NSDI Cooperative Agreements Program
Metadata Training and Outreach Assistance Project
Final Report

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Final report
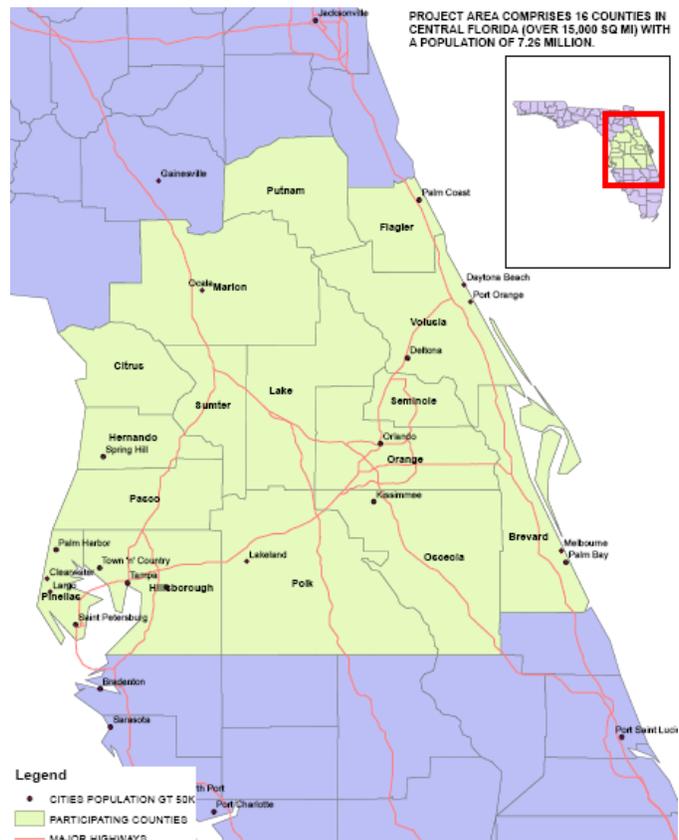**Organization:** Central Florida GIS Workshop, Inc
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Executive Summary

The Central Florida GIS Workshop has provided metadata training for local city, county, regional and state organizations within the project area, which encompasses the counties of Orange, Osceola, Seminole, Volusia, Flagler, Putnam, Lake, Marion, Citrus, Sumter, Fernando, Pasco, Brevard , Polk, Hillsborough, and Pinellas comprising all of the Central Florida Region and including the Daytona, Orlando, Tampa, St Petersburg urban corridor. (See figure 1)

Figure 1

The organization assisted some of the participants with their efforts for metadata publishing and implementation of their in house metadata programs. We have conducted three one day and and four half day metadata training sessions in the Central Florida region, five one hour metadata presentations for managers were presented at each of the three regional user conferences in Florida, SERUG 2012 and ESRI's 2012 International Conference. Three 1 ½ hour introduction to metadata blocks were inserted into the curriculums of two University of Central Florida courses, PAD 4712 and PAD 6716 (Information Technology in Public Administration) and one GIS 2040 course at Daytona State College. All training was conducted at no cost to the participating organizations, but the one day training sessions had an agreement printed on the sign in sheet that required the participants to generate or update their data documentation and to provide metadata to regional, state, and federal data portals. The procedures for publishing metadata were part of the training. All training materials as well as helpful links are now posted in the training section of the CFGIS Workshop web site.

Project Narrative

In the beginning of the grant performance period, the project team started by reviewing, collecting and developing the materials for the curriculum of the one day training classes, the Metadata for Managers presentations planned for the CFGIS Workshop, SHRUG, and the SFGIS Expo, and for the planned 1 ½ hour metadata training proposed for local college students participating in GIS courses. The primary goal for the one day training sessions was to provide participants an opportunity for hands-on metadata creation up to the adopted National and International standards. The training team planned to use the latest version of the GIS software by ESRI to create, export and import the metadata. The first challenge to overcome was the complete change of the metadata interface with version 10 of Esri's ArcGIS software. With this version the software vendor added compatibility with the ISO and the North America Profile metadata standard and also added a short ArcGIS metadata version for quick access and data description but initially abandoned the (VB based) FGDC editor. Up to this point the metadata files would have been created with this well known FGDC metadata editor and then exported for distribution in XML format, but the new version of the software would not read XML files well and successfully import only part of the information stored in them from earlier FGDC compliant metadata. The project team decided to evaluate other methods for creating metadata using other software, including some of the free metadata editors available on the web. During the research period we found that ESRI had rethought their approach and made available tools to address the issues within the version 10 Metadata editor via a patch and also with additional improvements via Service Pack 1 to their software. After some comparison and discussion with the local user community it was decided to employ the tools provided by ESRI in the exercises for the one day training class but to also provide guidance in successful conversion of existing FGDC compliant metadata created in earlier versions for use in ArcGIS v10.

Another challenge was the change of the Geodata.gov portal page that made the use of the presentation materials from the National Spatial Data Infrastructure Training Program difficult without modification and update. The new training slides on that subject were prepared using the same presentation flow but with updated content and snapshots from the new web page.

During the final stages of preparing the training materials for the one-day training sessions our project team had an opportunity to discuss the Metadata topic with a community that is not using ESRI products, but open source programming to present and share geographic information. We presented a comprehensive ignite presentation and facilitated a discussion session about the Importance of Metadata at the WhereCampTB event held in Tampa FL. The Metadata topic was discussed outside of the context of required elements for all federal data initiatives, rather as very much needed information as data is combined and presented in open source map products. Having metadata standards and associated tools that make the following of these standards easy sparked a great deal of interest within the "open source" community

The last challenge we have faced was the arrangement for the one day training class dates. The initial plan was to hold the first one day training in May 2011, but with all the changes brought about by the release of ArcGIS 10, extra time was required to prepare the materials. Subsequently, the plan was to conduct the first metadata training class as part of the CFGIS pre-workshop training in September 2011. However, this time the choice of dates proved to be a problem. The Metadata training class was scheduled for Saturday but our potential students primarily work for governmental organizations and it was reported that no compensation was to be expected if they took a class during the weekend. The enrollment was exceptionally low as a result and it was decided once again to postpone the one day training session. We decided to search for free training facilities throughout the region and to plan for training during the work week. Our approach proved successful and we scheduled and completed three one day hands on training classes between January and March 2012. The dates and the locations are listed in the following section of this report and the scanned sign-in sheets and summary of the surveys are provided as an attachment to this report.

Each sign-in sheet for the one day metadata training class had a disclaimer printed with the following content: "This Workshop is provided at no charge courtesy of a grant from the FGDC. Participation implies your organization understands the importance of metadata and will strive to create and publish metadata about your data holdings as appropriate." It was left to the best judgment of each governmental organization how best to apply the knowledge gained from the class in their existing data documentation and data sharing practices.

After we completed the three one day training classes we had scheduled the half day training blocks as part of the Volusia County free GIS training classes, that the County GIS department schedules throughout the year. These classes included the power point presentations from the one day training and provided a link to the published hands on exercises on the our web site.

Our project team submitted and had accepted a presentation on the CAP grant project and the Metadata Standards topic for the 2012 ESRI International User's conference.

The work on the project finished with a presentation at the 6th Annual Central Florida GIS Workshop on the process of the CAP grant acquisition, grant management, the challenges we had faced working on the training materials as well as a brief version of the Metadata for Managers presentation.

I would like to mention that the USGS Metadata Grant Management team provided support and was greatly involved with the project. They facilitated discussions and sharing of information and materials between all grant recipients and provided valuable assistance with materials and information sources needed for the development of the training material.

Training and outreach assistance:

One hour Metadata for Managers presentation - September 20th, at the 5th Annual Central Florida GIS Workshop in Daytona Beach, Florida
One hour Metadata for Managers presentation at the South Florida GIS Expo in W. Palm Beach, Florida on October 7th.
One hour Metadata for Managers presentation - November 10th at the Seven Hill Regional user Group (SHRUG) Conference in Tallahassee, Florida.

The 1 ½ hour "Introduction to Metadata" has been inserted into the curriculums of two courses at the University of Central Florida in Orlando, PAD 6716 and PAD 4712 (Information Technology in Public Administration). A third block has also been added into the curriculum for the GIS 2040 course offered at Daytona State College in Daytona Beach, Florida.

Half day training session - December 7th in Volusia County at the Library Support Center in Daytona Beach

Ignite presentation and discussion at Where Camp Tampa Bay, Tampa, FL

One day training session - January 11th, 2012 Lyonia Environmental Center in Deltona, Florida.
One day training session – February 21st, 2012 Lyonia Environmental Center in Deltona, Florida.
One day training session – March 15th, 2012 City of Kissimmee GIS training lab, Kissimmee, Florida.

Half day training session – March 9, 2012 in Volusia County at the Library Support Center in Daytona Beach

Half day training session – September 6, 2012 in Volusia County at the Library Support Center in Daytona Beach

Presentation at 2012 ESRI international User's Conference – July 25, 2012, San Diego, CA

All materials prepared for the classes conducted under this initiative follow the FGDC metadata Core Curriculum for training content. All training materials are supported with local metadata examples and the 3 one day workshops included hands on exercises for developing metadata using the tools provided with Esri's ArcGIS 10 software package. Step by step procedures for metadata publishing at the listed NSDI clearinghouses (CFGIS, FGDL, and Geodata.gov) are part of the training materials.

Attachment 1: The student names, customer satisfaction results via a student survey and a listing of the agencies / organizations receiving training are listed in the attached sign-in sheets and survey copies.

Attachment 2: PDF files with copies of the presentations given to each of the forums listed above and the student workbook for the one day class. A link to the WhereCampTB YouTube video with the ignite presentation and a ZIP file with the GIS files used for the exercises during the one day hands on class

Attachment 3: Copy of the programs (selected pages) from CFGIS Workshop, Seven Hills, SF GIS expo, SERUG and ESRI UC, where the Metadata presentation is listed

Status of Metadata Service

The metadata was served as part of each the one day metadata training classes. As part of the curriculum each student created a profile with the GeoData.gov clearing house and worked on publishing metadata for a dataset available for distribution by their organization. Approximately 20 students for each of the one day classes had worked on publishing Metadata.
Most of the agencies whose staff was participating in the training sessions already have metadata developed and used for publishing GIS data at different clearing houses, including GeoData.gov
The work was completed before September 21, 2012 and the final report was presented for approval from the CFGIS Workshop board members via e-mail.

Attachment 4: Photographs and link to an interactive map with all the locations where the initiative was presented and the training classes took place

Next Steps:

Metadata training will be added as part of the class materials for annual training events conducted by the CFGIS Workshop staff.
Metadata training materials are already being revised and changed with the new version of the ArcGIS software - ArcGIS 10.1

The main challenges with Metadata management are the changes that are taking place with the Metadata editors – more specifically ESRI's metadata tools. Another challenge is the migration to a new Metadata standard and not the very clear definition on the migration path to this new standard. Last, a very important challenge is the slow change in perception in the GIS community for Metadata as a very important part of a GIS data layer as a whole and not like information that should be added only if it is for a project sponsored through the Federal Government.

FGDC assistance is very welcome and some the best approaches to providing help is via expanding education, providing support for the development of training materials that are up-to date with the most

current standards, providing information about portals for metadata publishing, and ensuring availability of Metadata trainers that could be asked to conduct classes on Metadata.

Metadata training materials are added to the training agendas for Volusia and Seminole counties.

The materials and updates created for this project have been shared with Miami-Dade County as they are working on a current Metadata grant from USGS.

The metadata materials and presentation will remain a part of the curriculum for the three GIS related classes at University of Central Florida and Daytona State College as discussed earlier.

Feedback

What are the program strengths and weaknesses?
Program strengths:
- Very good program management from the USGS Grants team
  - Provided resources for training materials
  - Facilitated discussions and materials exchange
  - Timely reminders and providing quick links to important report requirements
  - Totally engaged with the progress of the project
  - Fast processing of finance questions and change requests

Program weaknesses:
- Difficulty to keep-up with all the changes in the requirements and the tools for Metadata
- Providing training would be easier with trained instructors, available to travel

Where does the program make a difference?
The Metadata training program brings to the forefront the discussion of data credibility and the need to keep the Metadata current in order to prove that the data your sharing is accurate and from reliable source.

Was the assistance you received sufficient or effective?
Both – sufficient and effective

What would you recommend doing differently?
Have a list with few trainers available to travel and conduct one or two day metadata classes.

Are there factors that are missing or additional needs that should be considered?
Update the presentations on the web to adequately reflect the changes in GeoData.Gov
Provide examples for hands-on exercises on Metadata creation and distribution

Are there program management concerns that need to be addressed, such as the time frame?
No

If you were to do this again, what would you do differently?
Would try to use more available training resources, such as ESRI courses and Virtual Campus classes.