ILLINOIS GIS NOTES

THE NEWSLETTER OF THE ILLINOIS GIS ASSOCIATION

Enterprise GIS in Cook County

By Alan Hobscheid

Cook County, Illinois is committed to GIS as an essential tool in the management of its records and its resources. The county is currently implementing an enterprise GIS to serve the departments under the Cook County Board President, the offices of the elected officials, and the public.

Introduction

The major objectives of the Cook County GIS initiative are as follows:

- Creation of a large-scale database composed of cadastral and planimetric information that standardizes and supports all existing and future GIS procedures and applications within Cook County.
- Re-engineering of internal workflows to maximize efficiency, facilitated in part by staffing and training strategies.
- Integration and consolidation of related departmental legacy data to enhance public access.
- Establishment of data-sharing agreements with external governments and other public entities in order to extend the utility of the data and to foster reciprocal working relationships.

The major tasks of the project were initiated in 1999. The project is composed of three assignment tracks, which include data conversion and automation, system design and implementation, and application development. Significant progress has been accomplished on all three tracks at this time. A summary of individual tasks follows.

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Inside this issue...

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Misperceptions about GPS Selective Availability Reduction and Its Impact on Professional Surveys

By Christopher Stohr

Before the advent of satellite-based global positioning systems (GPS), surveying of locations was laborious work. Locational surveys required precision instruments, working knowledge of surveying methods and techniques, and diligence in performing every aspect of the work – including calculations – in order to achieve a certain level of accuracy.

Unfortunately, some came to believe that the relative ease in obtaining coordinates from a "black box" meant that the previous levels of diligence and knowledge were no longer necessary. This is untrue. Users of satellite-based systems will have no assurance that the locations computed are accurate unless they understand and adhere to proven methodologies.

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The Editor's Corner

By Larry Gunderson

Welcome to the second issue of our newsletter! We appreciate the positive feedback we received from ILGISA membership on our inaugural issue. Judging by your comments, I think we both met and exceeded expectations for our first publication.

Although many were involved in developing the first *Illinois GIS Notes,* I would like to especially single out Donald Luman, former ILGISA Board Member and Editor of *Illinois GIS & Mapnotes* for his contributions. Don not only provided the impetus to move forward with a new publication, but he was also instrumental in organizing the many ideas and concepts that we had regarding the newsletter and refining them into one coherent document. Many thanks to Don for all of his hard work and dedication.

As the principal publication of ILGISA, *Illinois GIS Notes'* sole purpose is to serve its membership with relevant and timely news and features. It is important to note that the newsletter exists not only *for* its membership, but also in a large part *by* its membership.

Your responses to the publications survey got us started. In the first issue we published the results of that survey, which are helping to guide the content of the newsletter. So far, with the first two issues of *Illinois GIS Notes,* we have covered many of the topics that you indicated were important.

One idea under consideration is to have a regular column in the newsletter devoted to a single subject area, such as "GIS & Surveying " or "GIS Software Reviews." What we need is your input. Let us know if this concept is worth pursuing and the subject(s) that you would like to see addressed.

Also, if you would like to submit an article to be considered for publication or would like to be involved in some way with the newsletter, contact an ILGISA Board Member or drop me an e-mail at gundersonl@naperville.il.us. Judging by the excellent articles that have been published in the first two issues, ILGISA's membership has a lot to offer.

Finally, I would like to note that the ILGISA Board had originally planned for publication of the newsletter to expand to three issues annually after the first year. However, our plans for the upcoming year are to publish only two issues of *Illinois GIS Notes*. One of the main reasons we have delayed expanding publication is practical – we felt a "go slow" approach would be prudent while we were still starting out and establishing format and content.

Also, the ILGISA Board is looking at other ways to increase our communications with the membership. For that reason, expanding the ILGISA web site is going to be a top priority. So look forward to more announcements in these pages regarding ILGISA's web site during the upcoming year.

Larry Gunderson is Editor of Illinois GIS Notes and GIS Manager with the City of Naperville.

Fall 2000 Conference Review

ILGISA's tenth annual fall conference attracted 230 participants and 163 workshop attendees. Survey responses indicated overall satisfaction with the format and facility, and all four workshops got high marks.

The annual ILGISA meeting included reports to the members, introduction of new board members (see page 11) and awards presentations (see photo at right).

Richard Hilton received the ILGISA Dahlberg Distinguished Achievement Award. ILGISA Service Awards went to the remaining recipients for outstanding contributions to GIS in Illinois.

The ILGISA Board and Conference Planning Committee thank all of you who attended the Fall Conference. We look forward to seeing you at the Spring 2001 Conference in Urbana on April 10 and 11.

ILGISA 2000 Award Recipients: (standing, from left) Randy Nydegger, Kevin Kothe, Jason Grootens, Mark Hocking, Troy Olson; (sitting) Alan Hobscheid, Richard Hilton, Tim

(More conference photos on page 12)

For Your Information…

Horizontal Datums in Illinois

By Case Grintjes

Q. What is the North American Datum of 1927, or as it is often referred to, NAD 27?

A. The North American Datum of 1927 is defined by a two-dimensional reference surface conforming to the dimensions of the Clarke Spheroid of 1866. Meade's Ranch in central Kansas (a triangulation station) assigned to it specific coordinate values of latitude and longitude and an azimuth to triangulation station Waldo. All other stations in the U.S. are referenced to the Meade's Ranch station.

In order to make the national horizontal control system readily available in an acceptable format to surveyors and engineers, the U.S. Coast and Geodetic Survey (now National Geodetic Survey, (NGS)) established in 1935 the state plane coordinate system. Each state has its own state plane system referenced to the Meade's Ranch station.

Q. What then is NAD 83?

A. With improvements in survey instrumentation, the inadequacies of NAD27 became increasingly evident. In the late 1970s the NGS began work on NAD 83, which was developed to place every country considered part of North America on the same datum.

NAD 83 is the horizontal control datum for the United States, Canada, Mexico, and Central America. It is based on a geocentric origin – the earth's center – and the Geodetic Reference System of 1980, which is also earth centered.

Implemented in 1986, NAD 83 better approximates the true size and shape of the earth's surface.

Q. Do I have to use the NAD 83 system?

A. No. But the NAD 83 system is more accurate and *should* be used on all new projects.

NAD 83 is a better approximation of the earth's size and shape than NAD 27 because it is based on a geocentric origin rather than a two-dimensional reference point.

In 1984 Illinois passed the Illinois Coordinate System Act (765 ILCS 225). This act officially established NAD 27 as the system of coordinates for designating the position of points on the surface of the earth within the State of Illinois. The act describes that the use of the term "Illinois Coordinate System" on any map, report, survey, or other document is limited to coordinates based on the Illinois Coordinate System as defined in the act – that is, NAD 27.

The Illinois Department of Transportation has submitted a proposal to the Illinois legislature to include the coordinate system of NAD 83 in the Illinois Coordinate System Act.

The proposal leaves the usability of NAD 27 in the act for all users who have ongoing projects on the NAD 27 coordinate system and who not wish to convert over.

The proposal has yet to be addressed. As of today the Illinois Coordinate System Act still only defines coordinates based on NAD 27.

Q. Is HARN another datum for Illinois?

A. No. The Illinois HARN (High Accurate Reference Network) is a coordinate system based on the North American Datum of 1983.

In June, 1997 the NGS, in cooperation with the Illinois Department of Transportation, used GPS to observe 242 stations (152 existing and 90 new) spaced at approximately 30-kilometer (23-mile) intervals.

The GPS data were adjusted to the Continuously Operating Reference Station network and existing Federal Base Network stations in neighboring states. All existing horizontal control in the state was readjusted to provide consistency between HARN and the existing horizontal network.

The Illinois High Accurate Reference Network provides GPS-based coordinate adjustments to NAD 83 and is referred to as NAD 83 (1997).

The new coordinate values are referred to as North American Datum of 1983, Adjustment of 1997, and are designated NAD 83 (1997). Updated coordinate information may be obtained at www.ngs.noaa.gov.

Case Grintjes is Engineer of Aerial Surveys with the Illinois Department of Transportation.

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Data Development

As noted above, the project delivers both cadastral and planimetric data. Each of these data sets to varying degrees will be constructed from digital orthoimagery based on aerial photography flown in Spring 1998.

The cadastral data will replace the current manually maintained tax maps (1:1200) and serve as the gateway to a host of data files that are organized by parcel identification numbers (PINs). It is the county's intention that the new tax maps will retain all information currently found on the present maps. However, any improvements and corrections that are by-products of the conversion process will also be incorporated.

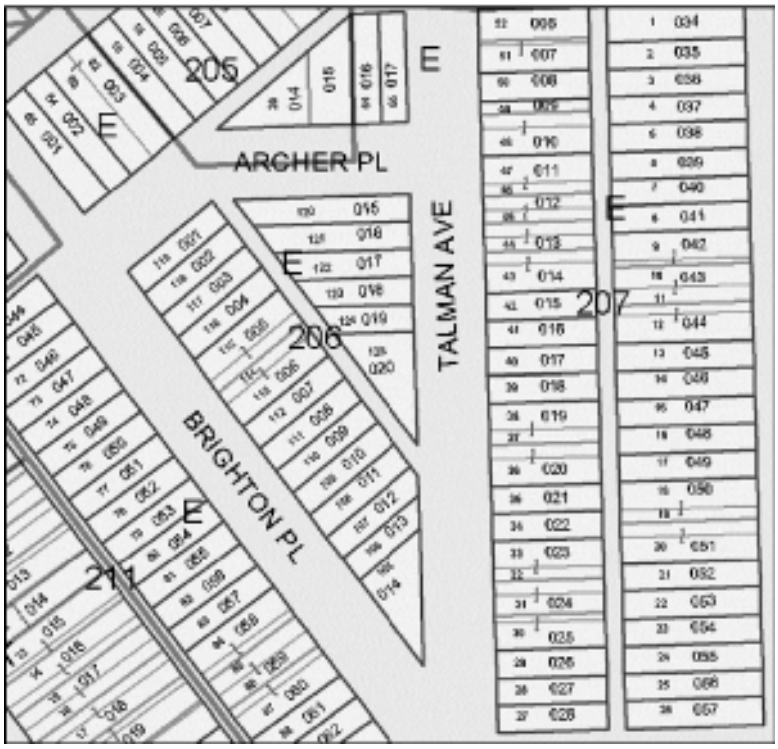
The planimetric data will supplant an existing GIS database that serves smaller scale mapping and applications. Features will include pavement edges, road midlines, hydrologic features, railroads, and building footprints in unincorporated Cook County.

Most notable of these data are the midlines, which will be attributed with address ranges captured through conflation of an enhanced 2000 TIGER file. These data will serve a large number of applications across several departments.

The data are to be delivered in ArcInfo geodatabase format. Much of the conceptual design was done using an object-oriented approach (Unified Modeling Language) to support the new data model. However, because of logistical realities, initial physical design and data deliveries are being managed in the traditional ArcInfo coverage format.

The coverage database design is virtually set. It is sufficiently

Cook County Cadastral Data



durable, especially for cadastral data, where Cook County has some of the most complex land-division and tax-mapping issues in the country. Piloting of data compilation has been successfully completed and full production has begun.

The timetable for conversion of cadastral data is eighteen months. Planimetric data conversion is on a twelve-month schedule.

Rigorous quality assurance procedures have been established to ensure the accuracy and the integrity of the data.

FGDC-compliant metadata is under development for all coverages and/or geodatabase datasets resulting from this project. Cook County is committed to full and accurate documentation as an integral part of its data-sharing strategy. All metadata will be posted to the Chicago Region GIS Clearinghouse.

System Implementation

Hardware and software acquisition has been an ongoing effort. The use of commercial off-the-shelf (COTS) products constitutes the overall philosophy for such acquisitions.

Four servers have been installed for testing. These servers support ArcSDE DB2 and the data, ArcIMS, Citrix Windows Terminal Server/ MetaFrame technology, and the DataJoiner Gateway.

Prototyping will be performed in two phases. Initial investigation is done at the vendor location to test integration, software, and data deployment, as well as application performance. Phase two is at the county site where full implementation, including integration to existing systems, will be done.

DataJoiner technology allows for flexible access to various RDBMS platforms and flat file formats,

including those on the mainframe, such that it is invisible to the user. This will accommodate the current environment for tax and assessment information.

Data warehousing is seen as a requirement for efficient and secure access to the GIS. A solution will be developed in the first quarter of 2001.

will be controlled and coordinated during the lifespan of the process.

The sequence and status of job subtasks, including a notification function, will be monitored through an electronic mail/ bulletin board system. Analysts and administrators will be able to inspect the progress of jobs through the GIS.

Cook County is committed to developing intergovernmental agreements that will help ensure standard and policies for successful decision-making.

Application Development

Although the county attempted to derive all of its GIS functionality through COTS software, it became apparent that some system requirements could only be met through the development of specific applications. Such customization was necessitated in part by the implementation of the new geodatabase model, for which COTS products do not yet exist.

Also, customization was useful in developing a product that would accommodate the idiosyncrasies of county procedures and work flow. In this way, users will query, analyze, edit, and otherwise access data via familiar methods incorporated into a standardized interface environment.

The customization task is an integrated application that includes the following tasks: division log entry, work-flow notification, parcel editing, PIN management, map production, and mainframe integration.

Jobs such as requests for land division or recorded documents will be managed such that the tasks of various users from different offices

To edit cadastral data, cartographers will utilize ArcMap functionality that specifically supports COGO (coordinate geometry) tools, management of PIN integrity and lineage, and cataloging of legal descriptions. The integrated application will also handle production of standard map products to enhance public service and enable custom mapping activities.

The application will also take advantage of the integration of the GIS to other corporate databases to perform complex queries and analysis. Cook County envisions this application as the impetus for improving work flow, integrating tasks, and enhancing procedures and policy among several offices. Prototyping for this application is set for the first quarter of 2001.

The county has also scoped objectives for applications that address Internet deployment of data and single-point information access for the public.

Conclusion

Cook County is committed to GIS as an essential tool in the management of its records and its resources.

It also is committed to developing intergovernmental agreements that will help ensure standards and policies for successful decision-making.

The county has well-established ties to the GIS group of the City of Chicago, which enables joint decisions on technical and administrative matters.

In addition, as part of the project, outreach meetings will be conducted in 2001 to coincide with the availability of data. They are planned for various venues and will target different groups, including municipalities, to broadcast the specifics of the project.

Alan Hobscheid is Cook County GIS Coordinator.

URLs Needed for ILGISA Web Site

The ILGISA Publications Committee needs your help identifying all URLs for GIS activities of agencies and governments at local, county, regional, state, and federal levels operating within Illinois.

We also want to list all educational institutions with GIS activities in Illinois as well as the pages of our sister societies throughout the state.

Once we get these URLs in order, we will consider if and how to list private firms, consultants, and individuals.

Please send any URL that you think is relevant to ILGISA members to Jim Carter at jrcarter@ilstu.edu.

If you would be willing to serve on the Web Page Subcommittee of the Publications Committee, please express your interest.

(continued from page 1)

Until recently, a substantial source of error in the single-channel GPS system has been selective availability (SA), which is the deliberate dithering of time and altitude data. While the improved, non-degraded signal will increase the accuracy for uncorrected positioning applications, it does not "level" the playing field in terms of the accuracy attainable with the different types of GPS receivers.

GPS Receivers

GPS involves two components in addition to the user: the NAVSTAR satellite system operated by the Department of Defense (DoD) Space Command control station and the GPS receiver.

Users of satellite-based systems will have no assurance that the locations computed are accurate unless they understand and adhere to proven methodologies.

Each of the NAVSTAR satellites broadcasts data over two 2MHz-wide frequencies called Link 1 (L1) and Link 2 (L2) .

GPS receivers generally fall into three categories: autonomous ($100 -$400), differential correctable ($2000-$12,000), and geodetic ($20,000). Autonomous and differential correctable (DGPS) receivers are single-channel (L1) receivers that rely upon data broadcast in the satellite telemetry to determine their location.

A geodetic receiver does not rely solely on the satellite signal. Instead, the receiver squares the signal and measures the phase of the wave. Geodetic receivers are used in pairs so that they are using DGPS to compute location.

Autonomous receivers are the least precise and accurate. The autonomous GPS receiver has a variable, unknown error of about 5 to 8 meters, with some estimating error as great as 15 to 25 meters (www.ngs.noaa.gov/FGCS/info/sans_SA). When using autonomous receivers, differential correction will always be needed to obtain horizontal precision less than a meter.

When using autonomous GPS receivers, differential correction will always be needed to obtain horizontal precision less than a meter.

Differential correctable GPS and geodetic receivers rely upon surveyed base stations to correct errors, improve the accuracy of positions, and achieve high precision. Most modern DGPS receiver systems are capable of correcting data from the L1 band to less than one meter most of the time. Geodetic receivers can realize horizontal precision within centimeters.

Selective Availability

Previously, the greatest source of non-human error in single-channel GPS systems was selective availability. A 1996 GPS error budget showed that selective availabilty contributed up to ± 35.3 meters of error 95% of the time (an improvement over the previous ±100 meters). In March, 1996 President Clinton directed that dithering of GPS telemetry be reduced over the next ten years.

In May, 2000 President Clinton directed that selective availability be reduced to zero. This reduced but did not eliminate error in GPS measurements (www.ngs.noaa.gov/FGCS/info/sans_SA).

Changes in GPS Industry

If you thought that removal of SA was 'as good as it gets' you will be interested to know that there are two additional programs aimed at improving the precision of GPS.

Under one program a coarse acquisition (C/A) code for the L2 band will be added to future GPS satellites. Most pseudorange GPS receivers only use one GPS frequency, L1. The addition of the second C/A code is expected to improve to the uncorrected positioning of GPS receivers capable of receiving both the L1 and L2 band broadcast.

So, anyone wanting to enjoy the benefits of the improved precision will want to purchase a two-channel receiver capable of receiving the C/A code for both frequencies.

The second initiative is to add a third 'civil' frequency, but that's another story.

— Christopher Stohr

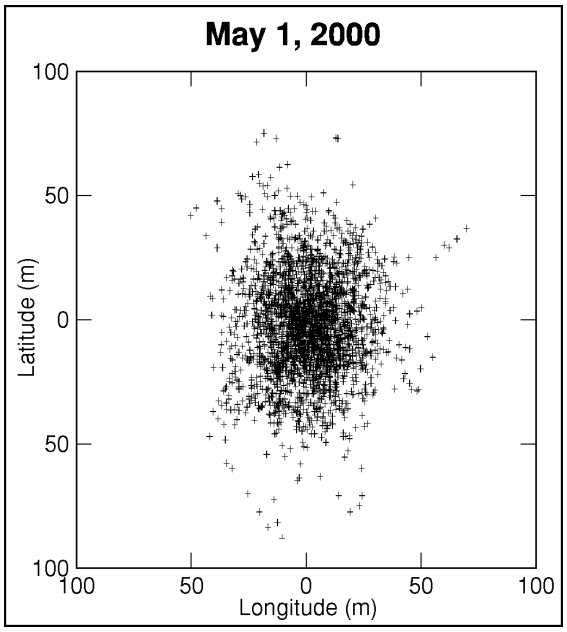


Figure 1: Positional scatter of single-station readings over 24 hours on May 1, 2000 (selective availability on)

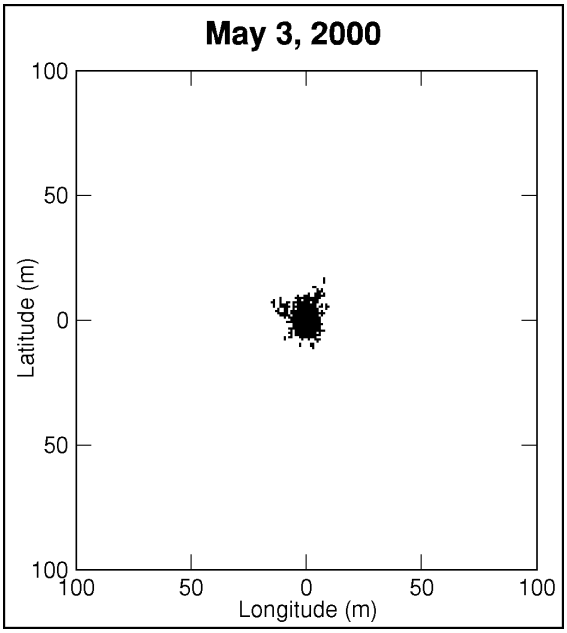


Figure 2: Positional scatter of single-station readings over 24 hours on May 3, 2000 (selective availability off)

Figures 1 and 2 compare the accuracy of GPS with and without selective availability. Each plot shows the positional scatter of 24 hours of data taken at a Continuously Operating Reference Station (www.igeb.gov/sa/diagram.shtml).

On May 2, 2000 selective availability was set to zero. The plots show that selective availability caused 95% of the points to fall within a radius of 45.0 meters (Figure 1). Without selective availability (Figure 2), 95% of the points fall within a radius of 6.3 meters (www.igeb.gov/sa/diagram.shtml).

Summary

The increase in attainable accuracy provided by the removal of selective availability makes hand-held autonomous GPS more useful to the general public for such applications as car navigation, Enhanced 911, and recreational activities. But it does not provide the accuracy needed for most measurements made for land surveying, engineering, and scientific uses.

Some individuals mistakenly believe that the reduction of selective availability to zero means that autonomous GPS receivers costing less than $200 will be as accurate as more expensive differential DGPS receivers. This is untrue. Without differential correction, it is impossible to determine the error of a hand-held autonomous GPS.

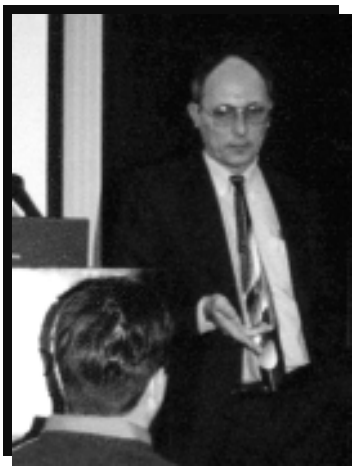
The removal of selective availability reduced but did not eliminate error in GPS measurements.

Even without the intentional signal degradation of selective availability, the actual error of autonomous GPS will vary with atmospheric conditions and the instantaneous geometry of orbiting satellites. Real-time or post-processed differential correction of GPS measurements will continue to be needed for most scientific and professional uses.

Dr. Christopher Stohr is Associate Geologist with the Illinois State Geological Survey.

In the Next Issue...

- *Municipal Utility Case Study*
- *2000 Census*
- *More on the ILGISA web site*



Mapping the Earth in 3-D

A conversation with Paul F. Dye

NASA's Mission STS-99 used a radar interferometer to map a consistent digital terrain model of the earth's land surface from 60° north latitude to 54° south. In 159 revolutions around the earth, the mission captured ". . . a data set that will be used for decades."

Paul Dye is a Flight Director with NASA's Johnson Space Center in Houston. In addition to his work on the Spacelab and the Orbiter, Mr. Dye has been involved with all shuttle/Mir missions and the Hubble telescope.

He was Lead Flight Director for Mission STS-99. Mr. Dye's lifelong interest in maps inspired him to represent NASA at the fall ILGISA conference. His background as well as his keynote address on the Shuttle Radar Topography Mission (SRTM) generated considerable interest and questions, some of which we address here.

Where did the impetus come from to create a consistent, 3-D image database model?

Well, in a way, you folks in the GIS world would be better off answering that than I would!

But when I was assigned to this flight, it quickly became apparent to me that creating a single consistent topographical database of the earth was going to be one of the most significant and useful things that we have done with Shuttle – or earth science – in a long time.

This mission was the result of one of those remarkable coincidences of a capability showing up as the same time as a need. The folks at National Image & Mapping Agency (NIMA) were scratching their heads over how they were going to create this database, while the Radar Imagery folks at Jet Propusion Lab (JPL) were trying to figure out what they could do next with their existing shuttle-qualified hardware and new interferometry techniques. Some bright fellows saw that this was a perfect marriage, and the mission was off and rolling.

One of the best quotes I heard was from the SRTM Chief Scientist, Mr. Mike Kobrick, who sold the mission by telling people that "I could go to my desk, pull out a CD-ROM, put it in my computer and see a complete 3-D map of the entire planet ... unfortunately, that planet isn't Earth!".

In fact we actually had better maps of Mars and Venus, due to previous JPL radar mapping, and it was time to get caught up with our own planet.

When and how will the data be made available? Will it be made available to the public?

As I understand it, the processing time for the complete data set was expected to be about two years. Since the mission landed in February of 2000, that would mean that the data should be out in early 2002.

Now, you'll have to check with NIMA or JPL to see how the data reduction is going, but I am confident that those folks are going to get the job done. It is also my understanding that the general database will be available to anyone that has a need for it – they will simply have to go to NIMA to get it.

How did you become involved with the SRTM project?

As a Space Shuttle Flight Director, I get the chance to fly a lot of interesting payloads and missions. There are about eight Orbit Flight Directors at any one time, and we each are assigned to lead particular missions, as well as flying the second and third shifts on other flights during the year.

SRTM came along as I was finishing up the long series of Shuttle/Mir missions and looked to me to

be a very interesting and exciting flight, so I asked for the assignment.

It was a nice "bridge" mission for me between the Mir flights and the new International Space Station support effort, and I was glad that it all worked out. I had a wonderful time and learned a tremendous amount by leading the SRTM flight.

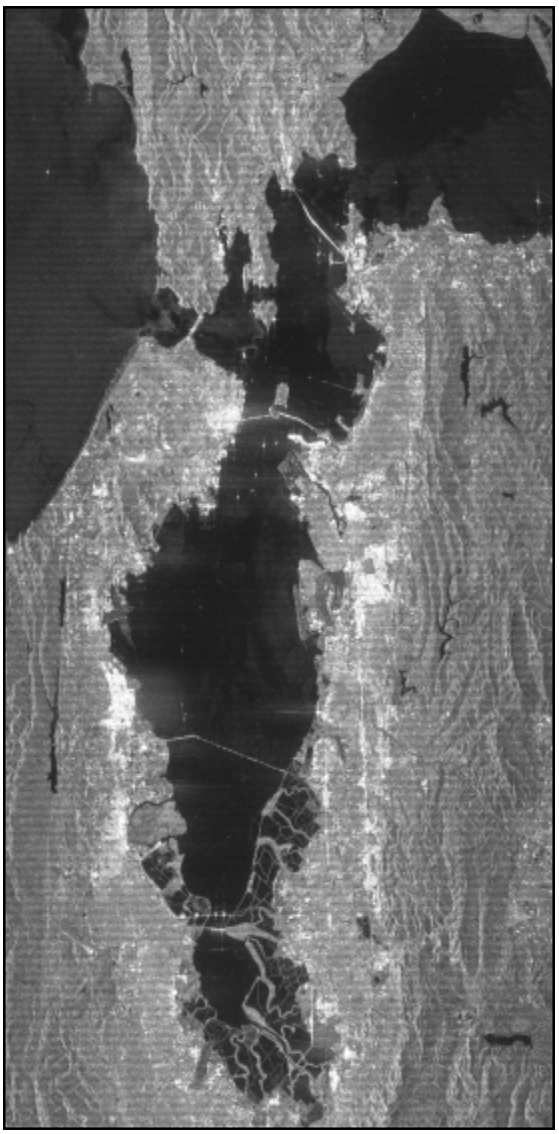
What was the biggest challenge you faced with this mission?

From the very outset, we realized that this flight was extremely unforgiving in two areas – time and consumables.

We knew that in order to get the entire earth covered, we had to be mapping by 12 hours into the flight, and had to keep doing it continuously – with no gaps – until just before entry day. This meant that we had to be literally perfect in execution. Any bobbling or problems would lead to gaps in the coverage. Staying perfect for ten days is a very tall order, but the teams came through and managed to pull it off.

The other difficulty we faced was having enough power and propulsion consumables to complete the mission. We needed sufficient propellant to continuously tweak our low-altitude/high drag orbit. We also needed enough cryogenic oxygen and hydrogen to provide power for the energy-hungry radar.

As it turned out, we had to go to extraordinary lengths to make the flight work, and we were down to our last final percent of each when we ended the mapping. It was as about as close as you can get to having nothing left over. That's a challenge!



The San Francisco Bay area is shown in this portion of a radar image from the Shuttle Radar Topography Mission. The San Andreas fault is seen on the left side of the image as the straight feature filled with dark linear reservoirs (www.jpl.nasa.gov/srtm).

What is your next activity?

I am now involved in both of the shuttle flights that are assembling the new International Space Station (ISS), as well as spending time as the Flight Director for the ISS itself.

In the immediate future, I am preparing a logistics mission for next June, which will change out the ISS crew and bring up a number of large experiment packages to start the real science mission of the station.

I am also working on the development of the next generation Lifeboat for the ISS, known as the Crew Return Vehicle. We will be flying a test version of this Lifeboat in 2002, taking it up in the Shuttle and allowing it to fly a complete re-entry and landing. Between Shuttle and Station, I'm keeping busy!

Does NASA have plans for future involvement with imagery and mapping?

I have no doubt that the smart folks out at JPL are, as we speak, cooking up something to top what we have already done.

Space flight gives us a tremendous capability to look back at the earth, and by so doing, better the lives of everyone on the planet. And that, after all, is what the space program is all about – creating a better future for everyone.

Interview conducted by Nancy Place, Managing Editor.

For information on the SRTM mission, imagery, and data products and availability, visit "The Mission to Map the World" at www.jpl.nasa.gov/srtm.

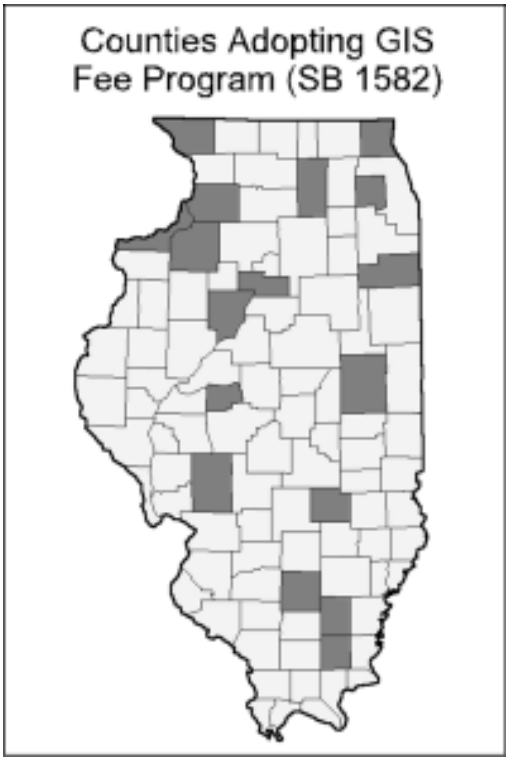
ILGIC Establishes Local Government Consortium

By Sheryl Oliver and Bill Faedtke

The Illinois Geographic InformationCouncil (ILGIC) organized a Local Government Consortium to assist, standardize, and encourage adoption of a new funding mechanism for county-level GIS programs.

This article is a follow-up to Richard Hilton's lead article in the inaugural issue of *Illinois GIS Notes* on the recent GIS funding legislation.

A unique new funding source for Illinois county-level GIS became a reality in June of this year. The law leaves it up to each county to decide whether or not to raise funds for GIS through a document surcharge program. While a number of counties in the state have implemented GIS with great success, there is a larger number of counties where funds have been the limiting factor in GIS development.



As the legislated statewide geographic information body, ILGIC organized a Local Government Consortium in August to aid counties that have implemented the new funding mechanism and to find ways to foster adoption in all Illinois counties. The consortium is co-chaired by William Faedtke, Manager of GIS – DuPage County, and Tim Oliver, Director of GIS – Rock Island County.

The consortium plans to provide a venue to facilitate GIS implementation; prepare practical guidelines for standards, metadata, and data access and distribution; and explore additional funding mechanisms and programs for those counties that will accrue limited resources from the collection of document fees.

In August the consortium sent a letter to each county board chairperson requesting designation of a representative to work with ILGIC on developing standards and coordinating the use of these standards with local, municipal, township, and other interested agencies in the county. The letter also requested acknowledgment as to whether or not the county board has implemented the new surcharge program.

The first wave of responses is depicted in the figure below. Although initial response to the new funding mechanism was minimal, it is encouraging to see downstate counties activating the program.

In October a small workshop was conducted in DuPage County to address GIS standards and build a draft working document. Additional workshops are planned to include consortium representatives.

In November Bill Faedtke requested ILGISA Board assistance in working with ILGIC to develop a basic set of GIS standards for the State of Illinois. The emphasis will be on Public Safety, which includes addressing database standards; and Property Rights, which includes Public Lands Survey System preservation and GIS accuracy standards.

The board agreed to present the request for assistance to the ILGISA membership and discussed the idea of a GIS standards workshop at the Spring 2001 conference.

Development of the Local Government Consortium is timely in light of the evolution of geographic information technology throughout Illinois.

Please circulate this newsletter article to the appropriate members of your county board, or contact Sheryl Oliver at oliver@dnrmail.state.il.us or 217-785-8586 for more information about the funding bill or the consortium.

Sheryl Oliver is GIS Coordinator for the Illinois Dept. of Natural Resources and ILGIC User Advisory Committee Chair. Bill Faedtke is Manager of GIS – DuPage County.

You can learn more about ILGIC at dnr.state.il.us/ orep/ilgic/toc.htm.

Board Member Profiles

ILGISA board members are elected from the membership and serve two-year terms on the eight-member board. Robert Krumm and Ruth Anne Tobias took office at the fall conference, filling the seats vacated by Donald Luman and Don McKay.

ROBERT KRUMM is a Geologist at the Illinois State Geological Survey (ISGS) in Champaign, Illinois. He manages the Geospatial Analysis and Modeling Section, a team of geologists and GIS and Database Specialists who are responsible for the majority of GIS activities within the agency.

Rob has worked with GIS technology since 1983, and except for a two-year stint working for ESRI, all of his professional work experience has been at the ISGS. His experience includes project management, database development and data integration, instruction on the use of GIS technology, and application of GIS techniques to support geologic mapping, analysis, and modeling. He holds BS and MS degrees from Southern Illinois University.

Rob has been a member of ILGISA for several years, and he has participated in many ILGISA meetings as a presenter and session moderator. He organized and helped to present the workshop "Geographic Information System Implementation Issues: Managing GIS Within an Organization" at ILGISA meetings in 1996 and 1997. Rob was the recipient of an ILGISA Service Award in 1999.

Rob believes that ILGISA provides an excellent educational and networking opportunity for everyone working with GIS technology in Illinois. He is particularly interested in workshops and presentations that address specific issues identified by ILGISA members.

RUTH ANNE TOBIAS has been a research associate since 1981 at the Center for Governmental Studies at Northern Illinois University, where she received her MS in Geography.

Ruth Anne has had extensive experience in public data management for community and economic development and spatial analysis activities. Her office has been part of the Illinois State Data Center cooperative program with the U.S. Census Bureau since the 1980 Census. Another facet of her experience includes work with computer mapping and GIS for community and regional analysis.

Ruth Anne's current responsibilities include development of the "Rock River Valley Economic Index," oversight of the quarterly "Rock River Valley Economic Outlook Survey" of more than 500 businesses in the Rockford Metropolitan Area, oversight of the quarterly "DeKalb County Economic Outlook Survey," and production of the annual "Northwest Illinois Market Facts Data Book" for the 11 counties west of Boone and DeKalb.

Ruth Anne has been involved with *GIS in Illinois* conferences since the first one was held in DeKalb in 1990. She continues to be active in planning and participating in conference activities. Her involvement has included program development, presention of workshops and papers, and management of the poster exhibits. Most recently she served as exhibits coordinator.

Ruth Anne has a strong interest in promoting the use of GIS in state and local government and in facilitating the sharing of knowledge and experience in the field among students, practitioners, and policy makers.

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Calendar of Events

February 27-March 2
WLIA Annual Conference
LaCrosse, Wisconsin
www.wlia.org

March 4-7
GITA Annual Conference
San Diego, California
www.gita.org

April 10-11
ILGISA Spring Conference
Urbana, Illinois
www.cagis.uic.edu/ilgisa

May 6-8
Technology-Making Public Works Better, *(sponsored by URISA)*
Rosemont, Illinois
www.urisa.org

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