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Everything Happens Somewhere !

- Nancy Tosta
Vice President, Ross & Associates



Street Centerline 1996
Aerial Photography 1996

Delaware County, Ohio
David A. Yost, County Auditor
Shoreh Elhami, GIS Director

Street Centerline 2002
Aerial Photography 2000

The Importance of GIS in Ohio

Fiscal Year 2001 Annual Report
(July 1, 2000 - June 30, 2001)

The Ohio Geographically Referenced Information Program (OGRIP)

Executive Director Report

by *Stuart R. Davis*
OGRIP Executive Director

"Everything happens somewhere" – Nancy Tosta, Vice President of Ross & Associates, made this simple yet profound statement in an article about GIS in the Computer World news. This quote is important for two reasons: 1) it conveys the essence of what Geographic Information Systems (GIS) technology is all about, and 2) this quote was in an Information Technology (IT) magazine. Those of us working with GIS understand the importance of location to government processes. Ms. Tosta is right, everything does happen somewhere and it is spatially related to numerous other activities. It also shines a light on GIS for the IT community. IT professionals are beginning to take notice of GIS and its impact on business functions.

Information Technology professionals were focused on moving data from one place to another more quickly and efficiently for greater access. No thought was given to the data itself. GIS professionals are focused on the data – its completeness, accuracy and currency. These three issues are solely dependent upon the spatial application we are trying to support. Because of these differing perspectives, IT and GIS folks have had difficulties in communicating the needs and requirements for GIS. The fact that Ms. Tosta's article was in Computer World indicates that the IT community is beginning to recognize GIS technology and GIS is recognizing the need for more structured IT procedures. This is a promising sign of things to come. The long waited merging of IT and GIS is beginning.

This recognition of GIS and its potential can be seen in a number of ways in Ohio. More and more state agencies and local governments are researching the use and implementation of GIS. An indicator of this has been the widespread participation and attendance in GIS related activities in Ohio. A few of the OGRIP sponsored educational venues this fiscal year are identified below:

The **10th Annual Ohio GIS Conference**, held in

Successes/Initiatives

Tax Mapping Conference

In May, OGRIP co-sponsored the first Ohio County Tax Mapping Conference with the County Engineers Association of Ohio and the County Auditor's Association of Ohio. There were over 195 people in attendance representing 66 of Ohio's 88 counties. The conference focused on tax mapping and its importance to county officials and the private sector. Tax mappers from across the state shared their experiences on how they handled complicated and challenging discrepancies on tax maps and deeds. Due to the favorable response of this first Tax Mapping Conference, the Conference will become an annual event.

September of 2000 was again a big success. The conference content keeps getting better each year. This year over 600 individuals attended the conference including 37 vendor exhibits. The keynote speaker was none other than Nancy Tosta. Ms. Tosta's presentation focused on GIS and its uses and reminded the audience how far we have come in the past 10 years. A wide range of elected officials, including county auditors, commissioners and engineers attended the conference. This increased involvement from Ohio's elected officials demonstrates the educational value of the conference and the growing commitment to improving government functions through the use of GIS technology.

The County Engineers Association of Ohio, County Auditor's Association of Ohio and OGRIP sponsored the first **Ohio County Tax Mapping Conference** in May of 2001. The conference focused on tax mapping and its importance to county officials and the private sector. The purpose of the conference was to provide a better understanding of the process and purpose of tax mapping. There was a little GIS thrown in but tax maps and tax mapping took center

stage. The anticipated attendance was 60 to 80 people so the program format was developed to engage the audience in discussions regarding the numerous issues associated with tax mapping in the new millennium. The actual response was somewhat overwhelming with over 195 people attending with representation from 66 counties. The last session was a two-hour spirited discussion facilitated by Fred Wachtel, Coshocton County Engineer. This session was entitled Discrepancies: Gaps, Overlaps and Things That Go Bump in the Night. Tax mappers across the state shared their experiences on how they handled complicated and challenging discrepancies on tax maps and deeds. Due to the favorable response and comments on the conference, it was determined that this conference will become an annual event.

In support of NASA and OhioView objectives, OGRIP and the GIS Support Center organized and conducted three **Satellite Imagery workshops** targeted at specific user communities to educate prospective users about OhioView, satellite imagery

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Future Direction

by *Stuart R. Davis*
OGRIP Executive Director

The difficulty in managing growth and associated county land activities is why over 70 counties in Ohio have an expressed interest in GIS technology. The need and use of GIS can be seen on the front of this annual report. These two digital ortho images from Delaware County readily identify the changes in the land over 4 years. This is augmented with a digital centerline that is current and up to date. Keeping up with changes and maintenance of Ohio's land records is one reason the Auditors and Engineers are investing in GIS. We must ensure that GIS requirements are not too narrowly defined and address more than one organization. As in Delaware County, considering the needs of others creates a usable information infrastructure, increasing data sharing efficiencies, compatibility and interoperability.

Just like state and local governments, citizens and businesses have demands for multi-jurisdictional spatial data. Land title searchers track land ownership records from county to county and jurisdiction to jurisdictions. Utilities must build and maintain networks that extend over many jurisdictions. Engineering firms, banks, real estate and insurance companies, development firms all use spatial data, from many jurisdictions on a daily basis. As a result, citizens and businesses must also contend with the costly inefficiencies of work with inconsistent or incomplete data as they move from local government jurisdiction to local government jurisdiction.

However, there must be a base or foundation of information to apply this analysis toward. To create this solid foundation, state and local government need to pull together and support each other's efforts. The establishment of a consistent foundation for efficient development of spatial data, applications, products and services is critical to our future. This foundation will create a statewide information network that

(Future Direction continued on page 5)

Successes/Initiatives Ohio GIS Conference

Once again, OGRIP cosponsored the 2001 Ohio GIS Conference. The conference was a success hosting over 600 attendees including 37 vendors. This year's speakers were exceptional and provided a wealth of insight regarding spatial data and geographic information systems. As always, special thanks goes to the County Engineers Association of Ohio, without whom, the Ohio GIS would not be possible.



Financial Overview

Funding Total	Objective #1	Objective #2	Objective #3	Objective #4	General Office Operations
<i>Total Funding</i> \$718,521.00	<i>Increased Representation and Interaction</i>	<i>OGRIP Clearinghouse Effort</i>	<i>GIS Education and Awareness</i>	<i>Support for GIS Development Efforts</i>	
<i>Total Expenditures</i> \$731,111.69					
<i>Shortage*</i> \$12,590.69					
(See Graph Depiction on Page 5)	Administrative Support \$36,779.83	Administrative Support \$27,584.42	Administrative Support \$55,168.85	Administrative Support \$27,584.42	Administrative Support \$36,779.23
	Training/Conferences \$9,767.24	Municipal Boundaries \$20,000.00	Remote Sensing Workshop \$20,000.00	Cost Benefit Analysis \$281,075.00	Maintenance/Supplies \$4,216.50
	Printing/Communications \$4,638.80	SPOT Imaging \$13,720.00	NGS Advisor Program \$15,466.60	Geodetic Program Plan \$43,780.00	General Operating Expenses \$119,640.83
	Total \$51,185.87	Total \$61,304.42	Total \$90,635.45	Total \$352,439.42	Data Processing Equipment \$13,963.94
					Temporary Office Support \$946.03
					Total \$175,546.53

*The shortage was caused by the transfer of \$300,000.00 earmarked for the Cost Benefit Analysis thus increasing the administrative assessment to the OGRIP budget. This caused a budget overage of \$36,931.19. This amount was decreased by an unexpended funds amount of \$24,340.50.

Executive Director Report (cont.)

by **Stuart R. Davis**
OGRIP Executive Director

and current and potential uses of remote sensing. These free workshops attracted a variety of users with varying backgrounds. Fifty-eight (58) individuals from federal, state, regional, county, municipal government, academia and the private sector participated in these workshops. John C. Antenucci, President, and Sheldon Piepenburg, Executive Consultant of PlanGraphics, Inc., provided an overview of the satellite imagery and explained key concepts and the vocabulary used in the remote sensing community. William S. Burgess, Program Manager, GIS Division, Chesapeake & Coastal Watershed Service for the Maryland Department of Natural Resources focused on how satellite imagery was being used across the United States to support all levels of government in accomplishing their operations. The final presentation by Dr. Joel Morrison, Director for The Ohio State University Center for Mapping, addressed the integration of vector data sets to provide more value to the end user. The findings and conclusions of these workshops can be accessed at <http://www.ohio.gov/ogrip/reports.htm> and clicking on NASA Grant Report.

Street addressing is a critical issue for most GIS programs at all levels of government. For this reason, OGRIP sponsored an Urban Regional Information Systems Association (URISA) certified workshop on **Addressing and IS/GIS Implementation**. The presenter was Peirce Echelberger, a nationally recognized expert on this issue and a long time GIS professional. Over 50 individuals from across Ohio attended this free workshop representing all levels of government. Mr. Echelberger

covered the basic concepts for understanding the importance of address issues in GIS implementation. It also covered addressing grids, standards, GIS data models and code enforcement issues. This workshop provided guidance for working with street centerline and street address files, geocoding and the relationships to Census Bureau data.

There were two major data licensing efforts to support Ohio and the state agencies this fiscal year. OGRIP licensed **10 meter SPOT Satellite Imagery for all of Ohio**. The acquisition of 10-meter satellite imagery took four years (1998 - 2001) to ensure complete coverage of Ohio due to a variety of reasons (cloud cover, ground fog, inclement weather, etc). This 10-meter satellite imagery was distributed to over 15 universities, 6 state agencies and numerous local governments at no cost to the user through this licensing arrangement. This imagery is currently available through the GIS Support Center on

four CDs.

OGRIP also acquired a statewide license for Geographic Data Technology (GDT) **DynaMap/Municipal Boundary dataset**. This dataset depicts the most consistent and update municipal boundaries for use by state agencies currently available. This information is being used to support five state agencies with their spatial applications.

In the fall of 2000, the State of Ohio retained the team of PlanGraphics/Booz Allen Hamilton to determine whether the State could receive a greater return on its investment by managing spatial data activities differently than the approach it was currently using. The **Spatial Data Management Cost Benefit Analysis Study** involved twelve (12) state agencies and took close to a year to complete. Participating state entities were the Departments of Administrative Services (DAS), Commerce (ODC), Development, Health (ODH), Job and Family Services (JFS), Natural Resources (ODNR),

Public Safety (ODPS), Taxation, Transportation (DOT), Criminal Justice Services (OCJS), Public Utilities Commission of Ohio (PUCO) and Environmental Protection Agency (OEPA).

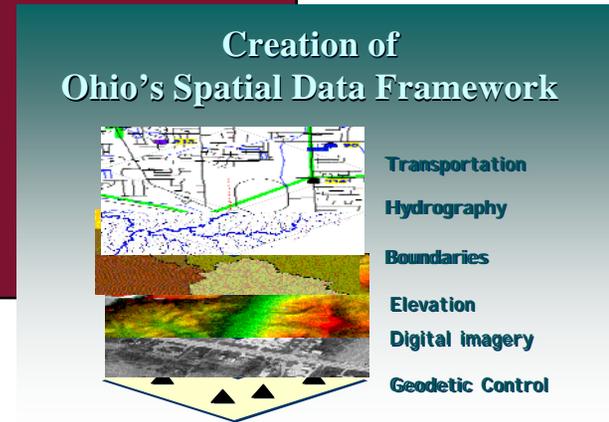
In general, the State of Ohio should expect to receive large benefits from implementing a more coordinated enterprise-wide approach to the management of spatial data and GIS. This is due to several factors:

- Improved efficiency and decreased expenditures - Using an enterprise-wide approach, more agency staff, as well as others outside of state government, will be able to use existing and future data and GIS in their activities.
- Building upon past investments - Leverage the costs previously spent on acquiring, installing or upgrading hardware, software and the communications network allowing applica-

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Successes/Initiatives Geodetic Control

OGRIP developed the Geodetic Control Program Plan that calls for the establishment of the first component of a comprehensive spatial data framework for Ohio (see figure to the side). Geodetic control allows spatial data to be tied to real world coordinates and provides a foundation for all future spatial data development.



Objective Overview

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. The Successes/Initiatives boxes throughout the 2001 Annual Report focus on a few of the actions of OGRIP which have supported these objectives this year.

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

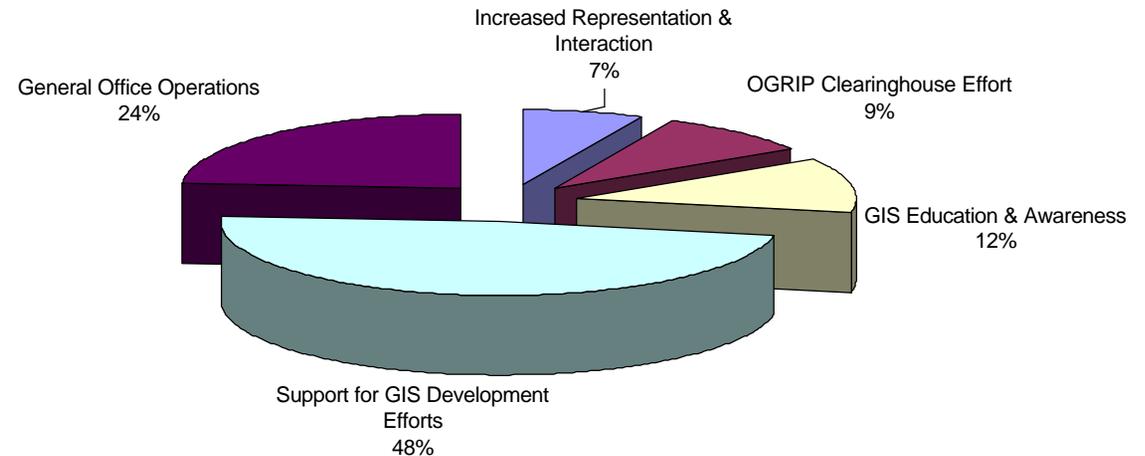
OGRIP must continue to educate Ohio on the advantages and benefits of GIS technology. We must raise the awareness of GIS as a tool to support public and private organizations in their related business functions.

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 www.state.oh.us/ogrip/pdf/Fundingdoc_02.pdf.

Financial Overview

Graph Depiction



Future Direction (cont.)

by *Stuart R. Davis*
OGRIP Executive Director

facilitates the cost effective sharing of expertise, applications and best practices provides the impetus for state and local governments to adopt uniform guidelines and standards to produce significant savings for all spatial data users - local, regional, and state government as well as private sector.

Requirement definition activities and spatial data needs assessments include the identification of foundational layers. These foundational layers are in the form of the Ohio Framework Layers approved this year by the OGRIP Council. These were adopted from the National Spatial Data Infrastructure's (NSDI) framework layers and have been endorsed for the state of Ohio. In addition, requirements and GIS spatial data needs for state government will be identified through the Cost Benefit Analysis OGRIP sponsored this year. This analysis will identify and prioritize datasets for the state of Ohio as well as determine the most cost effective way to approach this foundational subject for the state of Ohio.

Successes/Initiatives Cost Benefit

To ensure and protect the state's investment in spatial data, OGRIP initiated a Cost Benefit Analysis study (CBA) to identify opportunities to improve the efficiency of spatial data development and management within state government. This analysis will identify ways for improving spatial data collection, distribution and maintenance using a more enterprise wide perspective, thus saving taxpayer money. This effort is currently underway with recommendations expected at the end of this fiscal year.

Successes/Initiatives **NASA Funded Remote Sensing Workshop**

In support of the National Aeronautic and Space Administration (NASA) and OhioView objectives, OGRIP, in conjunction with the GIS Support Center, organized and conducted three workshops targeted at specific user communities to educate prospective users about OhioView, satellite imagery and current and potential uses of remote sensing.

The results of these workshops were compiled and summarized in an official report. The summary of the workshops will assist in developing a description and listing of imagery and hybrid (raster/vector) products deemed beneficial to state, multi-county (Regional Planners, Watershed, Nature Conservancy, Soils, etc.) and local (County, Township and Municipal) government. Potential products will be reviewed and analyzed to determine standard and custom products based upon available satellite imagery in 2001 and the promise of better resolution imagery in the future as well as the integration of vector spatial datasets. This will assist NASA and OhioView in determining what products would be useful to support three levels of government and prepare these levels of government for the varied alternatives available to support their mandated functions.

Council Members

- Stuart Davis, Council Chair
Ohio Department of Admin. Services
- David Crecelius
Ohio Department of Natural Resources
- Dave Blackstone
Ohio Department of Transportation
- Barry Bennett
Ohio Department of Development
- John Albrecht
Ohio Environmental Protection Agency
- Barbara Curtiss, Fairfield County Auditor
County Auditors Association
- Joseph Merritt, Clinton County
County Commissioners Association
- Jim Nimz, Seneca County Engineer
County Engineers Association
- Phil Honsey, City of Galion
Lisa Swain, City of Columbus
Ohio Municipal League
- Jim Brosnahan, AEP
Public Utilities
- Dr. Mark Salling, Cleveland State
Institutions of Higher Education
- Mike Paprocki
Ohio Assoc. of Regional Councils

Forum Officers

- Bob Brinkman, Forum Chair
- Lisa Swain, Forum Vice-Chair
- Greg Rouse,
At-Large Representative
- Joe Reichlin,
At-Large Representative
- Gene Hinterschied, Forum Past Chair

Publication Listing

- NASA Funded Remote Sensing Report
- 2000 Annual Report
- Ohio GIS Conference Program
- Ohio Framework Task Forces Document
- Geodetic Control Program Plan
- Tax Mapping Conference Materials
- Cost Benefit Analysis Study
- GIS Contacts Book
- Ohio Grant Activities

Successes/Initiatives **Forum Outreach Meetings**

As in the past, OGRIP has continued to have it's Forum meetings once per month with excellent participation. Each meeting has featured an educational topic related to spatial data and GIS. To promote interaction from all sections of the state, OGRIP initiated two Forum Outreach meetings per calendar year. These meetings are held in a non-central location in hopes that many GIS professionals who are unable to travel to Columbus will be able to attend. The meetings, held in Summit and Ross Counties respectively, were well received and well attended this year.

Executive Director Report (cont.)

- tions related components to be implemented earlier.
- Reduced costs for spatial data management - The labor segment of the current operating costs is the most significant expenditure the state has thus far. An enterprise-wide approach to spatial data management provides an opportunity to significantly reduce staffing and operating costs resulting in increased savings.
- Improved accuracy and quality of spatial information - Significant future savings will be realized by the utilization of accurate data sets and GIS layers that already exist and are consistent with the state's needs rather than having each state agency recreate the "spatial data" wheel.

Recommendations from the Spatial Data Management Cost Benefit Analysis were focused on six areas:

- Developing spatial data standards for use throughout the State

- Completing development of the Ohio framework as it is currently envisioned
- Expanding the current framework definition to include new framework components
- Preparing expanded metadata so that information on spatial data sets, maps, and drawings will be locatable through a spatial data clearinghouse
- Creating a virtual spatial data clearinghouse to allow prospective users of spatial data and GIS to discover and access information
- Pursuing a significant new collaborative initiative with Ohio's local governments to develop several higher resolution data sets

OGRIP, the state's coordinating entity for spatial data and GIS, was identified as the lead to implement the comprehensive spatial data management program to promote data exchange and collaboration. While OGRIP will work primarily with other

State agencies, it will also promote participation in the virtual clearinghouse and provide incentive assistance to local governments.

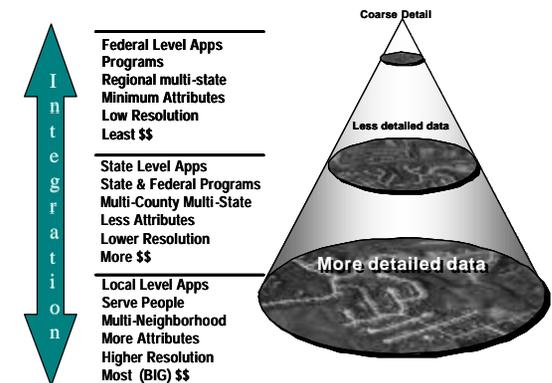
OGRIP is excited about the future and the potential impact of the above recommendations. OGRIP has been discussing the possibilities of vertical integration through partnering with local government for some time. Vertical Integration of spatial information can be describe simply as "Capture it Once, Use it a Bunch." The most detailed geographic information is being captured at the local government level. Vertical integration proposes to leverage local government efforts in support of state and federal efforts. This creates a mechanism for state and federal government to financially 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.

Successes/Initiatives SPOT Imagery

The OGRIP Office was directed by the OGRIP Council to enter into a licensing agreement with SPOT Image for 10-meter satellite imagery. This license allows for the sharing and distribution of this 10-meter satellite imagery covering all of Ohio for all state agencies and departments, counties, municipalities, state universities and public schools in Ohio free of charge. SPOT Image delivered edge matched, geo-referenced and a specific file formatted, 10-meter satellite imagery. It will be an internet display only offering no ability to download or screen capture but is available on CD. This is a very exciting project for the state of Ohio and offers great opportunities for future GIS development in Ohio.



10-meter SPOT Satellite Image



(previously defined in the FY00 Annual Report)

To support the concept of vertical integration, OGRIP will begin the development of statewide Task Forces focused on spatial data creation and data sharing as the first step in an integrated solution for State and Local government in Ohio.



Ohio Geographically Referenced Information Program

Ohio Department of Administrative Services
Computer Services Division
77 S. High Street, 19th Floor
Columbus, OH 43215



GDT DynaMap Municipal Boundary Data

Successes/Initiatives

Municipal Boundaries

OGRIP entered into an agreement between Geographic Data Technology (GDT) for the GDT DynaMap/Municipal Boundary dataset with quarterly updates and will be licensing this database for unlimited usage by State of Ohio Agencies.

This dataset will be used by multiple agencies including DAS/OGRIP, Public Safety, Transportation, and the Department of Health. This dataset will provide the State of Ohio with an up-to-date municipal boundary database for use in Geographic Information Systems, spatial analysis, and mapping. It is an excellent investment in our future for the state of Ohio.

