

NSDI Cooperative Agreements Program Metadata Training & Outreach Project

Agreement Number: 04HQAG0161
Final Report

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Project Narrative

Project activities have included the successful creation of an online metadata clearinghouse, the creation of 30 metadata files, conducting 4 workshops, and the creation of a training website http://www.mpcer.nau.edu/metadata/index_md1.htm . We successfully faced the challenge of losing Jill Rundall, the MPCER GIS Coordinator, but her replacement, Kirsten Ironside, continued to plan and conduct metadata training workshops. She also attended Train the Trainer in Denver, Colorado and found it very useful. MPCER has successfully coordinated our efforts with several organizations. Vivian Hutchison, USGS NBII, has provided us with training materials and travel assistance for Kirsten Ironside to attend Train the Trainer. Allen Loy, NPS Mesa Verde, has helped us coordinate a May 18-19th workshop at Fort Lewis College, Durango, Colorado. Mark Manone, Northern Arizona University Geology Department, has helped us coordinate a July 19-20th workshop at Northern Arizona University, by providing us with a computer lab to conduct the workshop. Julie Prior-Magee, USGS, has advertised our Durango and Flagstaff workshops in the NBII Access Newsletter. Leanne Hanson, USGS Fort Collins Science Center, has also supported our efforts by providing

information about our training schedules. Our workshops had participants from a variety of agencies and professions. We also received excellent response and had to create a waiting list for people interested in attending if space opened. Workshops evaluations were overall positive and showed participants gained sufficient knowledge on how to create metadata and they found the information presented would be very useful on the job. We are currently developing a policy for the future creation of metadata for MPCER projects requiring metadata creation and listing metadata as a deliverable product in future grant proposals through the Geospatial Research And Information Lab (GRAIL). Future maintenance of metadata created by MPCER will be housed in the online clearinghouse. Workshop participants were encouraged to house metadata within the MPCER clearinghouse or other clearinghouses.

Metadata training and outreach assistance

- **List organizations and number of individuals receiving metadata training and outreach assistance as appropriate**

1. Merriam-Powell Center Staff received 1.5 days of formal training in February, 2005.
2. Biology Department graduate students at Northern Arizona University received 1 day of formal training in order to prepare for our May Durango workshop.
3. The Durango workshop (May 18-19) included Mesa Verde NPS, Fort Lewis College, Ute Mountain and Southern Ute Tribe, Forest Service, Bureau of Reclamation, Bureau of Land Management, and local governments in Montezuma and La Plata counties in Colorado. There were 19 participants that attended. As a result of this workshop we have received support from the Ute Mountain Tribe for further training.
4. The Flagstaff, Northern Arizona University, workshop (July 19-20) included participants from Grand Canyon National Park Service, USGS Southwest Biological Science Center, the Bureau of Land Management, Arizona State Parks, Center for Data Insight - Northern Arizona University, the Navajo Lands Department, the Navajo Historic Preservation Department, Arizona Department of Water Resources, Arizona State Land Department, Keim Genetics Laboratory/NAU, Bureau of Indian Affairs, Sustainable Water Resource Alliance, and Arizona Game and Fish Department. There were 23 participants that attended. We also had a waiting list of 15 potential participants.

- **At what level of proficiency are the trainees or training**

All four workshops were an introduction to metadata. Three of the workshops (1,3, and 4 listed above) were conducted over 1.5 days with hands-on computer laboratory exercises using Arc Catalog, Metavist, MP, and TKME. The workshop covered the FGDC *Content Standard for Digital Geospatial Metadata (version 2.0)*, FGDC-STD-001-1998, and the *Content Standard for Digital Geospatial Metadata, Part 1: Biological Data Profile*, FGDC-STD-001.1-1999 in full detail. For the Flagstaff July 19-20th training we had participants interested in other FGDC standards, primarily the Navajo Lands Department

because of the variety of data they work with, so we provided a brief overview of all the FGDC approved standards and where more information on those standards could be found. The workshop provided for NAU graduate students (1 day workshop) covered all the information provided in the other workshops but lacked hands-on exercises. All workshops covered how to create FGDC compliant metadata but were strongly encouraged to provide all the information necessary to fully document datasets.

- **Indicate the number and character of workshops conducted as appropriate**

Three workshops have been taught at NAU. One workshop was conducted in Durango, CO. One workshop was specifically for MPCER employees, one for NAU graduate students, and two for an assortment of tribal, agency and local government GIS professionals (see above for specific details). In the Fall, Paul Heinrich will be giving a presentation at the Arizona ArcIMS Users Group on Metadata Clearinghouse creation using ArcIMS, ArcSDE and MS SQL Server 2000

<http://mprlsrvr1.bio.nau.edu/metadataexplorer/> .

Status of Metadata Service

- **Site names where metadata is served; clearinghouse node or Geospatial One-Stop harvestable web folder.**

Our clearing house is up as of March 2005 and has been harvested by NSDI.

<http://mprlsrvr1.bio.nau.edu/metadataexplorer/>

- **Approximately how many metadata entries have resulted from this project?**

Metadata for 30 MPCER datasets are currently stored on our Clearinghouse. We expect to add many more as our training schedule ramps up. We have offered metadata hosting to all workshop participants.

- **Do you need assistance in providing for metadata service to organizations you have assisted?**

We do not require any additional assistance.

Next Steps

- **Will this project's activities continue in the future**

Yes, we will continue to hold several training workshops per year, assuming we can find funding for materials and other costs associated with training. We submitted a NSDI CAP I proposal in June for providing training to Native American groups in coordination with the Bureau of Indian Affairs Geographic Data Service Center, the Ute Mountain Tribe, and the Institute for Tribal Environmental Professionals. We are also willing to provide organizations training if willing to cover the cost of training.

- **Describe the next phase in your project**

We plan to expand the CP Metadata Clearinghouse into a full data node where we provide access to data through the Clearinghouse.

- **Are there issues in metadata management and service**

Only that it is difficult to develop a workflow to bring non-ArcCatalog created metadata into an ESRI-based Clearinghouse. We are working to develop a workflow to do this.

- **Requirements (more technical assistance, software, other?)**

Our major requirements are covering the costs of training materials and trainer's time. We are receiving good materials support from the NBII SWIN office.

- **What areas need work?**

We proposed to film training workshops and deliver the training via the WWW. Unfortunately, we ran out of time and resources to complete this part of the proposed project. Due to time lost because of the transition of employees working on the project (i.e. the loss of Jill Rundall and the time taken by Kirsten Ironside to become familiar with the project) we are not able to complete this portion of the project.

Feedback on Cooperative Agreements Program

- **What are the program strengths and weaknesses?**
- **Where does the program make a difference?**

We would not be able to provide training workshops without the support of the CAP program and contacts made through FGDC.

- **Was the assistance you received sufficient or effective?**

Very effective, the Train the Trainers workshops are extremely useful as is material support from FGDC and USGS/NBII.

- **What would you recommend doing differently?**

It may be useful to describe CAP levels somewhat more specific as to tasks. If necessary, add levels to segregate proposal objectives. CAP levels which just target training or just materials development or just software development would help to focus proposal goals.

- **Are there factors that are missing or need to consider that were missed?**

Perhaps a CAP level specifically targeted towards training materials development.

- **Are there program management concerns that need to be addressed? Time frame?**
- **If you were to do this again, what would you do differently?**

We would restrict or focus the scope of our proposal to fewer and more specific objectives. Our proposal included items which were over-reaching given the funds available at the level for which we applied. One proposed activity of our project was to develop online tools for metadata entry. As our project progressed we discovered that other groups were well ahead of us in developing such tools and that our level of funding did not allow for enough effort to realistically add to the state of the art. Because of this we have decided to direct our effort into Clearinghouse development and training workshops. Overall we are comfortable with the scope and progress of the project.