Agreement Number:
05HQAG0134 - Distribution of Idaho National Map

Report Type:
Final

Project Start and End Dates:
9/30/2005 – 12/31/2006

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This month a new liaison was announced:
Scott Van Hoff

Date Themes:
Roads
Structures
Boundaries
- American Indian Lands
- Counties
- Incorporated Places

Forest Lands
Grasslands
Miscellaneous Lands
Park Lands
Recreation Lands
Wilderness Lands
Wildlife Lands

Imagery

Capabilities File:
http://maps.insideidaho.org/wmsconnector/com.esri.wms.Esrimap?ServiceName=TNMIdaho&WMTVER=1.1.1&REQUEST=capabilities

Example Viewer:
http://maps.insideidaho.org/WebMapping/OGC/viewer.htm

Project Summary:

A.
This project focused on establishing the infrastructure and partnerships needed to integrate up-to-date public domain data for Idaho for three framework layers (boundaries, imagery, and transportation). I believe the biggest highlight of this project was the successful development of an automated geoprocessing tool to harvest and integrate data from several entities in North Idaho.

The CDA Tribe, Nez Perce County, Kootenai County, Bonner County, Boundary County, and INSIDE Idaho have gotten together and, using the Idaho Transportation TWG documentation as a guide, agreed upon road geometry and attributes to assemble into an integrated state-wide layer. Once some procedures were agreed upon, INSIDE Idaho created a automated tool that goes out to partner web sites early each morning and:

- Copies zip files containing shapefiles
- Extracts zip files
- Selects features based on steward attribute (GIS_STEW)
- Reprojects shapefiles to IDTM83
- Normalizes attribute column names using lookup table
- Merges shapefiles and load to ArcSDE
- Calculates feature lengths (meters, miles, feet)
- Creates metadata on ArcSDE feature class

Upon completion of the program, the road feature class is available to partners as an ArcIMS Feature Service.

We are continuing to refine the procedures and tools. Pushing these road data out to *The National Map* is pending partner approval but all indications are that it will take place in the near future. We are processing approximately 65,000 records in about 30 minutes. It should be noted

that this application works for multiple themes. We are currently harvesting structures from Kootenai County and providing those to *The National Map*.

We have worked diligently to develop procedures and tools for sharing and integrating geospatial data among interested parties in order to reduce time, effort, and expense of projects in which integrated multi-jurisdictional data are required.

I believe many of the challenges are at the coordination level as well as identifying sources of stable funding. Getting everyone going in the same direction is a big challenge. Then, having the resources to manage the themes on a day-to-day basis is critical

B.
At this point we are providing Roads, Structures, Boundaries (American Indian Lands, Counties, Incorporated Places, Forest Lands, Grasslands, Miscellaneous Lands, Park Lands, Recreation Lands, Wilderness Lands, Wildlife Lands), and Imagery through *The National Map*. There are no restrictions on the data. Our metadata is registered in *The National Map* and Geospatial One-Stop. For the structures layer and the roads layer, the data are being updated weekly. The automated management application harvests data from the local entities, integrates the data, and then servers the integrated layers to *The National Map*. Not to be overlooked are the boundaries layer and the imagery layer. The USGS office in Boise, Idaho put the boundaries layers together for Idaho. This was done on a county-by-county basis and topology for those layers needs to be corrected. Those layers are not being updated in an automated fashion. The imagery layer was a significant accomplishment due to its size. The service has performed quite well despite the size of the layer. One important point to make is that all no-data areas in the imagery were removed so there would be no conflict with adjoining states. The data were delivered with no-data areas that had to be removed and this required extra processing.

C.
INSIDE Idaho, managed at the University of Idaho Library, is recognized as the state geospatial data clearinghouse for Idaho and has significant experience managing geospatial data and providing those data to the public. INSIDE Idaho has the operational capabilities to maintain and update data harvested from local entities and made available through *The National Map*. Staff is experienced at monitoring and responding to user requests for spatial data and geospatial information. INSIDE Idaho staff include an Administrator, a GIS Specialist, a Programmer, and temporary student employees.

D.
We have encountered several challenges during this effort. On the technical side, the ESRI ArcObjects Object Model is quite extensive. Understanding the objects necessary to implement the automated geoprocessing portion of the program has been a challenge. But, we've been successful learning our way around the object model and implementing the pieces we need. One of the bigger challenges has been on the managerial side. Getting everyone involved to agree on attributes to integrate has been time-consuming. Folks have specific needs and interests and trying to come to a standard that meets everyone's liking is a formidable task.

The biggest issue for us I believe is still one of stable funding to support this effort. The grant has shown this is possible and that the technical and institutional hurdles can be overcome if some stable funding can be dedicated to integrating these themes.

I believe the CAP is very strong. The grant awards have allowed us to create an automated application that has folks around Idaho excited about the integration of framework data from the ground up. They have actually been able to see it is possible. We received sufficient assistance and what we received was effective. I don't have any negative comments about the CAP nor do I think anything should be done differently. I strongly support the program and the work you are doing.

E.
INSIDE Idaho has a strong relationship with USGS. That relationship, in the context of The National Map, goes back to 2002 when we collaborated on the pilot project for Idaho and Washington. Since that time we have been working together to establish a formal agreement specifically with USGS. INSIDE Idaho does have a formal relationship with the Idaho Geospatial Committee (IGC) of which USGS is a member. INSIDE Idaho has been recognized as an enterprise service in the State of Idaho Information Technology Strategic Plan. The following items attest to INSIDE Idaho's ability to maintain, integrate, and manage geospatial data.

- The state GIS Clearinghouse is recognized as an Enterprise Service in the State of Idaho Information Technology Strategic Plan 2004 [http://www2.state.id.us/itrmc/plan&policies/idahoitplan.pdf]

- The Idaho Geospatial Data Implementation Plan (I-Plan), the guide for developing and maintaining the framework of geospatial data themes for Idaho, tasked INSIDE Idaho with framework data distribution activities. [http://www2.state.id.us/itrmc/committees/igc/i-plan/Idaho_I-Plan.pdf]

- A Memorandum of Understanding among Governmental and Other Entities in Idaho for the Collection, Production and Sharing of Geospatial Data and the Establishment of a Coordinated Statewide Geospatial Data Clearinghouse recognized INSIDE Idaho as the vehicle through which to share geospatial resources. [http://www2.state.id.us/itrmc/committees/igc/mou_insideidaho.pdf]

The development of the automated application described above is continuing. We are upgrading the application to work under ArcGIS 9.2 and we are exploring ways to address topology at data boundaries. It appears we will be able to address edge-matching issues through the introduction of agreement points. If that proves true, we will be able to ensure topology at the boundaries between data from different stewards. While our follow-on activities include technical and managerial issues, stable funding to support this effort is needed. The grant has shown this is possible and that the technical and managerial hurdles can be overcome if some stable funding can be dedicated to integrating these themes.