

OGRIP

2003 - 2004 Biennial Report

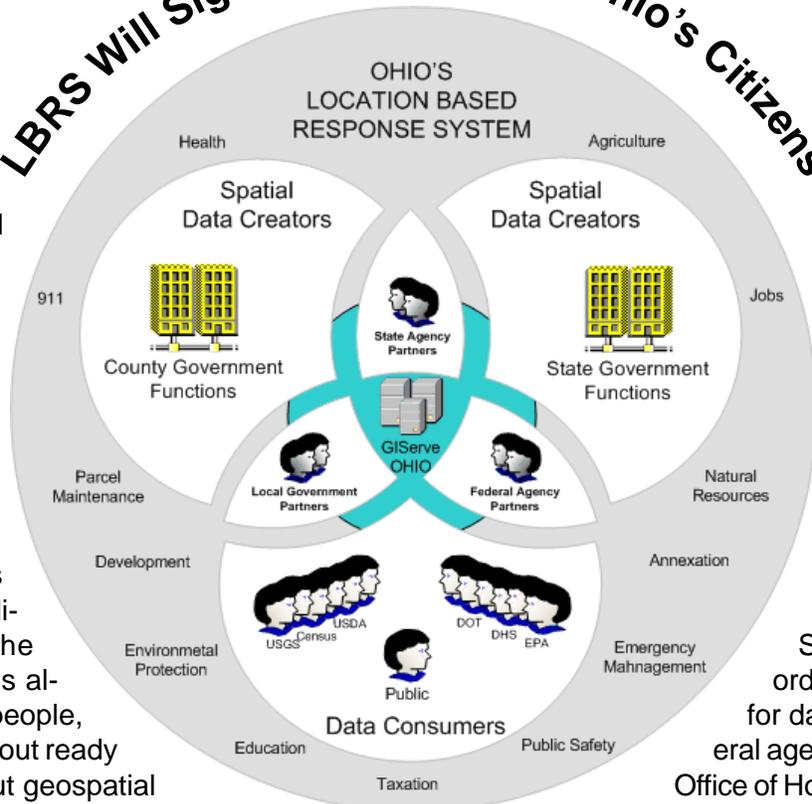
LBRS Will Significantly Benefit Ohio's Citizens

In order to prepare for and respond effectively to naturally-caused and man-made emergencies, local and state officials must have access to accurate information about the *locations* of people, places, and things. Locations might refer to street addresses, voter or school districts, census tracts, or geographic coordinates. No matter what the form, knowledge of locations allows us to identify where people, places, and things are. Without ready access to reliable data about geospatial data, local and state officials are compromised in their efforts to deliver emergency services, relocate displaced citizens, and provide medical aid and support to impacted areas.

The **Ohio Location Based Response System (LBRS)** is a collaborative effort by local, regional, and state agencies to share information about people, places, and things. Information related to geographic location is called geospatial data.

The cornerstone for the LBRS is an accurate street or road centerline containing valid address ranges for every road throughout the state. The goal of this project is to create a multi-jurisdictional statewide asset ensuring the quick and rapid response of emergency responders to natural and man made disasters.

The LBRS supports the collection, maintenance, and dissemination of location based data via hardwired, wire-



less, and Internet technologies to provide multiple points of access to these data for frontline institutions managing the response to incidents.

The LBRS information will be accessible through the GIServeOhio – the state's spatial data clearinghouse. It will enhance the State's ability to provide a coordinated response to requests for data to Local, State, and Federal agencies such as FEMA and the Office of Homeland Security. The LBRS supports a multi-jurisdictional approach to protecting the health, safety and welfare of the state's constituents.

The LBRS is well on the way to providing tangible benefits to the citizens of Ohio in a number of ways. The program is being administered by the Ohio Geographically Referenced Information Program (OGRIP), the state's coordinating body for Geographic Information System (GIS) activities in all levels of government. OGRIP has secured funding approval for 10 counties that have requested to participate in the LBRS program, and there are another 13 counties that are in the process of obtaining approval or have expressed interest in participating.

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National Geodetic Advisor Program

As we have done for the past ten years, the Ohio Geographically Referenced Information Program (OGRIP), through the Department of Administrative Services (DAS) financial commitment, continued to support the jointly funded statewide National Geodetic Survey (NGS) Advisor program. DAS, the Ohio Department of Transportation (ODOT) and the Ohio Department of Natural Resources (ODNR) jointly fund the NGS program to facilitate geodetic advisory services at all levels of government within the state of Ohio. This program is beneficial to local government and is a prime example of collaboration and cooperation within government. For more information on this program, please contact Ohio's NGS Advisor, David Conner, at 614-292-1619.

Volunteer TaskForce Efforts

Ohio developed several Task Forces to focus on specific themes of spatial information. These spatial data themes were identified as the Ohio Framework Layers.

This effort provided support to OGRIP's ultimate goal of promoting the development of specific components of a statewide comprehensive program. These components will provide the foundation for future interaction and activities between and within Ohio organizations. In short, the results of this assignment were an expanded and modified program description document detailing the requirements, management and maintenance of the broader program.

Two of OGRIP's six stated strategic goals are 1) the development of a comprehensive program for geographic data development for the state of Ohio, and 2) support and facilitation of geographic data sharing. OGRIP's intent was to position itself in the forefront of a statewide effort focused at the state and local level for geospatial data development using the National Spatial Data Infrastructure (NSDI) Framework as a guideline. It also supports one specific strategic objective identified in the current Strategic Plan - Support for GIS Development Efforts.

The intent of this strategic objective is to support cooperative GIS development. This includes identifying funding mechanisms and defining procedures for geo-spatial data development in consistent and readily accessible formats. This effort helped to develop the numerous components of a comprehensive GIS program.

This effort resulted in recommendations to Council on the implementation and funding of GIS development and data sharing in Ohio. Each Task Force did the initial investigation and developed into a Work Group on each spatial theme. The short-term objective of these task forces was to:

- Identify relevant information and data needs and requirements for each theme, document the differing perspectives associated with these themes (academia, private, state and local government), and
- Identify who should be involved in these discussions - those organizations responsible for the creation and maintenance of this spatial data or information,
- Identify approaches and concepts that are implementable in Ohio.

Each Task Force accomplished their initial three objectives and continue to work toward the final product of a modified program description document and recommendations to the OGRIP Council on the implementation and funding of GIS development and data sharing in Ohio. For more information on the specific Task Force's, please see the following page.

INTEGRATED E-GOVERNMENT CONCEPTUAL ARCHITECTURE

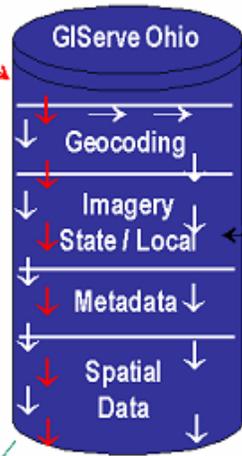
e-Shared Services (representative examples) -- Geographic Information Services (GIS)
 Representative diagram of infrastructure of GIS to support State and Federal Initiatives

Requirements for Location Based Information

Colored Items = Examples

State Applications & Functions:

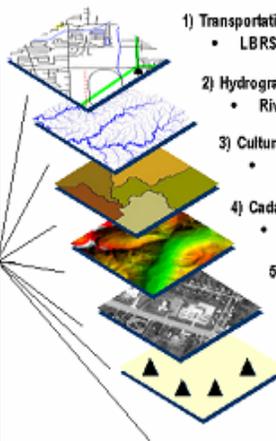
- 1) Tax Determination
- 2) Public Safety
 - Emergency Management
 - Homeland Security
 - e911
- 3) Economic Development
 - Siting of new businesses
 - Jobs Portal
- 4) Prevention Services



- Results/State Supported Projects:**
- Streamlined Tax Initiative
 - Public Safety/BMV Geocoding
 - MARCS
 - EMA Operations Application

Spatial Initiatives/Framework:

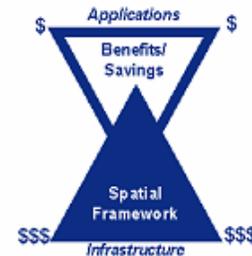
- 1) Transportation/Street Centerline
 - LBRS
- 2) Hydrography
 - Rivers, Streams & Lakes
- 3) Cultural Boundaries
 - Municipal Boundaries
- 4) Cadastral
 - Property Boundaries
- 5) Digital Imagery
 - DOQQ's
 - Satellite Imagery
- 6) Geodetic Control
 - NGS Advisor
 - Geodetic Control Program
- 7) Metadata
 - Information about Data



National Initiatives:

- 1) NSDI Framework
 - Elevation and Bathymetry
 - Hydrography
 - Geodetic Control
 - Cadastral
 - Transportation
 - Governmental Units
 - Orthoimagery

- Results/Federal Projects:**
- National Map
 - Flood Plain Update
 - TIGER Modernization
 - NSDI - Framework



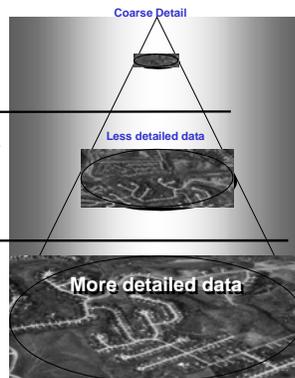
Vertical Integration

Collaboration is the key to spatial success. We must continue to fight for horizontal and vertical integration of spatial information and programs. This reduces costs, redundant activities and provides opportunities for economies of scale. Accomplishing narrow, small-minded goals without collaboration can be done quicker but with limited benefits. Collaboration involves trust and must include mutually beneficial activities. Vertical integration

proposes to leverage local government efforts in support of state and federal efforts, creating mechanisms for state and federal government to monetarily support the spatial data activities at the local level, providing benefit to all levels of government. In this way, we maximize taxpayer investment and the use of taxpayer dollars. The “**capture it once, use it a bunch**” concept is OGRIP.



- Federal Level Apps
Programs
Regional multi-state
Minimum Attributes
Low Resolution
Least \$\$
- State Level Apps
State & Federal Programs
Multi-County Multi-State
Less Attributes
Lower Resolution
More \$\$
- Local Level Apps
Serve People
Multi-Neighborhood
More Attributes
Higher Resolution
Most (BIG) \$\$



OGRIP Accomplishments

LBRs

The Location Based Response System is a program that combines state and local government resources in a partnership to develop seamless spatial data layers for street centerlines and site specific address locations are maintained at the local level. Currently there are 10 counties that are participating in pilots for LBRs, 2 counties are in the process of finalizing MOAs, 4 counties have expressed interest and are reviewing the MOA, and 6 additional counties have requested information regarding the program. (Please see graphic in box)

To date more than \$874,000 has been approved to assist local government with the development of county level LBRs subsystems.

OGRIP participated in two pilot programs to Obtain funds to acquire 1M IKONOS satellite imagery for Van Wert County and 60cm pan-chromatic and 2.4M multispectral Quickbird imagery for Lake County. The Van Wert County imagery was to evaluate the use of satellite imagery to support QA/QC of centerline acquisition for the LBRs program. The imagery was used as a completeness check to identify structures and roads that may have been missed during the collection and processing of the counties GPS data. The Lake County imagery was used to assess the quality of rectification using a high-resolution DEM and Ground Control points provided by Lake County and to evaluate the usefulness of the data for the development of a statewide imagery program.

LBRs Status

(as of December, 2004)

**funded by the Fairfield County Auditor in cooperation with the Ohio Department of Transportation*

County	Status	MOA Sent to County	Centerlines Required	SiteAddress Required	CollectionMethod	GIS Team In Place	County Signed MOA	OGRIP Signed MOA	Controlling Board Approval	State Signed MOA	RFP Reviewed	Proposal Review	Collected	ODOT Approval
CRA	Collected	Y	Y	Y	GPS	Y	Y	Y	Y	Y	Y	Y	Y	Y
FAI*	Collected		N	N	GPS	Y					Y		Y	Y
MUS	Collected	Y	Y	Y	GPS	Y	Y	Y	Y	Y	Y	Y	Y	Y
OTT	Collected	Y	Y	Y	GPS	Y	Y	Y	Y	Y	Y	Y	Y	Y
PUT	Collected	Y	Y	Y	GPS	Y	Y	Y	Y	Y	Y	Y	Y	Y
VAN	Collected	Y	Y	Y	GPS	Y	Y	Y	Y	Y	Y	Y	Y	Y
ATB	MOA Approved	Y	N	Y	IMAGERY	Y	Y	Y	Y	Y	Y	Y		
CLA	MOA Approved	Y	Y	Y	GPS	Y	Y	Y	Y	Y	Y	Y		
HOL	MOA Approved	Y	Y	Y	GPS	Y	Y	Y	Y	Y	Y	Y		
MRW	MOA Approved	Y	Y	Y	GPS	Y	Y	Y	Y	Y	Y	Y		
WAY	MOA Approved	Y	Y	Y	GPS	Y	Y	Y	Y	Y	Y	Y		
HUR	MOA Processing	Y	Y	Y	GPS	Y	Y							
HIG	MOA Received	Y	Y	Y	IMAGERY	Y	Y							
ASD	MOA Sent	Y	Y	Y										
FAY	MOA Sent	Y	Y	Y	GPS									
RIC	MOA Sent	Y	N	N	GPS	Y					Y	Y		
STA	MOA Sent	Y	N	N	GPS	Y								
DEF	Requested Info		Y	Y										
HAR	Requested Info													
KNO	Requested Info		P											
MER	Requested Info													
MIA	Requested Info		Y	Y										
SEN	Requested Info		Y	Y										
WOO	Requested Info		Y	Y	GPS									

Imagery

Geo-referenced, high-resolution imagery, (flown at local government specifications) is what is being requested for the highly urbanized areas for Homeland Security purposes. OGRIP has been a strong proponent of a program to capture imagery to meet local government specifications for Ohio. The Taskforce has provided recommendations and created a draft scope for a Statewide Imagery Program to that includes the creation of a statewide DEM and captures imagery on a two-year cycle. The initial focus is envisioned to capture the south half of the state in the first year. OGRIP is currently searching for funding to support this effort.

OGRIP has secured funding to establish the GIServeOhio platform that will house spatial data and support applications geared toward the maintenance and dissemination of statewide spatial data sets for the LBRs and Imagery programs.

Cadastral

OGRIP is in the process of developing a strategy for the creation of a statewide cadastral layer that will compile subsets of parcel information from local government that can be used to support state and federal initiatives. The Cadastral Taskforce has produced several

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OGRIP Accomplishments (continued)

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reports and recommendations regarding the use of parcel information to support programs at the state and has recommended that the attributes required be limited and focus on information that would help support Disaster Recovery and Economic Development. There is significant activity at both the state and federal level that will involve the need for accurate and current parcel information.

The development of a statewide cadastral layer is important because there are several mandated initiatives at the state and federal level that OGRIP has been asked to provide coordination and support to accomplish. Among these are Economic Development, Agriculture, and Homeland Security initiatives as well as activities that tie directly into the maintenance of Cultural Boundaries.

OGRIP has signed an MOU with Ohio Dept. of Agriculture to assist in the creation of a database to identify agricultural premises across the state. This is the first phase in the creation of a Federal Animal Identification Program. Premise identification will require the use of Computer-Aided Mass Appraisal data, GIS Parcels, Geocoding, and Landuse Classification Codes to locate agricultural use parcels.

OGRIP is working with the departments of Taxation and Education on projects that require the assignment of addresses to a particular school district. OGRIP will be working with local government to obtain pertinent parcel information that can be used to validate the results of the analysis that is being done to support these efforts.

OGRIP contracted with CSU, NODIS to create school district boundaries based upon voter registration records to support various initiatives across state agencies (e.g., Ohio Department of Education, Department of Taxation, Census Bureau, etc.). CSU, NODIS used the school district assignment on the current voter registration record to establish the district boundaries. The resulting dataset will provide benefit to all state and local government agencies in Ohio. The use of parcel information linked to school districts is an invaluable resource in the validation process.

OGRIP Objectives

OGRIP has identified four major objectives with specific initiatives that are supportive of all six of OGRIP's goals. These objectives are what dictate our actions and reactions regarding many situations in the spatial related industry. A brief overview of each objective is below.

Increased Representation and Interaction

OGRIP must continually pursue representation of all sectors of government as well as nonprofit and private organizations in Ohio. It must also continue to increase interaction with entities that have an impact on the GIS community in Ohio.

OGRIP Clearinghouse Effort

OGRIP will distribute and disseminate information through formal clearinghouse activities through the Internet and other

means. These activities serve as a foundation for future development and support Ohio as well as national initiatives.

GIS Education and Awareness

OGRIP must continue to educate Ohio on the advantages and benefits of GIS technology. We must raise the awareness of GIS as a tool to support public and private organizations in their related business functions.

Support for GIS Development Efforts

OGRIP must continue to identify external grants and other funding mechanisms to support GIS implementation. This includes defining procedures for geospatial data development in consistent and readily accessible formats. For more information, please access http://das.ohio.gov/itsd/ess/Ogrip/pdf/FundingResources_6-30-04.pdf.

The LBRS Will Benefit Ohio's Citizens (continued)

Continued from page 1

The LBRS provides benefits to Ohio's citizens by:

- *Providing for greatly enhanced security*
- *Providing increased funding for roadway safety*
- *Providing a mechanism for vertical integration of data collected by local governments*

Enhanced Security

- Effective emergency response planning begins with knowing the locations of people, places, and things
- Local governments know the most about where people, places, and things are located
- The LBRS will create an effective sharing environment in real time for geospatial data that will include information from counties, regional governments, and state agencies
- Ohio's citizens will be safer because the LBRS will provide access to the most current geospatial data across the entire state

Roadway Safety

- In 2003, 392,683 automobile accidents occurred within Ohio. A reportable total of 122,313 accidents on state highways was forwarded to

FHWA.

- 270,370 accidents were unreportable in 2003 because they occurred on local roads and could not be located and represented within the ODOT road database
- Federal appropriations for safety programs, including funding to upgrade portions of roads that have unusually high accident rates, are based on the number of accidents reported to FHWA.
- The LBRS will amalgamate local addresses with the ODOT highway database conventions, yielding a reporting rate that will include accidents off the state highway system.
- Ohio's share of FHWA safety dollars are estimated to rise by an additional \$24M after the LBRS is developed, with incremental funding rising incrementally as the system's databases are populated.

Capture it Once, Use it a Bunch

- Local, regional, state, and federal government agencies all need access to data about the natural environment, the built environment, and the location of cultural (jurisdictional, school, taxing district) boundaries
- All levels of government need information that cover many times the same geography.
- Once captured, all relevant

information not subject to protection should be made available on an as-needed basis.

Developing the Location Based Response System benefits citizens of Ohio in tangible ways

The citizenry will be the beneficiaries of current, valid and verified street addresses that will strengthen the regional- and state-level coordination of disaster planning and emergency response. This is a significant benefit, but one that cannot be quantified with a dollar amount until after an event has transpired and officials evaluate cost avoidance and the value of faster response times related to exceptional data quality.

The LBRS, and the partnerships between state and local government it creates, will be a cornerstone of seamless government.