

2009 NSDI CAP Award Interim Technical Report

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Agreement Number: G09AC00081

Project Title: Demonstrating the IndianaMap Data Sharing Initiative with four Key Framework Data Layers

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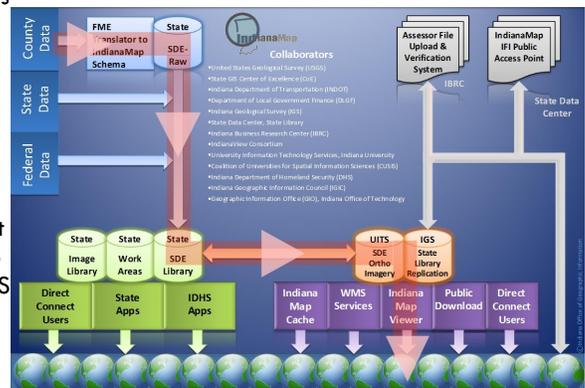
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Project Narrative:

IGIC and our project partners are in the process of implementing a data sharing initiative with County Government GIS data stewards to feed their local road centerlines, jurisdictional boundaries, point addresses, and parcel boundaries into the IndianaMap, and from the IndianaMap feed the National Map with four homogeneous statewide data layers. The resulting (Local → State → Federal) nested approach will provide authoritative local data to advance the NSDI.

Local County data is being provide to the State through OGC Web Feature Services (WFS). Each participating County hosts a WFS that the State can access on demand to harvest the data layers through the Internet. Harvesting each counties data is currently planned for once per month, and does not require County staff to do anything to feed their data to the State. Inside the State, each Counties harvested data is homogenized and merged into statewide feature classes for each of the four data layers. These data are then made available inside State Government through an enterprise ESRI SDE library at IOT. The four statewide layers are then replicated from IOT to the IndianaMap SDE library at the IGS. An ETL process at the IGS prepares these data for display on the IndianaMap, for Web Map Services (WMS) access, and for shapefile download. Finally, IGS updates the FGDC public metadata prior to publishing the new layers on the IndianaMap portal.



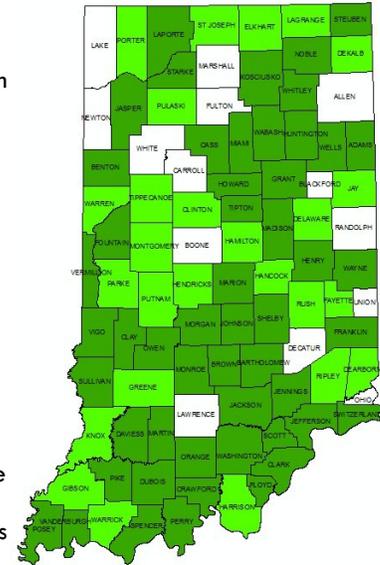
Key project tasks currently under development include:

Currently 77 of 92 Indiana Counties (shaded in dark and light green) have signed data sharing agreements to share their authoritative local data layers with the State of Indiana and the IndianaMap. Of these, 53 county Web Feature Services (WFS) have currently been harvested by the State and their data is in the process of being published to the IndianaMap (dark green) this month (December 2009). Previously, our project team have made three updates of these data layers to the IndianaMap, and this process is coming close to the point in development and finalization where it will become a regular scheduled monthly event beginning next month (January 2010).

An initial QA/QC process has been put in place as part of the overall process and includes checks to insure:

- Ability to successfully access and harvest data through WFS
- Adherence of the harvested data to the Minimum Data Standards
- Attribute Assessment (key values present)
- Metadata Assessment & updates

IGIC's Framework Workgroups for "Street Centerline and Addressing" and "Boundaries, Cadastral, PLSS" are currently working on new data standard guidelines for these four framework data layers. These standards are being re-designed to better support future applications using these multi-source GIS data layer, while also supporting advanced Geospatial Data Model design, and honoring County Government's unique Business Rules and Capture/Maintenance Rules for these data.



Next Steps:

The project team will stabilize and finalize the overall workflow and process, while also working with the uncommitted counties to encourage their participation in the program, and with the remaining counties still implementing their WFS connections to harvest their data. We do not expect all 92 of Indiana's Counties to participate, so we will prepare a plan to fill in the holes with the best available State or Open data sources available. IGIC's Framework Workgroups will complete work on the new data standard guidelines for these four framework data layers.

The initial QA/QC process that is in place will be expanded to include:

- Completeness Assessment
- Advances Attribute Assessment
- Horizontal Accuracy Assessment
- Topology Assessment (Internal and with Neighboring Counties)
- Develop a process to report back to the data stewards results of the independent QA/QC of the harvested WFS data in a meaningful and usable way.
- Develop a Problem/Resolution process to allow the data stewards to collaborate with adjoining counties on the resolution of any edge-matching or overlap issues (graphic and attributes).

To support the horizontal and topology QA/QC assessments, IGIC is developing a single, accurate digital County Boundary file to be provided to all county data stewards.

We see the enhancement and expansion of best practices coming from regular reporting of harvesting, processing and testing results. We see this step as an added-value benefit to each individual stakeholder. Having a separate group independently process and test each data layer on a regular basis will allow stakeholders to readily identify issues and to improve the overall quality, integrity, accuracy, and overall value of each data set over time. Through regular harvesting reports the data stewards will know exactly where attribution, topology, or edge-matching issues exist within their data set or between their data and adjacent data sets. It is in our best interest to allow each stakeholder to review and address these issues as they have the need and opportunity. As necessary, stakeholders can work one-on-one with neighboring jurisdictions under mutual-aid or other existing agreements to address any problems in common areas. These regular efforts will also help identify any specific (larger) data conversion or data management projects for potential funding by the GIO through the State IndianaMap fund.

Finally, the project team will document and present the best practices developed. IGIC will document the partnership and outreach mechanisms used (understanding and explaining current laws in the Indiana Code, developing data-sharing agreements, communicating with the county commissioners, the county/local GIS departments, GIS coordinators meeting,

statewide road shows, conferences, workgroups, special presentations, etc.).

Revised Timeline:

Due to internal delays in getting County funding for our data sharing agreements in place, our project is currently running approximately 90 days behind our original schedule. We now expect to complete our project by August 31, 2010, which is three months later than our original scheduled completion date of May 31, 2010. We would like to request a extension to this revised completion date.

Attachments:

None at this time