas:

- matters of importance to Aboriginal peoples
- environment and sustainable development
- public health
- public safety and security

Guided by various thematic, technical and policy advisory bodies, GeoConnections typically meets its objectives by co-funding projects. These projects have encouraged key stakeholders in the four program areas to collaborate with the Canadian geomatics sector in developing solutions for decision-makers.





CGDI – a foundation for data sharing

The CGDI consists of technologies, policies, applications and services – the tools and technologies needed to enhance the sharing of location-based data. Through the Internet, these data can be exchanged throughout the user community – all levels of government, the private and non-government sectors, and the academic community.

GeoConnections' goal is to develop the CGDI into an effective resource that helps decision-makers tackle some of Canada's most pressing challenges. To that end, the program strives to ensure that Aboriginal communities across Canada can take full advantage of the CGDI to plan land use effectively, manage resources wisely and preserve their cultures.

Did you know?

GeoConnections established an advisory committee to ensure that the GeoConnections program helps meet the planning and decision-making needs of Aboriginal communities. The committee is comprised of leaders from federal, national and regional levels of government, non-governmental organizations, academic institutions and the private sector. Representation includes First Nations, Métis and Inuit people.

The advisory committee identifies how Aboriginal communities can benefit from using geomatics and the CGDI. The advisory committee also refines the GeoConnections program by providing guidance and advice and by establishing the priorities of Aboriginal communities with regard to policy, content, infrastructure and user needs.

Contact us

For more information about GeoConnections, visit **www.geoconnections.org**.

If you have questions, e-mail **info@geoconnections.org**.

You can also subscribe to the electronic mailing list at **www.geoconnections.org/en/subscribeForm**. You will receive news about GeoConnections, the CGDI, workshops and training sessions. Plus, you will be notified as soon as a new opportunity or other relevant item is posted.

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