2005 NSDI Cooperative Agreements Program
Ohio Geographically Referenced Information Program (OGRIP)
Final Project Report
August, 31, 2006

Cooperative Agreement Number: 05HQAG0137
Project title: Ohio LBRS Stage 2
Project start and end dates: Start-September 1, 2005; End-August 31, 2006
Lead project organization: Ohio Office of Information Technology/OGRIP
Project Lead: Stuart R. Davis, Administrator, Enterprise Shared Services Division
Project Manager: Jeffrey R. Smith, Location Based Response System (LBRS) Manager
USGS Mapping State Liaison: Charles E. Hickman
Collaborating organizations: (members of the OGRIP Council)

County Auditor's Association of Ohio (CAAO)	Office of Information Technology (OIT)
County Commissioners Association of Ohio (CCAO)	OGRIP Forum Chair
County Engineers Association of Ohio (CEAO)	Ohio Association of Regional Councils (OARC)
Department of Development (ODOD)	Ohio Environmental Protection Agency (OEPA)
Department of Natural Resources (ODNR)	Ohio Municipal League (1 for cities over 100,000) [Cleveland]
Department of Transportation (ODOT)	Ohio Municipal League (1 for cities under 100,000) [Galion]
Institutions of Higher Learning [Cleveland State University]	Public Utilities [AEP]

Data themes: In addition to being the key NSDI thematic elements, this list is also recognized by in-state organizations as the Ohio Spatial Data Framework.

Geodetic Control	Imagery and DEMs
Transportation	Hydrography
Cadastre	Cultural Boundaries
Metadata	

Project Summary

Project Description, Highlights and Accomplishments

OGRIP—the Ohio Geographically Referenced Information Program—initiated and is managing a cooperative data development and data sharing program with local governments known as the Location Based Response System (LBRS). A multi-year state appropriation provides funding assistance to counties that create a high accuracy (±1m) roadway centerline file with street address ranges and premise addresses tied to the linear referencing system used by the Ohio Department of Transportation (ODOT). Funding under Cooperative Agreement 05HQAG0137 is being used to help support a number of activities that are intended to move existing LBRS participating counties toward fully participating contributors to GIServOhio, our data portal/clearinghouse, and thereby to Geospatial One-Stop and the National Map.

This program has been publicized to the in-state GIS community using Figure 1 and the term *Vertical Integration*. The catchphrase for this is "Capture it Once, Use it a Bunch." The figure demonstrates the critical nature of the geospatial data collected at the local level and how it is shared "upward" to state and federal entities. At the same time, it suggests how funding from federal and state governments can/should be shared "downward" with local jurisdictions and thereby benefit all potential users of critical geospatial information.

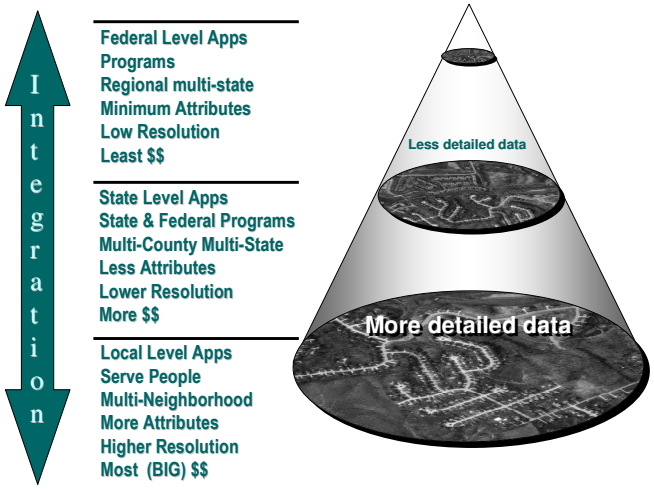


Figure 1:
Capture it Once, Use it a Bunch

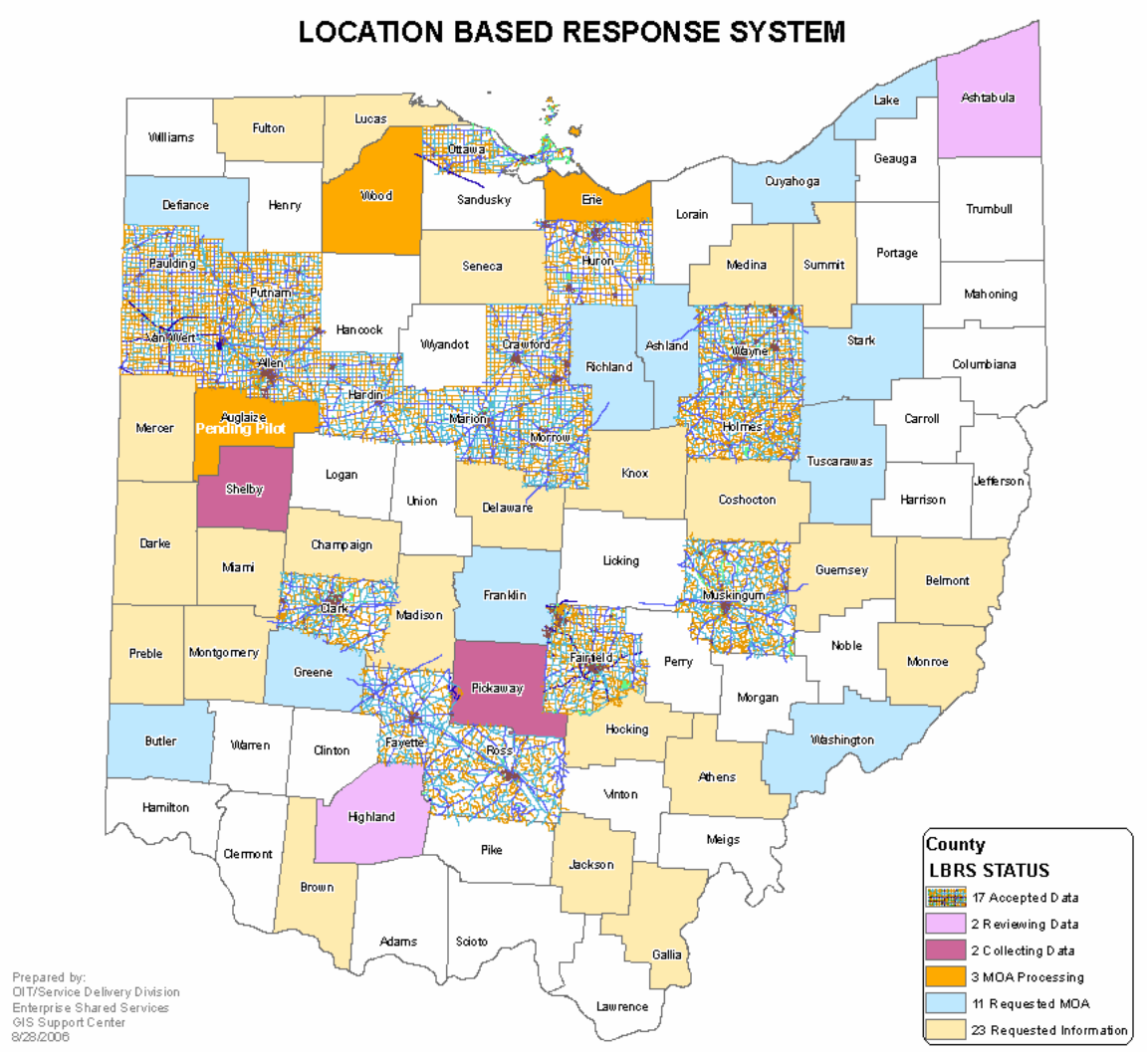
Several activities are occurring in a serial progression to move this concept forward. The initial MOA (memorandum of agreement) used for the LBRS pilots has been updated and revised. This newer version of the MOA will be used as additional counties step forward and develop the centerline files and address databases that are the products of that program.

Educational materials in the form of a four-hour interactive workshop were prepared and provided to LBRS participants to assist them in developing and maintaining metadata through the state's GIServOhio Portal. The workshop includes an overview of the

framework data elements, provides metadata development guidance and assistance, and introduces attendees to the work of OGRIP, GOS, and the National Map. The first public metadata workshop is being offered on September 22nd at the statewide Ohio GIS Conference, with regional workshops to follow for counties that may be unable to attend OGIS. The goal is to outreach to all LBRS participating counties by the end of 2006.

Data Themes and User Requirements

The identified LBRS centerline and address point themes comprise both the NSDI elements and the Ohio Spatial Data Framework for Transportation and Cadastre. Currently, no restrictions on LBRS data access exist. All data developed as part of the LBRS program is in the Public Domain. Of Ohio's 88 counties 17 counties have had data accepted into the LBRS program, another 4 have data under development or under review for acceptance.



Operational Capability

The operational capability to maintain and update LBRS data is shared between the staff and technical resources of the State of Ohio's GIS Support Center (GISSC), the Ohio Department of Transportation as program sponsors and data integrators, and local custodians by county spatial data contributors. GISSC Staff has completed the migration of metadata services to the state's new GIServOhio platform and enabled Z39.50 capability. An OGC compliant Web Map Service for LBRS data has been developed and is currently available through GIServOhio along with OGC compliant services for imagery.

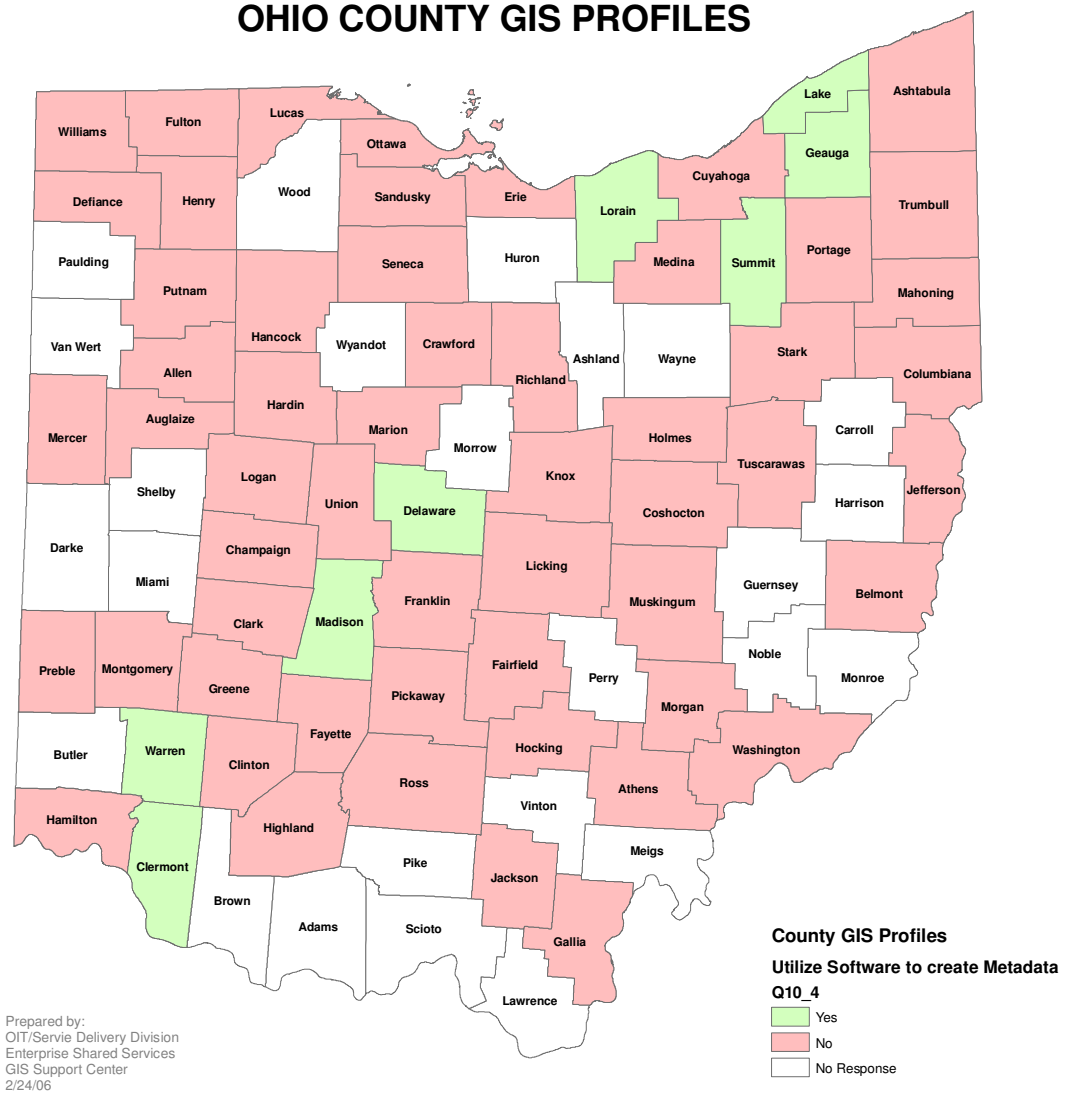
Updates to county data are provided to the GISSC through FTP or CD-ROM. Updates are incorporated into the existing LBRS services as they are made available by local government.

Metadata development and maintenance tools developed by the GISSC are provided to LBRS counties allow online access to maintain and publish metadata through GIServOhio. Metadata templates developed for LBRS centerlines and address points are provided to LBRS participants through GIServOhio. This functionality will be expanded to include all data providers throughout the state as staffing resources permit.

Issues and Challenges

The major issues stem from a local government perspective that metadata development is onerous and unnecessary to daily business functions. The perception is that metadata is of limited value to the local data creators. While the value of metadata is apparent to all who have need to discover and access spatial data, it remains little more than an afterthought to those who create the data, know where to find it and are intimately involved with its maintenance and up keep.

While data custodians acknowledge the usefulness of metadata for data discovery and dissemination, for most local government entities, metadata is perceived as an unnecessary evil akin to maintaining service records for your personal vehicle or renaming digital images on your PC. As government agencies are asked to do more with less, data custodians are not provided the necessary resources to develop or maintain metadata for data sets even though metadata tools are readily available. This become abundantly clear to OGRIP through Ohio's County GIS Profiles – see map below:



The findings indicated on the map demonstrate a strong need for OGRIP and others to educate and increase awareness regarding the benefits of having metadata to all, including the data creators. OGRIP has included the development of metadata as a requirement for all of its major initiatives including the LBRS and the OSIP programs. OGRIP and other state coordinating bodies must continue to take a proactive role in identifying the benefits and a return on investment to local government data creators. We will need to double our efforts for ensuring the appropriate resources, time, and requirements are part of the consideration of new development projects. Only in this way will efforts to develop and maintain metadata be funded and addressed.

One challenge at the state will be to fund and support the education and awareness campaign to increase the creation of metadata at the local level. Another challenge will be to offer data discovery and dissemination services that lessen the burden of metadata development and data dissemination and provide data custodians with ease of use that makes metadata maintenance as painless as possible and perhaps lessens the burden of dissemination through digital distribution.

USGS Relationship

As the integrating arm of OGRIP, the GISSC located within OIT's Enterprise Shared Services Division intends to continue staffing GIServOhio and working toward the development of the Ohio Spatial Data Framework. Discussions have be initiated regarding working with USGS as the de facto disaster recovery services for the Ohio Statewide Imagery Program and other Ohio spatial data sets. However, at this time, no formal arrangements have been made. No commitments for "mutual" staffing with any outside organizations have been formalized, though an oral data stewardship relationship exists with State of Ohio Department of Transportation for the integration of LBRS data into the state's transportation layer.