Federal Geomatics Bulletin

the official publication of the Inter-Agency Committee on Geomatics

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Welcome to the Federal Geomatics Bulletin

Welcome to the first issue of the **Federal Geomatics Bulletin**, published under the auspices of the Inter-Agency Committee on Geomatics (IACG). The Bulletin is a means of communicating information related to geomatics activities within the Canadian federal government. It will be published several times annually, and will be distributed free-of-charge.

The editorial board consists of Gordon Plunkett (EMR/CCRS), Brian Cromie (EMR/GSD) and David Ellwood (EMR/GSC). Editorial and production assistance is provided by Barbara McAulay (EMR/CIDC); translation into French by Lyne Labossière (EMR/Translation Bureau), Daniel Clavet (EMR/CCG); French editorial services by Diane Blondin and Johanne Curodeau (EMR/CIDC). The Surveys, Mapping and Remote Sensing Sector of Energy, Mines and Resources Canada provides the chair and the secretariat for the Inter-Agency Committee on Geomatics.

We hope you will find the Federal Geomatics Bulletin useful and informative. Subscription requests or submissions may be sent to the following address:

Federal Geomatics Bulletin
Secretariat, IACG
Geographic Information Systems Division
Energy, Mines and Resources Canada
615 Booth Street
Ottawa, Ontario
K1A 0E9

Federal-Provincial GIS Cooperation Announced

Canada faces the monumental task of computerizing map information from its enormous landmass. In responding to the challenges of mapping this huge country, Canadians have taken the lead in developing state-of-the-art digital mapping techniques. It is vital for Canadians to master these new technologies in order to restrict the costs of managing this country's new resources. In addition, by becoming leaders in GIS technology, Canadians will be able to provide a geographical service that customers around the world will be eager to buy.

The Geographic Information Technology Development Program (GITDP) was developed and announced by the federal Minister of State for Forestry and Mines in August, 1988. This program will address issues related to coordinating GIS development within various public sectors in Canada.

The ministerial announcement resulted from a series of agreements reached between the federal government and each of the provinces. In the past, the various governments have worked independently to develop GIS mapping systems for their specific programs.

Under the terms of the memoranda of understanding reached with the provinces, federal funding allocations will be matched dollar for dollar. With the GITDP announcement, the federal government committed an initial $8 million from EMR's budget to cost-share GIS initiatives with the provinces. The provinces are invited to match the funding for specific projects in their jurisdictions, raising the total investment up to $16 million, for the five-year program.

This multi-level governmental agreement will be the first step in a program that will contribute to Canada's world class expertise in GIS activities.

For further information on the Geographic Information Technology Development Program, please contact:

Assistant Deputy Minister
Surveys, Mapping and Remote Sensing Sector, EMR
580 Booth St.,
Ottawa, Ontario
K1A 0E4

Inter-Agency Committee on Geomatics

Major investments are being made in geographic information systems (GIS) technologies by all levels of government and industry. These investments in geomatics activities (including the development of GIS technologies, spatially-referenced data bases and communication protocols) will create a new information infrastructure for government and society.

The federal government is expected to provide national leadership in this area while avoiding unnecessary duplication in development and data collection activities.

As the Agency responsible for establishing baseline positional information concerning Canada's landmass, the Surveys, Mapping and Remote Sensing Sector (SMRSS) of Energy, Mines and Resources Canada has taken the initiative to establish the Inter-Agency

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Surveys, Mapping and Remote Sensing Sector
Secteur des levés, de la cartographie et de la télédétection

Canada

Opening of the Canada Centre for Geomatics

The Canada Centre for Geomatics in Sherbrooke, Quebec was officially opened by the Minister of Energy, Mines and Resources Canada on September 21, 1988.

The mandate of the Centre is to participate in the creation of a national topographic database and to update this data and the corresponding maps. Under this mandate, the Centre will also conduct research in digital mapping, in the management of topographic databases and in remote sensing, to develop more effective and cost-efficient methods and techniques.

The conventional paper topographic map will continue to be maintained and will still be required; however, the demand for digital topographic data is steadily increasing, and consequently, the Centre will offer the following digital products:

— raster and vector files of topographic maps at scales of 1:50 000 and 1:250 000;
— three-dimensional digital data; and
— digital terrain elevation data.

For further information, please contact:

Director
Canada Centre for Geomatics
Energy, Mines and Resources Canada
2144 King Street W., Suite 200
Sherbrooke, Quebec
J1J 2E8

The Honourable Marcel Masse, former Minister of Energy, Mines and Resources, is given a demonstration of an interactive workstation by Daniel Clavet of the Canada Centre for Geomatics. Looking on, in the foreground, are The Honourable Jean Charest, Minister of State for Youth and Fitness and Amateur Sport (M.P. for Sherbrooke), His Worship Jean-Paul Pelletier, Mayor of Sherbrooke and J. Hugh O'Donnell, Assistant Deputy Minister, Surveys, Mapping and Remote Sensing Sector, Energy, Mines and Resources Canada.

photo Zoom
Sherbrooke, Québec

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Committee on Geomatics (IACG) to encourage coordination of federal geomatics activities, under the chairmanship of L.J. O'Brien, Director General, Canada Centre for Mapping.

The major aims of the IACG include encouraging and promoting:

— the shared development and/or exchange of geomatics data, Canadian standards and technology among federal agencies, in order to maximize productivity, to minimize duplication and costs, and to better serve the public.
— the documentation and dissemination of information about geomatics activities by federal agencies to facilitate planning and cooperation.
— cooperation in data collection, development of data bases and dissemination of geographically-referenced information with a view to maximizing the uses and benefits of geomatics products.
— consultation on research and educational programs (including inter-agency coordinating bodies in other jurisdictions) to focus on the relevance of new GIS developments.

Six technical sub-committees have been set up to address the aims of the IACG. They are as follows:

- Sub-committee No. 1: GIS Data Models; chairperson, David H. Armstrong, Energy, Mines and Resources/Canada Centre for Mapping.
- Sub-committee No. 2: Data Communications and Networking; chairperson, Robert Baser, Department of Communications/ Communications Applications Branch.
- Sub-committee No. 3: Government Data Bases; chairperson, Gordon W. Plunkett, Energy, Mines and Resources/Canada Centre for Remote Sensing.
- Sub-committee No. 4: Standards; chairperson, Tim Evangelatos, Fisheries and Oceans/Canadian Hydrographic Service.
- Sub-committee No. 5: Research and Education; chairperson, Andy Rencz, Energy, Mines and Resources/Geological Survey Commission.
- Sub-committee No. 6: User Needs; chairperson, Sidney Witiuk, Statistics Canada/Geocartographic Division.

The IACG meets on a regular basis; the technical subcommittees meet as required to work on assigned tasks.

For further information on the IACG contact:

Secretariat, IACG
Geographic Information Systems Division
615 Booth St.
Ottawa, Ontario
K1A 0E9

Geological Surveys Establish GIS Coordinating Committee

Representatives from federal, provincial and territorial geological survey agencies met in Ottawa for two days in November, 1988, to discuss ways and means of establishing compatibility between the various geoscience information systems being developed or in use at the participating agencies. Topics discussed included computer hardware, digital field data acquisition, existing data bases, digital cartography, conversion of geological maps to digital form, and future plans. A coordinating committee was established to continue the discussion and to provide a permanent forum for cooperation. A working group to study the problem of data transfer standards was also established.

For further information, please contact:

Geological Survey of Canda
Geological Information Division
601 Booth Street
Ottawa, Ontario
K1A 0E8

Environmental Information Systems

The Environmental Information Systems Division (formerly, Canada Lands Data Systems) forms part of the State of the Environment Reporting Branch of Conservation and Protection/Canadian Wildlife of Environment Canada. Environmental Information Systems (EIS) is a collective term for an integrated group of computer-based systems for geographic information processing, developed through two decades and incorporating the grandfather of all geographic information systems, the Canada Geographic Information System (CGIS).

A large number of concepts, algorithms and terminology associated with today's geographic information systems are derived from the original CGIS. In 1975, the Environmental Information Systems Division (EISD) became the world's first GIS to offer its customers remote interactive graphics retrieval on a national basis. Recent innovations include micro-computers for land data analysis and graphic input and state-of-the-art, multi-processor hardware employing artificial intelligence techniques for interactive editing of input documents. In 1985, EISD received an Exemplary Systems in Government award from the Urban and Regional Information Systems Association (URISA) in recognition of "extraordinary achievement in the use of automated systems for increased services and increased benefits to citizens".

The EIS is a generalized GIS with a very complete range of functional capabilities to capture, validate, edit, store, manipulate, retrieve and display geographically-based data. Throughout 20 years of operation, an enormous bank of digital data holdings has been captured, now totalling about 10 000 map sheets and encompassing over 200 data coverages (themes).

EISD offers a number of services including: data capture, complex spatial data analysis and resource management and data transfers of vector and/or raster formats suitable for use in micro-computer GIS. These services are offered to government departments (federal, provincial and municipal), non-profit, non-govern-

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Interdepartmental Cooperation Results in Memorandum of Understanding

Recently, a Memorandum of Understanding (MOU) was signed between Energy, Mines and Resources (EMR) and Statistics Canada (STC) stating that the two departments "agree to pursue scientific and technical cooperation in the field of statistical and thematic mapping, geographic information systems, remote sensing and related subjects". The MOU was signed by Hugh O'Donnell, ADM, Surveys, Mapping and Remote Sensing Sector, EMR and Gordon Brackstone, Assistant Chief Statistician, Informatics and Methodology Field, STC. The signing took place during a two-day briefing and planning session held in Arnprior in November, 1988.

The two departments are currently working together on a number of initiatives, including geographic names, administrative limits, remote sensing research and geographic information standards. A new project, the Canadian On-line Unified Geocartographic Analysis and Retrieval System (COUGAR) is currently proposed as a national geostatistical framework that will support the Census. This framework will be based on EMR's national topographic database.

Signing the Memorandum of Understanding are (left) Gordon Brackstone, Assistant Chief Statistician, Informatics and Methodology Field, Statistics Canada and J. Hugh O'Donnell, Assistant Deputy Minister, Surveys, Mapping and Remote Sensing Sector, Energy, Mines and Resources Canada.

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mental organizations, international agencies and private sector companies.

Inquiries related to the system, its services, costs and applications can be addressed to:

Environmental Information
Systems Division
State of the Environment
Reporting Branch
Canadian Wildlife Service
Conservation & Protection
Environment Canada
Ottawa, Ontario
K1A 0H3

GIAC: Working for Industry

The Geomatics Industry Association of Canada (GIAC) is the new name for the former Canadian Association of Aerial Surveyors (CAAS), an organization that has represented the interests of aerial photography, mapping and airborne geophysical companies in Canada for more than 25 years. Under the new association name, the mandate of the organization has expanded and the membership now comprises firms that work in the disciplines of aerial photography, cartography, control surveying, engineering surveying, geodesy, geophysical surveying, hydrography, land/geographic information processing, land surveying, mining surveying, photogrammetric mapping and remote sensing.

Priority activities in which GIAC is currently engaged include the following:

1. Formulation and implementation of strategies to expand export markets for Canadian geomatic services.
2. Development of a data base of Canadian geomatics industry capabilities, and profiles of individual member firms.
3. Production of improved media to promote the Canadian geomatics industry.
4. Negotiation with government authorities to modify procurement practices, so that Canadian industry can develop the expertise necessary to improve its competitiveness in the international marketplace.

For further information contact:

Geomatics Industry Association
of Canada
66 Queen St., Suite 400
Ottawa, Ontario
K1P 5C6

Digital Topographic Data

The Topographic Mapping Division of the Canada Centre for Mapping, Energy, Mines and Resources Canada, produces digital topographic data at the 1:50 000 and 1:250 000 scales. Based on the National Topographic System, the data is collected through digital stereo-compilation and raster scanning. The 1:250 000 program, which will be completed in September 1989, will provide digital data for the complete Canadian landmass, while the 1:50 000 program, projected to be completed by year 2000, consists of data for selected areas of Canada.

In its current form, the data is unstructured and has conditions such as overshoots and undershoots, gaps and misclosures. However, measures are being taken to correct these conditions.

Further information regarding these data collection programs may be obtained from:

The Program Management Office
Topographic Mapping Division
Canada Centre for Mapping
615 Booth Street
Ottawa, Ontario
K1A 0E9

GIS Calendar of Events — 1989

February/March

GIS — Challenge for the 1990s, Ottawa, Ontario, February 28-March 2.
Canadian Hydrographic Conference, Vancouver, B.C., March 6-10.
International Seminar on Photogrammetry and Land Information Systems, Lausanne, Switzerland, March 6-17.
GIS '89, A Wider Perspective, Vancouver, B.C., March 7-10.

April/May

ACSM/ASPRS Annual Meeting and Auto Carto IX, Baltimore, MD, April 2-7.
Surveying and Mapping '89, Warwick, England, April 17-21.

June/July

Canadian Institute of Surveying and Mapping — Annual Meeting, Halifax, N.S., June 6-9.
International Geological Conference/Symposium on Data Integration and Image Analysis, Washington, DC, July 9-14.
IGARSS '89 and 12th Canadian Symposium on Remote Sensing, Vancouver, B.C., July 10-14.

August/September

URISA '89, Boston, MA, August 6-10.
FIG PC Meeting, Budapest, Hungary, August 14-21.
14th ICA Cartographic Conference, Budapest, Hungary, August 17-24.
ACSM/ASPRS Fall Technical Conference, Cleveland, OH, September 17-22.

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