

Cooperative Agreement

Development of a Data Access Catalog Services Specification Supporting the Geospatial One Stop Portal

1. Applicant organization:

GeoData Alliance
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2. Collaborating organizations:

The Geodata Alliance, OpenGIS Consortium, and the FGDC Secretariat share common concerns with policies, standards, and procedures for organizations to share geographic data. This cooperative agreement affords the opportunity for these organizations to further the development and deployment of the OpenGIS® Catalog Services Specification which is important to the National Spatial Data Infrastructure (NSDI) and the Geospatial One Stop with abstract and implementation-specific models for encoding data access agreement elements as a component of the metadata.

3. Key contact for project:

Dr. Todd S. Bacastow
GeoData Alliance
Chair, Council of Trustees

4. Other key organizations and personnel:

- a. Open GIS Consortium Inc.
Jeff Harrison
Executive Director, Interoperability Program
35 Main Street, Suite 5
Wayland, MA 01778, USA
- b. Bruce Joffe
GIS Consultants
1615 Broadway, Suite 415
Oakland, CA 94612
- c. GeoData Alliance Council of Trustees:
 - i. Timothy Case, Parsons Brinckerhoff
 - ii. Cindy Domenico, Boulder County Assessor
 - iii. Dr. Timothy Foresman, Executive Science Advisor for the United Nations Environment Programme in the Regional Office for North America and Vice President of the International Center for Remote Sensing Education
 - iv. Robert Hranac, Director of the non-profit Open Planning Project
 - v. Glenda Humiston, Senior Partner at AGvocate

- vi. Susan Carson Lambert, Past-President of the National States Geographic Information Council and former Executive Director of the Kentucky Office of GIS
- vii. Dr. Stephen Marley, Principal Engineer with Raytheon Company
- viii. Scott Mount, GIS Services Supervisor for Austin Energy with the City of Austin, Texas
- ix. Robbie Rand, Director of the Rosenstiel School of Marine and Atmospheric Science Library at the University of Miami
- x. Jim Steil, GIS Coordinator for the Mississippi State University Extension Service
- xi. Ian Von Essen, Chair of the Washington State Geographic Information Council

5. Statement of Joint GDA and FGDC Objectives

- a. Goal. The goal of this initiative is to permit the Geospatial One Stop Portal Gateway user to negotiate issues of ownership and copyright, access, privacy restrictions, security restrictions, liability, cost of data or services as part of routine Catalog Services interaction. The following scenario provides insight into what activities the Data Access Catalog Services Specification should be able to support as part of the GOS Portal infrastructure.

Scenario: *An official requires the synthesis of a map that includes geologic, soil properties, road network, water lines, demographic information, and public service facility locations such as hospitals and schools to be plotted for an urban area just impacted by an earthquake. The Data User queries federal, state, (county) local, and commercial data sources' metadata via the Geospatial One-Stop Portal. A list of possible data sets shows available on-line feature level access. A visual review of the metadata reveals that the needed digital data layers include both for sale, restricted, and free data.*

Sessions are established with each source based on the connection parameters stored in the linkage element of the metadata entries. In the case of the roads data, the user selects a county level and commercial data source. Element of the metadata concerning data access provides information for the system to prompt the user through an automated negotiation of copyright, privacy restrictions, security restrictions, liability, and establishes a subscription service for metered use of certain data sets. The map is created and saved based on the contributed information so it can be reprinted again at a later date. The client program is terminated and the sessions to each data server are dropped. The user walks to the plotter to assess the results and start passing out the maps to authorities.

- b. Background. The Services Catalog removes barriers to the awareness and use of geodata and geoprocessing services such as liability, freedom of information, security and intellectual property. Currently data access agreements are usually in the form of a Data Use License or partnership text document. The OGC's catalog services support the ability to publish and search collections of descriptive information (metadata) for data, services, and related information objects. Such catalog services are required to support the registry of information resources within a collaborating community such as the Geospatial One Stop portal. Since October 2003, the Geodata Alliance has been working with Mr.

Bruce Joffe, GIS Consultants, on a Model Data Agreements effort as part of the Open Data Consortium. This effort is intended to develop a text-based data distribution policy document that can serve as a model to regularize the business conditions surrounding data distribution, thus enabling easier access to public geographic information.

c. Purposes. This effort will:

- i. Apply the results of the FGDC sponsored Geodata Alliance's Model Data Distribution work with the efforts of the Open GIS Consortium and the FGDC to develop Data Access Catalog Services that include data agreement information.
- ii. Support the public purpose of sharing geographic information authorized by Federal Statute (EO 12906; OMB Circular A-16; E-Government Act of 2002).
- iii. Furthers the mission of FGDC (1997 Strategic Plan: Goal 2, Objective 3: Support the development of tools that allow easy exchange of applications, information, and results).

d. Objectives. The objectives of the effort are to:

- i. Maximize the availability and use of spatially referenced data by building on the accomplishments of the Model Data Distribution Agreement project. The fundamental barrier addressed in this initiative is the lack distribution agreement information in metadata. This barrier is frequently an obstacle to developing accessible geospatial information resources than are the technical issues.
- ii. Develop an open standard/template to enable the exchange of geographic information. Barriers addressed here include:
 - Access to geospatial data by individuals, enterprise and government
 - Mass data rollouts without costly individual licensing implications
 - Access to data without barrier of proprietary agreements
 - Lowering barriers to entry for data marketplace
 - Advancement of global network for data development
- iii. Engagement of business, government, and the public through the conduct public workshops (in person and webinars). This will build a commitment that will further the adoption of the GOS marketplace by business and local government.

e. Benefits

- i. Provides an essential capability to enable the GOS marketplace to function efficiently. The proposed Data Access Catalog Service should fulfill the following requirements:
 - Support of a standard protocol (ISO 23950) for search and retrieval on an Internet-accessible server.
 - Create an implementable extension of ISO 19115- Geographic Information/Metadata so that the Data Access Catalog Standard meeting ISO conformance requirements is facilitated.

- ii. Platform independent; Open source/standards based solution is available to all without restrictions on access. Linkage to the GOS metadata management system that supports multi-field queries on text, numeric, and extended data types that can return entries in a structured form that are or can be converted into a requested report in HTML, XML, and text.

6. Project Management Plan: GDA and FGDC

- a. Roles, Responsibilities, Obligations, and Accountability.
 - i. The Geodata Alliance will manage the business aspects of the grant and participate in the technical effort. The Geodata Alliance assumes financial responsibility and accountability both for the awarded funds and for the performance of the activity. Dr. Todd S. Bacastow will provide the overall technical direction and coordination of the project.
 - ii. The Federal Geographic Data Committee will support technical coordination among parties. Contributions include: establishing forums, facilitating access to related efforts such as the Geospatial One Stop, and fostering partnerships.
 - iii. The OGC will test and demonstrate the use of the Standard with technologies that employ OpenGIS® Specifications such as Web Feature Service. The OGC will create an associated process to deploy the Catalog Services Data Access Agreement Specification for practical application by cooperating communities.
- b. Nature, character and extent of FGDC involvement
 - i. Selection of key project personnel (project manager, advisory committee, key consultants, etc.)
 - ii. Collaborate and participation in all phases of project
 - iii. Monitor to assure appropriate linkages with other related activities (Clearinghouse, GOS portal, other standards activities)

- c. Performance measurements
 - i. Specific project milestones

Step	Action	Targeted Completion Date
1	Review and refine project purpose and need with FGDC. Coordinate with the OGC.	October 2003
2	Form Advisory Group. Conduct initial meeting/conference call with the Group.	November 2003
3	Define project's working principles, timeline, and governance structure	January 2004
4	Form Standards Development Team	March 2004
5	Convene periodic webinars to communicate status of standards development.	As needed
6	Complete standard development	September 2004
7	Schedule public forum to announce release of standard	September 2004
8	Begin ANSI/ISO approval process	October 2004

- ii. Performance measures. The Geodata Alliance will provide the following deliverables as a indication of performance:
 1. A coordinated statement of needs from input provided by the FGDC, GOS, and OGC.
 2. Form an Data Access Catalog Services Advisory Group (DACSAG).
 3. Lead the DACSAG's development of a document denoting the project's working principles, timeline, and governance structure.
 4. Assist the DACSAG in the formation of a Data Access Catalog Services Technical Working Team.
 5. Convene two webinars to communicate status of standards being developed by the Technical Working Group.
 6. Assist the DACSAG to conduct a public forum to announce release of standard.
 7. Begin ANSI/ISO approval process
- d. Resources. The Standard Form 424A contains the project budget totaling \$60,000 for the period of the project. Donated Services (Volunteers) will be used to direct this effort. The estimated the value services at the level of similar work in the volunteer's organization (including a reasonable amount for fringe benefits) is \$20,000. A summary of the support from the USGS include:

Item	Category	Amount
1	Personnel	\$0
2	Fringe benefits	\$0
3	Travel	\$13,500
3a	Advisory Committee, one, one-day face to face meeting of 5 people: \$3,500	
3b	Standards Development Team, 7 people x 4, 2-day meetings= 7 x \$1,300=\$9,100 (rounded up to \$10,000).	
4	Equipment:	\$0
5	Supplies: (\$100 per meeting x 5 meetings)	\$500
6	Contractual	\$17,000
6a	OGC \$7,000	
6b	Bruce Joffe \$7,000	
6c	Bob Van Hook \$3,000	
7	Construction	\$0
8	Other	\$6,250
8a	Meeting facilities (5 meetings x 250 = \$1,250)	
8b	Telecommunications, Webinars = \$5,000	
	TOTAL DIRECT	\$ 37,250
	INDIRECT	\$2,750
	TOTAL	\$40,000