

Innovation Case Study: Geomatics Canada Access on the WWW

1. What was the innovation?

To allow access to and distribution of geo-spatial information products and services through the Internet.

2. Rationale

Geomatics Canada's program with respect to access geo-spatial information needed to change to be more in line with user needs and emerging technologies. Geomatics Canada must become more client-driven.

Geomatics Canada's role within the context of access to spatially related data includes:

- database administrator for information on the Canadian land mass
- provider of georeferenced data products and services
- leader in R & D and standards
- coordinator and integrator of data from suppliers and users.

3. Description

Geomatics Canada is responsible for the acquisition, production and distribution of topographic data in traditional paper map form as well as digital form. It also does the same for geodetic data, aeronautical charts, and the legal surveys of Crown Lands. It holds a very large archive of satellite imagery of Canada. These data products are used by a broad community; most of the distribution has been done by means of a conventional dealer network.

The increasing power of desktop computers and the ease of networking has allowed Geomatics Canada to initiate the development of a new method for the distribution of the basic data sets and to increase the diversity of products offered. This permits the products to be better tailored to specific applications or regional niche markets.

The basic data sets may be located and down-loaded using the World Wide Web as the transport medium/protocol. Clients may now be end users or, better, other organizations, both public and private, can offer a host of value-added services and enhanced products. The data is transformed to higher levels of information as it moves from the data archive through the various services offered on the Web to the end user.

Key to the concept is the broadening of the network to include spatially referenced data sets held by other agencies, such as census, agriculture, geology and health. The various data sets may be integrated into even more sophisticated information products.

The program at Geomatics Canada assists other organizations, including those from the private sector, to develop the interfaces necessary to make their data, products and services visible on the network and to participate in this new form of commerce.

4. Risks, Problems, Barriers

The following are some of the risks, problems and barriers that have arisen in this infrastructure development program:

- Technology is advancing very rapidly, thus the program is designed to be as flexible as possible to meet this changing environment.
- User requirements and the users' perception of their requirements are changing and need to be monitored closely.
- Policies related to data ownership, copyright, data sharing, data rights need to be resolved in order to protect both data producers and data users.
- The community which can add value must be nurtured and developed within the private sector to take full advantage of this new infrastructure.
- Existing staff must be trained and retrained to make effective use of these new data access capabilities.

5. Benefits

Major benefits of the program have included:

- Development of a consistent infrastructure for the exploitation of Geo-spatial products and services.
- Development of world-class Canadian industrial capability in spatial data integration for export market.
- Reduction in cost of producing, maintaining and disseminating spatial data. Reduction or elimination of duplicate data collection.
- Improvement in decision-making through accessibility to the most up-to-date data.

6. Lessons Learned

While the major thrust of the development has just been started, the following are some of the lessons learned in developing the prototypes:

- Ensure that the organization is set-up to collect and evaluate information from stakeholders. Train and provide staff that are in tune with existing and promising technologies.
- Look to alternative mechanisms for efficiency
- Do not cast plans in concrete, remain as flexible as possible.
- Consult with peer, user and provider organizations to provide input to stakeholder modelling scenarios.

7. Contacts for further information

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