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Project title: Create Central Repository for Transportation Data
Interim report
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Data themes: (list) Transportation infrastructure, roads

Executive Summary

The Kenai GIS Transportation Portal project kicked off with extensive outreach and information gathering to member agencies of the Alaska ArcUser Group, Alaska URISA chapter and Kenai Peninsula GIS Users Group. Information was gathered via a series of in person meetings and teleconferences. A standard interview format was established. Primarily digital data and database schemas were transmitted via email and FTP. The Kenai GIS Transportation Portal web site was established at http://www.kpbgis.org/TransportationPortal/index.html with information about the project including links to standards, presentations and activities. Project updates are also available on Twitter (www.twitter.com/KenaiGIS). Transportation web services with associated metadata and database cross walking tools will be hosted on the transportation portal web site. A grant oversight committee has been established and bimonthly meetings are being held.

Project Narrative

The goal of this project is to centralize transportation data resources for the Kenai region via a web portal that hosts geospatial data, web services, metadata, database crosswalk tools and other documentation. This web site will become the "one stop shop" for digital road data, eliminating the need to contact numerous entities for regional road information. An initial task was to compile a list of key stakeholders and point contacts. Currently, the data are housed and maintained by numerous distributed agencies/entities (and utilized by many more.) Respective agencies/entities will continue to maintain portions of the data under their jurisdiction, but all of the data will be integrated via database crosswalks built to the National Map standard. The priority for the grant has been to collect and analyze various database schemas and develop crosswalks to the "Trans_RoadSegment" table of the National Map standard. Many entities have recently been completing extensive database updates. Current database designs address internal business needs. The Borough's X-9 Microdata standard and Alaska DOT's schema are the most extensive. The Cities, native corporations, Forest Service, Wildlife Refuge and others do not have firmly established standards, so an opportunity exists to encourage these entities to adopt the National Map standard thus allowing organizations with limited resources to avoid reinventing the proverbial wheel.

Data are primarily maintained by all agencies in ArcGIS. Database crosswalks are being developed using Visio and ArcGIS Model Builder. Offsite geodatabase replication has been successful to allow the Cities to contribute updates to the Borough's X-9 database standard. Work flow challenges have been identified due to varying levels of ArcGIS licensing between e911 centers and the Cities which do not have editing capabilities (ArcEditor is required to edit the replicated geodatabase.) ArcGIS Server solutions are being considered.

An online transportation survey was developed using SurveyMonkey. Draft available at: http://bit.ly/4G7j8v It is anticipated that this will be distributed to broad list of stakeholder

entities and users this Fall. Feedback welcome.

The Kenai Peninsula GIS Transportation workshop is tentatively planned for January 12th. All stakeholders will be invited. The preliminary agenda will include project overview presentations geared toward managers, followed by more technical presentations and discussion.

Subcontracts for conducting the grant tasks were awarded in late Spring. Many key stakeholders were on vacation, consumed by Summer field work or seasonal emergencies (such as forest fires) and were unavailable until late August.

b. The content provided to *The National Map* will be in the form of Open Geospatial Consortium standard (WMS, WFS) services and Federal Geographic Data Committee (FGDC) metadata. A metadata Web Accessible Folder (WAF) will be established and registered with *The National Map* for periodic harvesting. The Kenai Peninsula Borough GIS Department hosts web services via ArcGIS Server. Testing of public services for transportation resources has resumed using the latest software release and it is anticipated that the WMS, WFS services will be linked to the Kenai Transportation portal web site this Fall.

Private roads on Native owned lands are not publicly accessible. Managers have concerns about trespass issues but GIS practitioners recognize the need for collaboration. However, these roads and off-road trails may be relevant in the case of emergency response. A protocol for handling this sensitive information will be considered.

c. Open Geospatial Consortium standard (WMS, WFS) services will be publicly available via the Kenai Transportation portal. These services will be maintained by the Kenai Borough GIS Department as part of routine maintenance for services to tied to various online mapping tools currently available to the public. These services can be harvested by the National Map as needed. A web accessible folder (WAF) will be established to harvest metadata linked to these services.

The Kenai Peninsula GIS Department hosts a directory of geospatial services via ESRI's ArcGIS Server version 9.3.1 at: http://mapserver.borough.kenai.ak.us/ArcGIS/rest/services The transportation related services are being refined and expanded to expose WMS/WFS. Testing has begun.

d. Administrative challenges were encountered which delayed the establishment of subcontracts to conduct tasks for the grant. The KPEDD does not have in house GIS expertise and therefore established an external review committee to review progress on the grant. Confusion on reporting requirements and duplication resulted. Twitter announcements have been adopted to keep collaborators updated on progress weekly progress and milestones, but USGS staff are not able to access Twitter.

It would be helpful if the USGS Google site had current documentation content for the Transportation data model schema, an associated data dictionary for the fields and live data samples.

e. An MOU was signed on April 1ˢᵗ by the Kenai Peninsula Borough Department of Planning, Kenai Peninsula Borough GIS Department and Kenai Peninsula Economic Development District in support of the USGS FGDC Cooperative Agreement Program award to create a Kenai GIS Transportation Portal.

If any **photographs, graphics, or illustrations** of the project in action are available please include a couple or more of these.

1.   Kenai GIS Transportation Portal:
     http://www.kpbgis.org/TransportationPortal/index.html

Kenai GIS Transportation Portal

Home   Downloads   Committee   Contacts   National Map   KPB User Group

City Council Member, Seward Alaska:

The digital road data available via the USGS DRG "is so outdated that it still shows the old road from Port Avenue to the naval station across the airport, Bayview school, Fourth of July Creek running straight west to the bay before the levy was built or the prison, and an inaccurate west city limits boundary. No current residential developments, the middle school, or long term care facility are shown either."

Other Links

> www.twitter.com/KenaiGIS; login is fgdc2009

> View the full proposal

> Project plan: timeline of tasks

> National Transportation Data Model

> ASMC 2009 (3MB)

> Kenai Transportation Data Survey - **Coming Soon**

> x9GIS

Welcome to the Kenai GIS Transportation Portal!

In 2008, the Kenai Peninsula GIS User Group conducted a preliminary data needs survey and transportation data was identified as a top priority. As a result, a decision was made to pursue a collaborative pilot project to improve regional transportation data with funding from the USGS Cooperative Agreement Program. The goal of this project is to improve work flows among the agencies responsible for maintaining this information and to enhance access to transportation data via an online data portal. A $50,000 grant was awarded to the Kenai Peninsula Economic Development District (KPEDD) to direct this grassroots effort; view the award here.

Local GIS professionals with an intimate knowledge of the Peninsula will be contracted to work under the direction of the KPEDD grant oversight committee to perform this work.

Regional GIS data from city, borough and state entities will be enhanced with federal standards to improve the National Map.

Recent News

3 September: Grant Oversight Committee Meeting (click here for notes)

5 June: Project outreach to Alaska ArcUser Group and Alaska URISA chapter; ESRI presented ArcGIS Mobile technologies

26 May: KPEDD contracts project support from Alaska Map Co. and Nuna Technologies

2. Kenai GIS – FGDC Transportation Grant Updates
   http://twitter.com/KenaiGIS

3. Example of Cross walk built between the City of Seward, Kenai Peninsula Borough, DOT and the National Map's "Road_TransSegment" table standard.