

# Federal Geographic Data Committee Newsletter

2006 Winter Edition

## The Global Spatial Data Infrastructure Association Conducts An Extremely Successful 9th Meeting In Santiago, Chile

The 9th International Conference of the Global Spatial Data Infrastructure (GSDI) was conducted in Santiago, Chile from November 2-11, 2006. The conference attracted over 400 delegates representing 62 nations. It featured over 193 presentations and 53 posters in 58 technical sessions, 8 workshops, 6 round tables, and many business meetings. The venue was the historic and beautiful Chilean Military History Museum. In order to maximize participation the planning committees arranged for several other conferences and meetings to be conducted at the same time and in the same venues:

- Workshop of the Permanent Committee Spatial Data Infrastructure of America (PC – IDEA)
- United Nations Geographic Information Working Group (UNGIWG-7).
- IX International Earth Sciences Congress
- International Steering Committee for Global Mapping (ISCGM-13).
- XXXIX Council Meeting of the Pan-American Institute for Geography and History (PAIGH)
- Americas Global Map Project (MGA-2)
- GSDI Association Board & Council Meetings.
- Meeting of the main Committee of PC-IDEA
- FRAME -- US AID sponsored project meeting



Plenary panel at GSDI-9

The Local Organizing Committee (LOC) is the Instituto Geográfico Militar and is to be congratulated for its

enormous efforts to make the meeting a success. Well over and above typical planning, however, on March 5, 2006 (and extremely late in the planning process) the original venue, the “Diego Portales” Convention Center, had a serious fire rendering it incapable of hosting the conference. There were no other facilities within the city that could provide for the GSDI meeting requirements. The LOC, using its considerable imagination, overcame this apparent show-stopping disaster to find the



Chilean Military School

Chilean Military Historical Museum which needed some considerable renovations to accommodate the conference. To their credit they dealt with this problem in stride making many of the modifications themselves, and the meeting appeared to come off flawlessly. An obvious added feature was that participants could avail themselves of the many historic displays in the museum.

At the GSDI Business meeting, outgoing GSDI President, Harlan Onsrud of the University of Maine, USA, past the gavel to Incoming President Jarmo Ratia, Director of the Finish Mapping Agency who will lead the association until GSDI-10. Bas Kok, Director of RAVI, the SDI Advocacy Group in The Netherlands was elected as Incoming President for the same tenure. All Expressed thanks not only to the Local Organizing Committee but to President Onsrud for his efforts in making the meeting a success as well as the major contributions of ESRI, Intergraph, and the US Federal Geographic Data Committee, all charter supporters of the Association and major contributors to the Conference.

The first GSDI conference was held in Bonn, Germany in 1995 hosted by the Nordrhein Westfalia Mapping Agency with about 60 invitees. Since then GSDI conferences have been held in Raleigh, North Carolina, USA; South Africa; Australia; Colombia, South America; Budapest, Hungary; Bangalore, India; and Cairo, Egypt... each with increasing participation.

Special thanks should also be given to:

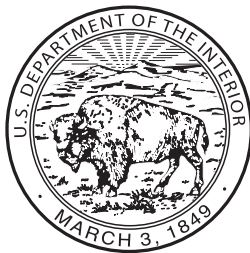
- Conference Hosts, the Military Geographic Institute, especially the Local Organizing Committee, the National System of Territorial Information (SNIT), and the Global Spatial Data Infrastructure (GSDI).

- The Government of Chile, the Basic Territorial Information Group, the “Hogar de Cristo” charitable organization, the Pan-American Institute for Geography and History, the Hydrographic and Oceanographic Service of the Chilean Navy, the Aero-Photogrammetric Service of the Air Force of Chile, the “SERVICIO PAIS” organization, and the “Rural Life Foundation” of the Catholic University of Chile,
- Platinum Sponsor: Intergraph Corporation and Environmental Systems Research Institute (ESRI),
- Basic and Local Sponsors: COMPUSULT, ITC, GEOCOM, CIREN, MICROGEO, XEROX, Service firm “Juan Cristian Costella Montt”, TOPCOM Eduardo Perez y Cia. Ltda., CGD and LAND SURVEYING.

Contact Al Stevens at [asteve1@usgs.gov](mailto:asteve1@usgs.gov)

## Department of Interior Enterprise Architecture (IEA)

DOI Interior Enterprise Architecture  
Geospatial Modernization Blueprint



Geospatial Line of Business

### Executive Overview

The analysis of the DOI’s Geospatial business and infrastructure environment has yielded a series of findings. The findings represent the most significant areas for business process, system or service improvement, data reuse, management or investment enhancements that support DOI business objectives. For each finding, the MBT process creates a recommendation and required transition activities to support DOI’s transformation.

The DOI Geospatial Blueprint will use the following three categories to organize its recommendations:

- Enhanced Governance – implement performance accountability and compliance mechanisms,
- Planning and Investment Strategy – Coordinated Budget Planning, Acquisition, and labor cost avoidance,
- Optimize and Standardize – Shared and reusable geospatial and geo-enabled business data, systems and services

These categories have been established by the Federal Geospatial Line of Business (GLOB) to classify federal improvements. See Figure 2 1 The MBT recommendations have been classified in this manner to facilitate longer term communication and coordination with the Federal Geospatial Line of Business and to provide a structure for understanding the DOI Geospatial Blueprint. For further information, contact Leslie Armstrong at [larmstrong@usgs.gov](mailto:larmstrong@usgs.gov)

## Outstanding Service award for Milo Robinson

FGDC Secretariat, and Alan Voss, TVA Steering Committee Member, received the Outstanding Service Award for exceptional and dedicated service to NSGIC and the Nation. This award is made in recognition of upholding the highest ideals of promoting good and effective government. The award was made on October 5th at the NSGIC 2006 16th Annual Conference in Little Rock, Arkansas.



**Tony Spicci, NSGIC President (L), presents award to Milo Robinson (R)**

## FGDC Welcomes New CAP Coordinator

The Federal Geographic Data Committee is pleased to announce the selection of a new coordinator for the National Spatial Data Infrastructure (NSDI) Cooperative Agreements Program (CAP) and the opportunities for 2007 NSDI CAP award. Gita Urban-Mathieux joined the FGDC staff this past summer and was selected for the coordinator position in October. She has been with the U.S. Geological Survey since 1988 serving as a research cartographer. For the past 10 years she has been dedicated and engaged in the efforts to design, develop, implement, and improve the award-winning National Atlas of the United States®. Gita will miss supporting the Atlas, but is looking forward to new prospects and challenges that come with coordinating the NSDI CAP that offers recipients great opportunities to participate and build the NSDI. The first item on Gita’s agenda was completing the development of the 2007 NSDI CAP announcement for award opportunities. This year’s program will be posted on [Grants.gov](http://Grants.gov) in the first part of November and is seeking to fund up to 26 innovative projects in the geospatial data community to build and improve infrastructure necessary to effectively discover, access, share, manage and use digital geographic data. To date the NSDI CAP awards have created collaborations at all levels of government, provided seed money to enable geospatial organizations to participate in the national effort to implement the NSDI, promoted the development of standardized metadata in hundreds of organizations, and funded numerous implementations of OpenGIS Web Mapping Services and Web Feature Services. The ten years of CAP awards have played a substantial role in promoting and disseminating the tenets of the NSDI to thousands of practitioners. To get the latest information about the 2007 NSDI CAP see: [http://www.fgdc.gov/grants/2007CAP/Tentative\\_2007CAPschedule](http://www.fgdc.gov/grants/2007CAP/Tentative_2007CAPschedule). Gita Urban-Mathieux will be happy to respond to questions and/or comments about the CAP. She can be reached at [burbanma@usgs.gov](mailto:burbanma@usgs.gov) or 703-648-5175.

# International Multidisciplinary Metadata Workshop

**Thursday, January 18, 2007**

**8:30 am – 5:00 pm**

**West Ridge Research Building Room 010  
University of Alaska Fairbanks  
Fairbanks, Alaska**

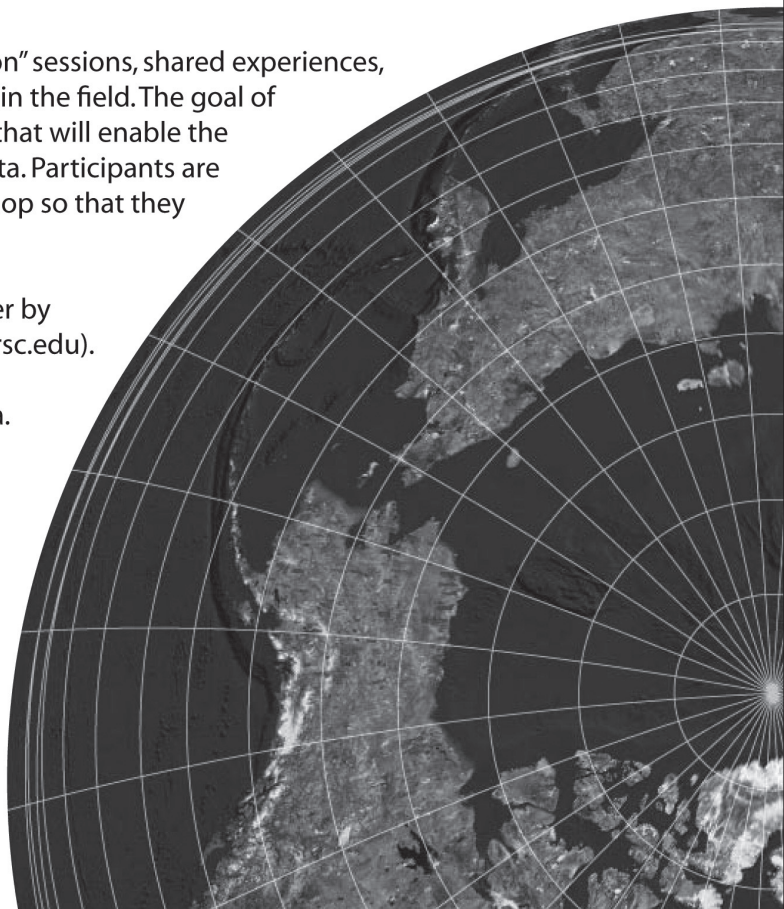
These days metadata are a requirement for sound science and for receiving federal and other funding. They are part of being a good citizen and represent a global set of "Best Professional Practices"; they are manifested already as binding global ISO standards. However, the tools, software, expertise, infrastructure and awareness to achieve good metadata are often missing.

This free workshop promotes metadata creation across various disciplines (terrestrial, marine, arctic, boreal, tropical, ecology, sensors, remote sensing, GIS, biodiversity, statistical models) so that students, faculty, agency employees, contractors and other interested parties understand the required steps, the why's and the how's to assemble metadata according to FGDC, NBII and IPY standards. We will cover links with GBIF, OBIS, ITIS (Canada and U.S.), and the requirements brought by NSF and ISO. Metadata creation tools, such as Metavist, TKME, NPS tool, ArcGIS/Catalogue and SMMS and metadata formats, for example, XML and EML, will be covered.

The workshop will include presentations, "hand's on" sessions, shared experiences, and discussions with the participants and experts in the field. The goal of this workshop is to cover the standards and tools that will enable the audience to create their own high-quality metadata. Participants are encouraged to bring their own data to the workshop so that they can learn to use the tools with familiar data.

The cost of the workshop is free, but please register by sending an email to: Rebecca Koskela ([koskela@arsc.edu](mailto:koskela@arsc.edu)). Questions about this workshop can be sent to: Falk Huettmann ([fffh@uaf.edu](mailto:fffh@uaf.edu)) or Rebecca Koskela.

Hosted by:  
Laboratory for Ecological Wildlife Habitat Data  
Analysis for the Land and Seascape (EWHALE)  
Arctic Region Supercomputing Center (ARSC)  
Institute of Arctic Biology (IAB)



## Iowa Holds Metadata Retreat

Whether it is staffing, incomplete knowledge, lack of tools, daily distractions or data updates, everyone has their own excuse for not doing metadata. It seems this task always ends up at the bottom of the list. Iowa, like many states, is struggling in our efforts to get GIS professionals to adopt and implement standards related to geospatial data. After several metadata workshops and many presentations pleading to our peers, we realized that the emerging pattern from the multitude of excuses was the lack of time. Previous efforts of educating data developers and maintainers about the importance of documenting data and standards produced a lot of nodding heads and blank stares. What we wanted was better production of documented data and the publishing of metadata. One of the metrics we looked at to measure where Iowa GIS professionals were in adopting metadata standards was the amount of metadata published to the Iowa Geospatial Data Clearinghouse. In the past couple of years few documents had been published as a result of metadata workshops and conference presentations. There had to be a way to provide the time needed to document data.

In 2004 the Iowa Geographic Information Council was awarded a Category 2 CAP grant to provide metadata training and outreach to GIS professionals in Iowa. With this grant a statewide geospatial data clearinghouse was implemented and enhanced. In addition, metadata training was provided to over 30 GIS professionals from a variety of sectors. Response to metadata training sessions was positive in the context that the trainings were needed, but this wasn't quite the enthusiasm we were looking for. One of the measures we were trying to achieve from the training sessions was an increased participation in the Iowa Geospatial Data Clearinghouse through metadata publishing. Taking the attitude that training was going to motivate individuals to complete data documentation was an assumption that was quickly proven incorrect. Despite assurances from Casey Kohrt, Iowa DNR GIS Librarian, and Patrick Brown, Iowa State University GIS Facility, workshop participants were not convinced that metadata could be a relatively painless effort. Participants repeatedly told of the various attempts to complete metadata only to get distracted by the emergency map that needed to be produced for tomorrow's meeting, the server that crashed, or parcel maintenance that was behind schedule. We found that metadata was not part of the data workflow because of the perceived time that



Casey Kohrt, Iowa DNR assists retreat participants with metadata



GIS Coordinators Matt Boeck, Story County, Iowa and Jon Lubke, Winneshiek County, Iowa work on metadata

it might take to accomplish minimal documentation.

Micah Cutler, GIS Coordinator Hardin Co. Iowa, Casey Kohrt, and Patrick Brown schemed a way to get GIS professionals out of the office and away from work related distractions in order to give them the opportunity to finish those metadata tasks that had been started so many times. The concept of the

metadata retreat was initiated and our first metadata retreat was held in July 2006. The educational goals behind the metadata retreat were to give participants an introduction to metadata focusing on hands-on metadata development and peer review of metadata. The retreat provided a relaxed environment for metadata authors to work alone or in groups on completing their data documentation with one of the outcomes being to publish to the Iowa Geospatial Data Clearinghouse. Participants walked away from the 1 ½ day retreat with at least one documented dataset using metadata standards and the realization that writing metadata could be a relatively painless process. In addition, each participant was introduced to publishing to the Iowa Geospatial Data Clearinghouse through a web based form and through ESRI's ArcCatalog.

Future plans include holding four additional metadata retreats in 2006-2007. In response to participant feedback, the format for the retreats will be modified to increase the amount of hands-on writing time. Yes they wanted more! The format will be changed so that each section of the training includes one of the seven metadata sections followed by writing time to complete the section. Peer review of the completed document in groups of 3 - 4 will occur at the end of the day. The second day will focus solely on completing metadata for additional datasets. We believe that participants and their respective organizations will benefit from the time and energy invested in writing metadata during the metadata retreat and hope that the next retreats will bring as much excitement about metadata as the first retreat.

## Successful CAP Metadata Workshops continue with Northern Arizona University

Staff from the Merriam-Powell Center for Environmental Research are planning 3 Metadata training workshops in Arizona:

- December 6th and 7th, 2006 in Flagstaff

- on NAU campus,
- January 10 - 11th, 2007 in Flagstaff on NAU campus
- February 7th and 8th, 2007 in Phoenix, tentatively scheduled at the Salt River Indian Community

Each workshop will run from 8am to 5pm the first day and 8am to 12pm the second day. The workshops are developed for people who have beginning to intermediate GIS experience. There is a registration limit of 15 - 20 people, with registrants from tribes on the Colorado Plateau given first priority. The workshops are offered free of charge, although participants must cover their own travel expenses. Register at: <https://www4.nau.edu/mpcer/training.html>

*This effort is funded through the 2006 NSDI CAP grant. Metadata training is based on the federal geographic data committee (FGDC) standardized metadata profile, Content Standard for Digital Geospatial Metadata (CSDGM) and the National Biological Inventory Infrastructure (NBII) extension of the biological data profile (BDP). For further information contact [janice.kerata@nau.edu](mailto:janice.kerata@nau.edu), or Bonnie Gallahan, [bgallahan@usgs.gov](mailto:bgallahan@usgs.gov)*

## New Tribal Relations course at USGS

The USGS has developed a new Tribal Relations course for employees, to help them work more effectively with Tribal governments. The one-day course debuted November 1 in St. Petersburg, FL and was hosted by the Florida Integrated Science Center. Presenters included Thomas Bird Bear, an attorney with the Office of the Special Trustee for American Indians, who discussed the legal and historical aspects of Federal-Tribal relations. David Bear Carillo, of the National Center for Cultural Healing addressed cultural issues for the class. American Indian participants from the Penobscot Indian Nation and the Seminole Tribe of Florida, along with Mr. Bird Bear and Mr. Bear Carillo, gave the USGS employees Indian perspectives on these issues along with their experiences in working with the USGS. Lee Case and Tom Weaver provided USGS experiences in working with Tribes and feedback from USGS employees was very positive. For further information contact Sue Marcus, [smarcus@usgs.gov](mailto:smarcus@usgs.gov) or Bonnie Gallahan, [bgallahan@usgs.gov](mailto:bgallahan@usgs.gov) Visit the website at: <http://www.usgs.gov/indian/>

## Community Driven Studies with the Navajo Nation

Dr. Margaret Hiza, USGS, Flagstaff, AZ has been working with the Navajo Nation in studying the effects of long-term drought, land-use practices, and the impacts on people on the Navajo Nation. These studies,

conducted with the permission and cooperation of the Navajo Nation, address current issues with which only the Navajo Nation must contend. The interdisciplinary geological and biological research shows real-world uses of USGS data, metadata and GIS capabilities. For further information contact Dr. Hiza at [mhiza@usgs.gov](mailto:mhiza@usgs.gov), or Sue Marcus at [smarcus@usgs.gov](mailto:smarcus@usgs.gov)

## American Indian Activities within the USGS Central Region

During the final quarter of FY 2006, the American Indian Activities at the USGS Center for EROS completed an Interactive Digital Map to be included in the Native American Annual Report for the USGS that will ultimately be accessible via the Internet. Staff participated in meetings of the Missouri River Rehabilitation Implementation Committee (MRRIC) and coordinated with six reservations on this activity; the Committee was established to restore habitat along the Missouri River on Indian lands and to involve Tribes in decision-making processes before restoration projects are begun.



**Thomas Dowd, DOI Bureau of Indian Education, Speaks at Tribal College Forum V**

The USGS and FGDC sponsored six Tribal College representatives to present reports on their research activities at the August Environmental Systems Research Institute (ESRI) Conference in San Diego, CA. Also in August, staff coordinated and participated in a second Memorandum of Understanding (MOU) meeting involving the Rosebud Sioux Tribe (RST), Sinte Gleska University (SGU), and USGS. Part of the discussions included a plan for having RST match funds 50/50 for future USGS internships at SGU. The USGS and FGDC also coordinated and hosted Tribal College Forum V, September 7-8, in Bismarck, ND. Twenty-six Tribal Colleges were represented and over 100 people attended the Forum. Thomas Dowd, the new Director of the Department of the Interior Bureau of Indian Education served as the keynote Speaker. Contact: Gene Napier, 605/594-6088, [enapier@usgs.gov](mailto:enapier@usgs.gov).

## Alan W. Voss

Alan Voss retired this fall of 2006 as Special Projects Manager of the Tennessee Valley Authority specializing in geospatial program research and production. He represented the TVA on the FGDC Steering Committee and it's predecessor since 1991.

Early in his involvement with the FGDC he lead TVA's part in helping to developed the "Mapping Partners

Demonstration” as well as the development of the Base Cartographic Data initiative to accelerate development of 1:24,000-scale digital data for the nation. Thanks to Alan’s contributions to the FGDC the TVA was awarded the Hammer Award from Secretary of the Interior Bruce Babbitt, September 11, 1996. Most recently he co-chaired the FGDC Committee on Governance resulting in several sweeping changes that the FGDC has and continues to implement. His contributions did not start in 1991, he managed the Valley Topographic Mapping Program, the TVA part of the National Mapping Program of 1:24,000 and 1:100,000 scale mapping and has worked closely with the USGS mapping program back to the 1970s. He also participated on the NHAP and NAPP aerial photography programs.

In the position from which he retired he was responsible for developing relationships with users and producers of spatial information to more efficiently collect the geographic data needed by TVA and others. He managed many special projects such as a pilot for a statewide base mapping system for the state of Tennessee. This project is now in full production and nearing completion and will provide the state of Tennessee a uniform GIS base map and property information for the state. Early in his career he led the Cherokee County, NC Land Records Improvement Program. He also served as the Project Manager on a 17-day crisis mapping project that mobilized more than 50 staff, in response to the events of September 11, 2001. Other projects included the use of industrial metrology to map nuclear plant piping systems and valves, and hydro plant turbines and generators.

Alan graduated from the University of Wisconsin with a MS in Civil Engineering and completed additional graduate studies in Civil Engineering and Physics (electronics and optics.) At the invitation of Alan Stevens, then Chief of Photogrammetry and remote sensing at TVA, he came to TVA in 1974. He was the principal architect moving the TVA mapping program into digital age and introduced geospatial and GIS applications throughout TVA and the many programs that it touched outside TVA.

Alan and his wife Barbara live on Signal Mountain, Tennessee looking down on Chattanooga and the Tennessee River. They have two adult children -- Katherine and Andrew. He will be missed by the FGDC, USGS, and the mapping industry in general because his contributions were many, varied, and widely distributed. We wish him and his family the very best in retirement.

## **The National Map, an online, interactive map service.**

You can view The National Map by using your Web browser (no special software or download required).

The National Map is a consistent framework for geographic knowledge needed by the Nation. It provides public access to high-quality, geospatial data and information from multiple partners to help support



**Camden Yards, Baltimore, MD**

decisionmaking by resource managers and the public. The National Map is the product of a consortium of Federal, State, and local partners who provide geospatial data to enhance America’s ability to access, integrate, and apply geospatial data at global, national, and local scales. The U.S. Geological Survey (USGS) is committed to meeting the Nation’s needs for current base geographic data and maps. Our vision is that, by working with partners, we will ensure that the Nation has access to current, accurate, and nationally consistent digital data and topographic maps derived from those data.

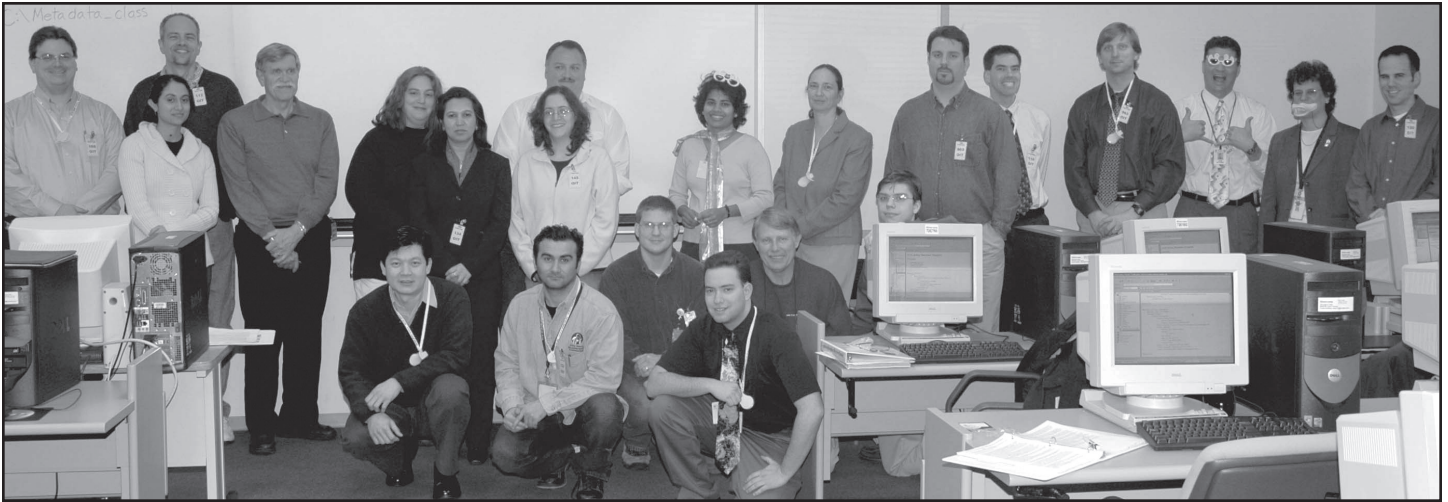
We welcome your comments on The National Map vision, mission, and strategies, and we encourage you to contact us at [www.usgs.gov/ngpo](http://www.usgs.gov/ngpo)

## **New Jersey Dives into Metadata**

In the state of New Jersey, there are ongoing active efforts to create and acquire geospatial data in numerous and highly distributed government and quasi-government entities. Examples include state departments, agencies, and commissions, county governments, county offices of emergency management, municipal governments, planning area commissions, sewer authorities, port authorities, transportation planning authorities, and others. In order to facilitate data sharing and to reduce duplication of effort, the central geospatial portal and catalog “New Jersey Geographic Information Network (NJGIN) Explorer” ([njgin.nj.gov](http://njgin.nj.gov)) is maintained by the State of New Jersey Office of Information Technology (NJOIT). Quality geospatial metadata are needed to make the catalog function, and to enable all these entities to manage their data over the long term.

In order to support the creation of standardized, quality metadata, a free geospatial metadata training program is sponsored by the Office of GIS within NJOIT, and the New Jersey Department of Environmental Protection – Bureau of GIS (NJDEP-BGIS). Each training event consists of a one-day, hands-on class in a computer classroom at NJOIT, followed by a half-day optional workshop in the same location.

Notification of upcoming metadata training is made by direct email to state government employees who are known to have an interest in GIS, and posted on the



**Geospatial Metadata Training class at the NJ Office of Information Technology, February 2005**

NJGIN portal and calendar, and on the FGDC training calendar. Publicizing training sessions through the NJ Department of Community Affairs has resulted in participation by a number of municipal employees and contractors.

Following registration, applicants are asked to review an Introduction to Metadata PowerPoint. The class, held in a computer classroom at NJOIT, generally covers the FGDC Metadata Workshop Core Curriculum (<http://www.fgdc.gov/training/training-materials#fgdctraining>) as well as information about NJGIN Explorer. Exercises include ArcCatalog set-up, template creation and use, metadata authoring for a provided data set, and metadata checking using MP and other tools.

The half-day optional workshop provides metadata creators with an opportunity to work on metadata for their own data sets and get on-the-spot help and advice from metadata trainers. We welcome anyone to the workshop who has had any previous metadata training, and several participants have returned more than once to work on additional metadata records.

The training sessions are held at least four times per year, often scheduled in conjunction with meetings of the New Jersey Geospatial Forum (see [https://njgin.state.nj.us/OIT\\_NJGF/index.jsp](https://njgin.state.nj.us/OIT_NJGF/index.jsp)) Additional training sessions are scheduled when demand warrants.

This training program owes its success, in part, to the early leadership of NJDEP in geospatial data development and standardized metadata creation and training. NJDEP adopted the FGDC-Content Standard for Digital Geospatial Metadata in 1998, for all data created and published for distribution. In 1999, John Bocchino attended the FGDC's Train the Trainer program; then, using the knowledge and materials he had acquired, was assigned to develop a metadata training curriculum. With the help of a 1999 FGDC metadata CAP grant, NJDEP-BGIS ran training sessions

around the state and internally at NJDEP for the next several years.

After the Office of GIS was established at NJOIT and was charged with statewide GIS coordination, a Clearinghouse was developed to provide a publication and search outlet for New Jersey geospatial metadata. In 2003 the successor to the Clearinghouse, NJGIN Explorer, went live. NJGIN Explorer catalogs not only data sets, but also map services, applications, and documents with a geospatial component, and is the electronic glue that ties together state, county, and municipal sources of geospatial information.



**State of New Jersey Geospatial Metadata Trainers Edith Konopka, John Bocchino, and Seth Hackman**

There was an ongoing need for metadata training and outreach, so Edith Konopka of the Office of GIS teamed up with John Bocchino and Seth Hackman of NJDEP-BGIS to develop a curriculum and training program appropriate for all custodians and publishers of state and local GIS data. Edith attended the FGDC Train the Trainer program in 2004. The first New Jersey joint training was held in February 2004, and since then 178 GIS users from New Jersey's public, private, and non-profit sectors have attended. In 2005, Kate McGuire of the Office of GIS joined the training team to take charge of outreach and registration. Contact Edith Konopka at [edith.konopka@oit.state.nj.us](mailto:edith.konopka@oit.state.nj.us)

## 2007 Upcoming Conferences

March 5-8	Coastal Geo Tools	Myrtle Beach, SC
March 4-7	GITA	San Antonio, TX
March 7-9	WILA	Appleton, WI
March 9-12	ACSM	St. Louis, MO
March 19-20	TUGIS	Towson, MD
March 28-31	Crime Mapping	Pittsburgh, PA
April 23-26	IGIC 2007 GIS Conference	Sioux City, IA
May 3-5	TX GIS	Austin, TX
May 7-11	ASPRS	Tampa, FL
June 18-20	ESRI UC	San Diego, CA
July 13-17	NACO	Richmond, VA
Aug 20-23	URISA	Washington, DC
Sept 6-8	Tribal College Forum	Bismarck, SD
Sept 23-27	NSGIC	Madison, WI
Oct 7-10	ICMA	Pittsburgh, PA

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