



Geographic Information Systems Technology News

The Newsletter of the New York State GIS Coordination Program

George E. Pataki
Governor

William F. Pelgrin
Director

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NYS GIS Clearinghouse: <http://www.nysgis.state.ny.us/>

DUTCHESS COUNTY ENTERPRISE GIS

Dutchess County has recently developed a web-based bridge among the departments that have been independently active with GIS over the past decade. The County created an enterprise GIS for departments to manage their metadata, data transfer, downloads, queries, and view GIS data. The enterprise system contains a collection of Intranet based applications that are interconnected. The system allows users to switch between applications and maintain their geographic extent as well as links to metadata. This has allowed them to build small focused applications that are easy to learn and use with architecture that has proven to be very robust, flexible, and efficient for users.

As a result of the success and usefulness of the system to County employees, the County has expanded access to the enterprise GIS to other municipalities. With assistance from a NYS Local Government Records Management Improvement Fund (LGRMIF), the County was also able to finish giving access to local governments via a VPN (virtual private network) so that they too had access to the County's valuable GIS data and applications.

The system is now available to the public and municipal officials at dedicated stations throughout the County.

Dutchess County continues to expand GIS with a recent Internet application that is fully integrated with the County's web site (<http://www.dutchessny.gov>). GeoAccess is unique when compared to some government websites, in that in addition to having basic map functionality, Dutchess County has taken their map services to the next logical step by integrating it throughout the County website. The County's webpages can retrieve a map and in turn, these webpages can also be retrieved from the map. By using this service, anyone can locate an array of sites and physical features throughout the County, such as, government offices, schools, roads, hospitals, nursing homes, historic sites and museums, landmarks, trails, recreation areas, and much more.

For more information contact Phil Thibault at pthibault@co.dutchess.ny.us.

ORTHOIMAGERY APPLICATION UPDATED!

The NYS Office of Cyber Security & Critical Infrastructure Coordination is pleased to announce the launch of a new and enhanced online orthoimagery application, (<http://www1.nysgis.state.ny.us/mainmap.cfm>).

Highlights of the new application include the addition of the 2001 Suffolk County half foot natural color imagery and the Annual Lot 3 imagery flown in 2003 (fifteen counties covering the Eastern Finger Lakes area north to Clinton County).

New features of the application include a search by street address option, a print option that will allow the user to add a title, subtitle and comments to a pre-formatted print display, and a measure tool that will allow the user to measure the distance between 2 points.

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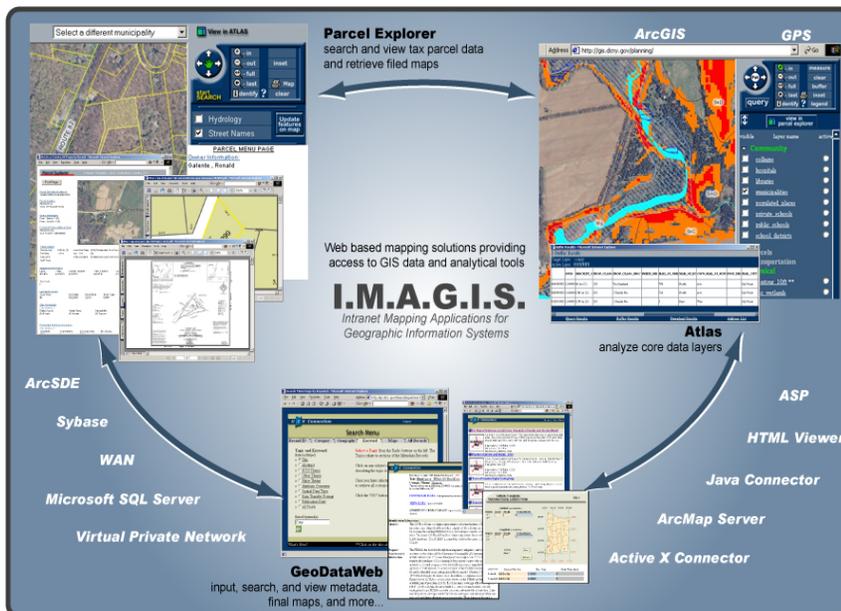


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When viewing the imagery through the application users can now choose "Download ALL imagery available for current area" in addition to the standard "Download imagery in current view." With the "Download All" option users will be provided with information on the number of orthoimagery datasets available for the area displayed in the map window as well as the ability to download the corresponding tiles from each of the available datasets. The direct download option will continue to be available for bulk download of imagery.

Please note however that the Digital Orthoimagery Application can only be viewed in I.E. v6.0 and up. It is necessary to disable pop-up blocker software and/or settings in Windows XP/SP2 when using this application.

For more information contact Sharon Oskam at sharon.oskam@cscic.state.ny.us.



NYS GIS Help Desk

The New York State GIS Help Desk, <http://www.gishost.com/gishelpdesk/> is administered by the NYS Office of Cyber Security & Critical Infrastructure Coordination and sponsored by the New York State GIS Coordination Program. This web-based help desk is intended to provide support for both general GIS questions and specific questions regarding the technical use of the following GIS software products:

- ArcGIS 9
- ArcGIS Desktop: ArcView
- ArcGIS Desktop: ArcEditor
- ArcGIS Desktop: ArcInfo
- ArcInfo Workstation
- ArcView GIS 3.x
- MapInfo Professional

Visitors can search the online [Knowledge Base](#) to view previously submitted questions and answers or view the Help Desk's most [Frequently Asked Questions](#). Residents of New York State may [Submit](#) GIS technical questions which will be answered within one (1) business day. All questions and answers will also be included in the searchable knowledge base. For assistance in the use of the NYS GIS Help Desk, visitors can select [Help](#) from the options on the left.

For more information contact John Borst at john.borst@cscic.state.ny.us.

MARK YOUR CALENDAR!

2005 NYS 21st Annual GIS Conference
 Hyatt Regency Rochester
 Rochester, New York
 October 17-18, 2005

The New York State GIS Conference has become a major GIS professional development opportunity for hundreds of GIS users in the State. The conference is a great place to discover how New Yorkers are using GIS to accomplish important objectives in the public and private sectors. Technical presentations feature working professionals who share their GIS experiences and solutions in dealing with real world problems like yours. Meet fellow New Yorkers active in the GIS field, exchange information and experiences, and seek solutions to your geographic data management needs.

New York State Digital Orthoimagery Program Status Update

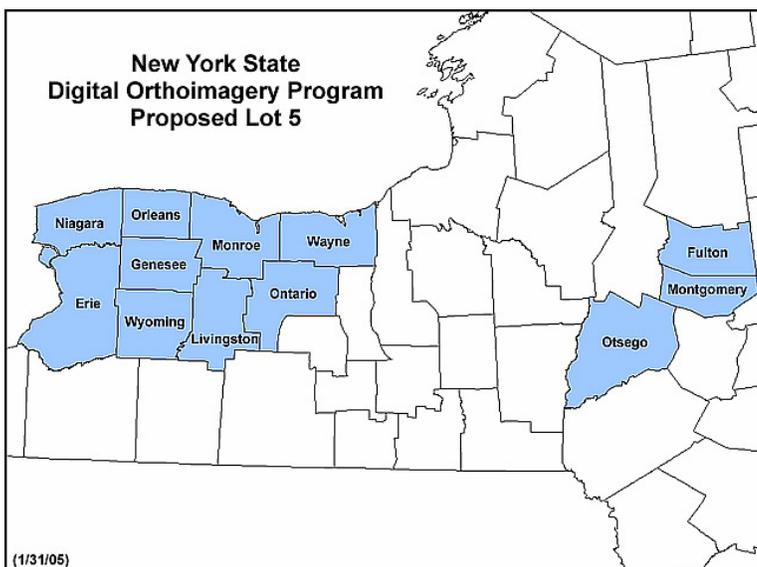
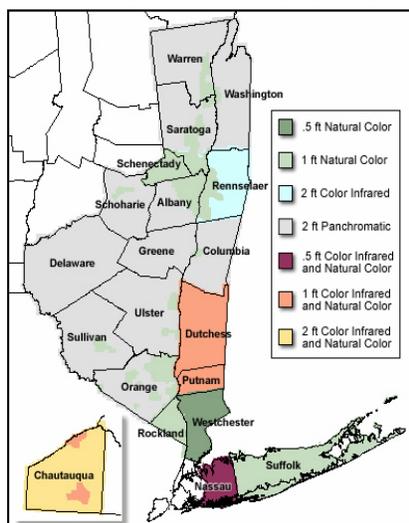
While 2004 marked several key milestones in the New York Statewide Digital Orthoimagery Program (NYSDOP), work in the New Year will lay the groundwork for the program's evolution in the coming years. Anyone visiting the NYSDOP pages on the NY GIS Clearinghouse (www.nysgis.state.ny.us/orthoprogram.htm) can see the steady progress made to capture and distribute high resolution orthoimagery for New York State. One original goal for the NYSDOP was to cover the state in a 4-5 year cycle. The first cycle was completed and the goal met with the 53 counties flown between 2000 and 2003. All of this imagery is available for viewing or download on the NY GIS Clearinghouse. Yet, the NYSDOP's prolonged success will depend as much on changes as on following the same formula which has worked so well.

Last year saw the first time the NYSDOP revisited counties. Of the twenty counties flown in the Spring of 2004, sixteen were flown in 2000 or 2001. Quality review of the orthoimagery is well underway, and final copies will be available this Spring. This will include coincident CIR and natural color coverage of Chautauqua, Dutchess, Nassau, and Putnam counties where digital cameras were used for the first time on the NYSDOP. This new technology produced good results and offers the ability to collect two image types with a single flight.

This Spring, Erie, Niagara, Orleans, Genesee, Wyoming, Monroe, Wayne, Ontario, Livingston, Fulton, Montgomery and Otsego Counties will be flown. Meanwhile, CSCIC is working on a new RFP since 2005 marks the last year of the current NYSDOP contract. The goal in developing the new RFP is to build on the strengths of the current contract (high accuracy, technology neutral, etc.) while applying the lessons learned in the first five years. This RFP and contract will shape the NYSDOP in 2006 and for years after.

For more information contact Tim Ruhren at tim.ruhren@cscic.state.ny.us.

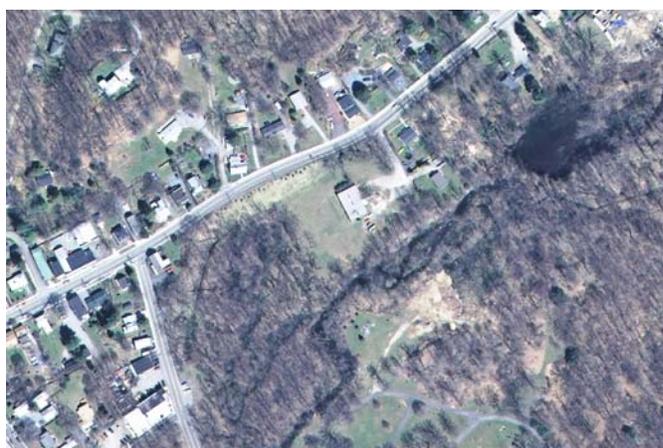
2004 Annual Lot New York State Digital Orthoimagery Program Status



Coincident Natural Color and CIR Orthoimagery from 2004 Coverage of Putnam County



1-ft GSD CIR



1-ft GSD Natural Color

Accident Location Information System (ALIS) Data Update

We've got great news to report! NYS CSCIC, NYS DMV and NYS DOT are pleased to announce that NYS took final acceptance of the statewide Accident Location Information System (ALIS) project data deliverables in late December. CSCIC has been busy processing the data for distribution to the NYS GIS Data Sharing Cooperative members through the NYS GIS Clearinghouse. Data availability is targeted for early 2005. Please note that due to contractual requirements, we are unable to provide general public access to the data until later this summer.

Available data layers include:

- Up-to-date street centerlines
 - Street names & aliases
 - Route numbers
 - Address ranges
 - Feature based metadata
- Address points
- Railroads
- Bridges
- Civil & public land boundaries
- Census geography (down to block level)
- Zip Code boundaries
- Landmark features (shopping malls, schools, libraries, etc.)
- Hydrography (i.e. water features)

In addition to its native ESRI ArcGIS 9 format (distributed as a personal geodatabase), all data will also be available in Map-Info tab and ESRI shapefile formats. Data will be provided as statewide files with county cuts of the data available for the streets and address point data layers. Additional enhancements we're working on prior to distribution include indexing/sorting the statewide streets layer and address points layer by zip code, creating customized geocoding services, identifying recommended geocoding preferences, and documenting procedures for geocoding against the ALIS

data. These enhancements will improve geocoding results when using the ALIS data. For easier labeling, the streets data will also contain a new attribute (FULLSTNAME) that concatenates the five street name components into one field.

New data download pages on the Clearinghouse will contain updated documentation and the new zipped data files. The documentation will include an updated geodatabase design, an expanded data dictionary, a combined Product and Process Description (P&PD) document, and a new Frequently Asked Questions (FAQ) document.

Users of the pre-release version of the ALIS data will notice improved street name and address attribution and better integration between the civil boundaries and streets layers. Interest in long term ALIS data maintenance continues to be high and with the imminent release of the final data, CSCIC has initiated small pilot projects to develop and test data maintenance options. Throughout 2005, the NYS GIS Standards & Data Coordination Work Group will continue the ALIS data maintenance discussions that began at their July 2004 meeting. Meeting notes available on-line at:

http://www.nysgis.state.ny.us/reports/data/meetings/data7_04.htm.

Additional information on the history of the ALIS project is available in the Geographic Information Systems Technology (GIST) Newsletter's previous issues located at <http://www.nysgis.state.ny.us/comm.htm>. For project status information, please contact John Borst at (518)474-5212 or by e-mail at john.borst@cscic.state.ny.us.



ALIS Road Centerline File
Near Niagara Falls

How do I Become a Cooperative Member?

To learn more about benefits of participating in the NYS GIS Data Sharing Cooperative, visit <http://www.nysgis/datacoop.htm> or contact Sharon Oskam at the NYS Office of Cyber Security and Critical Infrastructure Coordination at (518) 474-5212 or via e-mail at sharon.oskam@cscic.state.ny.us.

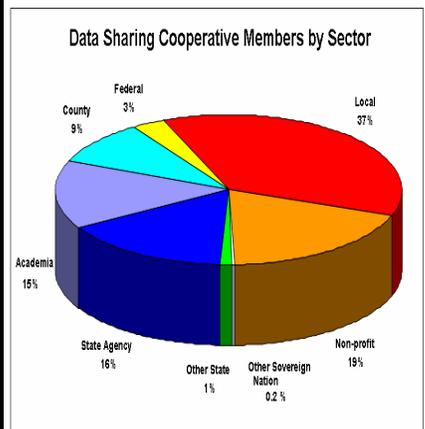
GIS Communications and Outreach

Looking to find a local GIS Users Group? Interested in contributing to GIS related electronic discussion lists? Then the NYS GIS Clearinghouse Communications webpage has the information that you are looking for. Here, you will find links to many different electronic discussion email lists, as well as links to and contact information for the many GIS user groups across New York State.

<http://www.nysgis.state.ny.us/comm.htm>

GIS Data Sharing Cooperative Still Growing

Membership in the NYS Data Sharing Cooperative has shown a steady increase with more and more governmental entities, not-for-profits, and academic institutions signing the Data Sharing Agreement, allowing each other to share their GIS data sets. The number of Cooperative Members at the time of this publication is at an all-time high of 502. A breakdown of Cooperative members by sector is as follows:



DiscoverSouthwestNY.com

The Southern Tier West Regional Planning and Development Board has launched DiscoverSouthwestNY.com, a new website designed to provide virtual tours of the business, quality of life, and tourism opportunities that exist in Allegany, Cattaraugus and Chautauqua counties. Using a technology called PixEarth, the website displays thousands of images of the area including industrial, commercial, residential, cultural and recreation locations. PixEarth's unique data-processing software combines interactive digital photography (GeoPhotosä) created from standard digital photographs with maps (ArcIMS) to create geographically referenced virtual tours for any location on earth. This new website is also a web portal to other local information resources, making it the true web destination for "Everything Southern Tier".

In the "business" section of the site, business owners, site selectors, and investors can find a regional profile that contains information regarding infrastructure, technology and natural resources. The section also contains statistics on local labor force and educational opportunities, as well as information and links

regarding business incentive programs. In addition, visitors can take a virtual tour of the region's industrial parks and commercial development properties.

The "living" section of this site illustrates what life is like in the Southwest NY corridor. This section contains information, images, and links on topics such as culture, housing and community, as well as local statistics and information on education. This area of the site will be es-

pecially valuable to local residents and others interested in relocating within the region, and will be a valuable recruiting tool for local real estate agents and businesses.

The availability of recreational opportunities is one of the Southern Tier's greatest assets, so the "recreation" section of the website is devoted to the diverse range of activities available in the region. DiscoverSouthwestNY.com contains information and virtual tours of the region's most popular spots including cultural, outdoor, and sporting attractions. The site also contains images of and links to area accommodations to make visiting easier. While this is perfect for a tourist planning a visit, it also is ideal for local residents who may not realize all the opportunities for fun that exist in their own backyard.

Check out www.discoverysouthwestny.com and tell us what you think. If you have any questions or comments regarding the website or the PixEarth technology, please contact Brian Schrantz, Director of Information Services at Southern Tier West by phone at 716-945-5301 or by e-mail at bschrantz@southerntierwest.org.

IAGT Hosts Remote Sensing/GIT Outreach Workshop

In October 2004, the Institute for the Application of Geospatial Technology (IAGT), located in Auburn, New York, hosted a gathering of over 100 local, state, regional and federal government representatives. The three day meeting was co-sponsored by IAGT and four federal agencies: the National Aeronautic and Space Administration (NASA), the National Oceanic and Atmospheric Administration (NOAA), the United States Geological Survey (USGS), and the Federal Geographic Data Committee (FGDC). Additional support was provided by the National States Geographic Information Council (NSGIC) and the National Association of Counties (NACo).

Robert Brower, IAGT's CEO, discussed reasons for this workshop by stating that "the



federal government targets between two and four billion dollars a year to collect geospatial data through its various agencies; and it is estimated that approximately two billion of these dollars are invested in redundant data collection." Thus, money is wasted primarily because various governmental jurisdictions have not been working in collaboration. To

help address this problem, and as a backdrop to this workshop, IAGT awarded grant funding to 14 Northeastern states. The states were each asked to design an outreach project that would take satellite data and apply it to a local need. To qualify for the funding, the state representatives were tasked to design their projects in collaboration with local and regional representatives within the states. "The reason this October workshop was so special," Mr. Brower stated, "is that for the first time, representatives of multi levels of government from all of the fourteen states to which IAGT awarded grants, came together with federal agencies to discuss their projects and to define what it takes to make geospatial outreach efforts a success."

In addition to presentations, each of the states showcased a poster demonstrating one of its

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(IAGT... Continued from page 5)

successful projects. The federal government program representatives were thus able to hear from the other jurisdictions about their perspectives on critical need areas and traits present in their outreach projects that worked.

For example, the remote sensing project initiated in New York State addressed trans-border crime at the United States/Canada boundary. With monies provided by IAGT, new, uniform, and up-to-date land use/land cover imagery of a ten mile region along New York's Northern Border was created. In order to generate the imagery, quality data for a large area needed to be produced, which required the coordination of multiple agencies. Once completed, the imagery was given to the Integrated Border Enforcement Team (IBET) – a multi-disciplinary operational and intelligence team endorsed by the U.S. Attorney General and the Canadian Solicitor General. The land use/land cover data developed for this project will be used to assess the threat to border security in Jefferson, St. Lawrence, Franklin and Clinton counties.

At its conclusion, IAGT's October workshop attendees offered very positive feedback about their experience. One participant expressed a common view: "the opportunity for interpersonal networking across sectors of government has been an extremely valuable outcome."

IAGT is now working to compile the findings from the workshop for publication and posting on a special website. You may visit this evolving website at www.iagt.org/neaf/04workshop. The work is intended to improve collaboration and reduce geospatial data collection costs.



Land Use/Land Cover Area of Study Along the New York/Canadian Border

NEW YORK STATE CELEBRATES GIS DAY 2004

Carthage Central High School



For the first time ever, Carthage Central High School celebrated NYS GIS Day with a small scale local event. Attended by students, community members and administration, the GIS Day event featured speakers on a variety of topics related to GIS.

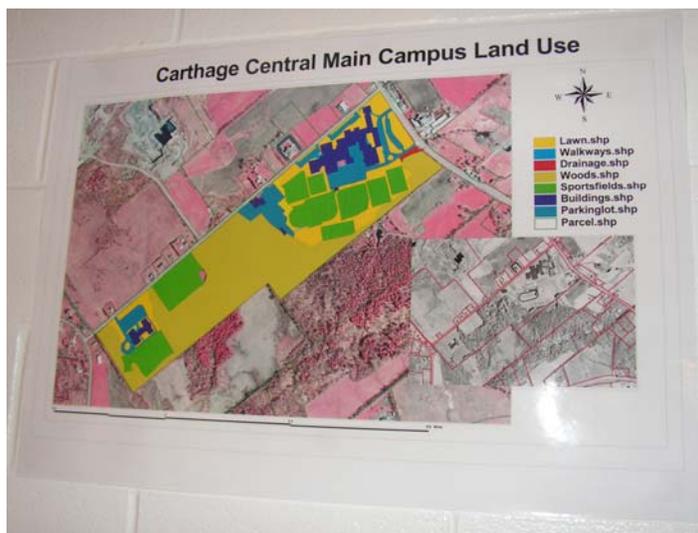
Mickey Dietrich, a GIS technician working for the NYS Tug Hill Commission, spoke concerning how GIS is used in his work capacity. Local and regional projects were reviewed with map products displayed. The Commission demonstrated their GIS Starter Kits which was produced for regional municipalities. Earth Science teacher Terese Bartlett introduced the audience to geocaching. Impressed with the number of local geocaches, and the ease of access, Terese was willing to share her

experiences at our GIS Day event in November. Her focus was to inform participants of the existence of geocaches, the necessary equipment, and to outline the etiquette engendered by most geocache hunters. The portability of the hobby and the minimal startup costs were major highlights of her presentation. Websites such as the popular geocaching.com were cited as great starting points for people interested in pursuing the hunt.

Ms. Bartlett's presentation was followed by Pete Walsemann, demonstrating how his Intro to GIS course participants were using GPS receivers to document trails for a local government program. The Intro to GIS course was developed over the summer of 2003 as a science elective for students attending Carthage Central High School. The purpose of the course is to introduce the concept of geographic information systems. Students learn ESRI's ArcView 3.2a software using the software's tutorial lesson plans which are supplemented in class by authentic real world situations. Students are also assigned laboratory exercises using local data and expected to apply what they've learned to solve real world problems.

The purpose of the event was to raise local awareness of GIS and to showcase student efforts in this area. Additionally, the intention was to stimulate some interest in the Intro to GIS course to increase enrollment.

For more information about the GIS Day event, contact Pete Walsemann at pWalsemann@carthageCDS.org.



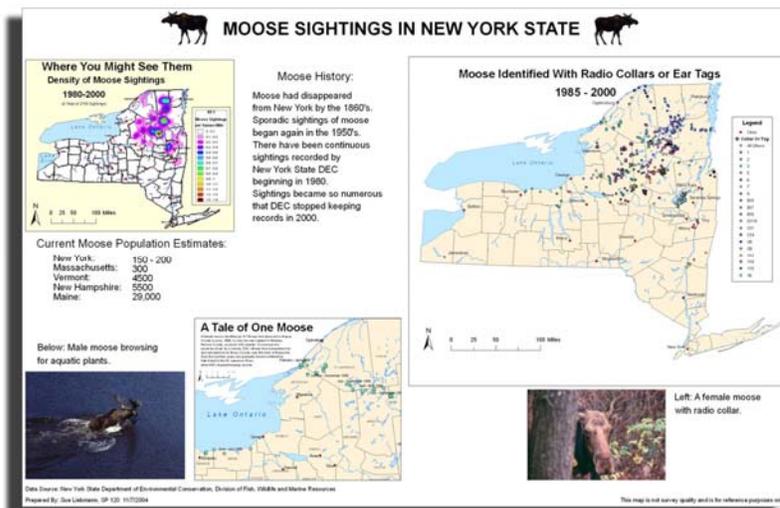
Land use Thematic map for the school campus is a class activity performed by students taking the *Intro to GIS* Course.

NEW YORK STATE CELEBRATES GIS DAY 2004

Fulton-Montgomery College Spatial Information Technology Center (SITC)

In order to promote Geographic Awareness and Geographic Information Systems technology, the Spatial Information Technology Center (SITC) located at Fulton-Montgomery Community College in Johnstown, New York, sponsored a map competition for GIS Day 2004. Maps were judged on the following criteria: technical merit, presentation of concept/purpose, cartographic design, accuracy/detail, and creativity/originality. For the college's first contest, a total of seventeen maps were submitted and publicly displayed in the student activities center. Voting ballots were also made available and all students and faculty were encouraged to vote for their favorite map. After the 75+ people voted in the contest, a winner was decided. Shown here is Sue Liebmann's map, "Moose Sightings in New York", which took first place at the map competition. In addition to the map competition, SITC staff set up a GIS display booth in the student activities center and answered questions about GIS. For more information and to view the winning maps, visit:

<http://faculty.fmcc.suny.edu/chaucer/gisday.htm>



Cattaraugus County



Cattaraugus County celebrated NYS GIS Day 2004 in the lobby of the County Building in Little Valley, NY. The County's GIS Coordinator Daniel T. Martonis was on hand all day to talk about GIS to any interested parties. Many maps were on hand, displaying the capabilities of the County's GIS system. A GPS receiver was also on display demonstrating how GPS data is collected and used at the county level.

Additionally, a computer was in place to let GIS Day participants browse the County's ArcIMS sites, illustrating to the people the capability of GIS. GIS Day participants also had the option of printing maps of anything from parcel lines to aerial photography. Multiple brochures were distributed containing maps of snowmobile trails, Amish locations, hiking trails, etc. In sum, Cattaraugus County enjoyed a successful NYS GIS Day and will plan on doing this again in 2005.

For more information contact Daniel Martonis at dtmartonis@cattco.org.

Niagara County

Niagara County held three activities this year at Niagara County Community College (NCCC), Lockport City School District and on Radio Lockport, WLVL 1340.

For the first activity, Niagara County Community College (NCCC) provided numerous

displays of GIS maps and aerial photography across the campus. The administrative building featured Census 2000 data mapped for Niagara County. The student cafeteria featured oblique aerial imagery of the college and grounds used by the Environmental Task Force in its landscaping work. The staff-dining lounge held a gallery of globes, maps, posters, air photos and satellite imagery covering Niagara County as well as topographic maps of our locality for Geography Awareness Week and NYS GIS Day.

The second activity took place at the Lockport City School District, which had GIS displays in the Board Office and where Robert Lord (NCCC Instructor) developed lessons for the Geography Awareness Week poster as well as a PowerPoint 'zoom', which took students on a visual trip from outer space right down to their school in Lockport. A GIS day video, "Layers of the Earth", was extremely well received by the elementary classes at Roy Kelley Elementary School.

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NEW YORK STATE CELEBRATES GIS DAY 2004

(Niagara County... continued from page 7)



The third and final activity actually lasted the entire week! The 'Sounds of Niagara' was a competition for all K-12 students in Niagara County and broadcasted on WLVL 1340, Radio Lockport. Robert Lord (NCCC) submitted a dozen sounds located throughout Niagara County. WLVL 1340 played one sound each day at a pre-announced time for students to identify and locate its origin. For example, the sounds of musket fire from Old Fort Niagara were played. Local and national sponsors such as United States Geologic Survey, BOCES, and the New York Geographic Alliance (<http://www.buffalostate.edu/orgs/nyga/geowaress.htm>) donated over \$12,000 worth of books, atlases, cds, GIS texts, Geography texts, maps, GIS software and other prizes for the winning schools and the students. The highlight of this competition was the support of local firms using GIS in their business: Malcolm Pirnie & Associates printed spectacular satellite images of the Niagara region while Pictometry, Conestoga Rovers Associates, Wendel Duchserer Architects & Engineers, Bergmann Associates and Ecology & Environment printed aerial photographs of the winning schools using orthoimagery flown in 2002.

It was a welcome change to raise attention to the value of Geography and the uses of GIS in Niagara and to do something for educators in the region. For more information, contact Robert Lord (Geography Instructor at NCCC) at roblord@adelphia.net. Photograph taken by Bert Brochey of the Lockport Union-Sun & Journal.



Erie County

For the third year in a row, Erie County's Office of Geographic Information Services celebrated GIS Day. Lines at demonstration kiosks told of the growing widespread interest in Geographic Information Systems.

This year's event featured demonstrations of GIS software in service daily by GIS users within County government, maps created by the County's Department of Environment and Planning (DEP) and Soil and Water Conservation District, and informative displays on Geographic Information Systems (GIS) tools.



After waiting in line, GIS Day participants viewed their parcels in both ArcMap and Pictometry. Visitors to the County's GIS Day celebration, which took place in the lobby of the County Office Building from 10 a.m. until 2 p.m. on Wednesday, November 17th, used ESRI's ArcMap to locate a parcel and to check its proximity to federal and state wetlands, floodplains, and historic districts and sites. After locating the parcel and creating a map of its surrounding area, participants could next

see what the parcel looked like from the air, using Pictometry, an aerial imaging application licensed by Erie County. Both the map and image of the parcel were passed to an html document, which was printed out, in color, for each participant.

In addition to learning about the GIS Office's capabilities through demonstration, visitors to Erie County's GIS Day learned about GIS through displays by the County's Department of Environment and Planning (DEP) and Soil and Water Conservation District. DEP's Division of Sewerage Management (DSM), frequent users of mobile GIS, created two posters. One poster explained the general basics of mobile GIS while the second demonstrated how mobile GIS assists in locating manholes. The County's Soil and Water Conservation District submitted a map, locating the projects it has undertaken throughout the County.

The Consortium display included screen shots of the many internet mapping sites hosted by the County. A display on the County's role in the Internet Mapping Consortium, contributed by the Office of GIS within DEP, educated visitors on the methods by which the County works with local governments throughout the region to forward GIS efforts. Through the Consortium, the County hosts Internet Mapping Sites for County departments, like the Department of Senior Services; local municipalities, like the Town of Cheektowaga; and for Niagara County, Erie County's neighbor to the north.

For more information about this GIS Day event or GIS in general, please contact Dale Morris or Deirdre McManus at gis@erie.gov.



NEW YORK STATE CELEBRATES GIS DAY 2004

Brookhaven National Laboratory and Long Island Geographic Information Systems Users Group Long Island, NY

On November 19, 2004, LIGIS (Long Island Geographic Information Systems Users Group) and Brookhaven National Laboratory (BNL) sponsored NYS GIS Day at Brookhaven National Lab in Upton. The event was well attended with over 100 students and adults registered. Victory Christian Academy in East Patchogue fielded the largest contingent, with twenty-five students from grades six through twelve. West Islip High School and Suffolk County Community College were also represented. Suffolk and Nassau County Executives, Steve Levy and Thomas Suozzi, respectively, issued proclamations naming the day GIS Day across the Island.

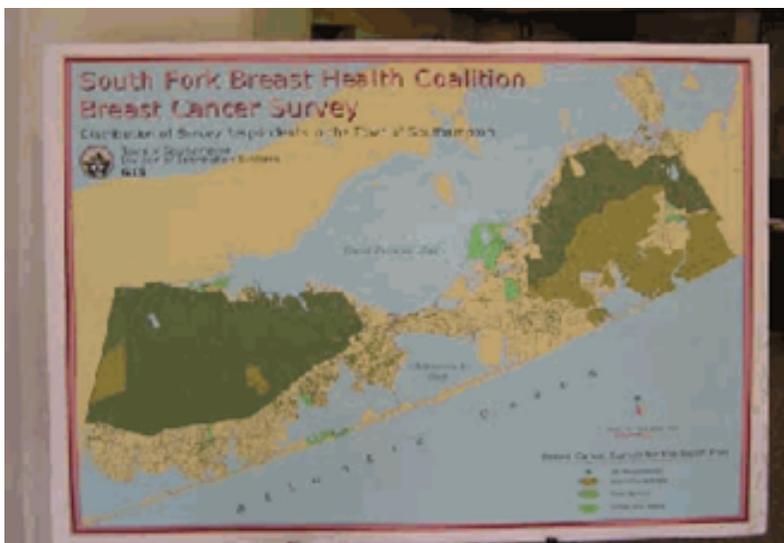
Attendees visited the Map Gallery and twenty GIS displays and activities. Exhibits ranged from the high tech, the Town of Southampton's integrated mobile GPS/GIS system for highway maintenance, to the low tech including geographic puzzles and a map projection display constructed from tennis balls and lots of glue.

Included among the various exhibits and activities were:

- A popular exhibit among both students and adults was Suffolk County Fire Rescue's emergency command center, a large van filled with communications, GPS and GIS technologies. LIGIS Steering Committee member Bob Gronenthal conducted tours of the vehicle.
- George Davis of ER Mapper led a team who showed how GIS was used to handle security during the 2004 Republican National Convention in New York City. This team will also be taking their GIS on the road again in January to Washington, DC, working the security personnel at the Presidential inauguration.
- Jennifer Higbie of BNL's Environmental and Waste Management Services Division demonstrated how the U.S. Fish and Wildlife Service used a combination of radio transmitters, GPS and GIS software to determine the travel habits and home ranges of several species on the Laboratory campus.
- Teachers were particularly interested in Michael Naughton's hands-on demonstration of where to find basic geographic data sets and how to use them in school GIS projects. Michael is a member of the LIGIS Steering Committee and works in the Highway Department in the Town of Huntington.

The day was enjoyed by all. In addition to the learning experience, new friendships were made and valuable professional connections were forged. Among the other exhibitors were the Town of Brookhaven Planning Department; Brookhaven National Lab's Energy, Environment and National Security Department; the American Society of Photogrammetry and Remote Sensing; the New York State Department of Environmental Conservation; the Suffolk County Police and Planning Departments. Thanks to the LIGIS GIS DAY Committee, Jim Daly, Mary Daum, Tony Logallo, Tom Marquardt, and everyone who helped to make this event a success!

For more information, contact Jim Daly at james.daly@co.suffolk.ny.us.



NYS Thruway Benefits from Internal GIS Website

The New York State Thruway Authority is an independent public benefit corporation responsible for more than 641 miles of roadway, including the 496-mile long Governor Thomas E. Dewey Thruway. The Thruway is the longest toll superhighway system in the United States, extending across New York State, and connecting its 13 largest cities. The Canal Corporation, a subsidiary of the Authority, maintains and operates the 524 mile New York State Canal System.

In 2000, the Authority began an enterprise-wide deployment of GIS functionality using ESRI's GIS products. Initial development focused on Desktop ArcGIS software with software installed on their own PCs. However, deployment of GIS to the vast majority of Thruway employees began in November of 2002, with the release of GISWeb. GISWeb is the name given to the ArcIMS-based suite of applications available on the Authority's internal Intranet site. GISWeb provides a wide range of applications to all 1,500 employees with a networked PC. It requires only a web-browser and eliminates the need to install and maintain specialized software on the client PCs.

Access to GISWeb is provided via a prominent link on the Authority's Intranet Home Page. A series of very short video clips, available from a help button on the main GISWeb page, give personnel the ability to easily train themselves, and provide a quick reference source for basic questions. With the flexibility of tailoring design and functionality, the GIS Team is able to create a variety of applications that share the same simplified interface. This makes for a very short learning curve before users are able to utilize the applications to serve their needs. After the initial creation of some basic templates, GIS staff can create and release new applications in a short period of time.

As with most of the transportation industry, the vast majority of the Authority's data sets are based on a linear referencing system—in this case, a system of mileposts placed along the roadway. The Authority maintains a large assortment of databases that contain a reference to these mileposts. For the Authority, the true power of the GIS software is that it allows people to display and analyze the information stored in these corporate databases on the map, using a process called Dynamic Segmentation.

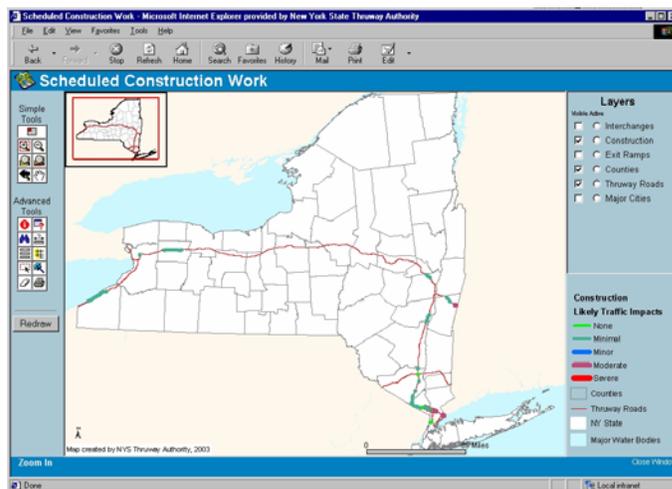
Historically, Dynamic Segmentation capabilities had been limited to the desktop arena, for users of the more robust desktop software. ESRI's Dynamic Segmentation capabilities were brought into the web environment with the advent of the ArcMap Server extension to ArcIMS 4.0. This extension provides the ability to serve web applications directly from Desktop ArcGIS map documents. This was a major step forward, as the Authority/Corporation was then able to display this crucial information in the web environment.

Employees now have a variety of applications available to them on GISWeb. They can view Thruway and Canal facilities to identify the location of toll plazas, service areas, mileposts, Canal locks, boating access, and much more. The Environmental Viewer lets users see a substantial assortment of information including wetlands, soil types, and ozone problems. The Survey Monumentation application lets staff identify survey control point locations while at their desk before venturing into the field. All GISWeb applications provide users with the ability to pan and zoom to more detailed maps (even aerial photography in some cases), and to identify and query map features.

The real benefit, however, can be seen in the GISWeb applications that display live database information using Dynamic Segmentation. The Authority has implemented an internal application that displays the

week's scheduled construction projects. Upon entering the application, employees can see where roadwork will be done, symbolized by its likely impact on traffic. Another application helps with the implementation and planning of Intelligent Transportation System (ITS) elements. These technology devices are used to facilitate improved traffic flow and management. Other GISWeb applications show the organization's Contracts Program, to help pinpoint specific highway and Canal projects outlined in the Authority's annual capital construction plan. Being able to see the information on a map, rather than in tabular form, brings the data to life. These capabilities have even extended to the Corporation's data—displaying database information to depict the development of the Canalway Trail (a system, which once complete, will be the longest multi-use recreational trail in the country).

GISWeb has been very successful and well received at the Authority. Statistics and follow-up surveys show that shortly after its initial release, approximately 20 percent of the organization was using these applications. There is an average of 400-500 users each month, with over 20,000 monthly ArcIMS requests for maps and information being satisfied. As the applications grow in scope and number, so do the users. The Authority is running the ArcIMS Application and Map Server software components their own application server. Only a very small ArcIMS component is installed on the organization's Intranet server for connectivity. This helps keep application and software development isolated to a separate server, minimizing the impact on other information technology services.



(Image 1)

As the software technology has matured, so has the functionality. With the most recent release, came the ability to recognize and process OLE DB connections to databases. This greatly expanded potential uses and provided access to a realm of more robust relational databases. This capability opened up a variety of potential applications for the Authority's web environment. The organization has developed applications that display dynamic data such as current highway incidents, and analysis of the level of service that highway ramps are providing. The organization is currently looking at developing applications to access inventory and inspection systems and to track daily maintenance work.

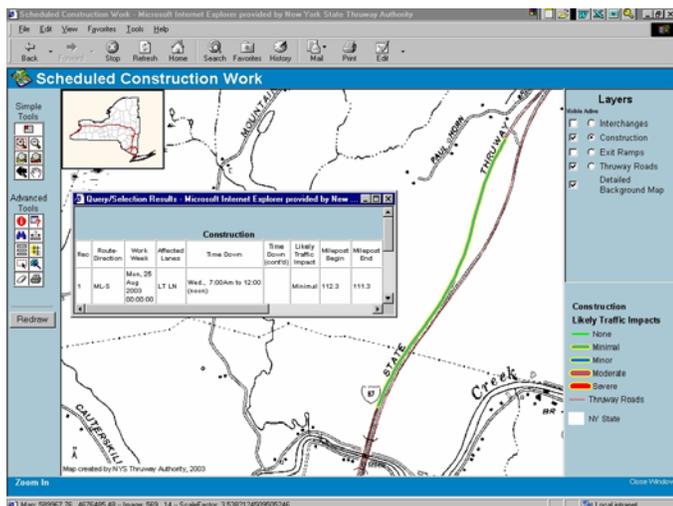
(Continued on page 11)

(NYS Thruway... continued from page 10)

The software has now reached a level of maturity that has opened up new horizons for providing information to customers. Organizations that use linear referencing and need to provide a map-based view to corporate databases are especially poised to benefit from this functionality. Through its internal GISWeb applications, the New York State Thruway Authority/Canal Corporation has successfully implemented an environment where a lightweight client can gain a great deal of information from GIS, without needing to become a GIS expert. People within a large organization can focus on getting their job done with better attention to the primary focus—analysis of the data.

GISWeb is the interface to web-based GIS functionality for Authority/Corporation staff. It is easily accessible from the Intranet Home Page and provides links to other pages from which users can launch the applications. The Help Button opens a page with sets of short instructional videos.

The Scheduled Construction Work application in GISWeb gives users a very quick overall view of the current week's planned construction projects, showing projects by the anticipated affect each will have on traffic. The information on the map is drawn from a live connection to an internal database. (See Image 1)



Users can utilize the simplified set of tools to zoom into a particular project for more detailed information. Here you can see that the lane closure is in the southbound lane and should have a minimal impact on traffic. A click to identify the project brings up further details.

For more information, contact Eric A. Herman, GISP, GIS Program Manager, New York State Thruway Authority and Canal Corporation (e-mail: eric_herman@thruway.state.ny.us or tel.: 518-471-5890.)

Who's Who in GIS

Would you like to be added to the "Who's Who in GIS" Listing? Please send an e-mail to the nysgis@cscic.state.ny.us. For more information, please visit <http://www.nysgis.state.ny.us/whoismain.htm>

Advantages of the Cooperative

- Avoids duplication of data development
- Improves existing datasets
- Saves money, reduces project time, and saves limited staff resources

NSGIC Conference coming to Rochester in September 2005

The annual conference of the National States Geographic Information Council (NSGIC) is coming to the Empire State for the first time. The event will be held at the Hyatt Regency Rochester, September 26-29. Don't miss out on the chance to mingle with leading state GIS professionals from across the country, as well as GIS leaders in federal agencies and industry. The NSGIC conference is consistently cited as one of the best GIS conferences. Come find out why!

NSGIC is an organization of States committed to efficient and effective government through the prudent adoption of geographic information technology. Members of NSGIC include delegations of state GIS coordinators and senior state GIS managers from across the United States. Other members include representatives from Federal agencies, local government, the private sector, academia and other professional organizations. A rich and diverse group, the NSGIC membership includes nationally and internationally recognized experts in GIS, geospatial data production and management, and information technology policy.

NSGIC provides a unified States voice on geographic information and technology issues, advocates State interests, and supports its membership in their individual initiatives. The Council actively promotes prudent geographic information integration and systems development. NSGIC reviews legislative and agency actions, promotes positive legislative actions, and provides advice to public and private decision-makers. NSGIC members are actively involved in the application of geospatial technologies in their member States.



For more information, visit the NSGIC website at www.nsgic.org.

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Associate Editor: John Borst
Editor: Patty Linehan

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