

A TEAM APPROACH TO GEOMATICS

Canada has taken a national approach to geomatics issues. Industry, federal and provincial governments, and academia work together as a team to co-operatively share, exchange and develop technology, information and expertise.

The strengths of this strategy are especially beneficial to Canada's export clients. Whether dealing with a private company, a government agency, or a university, the efforts and experience of the other team players are wrapped up in the products and services.

Moreover, Canada's experience can be tapped in establishing co-operative geomatic strategies and issues, including setting national standards and exchange formats, encouraging co-operation, establishing communications programs and setting up financial incentives.

A key player in Canada's team approach to geomatics is the Surveys, Mapping and Remote Sensing Sector (SMRSS) of the federal department of Energy, Mines and Resources Canada (EMR).

SMRSS is responsible for federal surveying, mapping, remote sensing and GIS activities, including research, development, training and administration. As part of its role as the key federal component of the Canadian geomatics community, it is in a special position to foster a co-operative approach among governments, industry and universities.

This co-operative approach includes contracting out and close technical co-operation with the private sector. Initiatives, such as the Geographic Information Technology Development Program, provide the structure for fostering data and task sharing at all levels of the geomatics process. The SMRSS works closely on export market development in co-operation with the Canadian International Development Agency, External Affairs and International Trade Canada, and other Canadian and international agencies.

The GIS component of the Canadian geomatics scene is of particular interest. A National Digital Topographic Database (NDTDB) serves as an important information base for GIS technologies and GIS-based information systems for all participants in the geomatics community.

The prime role of the SMRSS is to provide a reliable system of surveys, maps, remotely sensed data and geographically referenced information covering the Canadian landmass in support of national sovereignty, defence, the environment, socio-economic development and the governing of Canada.

In providing geographic data to users and geomatics professionals at all levels of the private and public sectors, an archive of hundreds of thousands of satellite images, maps and aerial photographs is maintained as a vital support for national and international environmental monitoring and resource planning and studies, including such areas as:

- ◇ acid rain;
- ◇ global environmental change and ozone depletion;
- ◇ desertification and drought;
- ◇ flood risk;
- ◇ vegetation damage;
- ◇ sediment movement in water;

- ◇ natural radiation;
- ◇ oil spills and toxic substance accidents;
- ◇ smoke plume movement; and
- ◇ settling pond seepage.

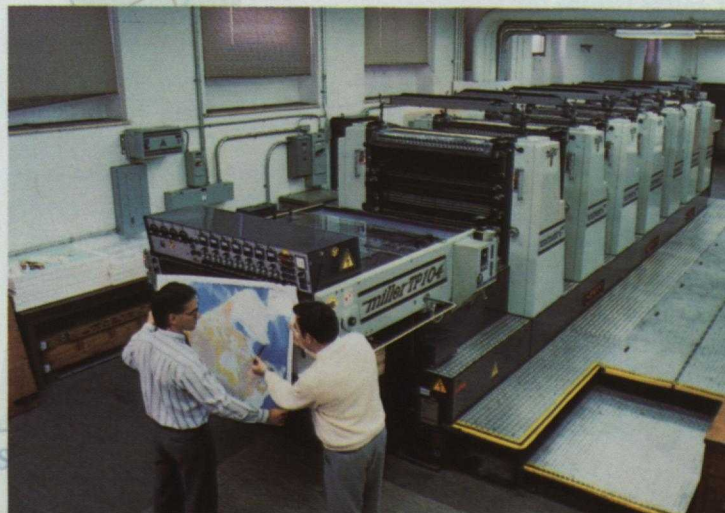
Technology development and enhancement are also key to national efforts. The further linking of remote sensing, mapping and GIS technology and the study of the proposed Active Control System (ACS) for Global Positioning System (GPS) technology in Canada are two current technological priorities. Also important is an Automated Canada Lands Information System (ACLIS) that will use GIS and database management technology to manage cadastral information on national parks, native lands and Canada's northern territories.

EMR's geomatics activities are conducted by the Surveys, Mapping and Remote Sensing Sector through the Canada Centre for Surveying, the Canada Centre for Mapping, the Canada Centre for Remote Sensing, the Policy, Planning and Services Branch and the Geographic Information Systems Division.

Canada Centre for Surveying

The Canada Centre for Surveying (CCS) is the national agency for surveying, providing the national survey framework. The Centre's Legal Surveys Division is responsible for performing and regulating all legal surveys of Canada's lands

A multi-colour map from a seven-colour computerized press.



Energy, Mines and Resources Canada