

# Background for the Great Lakes Commission Resolution on Data Exchange Partnerships and Standardization of Decision Support Tools

## Summary of Great Lakes Geographic Information System (GIS) Initiatives

### UNITED STATES

The Federal Geographic Data Committee (FGDC) was organized in 1990 under the Office of Management and Budget to promote the coordinated use, sharing, and dissemination of geospatial data on a national basis. It is an interagency committee composed of representatives from the Executive Office of the President and Cabinet-level and independent agencies. The FGDC is developing the National Spatial Data Infrastructure (NSDI) in cooperation with organizations from State, local and tribal governments, the academic community, and the private sector. The NSDI encompasses policies, standards, and procedures for organizations to cooperatively produce and share geographic data.



Under the Executive Order, the FGDC was also tasked with creating a metadata standard to meet these objectives. The Content Standard for Digital Geospatial Metadata serves as a uniform summary description of a data set, which allow for standardized documentation electronically accessible to the Clearinghouse network for data exchange between federal-state and state-state agencies.

Federal Geographic Data Committee website: <http://www.fgdc.gov>

### CANADA

The Canadian Geospatial Data Infrastructure (CGDI) promotes the sharing and expanded use of geographically related data by providing an appropriate technical, institutional foundation nation-wide. Implementation of the CGDI provides an environment for users to find, access, integrate, and analyze geospatial data from diverse sources, including provincial, territorial, federal, and private organizations. The CGDI initiative has been supported since 1996 by the Inter-Agency Committee on Geomatics (IACG) and the Canadian Council on Geomatics (CCOG). Natural Resources Canada has been initiating the national partnership under GeoConnections, which guides and implements the Canadian Geospatial Data Infrastructure (CGDI).



GeoConnections is advanced by the Program Advisory Network. The Program Advisory Network consists of 12 committees or "nodes" whose open, national membership enables it to leverage expertise and contributions from stakeholders. The goal of GeoConnections is to provide easy, consistent, and harmonized access to geographic information and services and to build the geographic information component of the World Wide Web that enable partnerships between federal, provincial and territorial governments, the private sector and the academic community.

GeoConnections website: <http://www.geoconnections.org>

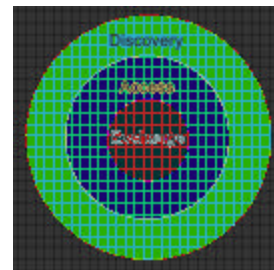
#### **Some Key Terms:**

- Metadata - Documentation of geospatial data written in a consistent manner
- Clearinghouse - A distributed catalog of metadata
- Geospatial - refers to a geographic location

#### **Key International Standards for Metadata:**

- FGDC Content Standard for Digital Geospatial Metadata
- ISO 19115 – Geographic Information Metadata
- Dublin Core

#### **Data Exchange Vision:**



##### **Discovery**

*Information assets will be described at this simplest level. This could be for a collection or single record.*

##### **Access**

*This level will be used to provide detailed access to scientific information holdings.*

##### **Exchange**

*Using the full geospatial and/or biological profile to enable the comprehensive disclosure and exchange of data.*

*(Source: Environment Canada)*

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### **ILLINOIS**

Illinois' statewide GIS coordination is the Illinois Geographic Information Council (ILGIC). The legislation establishes the Council to be coordinated through the Illinois Department of Natural Resources (DNR), and specifies its membership, leadership, and advisory group. In addition, ILGIC's duties and powers include evaluating proposals and making recommendations to the Governor, as well as, providing funding to state agencies regions, local and academic sectors in the state. The DNR has served as the lead agency for geographic information development and it generates many statewide initiatives including large-scale GIS database dissemination, and statewide database development. The DNR also serves as a comprehensive a repository through its Geospatial Data Clearinghouse to many state bureaus, centers and offices dedicated to such activities.

Illinois Geographic Information Council  
<http://www100.state.il.us/ilgic/>

Illinois Natural Resources Geospatial Data Clearinghouse  
<http://www.isgs.uiuc.edu/nsdihome/>

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### **INDIANA**

The Indiana GIS Initiative (INGISI) and the Indiana Government GIS Task Force coordinate state GIS initiatives. INGISI initiatives are statewide in scope and its objective is to coordinate statewide geographic information through dissemination of data and data products, education and outreach, building partnerships, and adoption of standards. The INGISI is also working to increase networking and communication opportunities for the Indiana geographic information user community. The Indiana Government GIS Task Force is a collaborative effort of state agencies to foster the efficient use of state GIS resources and provide geographic data in usable forms to the citizens of Indiana. Primary access to Indiana GIS data is through the INGISI.

Indiana GIS Initiative  
<http://www.in.gov/ingisi/index.html>

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### **MICHIGAN**

The Michigan Geographic Framework (MGF) program is designed to solve the data and communication problem of the state by creating and maintaining a single "official" state base map for state business needs. The Michigan Geographic Framework Network (MGFN) is a natural extension of the MGF program. The Michigan Center for Geographic Information (MCGI) goals are to ensure: 1) an "up-to-date" and seamless statewide digital map base supports ongoing state geographic information business needs; 2) users play an active role in its ongoing development and promotion, and 3) users of this data are empowered to more effectively apply the information to critical business needs. The MGFN strives to align the geographic data standards and update mechanisms with existing state/federal/local business processes.

Michigan Center for Geographic Information  
<http://www.michigan.gov/cgi>

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### **MINNESOTA**

Minnesota's Governor's Council on Geographic Information (GCGI) is the principal organization charged with identifying statewide geographic information technology initiatives. The GCGI has several responsibilities, including advising the executive and legislative branches of state government, representing state interests to the federal government, developing and promoting statewide policies and standards, researching technical issues, making policy recommendations, and publishing critical material. It also fosters communication with users and producers, promotes effective uses of geographic information technologies, collaborates with similar groups, promotes effective data development and works to improve access to spatial information. The Land Management Information Center supports the GCGI by bringing in geospatial technologies into state government and by supplying users with pertinent information about data resources for the state. Access to those resources is broadly referred to as the Minnesota Geographic Data Clearinghouse.

Minnesota's Governor's Council on Geographic Information  
<http://www.lmic.state.mn.us/gc/gc.htm>

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### **NEW YORK**

The New York State (NYS) GIS Coordination Program serves as the leading geographic information coordination group and provides leadership, direction

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and coordination; establishes “preferred” standards; and develops policy recommendations for the program. The program facilitates statewide forum for recognizing, analyzing, and developing solutions to problems affecting GIS and spatial information development. Through the NYS Technology Policy 97-6, it directed that state agencies are directed to “share GIS data in a consistent and appropriate manner” with others “at little or no cost.” State agencies were also directed to follow established standards for data and metadata, submit metadata to the NYS GIS Clearinghouse, and make data available to other public agencies.

New York State GIS Clearinghouse  
<http://www.nysgis.state.ny.us/>

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### **OHIO**

The State of Ohio initiated a program, through the Executive Order 2000-05T in 2000, to coordinate geospatial technologies efforts in the state and local government and private sector known as the Ohio Geographically Referenced Information Program. OGRIP’s vision is to “encourage the creation of digital geographic data of value to multiple users, and foster the ability to easily determine what geographic data exist, as well as the ability to easily access and use these data.” Within OGRIP, representation includes private utilities, municipalities and universities as well as representatives from state agencies and a number of local government participants. Ohio has created a GIS Support Center in the Department of Administration Services to provide GIS assistance to state agencies in Ohio.

Ohio Geographically Referenced Information Program  
<http://www.state.oh.us/ogrip/>

Ohio Department of Administration Services – GIS Support Center  
<http://www.state.oh.us/das/dcs/gis/>

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### **ONTARIO**

The Ontario Geospatial Data Exchange (OGDE) draws its members from all levels of government with a mandate in Ontario (federal, provincial and municipal). Membership is also available to First Nations and aboriginal communities as well as broader public sector entities such as conservation authorities, school boards,

and post-secondary educational institutions. Through OGDE, the Province of Ontario has established the Land Information Ontario (LIO) to orchestrate the collection and management of land information. Participant members are required to compile standardized metadata which describes their data sets in the Ontario Land Information Directory (OLID). This process makes the data discoverable on the Internet. While members may elect to retain the responsibility of distributing their own data, a central data warehouse facility, designated as the Ontario Land Information Warehouse (OLIW), has been established to facilitate standardized access by members. The goal LIO is to establish standards in managing land information and to coordinate Ontario's participation and its development of land information infrastructure as part of GeoConnections and the CGDI.

Land Information Ontario  
<http://www.lio.mnr.gov.on.ca/liohome.cfm>

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### **PENNSYLVANIA**

Pennsylvania Geospatial Information Council (PAGIC) was established in 1999, between Commonwealth agencies, and participating partners consisting of state-wide associations and nonprofit organizations. PAGIC's primary purpose is to cooperatively facilitate the sharing of common geospatial data; develop and recommend management approaches to data development and sharing; develop partnerships with public and private sector organizations. The Pennsylvania Spatial Data Access system (PASDA) is Pennsylvania's official geospatial information clearinghouse and is a node on NSDI. The PASDA clearinghouse provides for the widespread sharing of geospatial data, eliminates the creation of redundant data sets, and serves as a resource for locating data throughout the Commonwealth through its data storage, interactive mapping, WebGIS applications, and metadata and documentation efforts.

Pennsylvania Geospatial Information Council  
<http://www.pagic.state.pa.us/>

Pennsylvania Spatial Data Access  
<http://www.pasda.psu.edu/>

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### **QUEBEC**

Created in 1989, the Plan géomatique du gouvernement du Québec (PGGQ) is a consultative structure that brings together many government departments and agencies. It helps increase the efficiency of public services, foster innovation in management, and extend geomatics to the greatest number of sectors of activity possible. In its role as manager of public lands, the Province of Québec has established major geographic

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data banks over the years and developed exportable applications tailored to Québec's situation. The first departments and agencies to make use of geomatics were those with missions related to natural resources, agriculture, the environment, and land-use planning and territory management. Today, geomatics applications affect many more areas, such as transportation, civil protection, health, education, and tourism. Nearly 140 administrative units within the Government of Québec produce and process some 1,300 geographic entities.

Quebec Government Geomatics Plan  
<http://www.pggq.gouv.qc.ca/>

### **WISCONSIN**

The Wisconsin Land Information Board (WLIB) leading responsibility is the administration of the Wisconsin Land Information Program (WLIP). The WLIB's primary duties include: guide development of and approve county-wide plans for land records modernization, approve state agency data integration plans, serve as state clearinghouse for land information and land information systems, administer a grants-in-aid program for local government, and provide technical assistance to state and local government. Other agencies that support the program include the County Land Information Officers Network and the Wisconsin Initiative for Statewide Cooperation for Land cover ANalysis and Data (WISCLAND) Steering Committee. A key component of the program is that the county land information offices serve as focal points for information coordination within their jurisdictions, and also with other units of local government and the private sector located in an individual county. Its Land Information Clearinghouse provides a node for data access.

Wisconsin Land Information Board  
<http://www.doa.state.wi.us/dhir/index.asp>

Wisconsin Land Information Clearinghouse  
<http://wisclinc.state.wi.us>

### **GREAT LAKES COMMISSION**

The Great Lakes Commission has created the Data and Information



Management Program Area to help coordinate regional GIS efforts. A major effort is under way to catalog data holdings on all Commission projects according to binational metadata standards.

Areas that GIS regional coordination is currently

underway include Great Lakes coastal wetland studies, biological and hydrological monitoring programs, air toxics inventories, oil spill contingency planning, beach monitoring data, and regional water quantity management investigations.

The goal of such coordinated effort is to provide the data, information and technical support processes needed for informed decision-making on a range of public policy issues within the Great Lakes region.

Great Lakes Commission:  
<http://www.glc.org>

Great Lakes Commission – Data and Information Management Program  
<http://www.glc.org/about/programs/dim.html>