

Massive land information program shifts proposed

Budget would empower DOA and fund WLIS

by Bob Gurda & Ted Koch

In a bold move sure to draw plenty of attention from followers of Wisconsin's nationally recognized land information program, Governor Scott McCallum's first state budget includes provisions that, if enacted, would make the largest changes to the program since its inception in 1989.

Among the changes would be:

- dissolution of the Wisconsin Land Information Board (WLIB) and transfer of its authority (e.g., administrative rules to approve modernization plans and grants) to the state's Department of Administration (DOA);
- allocation of much of the WLIB's grant program monies to (1) begin the funding of the proposed Wisconsin Land Information System (WLIS), and (2) increase the funds available for Comprehensive Planning grants under the state's relatively new Smart Growth Initiative;
- lifting of the current 2003 sunsets of both the Land Information Program and the Wis. Land Council, thereby making the document-filing fee permanent.

To offset the loss of land information grant funds, counties would collect and retain an additional \$1 per document-filing transaction. In addition, the state's Department of Administration (DOA) would be given the authority presently vested in the WLIB (e.g., to approve land information modernization plans and grants).

A WLIB in different clothes?

The WLIB would, in limited respects, be reconstituted as a land information technical advisory group to the Wisconsin Land Council. The Council would recommend policy on land information, WLIS, and land use planning to DOA. The Council would be enlarged by three members to better represent the land information community.

The advisory group would include a representative of the University of Wisconsin and the State Cartographer, plus others appointed by the chair of the Land Council (currently Tim Hanna, mayor of the City of Appleton).

Funds for WLIS

To begin building WLIS, the proposed budget (for the two years beginning this July 1) calls for allocating \$623,500 annually from the land records filing fees collected by counties and forwarded to Madison. DOA officials indicate their intention to "outsource" most of the WLIS work.

Comprehensive planning angle

Another \$500,000 annually (also derived from the filing fees) would be directed toward Comprehensive Planning grants. The first such grants were awarded recently from \$2.5 million in funds (\$1.0 M from federal transportation sources and \$1.5 M from state General Purpose Revenues) which would be continued for the next two years. The \$500K would augment this fund.

The planning grants may be used to develop GIS data, much as WLIB program funds have been used for over a decade.

What does it all mean?

These changes, taken together, would dramatically reshape the state's land information program and make the DOA more directly responsible for policy and compliance. DOA staff say that in order to move forward expeditiously on WLIS there needs to be more flexibility vested in the agency.

Total recording fee collections have averaged \$8.1 M per year recently. The \$1 fee increase would boost that to \$9.45 M of which \$6.35 M would be retained by counties, approximately \$300 K would be returned to counties collecting less than \$35,000, \$415 K would support the continuing WLIS soil mapping initiative, \$1.12 M would support comprehensive planning grants and WLIS, and \$400K would be allocated for

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DOA's Office of Land Information Services administrative costs.

The WLIB's contribution-based grant program would suffer dramatically from lack of funds and might disappear—simplifying life for a county, since there would no grant applications to submit. However, the additional \$1 (per transaction) retained by counties would offset the loss of the grant dollars. Funds for statewide initiatives might only exist in some years when fee collections are high.

What's around the corner?

The governor's budget will be considered by the state legislature over the next 4 months (or more) and changes may be made to the land information language before it is passed. Then, the governor can exercise his powers of line-item veto.

We will continue following this story. Check the "News" section of our website for updates.

WLIB News

by Ted Koch

Since the previous issue of the *Bulletin*, the Wisconsin Land Information Board (WLIB) met on January 11 in Madison. The WLIB's next meeting will be held on March 1 in La Crosse in conjunction with the Wisconsin Land Information Association's Annual Conference.

Officers for 2001 elected

At the January 11 meeting, the Board conducted its annual election of officers. For the third consecutive year, Ted Koch, State Cartographer, was selected as Chair. Also elected to a third term as Vice-Chair was Fred Halfen, Regional Vice President of Ayres Associates' Madison office. Elected to a second term as board secretary was Tom Ourada, Executive Assistant at the WI Department of Revenue.

Strategic assessments advance

As discussed previously in the *Bulletin* (see the Summer 2000 issue), the Board is in the process of conducting a strategic assessment of the Wisconsin Land Information Program's Foundational Elements. The assessments, compiled from county land information plans, surveys and other sources, provide a summary profile of each element.

At its January 11 meeting, the Board discussed the summary recommendations for two Foundational Elements: Public Access, and Land Use Mapping. For Public Access, one of the major recommendations was to form a study group to identify key public access legal questions, and identify a plan to obtain authoritative legal opinion on these questions. In response to the recommendation, WI Department of Administration (DOA) Board Representative Tom Solberg reported that the DOA will chair the study group, and will proceed with forming the group in the near future.

Regarding the Land Use Mapping element, recommendations were made asking the WI Dept of Revenue (DOR) to assume custodial responsibility for this element, and to identify and evaluate various aspects of collecting, classifying and mapping land use. In its response to the Board at the January 11 meeting, Tom Ourada, DOR's representative to the Board, said that while DOR was not completely comfortable assuming responsibility for all the assessment's recommendations, they were willing to take the lead. Tasks would include defining DOR and partner roles and responsibilities and recommending a land use database and mapping products compatible with a variety of public and private needs.

Grant deadline passes

The 90-day period for counties to submit year-2000 project grants to the WLIB ended on January 31st this year. Two grant categories were available for this period: Contribution-Based and Strategic Initiative. The Contribution-Based,

which accepts a wide range of project applications, has \$1.2 million in available funds. The Strategic Initiative, for which a maximum of \$100,000 is available, is limited to metadata related projects.

WLC News

by Ted Koch

The Wisconsin Land Council (WLC) last met on January 26 in Madison. The next meeting is scheduled for March 22, with the location unknown at this time.

Council approves Planning Grants

At its January 26 meeting, the Council (WLC) awarded nearly \$2.5 million to applicants of 71 planning grants involving 150 Wisconsin communities. The grants will help communities prepare comprehensive land use plans to meet the requirements of the "Smart Growth" legislation which was passed into law as part of the state's 1999-2001 biennial budget.

In total, the WLC received 103 applications requesting over \$3.4 million. Many of the applications involved multiple communities. Applications were reviewed by five four-member teams. Team members for the most part represented the WI Depts. of Administration, Transportation, Natural Resources, and University of Wisconsin-Extension. Only one member represented the private sector, and one other was from the WI Dept of Agriculture, Trade and Consumer Protection.

Grant awards amounts approved by the WLC ranged from a high of \$504,000 to Portage County to a low of \$4,625 to the Town of Manitowoc Rapids. Thirty of the 71 grant awards were for \$10,000. The Portage County application included every city, village, and town in the county.

Following the signing of contracts between DOA and the grant winners, grant funds are expected to be available by June 1, 2001.

Elevation data: time for a new model

by Ted Koch

Sometimes it helps to take a step back, take stock, and reconsider where we are headed. Specifically, I believe that it is time to take that approach to our state's elevation data resources.

A growing realization

Late last summer I convened about fifteen people whom I considered to be experts to discuss some of the technical trends affecting several of the data elements in the state's Land Information Program. At the time, Ben Niemann, David Moyer, Jerry Sullivan and I had begun work on analyzing the current status and condition of the WLIP Foundational Elements, and we had quickly come to the conclusion that in some areas we needed more background information. We labeled this effort a strategic assessment of the program's elements which I reported on briefly in last summer's *Bulletin*.

The half-day meeting was organized as three segments, one to discuss representation of the Public Land Survey System, and another to discuss improvements planned to the vertical survey control network by WI DOT under its Height Modernization Program. A third portion focused on terrain data, on the assumption that an improved store of this kind of information would have great benefits. Typically, computerized representation of the land surface is either a digital elevation model (DEM) or a digital terrain model (DTM).

Height Modernization as the backbone

The objective of DOT's Height Modernization Program is to build a three-dimensional, highly accurate geodetic control network statewide to serve all survey needs. It would integrate recent investments in the HARN with a major improvement in vertical control. DEMs and DTMs, which are tied to the control network, form the building blocks for digital orthophotos and other data types such as elevation contours, so there is a strong link between two of the topics we discussed.

Where we are; where we can go

We wanted to gain some perspective on how evolving technology and emerging applications are changing both what elevation data can be collected as well as what demands for data can be expected. Elevation data issues include accuracy, completeness, age, and usefulness.

DEM data (30-meter point spacing in a regular grid) exists statewide, and is used as the terrain model for the federally produced DOQQs (digital orthophoto quarter quads). On the other hand, DTM data, which is collected in an irregular and sometimes denser pattern than the DEM data, forms the foundation for most of the township-based digital orthos in the state. Sometimes, DTM data is of an accuracy and density that it is suitable not only for building orthophotos, but also as a source for the generating topographic contours, analyzing flood potential, and identifying the steepness of slopes.

Quality yields utility

Our group of experts strongly made the point that high-quality terrain data has many applications and a long life since, other than along transportation routes and various land developments, the ground surface doesn't change appreciably in Wisconsin over periods as long as several decades. These experts also were quick to point out the down side of the current state of terrain information, it being a mixture of data types created to varying standards of accuracy and format, much of which is unsuitable for the needs of detailed analyses and applications.

Investing for the future

Collectively, the group enthusiastically supported the idea that an accurate statewide terrain model—varied in detail in different areas depending on application needs—would be a most worthwhile investment. The point was made repeatedly that once such a data set was collected, its long-term benefits would far exceed the initial cost of creation.

A similar argument was made (and heeded) decades ago when Wisconsin decided to partner with the U.S. Geological Survey to produce 1:24,000-scale topographic maps statewide. Those maps have generated a myriad of benefits, and their topographic contours are the source for the 30-meter DEM products we currently have. However, today those DEMs do not adequately support many needs, and newer technologies offer the promise of much higher quality.

Task Force will study and report

As a result this meeting, along with other information collected through our strategic assessment process, we are forming a temporary Elevation Data Task Force with the goal of outlining a long-term statewide strategy for elevation data. The task force will be led by David Moyer, our National Geodetic Survey State Advisor (who graciously accepted my invitation to be chair). The group has a number of charges:

- Identify and quantify existing elevation data statewide, i.e. what currently exists, how good is it, and what can it be used for?
- Identify the range of short- and long-term elevation data needs in both the public and private sectors.
- Analyze and evaluate relevant elevation data activities/programs in other states, and in federal agencies.
- Evaluate data collection technologies; e.g. GPS, photogrammetric, LIDAR, etc. for accuracy and cost-effectiveness.
- Outline a statewide elevation data strategy; i.e. what exists that's usable and needed in various areas for identified applications.
- Outline cost/benefits
- Identify financing options for a statewide approach
- Identify potential maintenance strategies and data custodians
- Identify potential partners

Task force members will be recruited within the next month, with the first meeting to follow soon thereafter. We'll keep you posted on its progress.

Clearinghouse Connection



the sum of the parts: a new framework

Metadata Collectively Documents Spatial Framework Diversity & Issues

by AJ Wortley

My role in metadata training and consulting has given me a unique perspective. In the process of helping people figure out how to document their state and local agency spatial data sets, I have seen how their resulting metadata opens up a vast range of data content, methods, and policies that now can be accessed by other people.

Individually, these metadata documents serve a function to both the producing agency, be they data producer or custodian, and the end-user, technical and novice alike. This simple function could be summarized as collecting, archiving, and dispersing useful information about a resource.

Lessons from WISCLINC

Being the daily support for the Wisconsin Land Information Clearinghouse (WISCLINC) has allowed me to interact with many metadata/data producers. The clearinghouse acts as a repository for the metadata itself, melding it into an on-line catalog.

Lately I have been compiling a summary of the SCO's work over the last few years on WISCLINC, as the wrap-up to our maintenance contract for this on-line resource. Through this summarizing process I have noticed more than ever that the clearinghouse contents *as a whole* allows for new function and value to emerge. That is to say, there is an additional value gained by everyone who contributes to the mass of metadata.

This larger community value is an emerging shape of a state and local spatial data collection—sometimes called “framework”—all of which is projected to coalesce under the title of a Wisconsin Land Information System (WLIS). Summarizing all the metadata in WISCLINC begins to document the diversity and some key issues in GIS data development in the state. However, that diversity is only representative of current participants.

Sharing a common language

One emerging part of the Wisconsin spatial data framework is the language or nomenclature itself. Our choice of words and associations can be profiled into useful semantic resources—including a WLIP Thesaurus, or common Keywords or Theme Index lists. Such formal resources would serve both the data customer in understanding Wisconsin GIS data and the producers in providing consistent descriptions or metadata. But even with a compilation, people can find and adopt ideas from others simply by browsing.

Why not link to a common practice?

Another portion of the framework is the emergence of common methods for data design, collection, and compilation. This may be a result of standards, software platform, or time-honored ‘best practices’; but regardless the cause, the ability to accurately describe these methods and make it available in a single location (on-line) is approaching.

Creating metadata becomes easier when much of what you need to describe exists elsewhere and all you need to do is point to the resource. Examples in a regional or local context would include data dictionaries or process guides, data catalogs or indices, or common naming conventions or data models. A new example of this information in compiled form is the DNR's newest recently-released *Locational Data Standards*.

Demand drives policy creation

A final strongly emerging issue in the spatial framework is policy. Again, metadata, with its common data fields, allows for direct comparison of local, regional, and state policies relevant to the data set. The number and variety of new regulations regarding digital resources is just beginning to balloon as legislation catches up with the explosion of on-line capacities.

Policies may address data access, distribution, liability policy, suggested use, disclaimers, etc. The collection of these bodies of local, regional, and state policy and their evolution will play as much a part in the technical configuration of a distributed statewide system as any factor.

What this means for WLIS

At the same time that WLIS planning is being funded and undertaken, the data, the resources, the policies are *themselves* defining, driving, and deriving a framework necessary to incorporate the largest number of varied resources into a common application arena and discovery framework (such as WLIS). This continued development of this implicit framework means that the specific design for WLIS will need to accommodate this spatial data.

But, metadata is the prominent vehicle by which this implicit framework is formed, and the framework will only be as good as its representation by way of metadata. Put simply, to be represented, one must contribute.

Raised relief in chocolate...

Wisconsin portrayed in edible 3D

by Bob Gurda

Molded chocolate may be popular for Valentine's Day, but anytime all year you can get a slab of chocolate molded to show the landforms of your favorite state or major city. AmeriCandy offers these confections through the mail from its headquarters in Louisville, Kentucky.

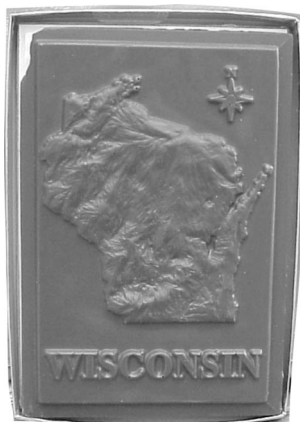
AmeriCandy sent us a sample showing Wisconsin in raised relief. The rendition of the state's landforms is quite good considering the small scale, although like most raised relief maps the vertical scale is exaggerated quite a bit. The confection appears to be manufactured by the Topographic Chocolate Company in Denver, CO.

After examining the cartographic qualities of our sample, and capturing a few photographs, we conducted individual taste tests. The sentiments of the SCO's staff are that the chocolate is fairly ordinary in quality, most like other molded chocolate such as is reputed to be delivered by the Easter Bunny.

Other locations in 3D, too

If a state map seems too tame, you can choose from alternatives such as Manhattan, Mount Fuji, Maui, the Marianna Trench, Mexico, or the World. See the full list at www.americandy.com/topmaps.htm or phone 502/583-1776.

Each 6-ounce piece comes in box (4.5 x 6.5 x 1.5 inches high) with a clear lid on which a simple map is printed to help identify major features in the chocolate below. The price is \$9.95 plus shipping.



ACSM honors as "Best Thematic Map"

Wisconsin Land Cover wins award

by Bob Gurda

WISCLAND's map of the state's land cover has been selected for an award by the American Congress on Surveying and Mapping (ACSM). The 2000 competition, the 28th staged by ACSM, will culminate with an awards ceremony on March 18th in Las Vegas during ACSM's Annual Conference.

Wisconsin Land Cover will be honored as "Best of Category—Thematic". The map, a by-product of WISCLAND's statewide land cover database, was designed by a multi-agency committee. Copies of the 42" x 50" map are available from the SCO for \$10 plus tax/shipping. See our website for an order form, or we can take credit card orders over the phone.

Price for historic map raises eyebrows

Middle West map value soars

...as reported recently:

Wall maps seem to be making good prices of late, condition notwithstanding, and one U.S. regional map that made rather more than expected the Heritage Map Museum: Lititz sale of last September was John Farmer's *Map of the State of Michigan & Wisconsin...* of 1861. As the full title explains, the map, which measures six by five-and-a-half feet, embraces "...a Great Part of Iowa, Illinois & Minnesota; and the Whole Mineral Region with Charts of the Lakes..." and it incorporates eight inset maps and two tables. A waterstain affects the left-hand third of the map, but complete with wooden battens and ribbons it brought a bid of \$2,530.

(source: *Mercator's World*, Jan/Feb. 2001)

Scanned topo maps on the web

Topozone offers easy viewing

by Bob Gurda

A new source for viewing Digital Raster Graphics (DRGs, or scanned USGS topographic maps) has popped up on the web. Topozone (www.topozone.com) is a breeze to use, and offers larger window views than some similar sites.

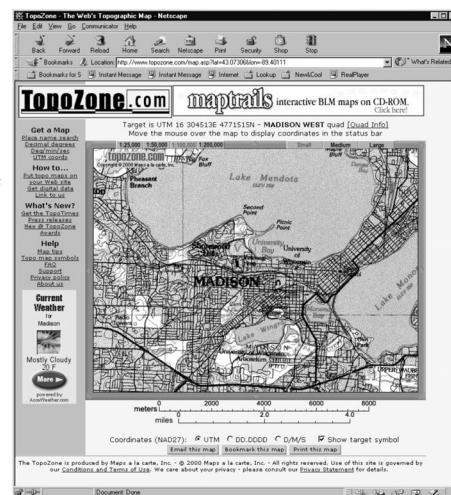
You can search by place name, latitude/longitude, or UTM coordinates.

Once your selected view comes up in your web browser, you can position your cursor on the map and see its coordinates displayed instantly in UTM, decimal degrees, or degrees/minutes/seconds (referenced to NAD 27 in each case).

At maximum zoom and largest window size, I could see about 4 x 4 miles of map coverage on my computer monitor, and at minimum zoom and largest window size, about 28 x 28 miles. The images appear seamless, and are all produced from the most-detailed (1:24,000-scale) DRGs.

In addition, it is easy to send an e-mail from your computer that includes a URL that lets a recipient see the DRG view you have selected, including a target symbol for a point of interest.

All in all, Topozone is a nice site, easy to use, and free!



...but how to keep it under control?

News, news everywhere...

by Bob Gurda

Newspapers, newsletters, TV, e-mail, web sites — who doesn't feel overwhelmed by the flood of information sometimes? "Trying to drink from a fire hose" does seem to be an apt term more often than not.

The answer may be in filtering what is available so that you receive only what you really need to absorb. Here's where specialized e-mail lists and web sites can come in very handy. We use several of these free services here at the SCO to keep informed, although sometimes we still feel overwhelmed on busy news days.



Daily news is one option

Several of us have signed up for the daily GIS/CAD news feed from *Spatial News*. This comes as an e-mail with excerpts and links to a web page; typically there are 10-20 stories each day! An archives is available.

The information collected through the *Spatial News* is mostly news releases from business and government sources. As a result, you have to "read between the lines" quite often. For a peek, look at *Spatial News* at spatialnews.geocomm.com/dailynews/. There is also a monthly web-based "magazine."

Weekly may be easier to handle

The GIS Café web site (www.giscafe.com) has a variety of offerings including a daily (or weekly, you get to choose) news feed. We haven't been receiving news through this mechanism, so can't comment on it. At the same web site you can read their monthly on-line magazine *GISVision*.

For a more digested source of information, try the *GIS Monitor* from TenLinks. In addition to commentary that helps provide context and insight, this service collects stories and sends you e-mail only once a week. A recent bonus was a collection of the top GIS stories of 2000. Check out the *GIS Monitor* at www.tenlinks.com/mapgis/.

It's easy to turn off the spigot

If you sign up for these kinds of news services, and then find that you can't keep up, or that your incoming e-mail stream becomes too much to handle, it's simple to cancel your subscription.

Wisconsin's historic site data headed to the Web

SHS GIS to go on line this summer

by Anna Weitzel

The Wisconsin State Historical Society (SHS) hopes to have its GIS of historic and archeological sites available via the Web by summer 2001. The data will include the locations of past archeological surveys, more than 30,000 archeological sites, and 100,000 notable structures around the state.

With a grant from the Wis. Department of Transportation, SHS hired the Madison firm GeoAnalytics, Inc. to design the GIS and web access.

According to State Archeologist Bob Birmingham, currently the SHS handles about 100 phone calls a week from consulting firms and public agencies wanting to know whether a particular project will disturb a historic or archeological site. While the web-based GIS will not make all of the data available to the general public due to the sensitivity of some sites, the system will make handling such compliance questions easier and can further provide information to be considered in comprehensive land use planning proposals.

(source: Bob Birmingham, State Archeologist)

Publisher has 31 titles in 4 years

GIS literature continues to diversify

by Bob Gurda

As the use of GIS continues to spread, books that target specific methods and applications follow. The publisher Taylor & Francis has long been active in this field, and their new offerings continue that tradition.

Below are listed some of their new titles, many already available and others forthcoming this year. Authors are from various countries, most heavily from the United Kingdom.

- GIS: A Sourcebook for Schools (2000)
- Introductory Remote Sensing: Digital Image Processing and Applications (2000) [includes software and 70 image datasets on CD]
- Remote Sensing and Urban Change (2000)
- Web Cartography (2000)
- Multidimensional GIS (3/2001)
- GIS for Group Decision Making (3/2001)
- Online GIS and Spatial Metadata (4/2001)
- Multimedia Information Systems for Urban Planning: A Hypermedia Cooperative Approach (6/2001)
- Digital Photogrammetry (7/2001)
- Land Resource Surveys and Information Systems (12/2001)

Prices for these particular titles range from \$17 to \$150. For details, contact Taylor & Francis at 800/634-7064 or via the web at www.gis.tandf.co.uk/intro.html.

Moving into production mode

FGDC-funded DOP Project begins assembly

by AJ Wortley

The Wisconsin Digital Orthophotography Access & Information Initiative is the long title for the SCO project to coordinate and implement a prototype on-line digital orthophoto catalog. Before we are ready to load images for web browsing, we first have to create some of the building blocks. Some of these underlying pieces include an index, visual descriptions, abbreviated descriptions, and ordering information among other things.

We have been testing key software components and server architectures that will enable us to re-create these catalog components on-line and relate them to DOP's in particular.

Planning is key

With technology moving at a rapid pace, modeling and planning are key features of any on-line application, and in the case of our catalog, we want to use the most efficient approach possible. Our approach relies on metadata as its central piece.

We intend to use metadata and freely-available software to assemble the catalog interface and back-end. The metadata content for the DOP projects will then contribute to building our index and sub-set descriptions for the catalog.

Now for the inputs

With a technology strategy in place and specific tools identified, proof of concepts is the next step in our project. This means creation, collection, and processing of DOP project metadata and associated imagery for our prototype area, Dane County. In addition, we will begin collecting information and experiences from Dane County's Fly Dane 2000 initiative for some associated catalog components.

Project website coming soon

Once we've worked through the proof of concept, we will begin posting test pieces of the catalog on a project website (which will be linked from the SCO website). This will enable others to view our progress as we then continue to fill in catalog content. At that time we will then shift our focus to some important decision-making and case-study resources that we hope will add significant value to the on-line catalog by giving visitors to the web site not only a sense of direction, but additional explanation and background information as they continue their search.

Using GPS to find "confluences"

Lat/long intersections draw interest

by Bob Gurda

Do you know somewhere where a parallel (of latitude) and a meridian (of longitude) intersect near your home? If not, you may soon, because a new hobby has sprung up where people seek out and visit these spots.

The capability to locate these arbitrary intersections is thanks to the proliferation of GPS receivers, especially the hand-held variety. Once the federal government lifted its deliberate distortion of GPS signals (called "selective availability") this last spring, it suddenly became possible for a person to locate any point with enough accuracy to say "I visited it."

A new hobby emerging

Finding and visiting "confluences", as they are called, has become popular, as indicated by web sites that carry evidence such as pictures of these intersection points and stories about the searching process. (Some even include topo map and aerial photo images).



The activity is worldwide, although it appears so far to be concentrated in North America, western Europe, and Australia. The "Degree Confluence Project"'s web site, www.confluence.org, is a clearinghouse for worldwide activity, and participants can report their visits and submit pictures.

What about Wisconsin?

There are 17 degree-confluence points in Wisconsin. One has been a popular spot for years: the intersection of 45 degrees North and 90 degrees West, near Poniatoski. (4 miles ESE of Athens, or about 20 miles west of Wausau).

Some of the others are on private property (e.g, a residential driveway). Surf to some of them via www.confluence.org/us/wi/index.html.

A more realistic view of the landscape

Some people will probably dismiss this new hobby as foolish, since the points being visited are absolutely arbitrary, mere artifacts of how our society measures the Earth. After all, what otherwise should be so special about the place where 46 degrees North latitude intersects 91 degrees West latitude?

On the other hand, one very interesting value, and one probably unintended by the hobbyists, is that the pictures posted on the web result in a sort of random sample of the landscape in a region. This way, you get a quite different impression of, say, Australia, as compared to what is shown by carefully selected pictures of the most notable and dramatic features.

Q: *The DOQQs (digital orthophoto quarter quadrangles) are apparently available for my area. How can I get copies, and how do I use them?*

A: The type of digital orthophotos (DOPs) produced through the National Digital Orthophoto Program are now available for most of Wisconsin. To check on status, surf the web to: mcmcweb.er.usgs.gov/status/mcmc/wi/wi_doq.html.

You can order copies from the U.S. Geological Survey for a small fee (ask.usgs.gov/digidata.html) or, since these files are not copyrighted, you can freely get copies from anyone else.

DOQQs are raster (gridded) image files that are oriented to a particular coordinate system (UTM, since they are federal products). Beyond their value as a photographic image used in isolation, these files can be used with various software to display as a visual backdrop for other information. The image provides a rich context for the other layer(s).

In order to overlay other geographic data on top of the DOQQ image, the two data layers need to be referenced to a common coordinate system. Depending on the software you have at your disposal, this may be an problem. The quickest way to accomplish this kind of merger is to convert your vector data layers to UTM. However, this may not be your best long-term strategy.

Instead many people have chosen to convert ("reproject") DOQQ files to match their coordinate system of choice, often a county coordinate system or State Plane. This conversion isn't simple, and most of us don't have the tools to do it ourselves. A contractor can step in at this point and provide this one-time service.

For a discussions of details, considerations, and options involved in the reprojection of DOQQs, look on the SCO web site under Maps: Base Maps: Orthophotographs: Reprojecting DOPs. And, if after reading that material you have further questions, please give us a call!

Correction

In our Fall 2000 issue, there was an incorrect URL listed for the web site at which to view scanned historical maps of Wisconsin (p. 10, left column). We apologize for the error. The correct URL is:

www.rootsweb.com/~usgenweb/maps/wisconsin.

Q: *I notice that National Wetland Inventory (NWI) maps are available over the Internet, but there aren't any for Wisconsin. Can I get hold of digital wetland maps for Wisconsin?*

A: The Wisconsin Wetland Inventory (WWI) was begun prior to the national program, and since it was accomplishing a similar goal, the NWI didn't do any mapping here.

WWI maps are available in paper form, or in digital form, from the Wis. Dept. of Natural Resources (DNR). Contact Calvin Lawrence at (608) 266-0756.

As part of modernizing a series of geographic information layers statewide, the Wisconsin Land Information Board is encouraging the DNR to review its wetland mapping procedures. The information is for a variety of private- and public-sector purposes, and having the mapped wetland information in an easy-to-use form has become increasingly important. As this story unfolds, we will carry news here in the *Bulletin*. If you have questions in the interim, contact Lois Simon of the DNR at (608) 266-8852.

Q: *I know that there is a big initiative to finish up the state's soil mapping, but how can I find out about the status of that work?*

A: The project to complete soil mapping actually has two parts. One is to accomplish a first-time mapping of counties in the far northwestern part of Wisconsin. Because that process involves field work (and in an area with short summers when soil sampling is feasible), it will extend over a number of years. Completion is scheduled by 2006, although some counties will be ready as early as 2003.

In addition, new State Soil Scientist Jon Hempel has expressed interest in releasing results for partial-county areas. The initial work is being done in the "red clay" area that borders Lake Superior, so some of that information might become available before the entirety of a county (say, Douglas) is finished.

To check on the status of soil mapping, visit the Wisconsin NRCS web site: www.wi.nrcs.usda.gov/soil/mapping_status_web.jpg.

The other part of the project will computerize existing county soil surveys. That work is moving along rapidly. To check on status, visit www.wi.nrcs.usda.gov/soil/digitizing_status_web.jpg.

Editor's Note: If you have a question, or had a question for which you found an answer that might be of interest to others, please let us know.

Color poster created from 79 orthos

Campus image map published

by Bob Gurda

Through a marriage of aerial photography and digital imaging, a group of faculty, staff and students has produced a striking new view of the UW-Madison campus: a 20-inch by 30-inch color photo image map that depicts the 900-acre campus in extraordinary detail.

The map, which covers a 2-mile by 3-mile swath from Eagle Heights to the Kohl Center, is a merged digital image of 79 aerial photographs that depicts the UW-Madison campus and its buildings and other features in the form of a poster. The scale is approximately 1" = 528 feet. The aerial photographs were acquired in May of 1999.

Orthophotography is the key

The image merger is based on orthophotography, a technique that removes distortions inherent in aerial photographs. The technique results in an image that can be used to measure distances, directions and areas accurately.

In addition, the orthophoto process registers each image to a common mapping coordinate system so that the collection of images can be merged into one larger computer file.

A collaborative project

The new map was produced through a collaboration of faculty, staff and students known as the Campus Map Project. Participating campus units include the Division of Facilities, Planning and Management; the College of Engineering and the Institute

for Environmental Studies. The map was published with the help of the UW-Madison Cartography Laboratory and the SCO85.

How to order

The map is available for \$14 plus tax, shipping and handling through the State Cartographer's Office. Order forms are available on the State Cartographer's Office web site at www.geography.wisc.edu/sco or can be obtained by calling (608) 262-3065. Credit card orders can be placed by phone.

Want a preview?

The SCO web site also has a reduced-resolution digital image for viewing. It's linked right from the site's front page.

Student staff shifts again

by Bob Gurda

As always, the SCO's student staff is in flux. John Marks finished up his work as the WISCLINC grant from the Wis. Land Information Board expired, and as he finished his GIS Certificate Program; he is moving on to the M.S. program in Environmental Monitoring where his metadata experience should pay dividends.

Graduate student Tara Roffler was also funded by the WLIB grant, and is leaving to finish up her M.S. in Water Resources Management.

On the undergrad side, Chris Schutt is leaving our staff in order to concentrate on an 18-credit load this semester, looking to speed up his graduation. We have hired Jacki Mullen, a double major in Anthropology and Cartography/GIS.

A re-introduction to the SCO site

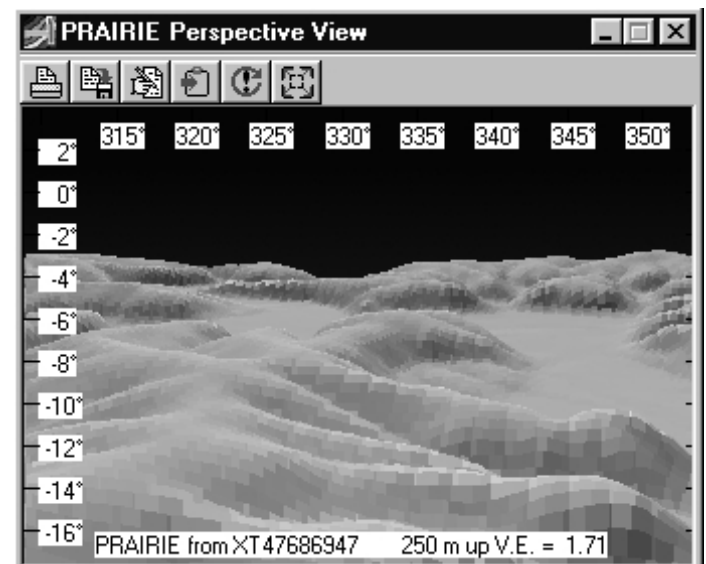
Taking a closer look at our web resources

by Anna Weitzel

As we mentioned in our Fall issue, our web team is in the process of redesigning the entire SCO website. Consequently, few changes have been made to the current site in recent months. However, in choosing the design for the new site, we've had to examine and evaluate the current resource. During this period of renovation, we will review parts of the current site that you may not realize are available.

Our Digital Elevation Models (DEMs) page is rich with resources and illustrations. Here you will find details on USGS DEMs including six data sets that you can download directly from the SCO. There are also links for obtaining shareware for DEM viewing and instructions on how to create your own three-dimensional view of a sample terrain model. A sample fly-through and orthophoto draped over a DEM illustrate some of the possibilities for these data.

To find our DEMs page, navigate to the Maps section and look under Earth-Related Maps.



A 3-D view created using the shareware MicroDEM and a sample DEM of the Prairie du Chien area.

Following satellites via the Web

NASA tracks Space Station

by Anna Weitzel

If you have ever looked up at the stars and seen a fast but steady point of light moving across the sky, you may have caught a glimpse of a satellite. The International Space Station (ISS), which has grown larger recently following delivery of new sections, is now a particularly bright satellite.

Rather than rely on luck and patience to spot a satellite, you can use tools on NASA's Human Spaceflight web site to calculate when a number of satellites including the International Space Station (ISS) will be visible in your area.

Web calculator makes it easy

A Java applet called SkyWatch calculates the date, time, and path of several space objects. You need only select the particular object that you want to track and then select a location from a list of cities or input a latitude, longitude, and altitude.

The calculator returns the first date and time that an object can be seen within the next seven days and lists its azimuth and elevation for every twenty seconds after it first becomes visible. You will see that the ISS moves fairly quickly across the background star field.

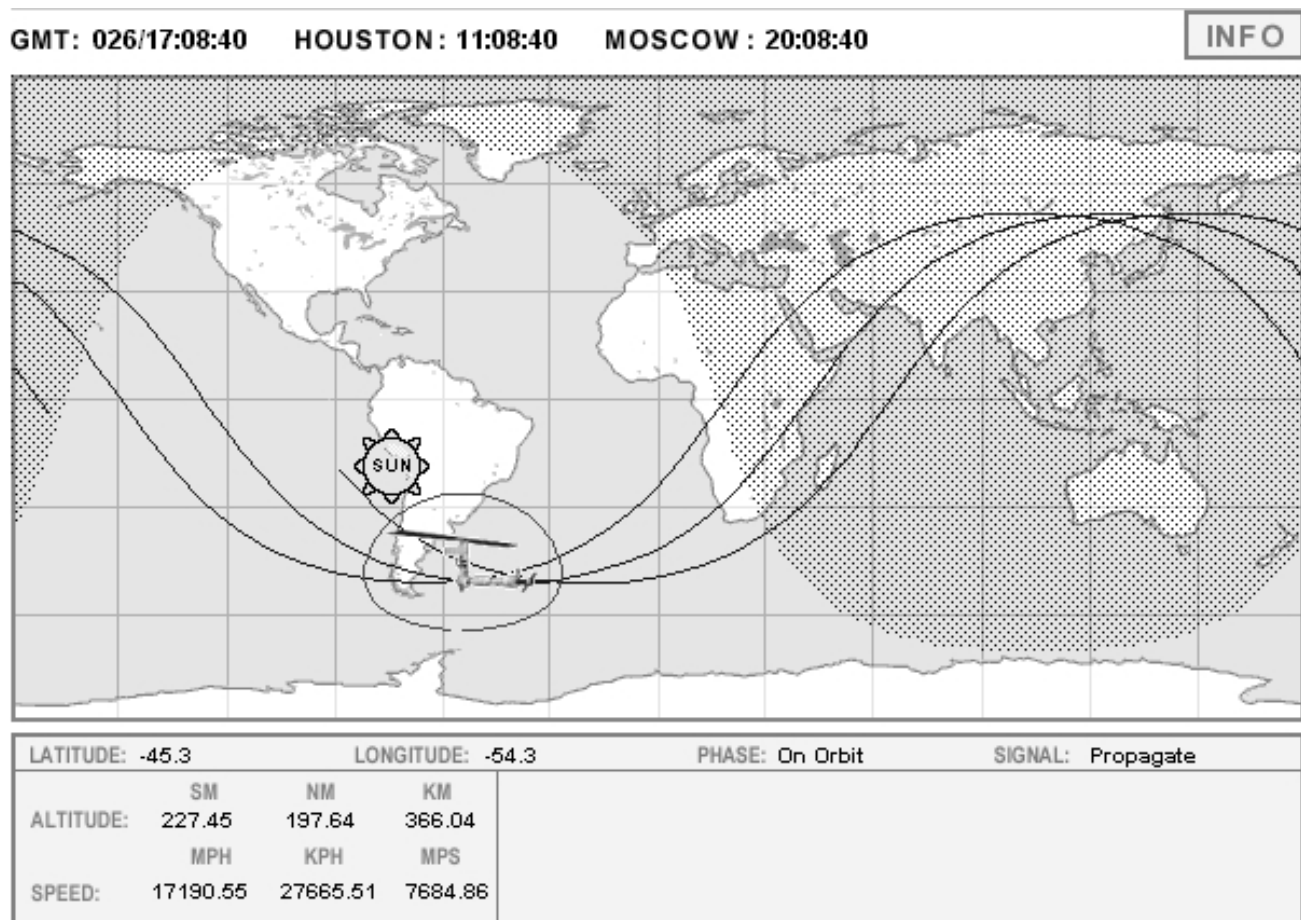
For the amateur stargazer, the program also produces a chart of the stars

and constellations that will appear in the vicinity of the object's path. The SkyWatch program can be found at 38.201.67.72/realdata/sightings/index.html.

Watch the orbit in map form

Another feature on the Human Spaceflight site is a real-time map tracking the orbit of the ISS. The space station's latitude, longitude, altitude, and speed are updated every five seconds. The map can be found at 38.201.67.72/realdata/tracking/.

The Human Spaceflight site is also rich with pictures, history, and other information about all of NASA's manned explorations.



An interactive map tracks the position of the International Space Station in real time. Note that the satellite's path appears to shift with each orbit, covering a different part of the earth with each pass.

Missed opportunities: state-level data integration

For this issue we talked with Steve Ventura, Professor at the UW-Madison Soil Science Department and Institute for Environmental Studies. Steve is completing his one-year term as President of the Wisconsin Land Information Association (WLIA).



For over 15 years you have been involved with land information issues in both the academic as well as public policy arenas. What is your assessment of how Wisconsin has progressed?

Over the last ten years, our state land information program has been the most important force leading to progress, complemented by the continuing and indispensable support of the WLIA. Attention to the local level of government, where many of the transactions occur that initiate the stream of land information, has been the program's focus. There, as is well documented in the WLIA's recent draft "Strategic Assessment", we have plenty to crow about.

There has been little progress toward common goals at the state agency level

However, I am very disappointed about the lack of parallel progress at the state agency level. Though some agencies individually have very sophisticated GISs, we have made little progress toward common goals. I'm talking about data integration, standards, and custodianship of Foundational Elements (data layers). This is a missed opportunity.

There are mechanisms that have been used to work on these issues over the last ten years, aren't there?

Yes, that's correct. The board (Wisconsin Land Information Board) and its staff (Office of Land Information Services, part of the Wis. Dept. of Administration) have the backing of statutory language to require state agencies to

submit "land information integration plans". The plans that have been prepared have been weak in terms of the issues I've mentioned, and there has been little follow-up to improve that situation. There is little evidence of attempts even to cajole, much less flex budgetary muscle.

It seems very ironic to me that while the soil mapping goal of the program has the full involvement of the federal NRCS, no state agency has taken on a similar custodianship of any other Foundational Element. That said, I have been somewhat heartened recently to see that several state agencies have stepped up to take the lead on modernizing wetland mapping (Wis. DNR) and on improving/densifying the vertical and horizontal geodetic control systems (Wis. DOT).

We have a real opportunity to address these problems through WLIS.

The WLIA hasn't had any budgetary or grant authority to assist state agencies in achieving statewide land information goals that benefit the larger community. Hasn't that been an impediment?

Yes, it has, but that isn't an adequate excuse for the minimal progress to date. State agencies could have achieved major efficiencies for themselves individually as well as a group, not to mention others who would have benefitted similarly as a result. An environment of enlightened self-interest just hasn't taken hold.

What are some examples of information types that illustrate your argument?

Floodplains is one; this affects both DNR and DOT as well as others. Although a federal agency (FEMA) has done floodplain mapping, that information is not very helpful for a wide variety of needs.

Another example is the interplay amongst voting districts, municipal boundaries, local roads, etc. There is no system to help integrate this information into a uniform boundary and annexation layer. Instead, redistricting is seen as a specific end once every ten years and no state-level entity integrates the other information.

Another example is land use classification; we are heading into a major state land use program without agreement on how to map and classify how the land is used.

In addition to WLIA's role and enlightened self interest, what other mechanisms might help resolve these problems?

Many other states have coordinating bodies that work on these kinds of issues, and some have made major progress through a lot of hard work and give and take. By contrast, the state agencies with seats on our Land Information Board more and more seem to vote as a bloc, which ends up being perceived as *us* vs. *them* by other members.

In our state, we have a real opportunity to address these problems through WLIS (the proposed Wisconsin Land Information System). In my opinion, it is absolutely critical that WLIS be governed by broad-based representation and that there be real authority.

Without that broad base, we are at risk of developing a WLIS that will fail. Recently, the news carried stories about a state election information system that was over budget and not yet functioning. No one wants that kind of result for land information.

Rather than a single public entity or contractor building WLIS in a vacuum, we need full community involvement. The people who will be the ultimate users need a place at the table. If that happens, I am confident that the private

WLIA serves as a gathering place where all the interested parties can discuss this exciting future.

sector will help fund the essential designing, prototyping, and implementation of a broad variety of applications that the WLIS Project Team didn't include in its budget estimates.

One organization that serves as a gathering place where all the interested parties can discuss this exciting future is the Wisconsin Land Information Association (WLIA). I would like to see state agency participation in WLIA be restored to what it was some years ago. WLIA is the forum where innovation and risk-taking necessary for a successful WLIS must emerge and be nurtured.

QuickBird satellite fails to orbit

When it rains.....it pours

by Bob Gurda

Earthwatch, one of the U.S. companies attempting to establish a viable commercial presence in high-resolution remote sensing, has suffered another setback. In November, its QuickBird 1 satellite was lost during launch from a Russian site. Reports indicate that the launch rocket may have shut off too soon, causing the satellite to fall back to earth before achieving orbit.

The failure of the QuickBird 1 launch was a major blow to EarthWatch, which three years earlier lost its first satellite (EarlyBird 1) days after its launch due to a power system problem. Shortly after this November's launch failure, the company was forced to lay off about 25% of its workforce which was prepared to begin processing digital imagery from the new satellite.

From orbit, QuickBird 1 was to collect both one-meter resolution digital black-and-white imagery and four-meter resolution digital color images. The plan was to follow along this coming summer by launching QuickBird 2.

EarthWatch faces stiff competition from two other Earth-imaging companies: ORBIMAGE, which has two satellites in orbit (with plans for two more); and Space Imaging, which after losing its first IKONOS satellite succeeded in September of 1999, making the company the only current source of space-based 1-meter imagery.

At the time of the November launch failure, EarthWatch was already building QuickBird 2. Reportedly, QuickBird 1 was fully insured. Given the lack of recent news, however, it's not clear if the company will be able to go forward with that planned launch.



million aerial photographs acquired over the last several decades. (Older imagery has been transferred to the National Archives). Amongst their several dozen digital product offerings are scans of 10-inch x 10-inch aerial photographs. Black-and-white is priced at \$10, and color at \$15. In addition, there is a media charge (CD; tape) of \$10-20 per piece of media needed.

APFO can do scans of 300 up to 2000 dpi (70 down to 12.5 microns per pixel), and the file size will vary as a result. They also offer 5 choices of file format

Delivery time is about six weeks, although small orders (under 10 scans) may be available more quickly. Orders of over 50 scans need to be scheduled.

Check APFO's web site (www.apfo.usda.gov) for a full description of products and prices, and for details and scheduling call Bob Lear at 801/975-3500 ext. 223.

WisDOT images go digital, too

The largest repository of aerial photographs in state government is at the Department of Transportation, in their headquarters office in Madison. Their holdings go back to the late 1930's. Any photograph can be scanned at 600 dpi in TIFF or JPEG format; cost is \$15 per scan (including media).

Turn-around is about 2 weeks.

For details, contact Tiffany Novinska at 608/266-7809 or via e-mail at Tiffany.Novinska@dot.state.wi.us.

To find out about coverage is available...

To check on what aerial photographs might be available for any area of interest in Wisconsin, consult the SCO's *Wisconsin Catalog of Aerial Photography* on our web site. There, you'll find listings of major projects arranged chronologically in county groups. Once you have zeroed in on what looks like a good choice, contact the organization that holds the images to make your specific selections. If your point of interest is close to a state or federal highway, check also with WisDOT for the existence of small-area project coverage which we don't include in our catalog.

APFO & DOT now offer digital images

Airphoto scanning spreads

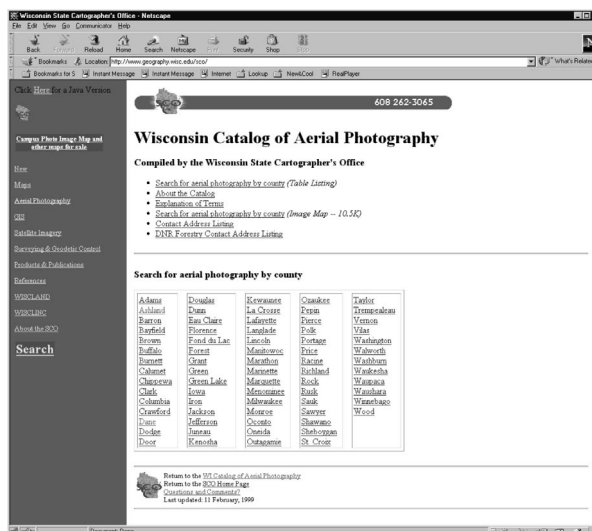
by Bob Gurda

The conversion of aerial photographs into scanned computer format has become popular for a variety of purposes. To address this interest, two major repositories of recent and historical photographs are now offering scans in addition to their traditional analog products.

People are using digital aerial photograph scans both for general viewing and reproduction as well as for producing orthophotos. Interest in older imagery is especially strong.

USDA facility adds scanning service

The Aerial Photography Field Office (APFO) in Salt Lake City, UT, a unit of the US Dept. of Agriculture, holds over 2



WISCLINC on autopilot

Future of Clearinghouse unclear

by Ted Koch & AJ Wortley

With the holidays and the year 2000 ended, so too have the funds devoted by the WLIP over two years ago to the Wisconsin Land Information Clearinghouse (WISCLINC) development project. As of January, the SCO's contractual agreement that supported active maintenance and expansion of the WISCLINC clearinghouse website expired.

WISCLINC: growth over time

WISCLINC is the on-line repository and discovery tool for geospatial metadata and data resources in the state, and is a node connected to the national clearinghouse network administered by the Federal Geographic Data Committee.

As part of our activity in upgrading and expanding WISCLINC, we have reported regularly in the *Bulletin* on the clearinghouse's new and enhanced features. WISCLINC now contains over 350 metadata files and nearly forty data files, plus connections to many other on-line resources.

At this point, the Metadata Strategic Initiative for local governments, recently funded at \$100,000 by the WI Land Information Board, will surely lead to a continuing flow of metadata files for the clearinghouse. How those files will be evaluated and added to WISCLINC is an open question now that the necessary resources have ended.

Long-term needs short-term utility

The Wisconsin Land Information System (WLIS) project team report points to the importance of metadata as a foundation for a statewide land information system. Projected future activities tied to the WLIS initiative point to a joining of clearinghouse functionality with proposed functions of the new system, but this 'join' may be physical or virtual, and the time line for this to occur is still nebulous.

So, right now WISCLINC's progress and maintenance will slow significantly. WISCLINC will continue to operate on a server at the WI Dept of Administration.

Entropy can mean atrophy

A cause for concern is that the clearinghouse is a dynamic resource relying on continual addition and update of content (inputs) to remain useful to its users. Such resources tend to suffer greatly or disappear altogether when not continually maintained at a significant level of commitment. The continued function and increased content on WISCLINC promise to help define the inputs for a WLIS.

So as winter yields to spring, we hope that new opportunities will arise and mechanisms will be found to support building an open and high-quality data infrastructure at the bottom that will support and provide content for ongoing planning and development at the top.

model law change recommended

GIS - Surveyor agreement worked out

by Bob Gurda

A quiet, simmering war may soon be settled. On the national level, a group of seven professional organizations have worked out an agreement over issues arising from computerized mapping in the context of land surveying.

The agreement has the form of a recommendation for state-level model law language, and has been submitted to the National Council of Examiners for Engineering and Surveying (NCEES). The hope is that various state laws would be modified to reflect the newly developed language.

Representatives of the seven organizations, after 650 person-hours of work over 13 months, recommended last October that the NCEES Model Law be altered to remove potential ambiguities and to clearly identify those activities requiring the services of a registered professional.

The issues and concerns behind the recent negotiations and agreement relate to the qualifications of people doing computerized mapping, especially relating to land ownership parcels. Traditionally the work of land surveyors who have professional credentials, parcel mapping in a variety of forms has more recently been carried out by people with a range of skills and knowledge of the nuances of real property boundaries. This trend is, to a great degree, the result of computerized mapping (including GIS) tools that have spread into a variety of other job classifications.

The agreement preserves the role of surveyor under some circumstances while in other cases allowing other people to perform GIS mapping.

In our state, reports indicate that the Wisconsin Society of Land Surveyors is moving to recommend a language change to our state statutes to reflect the October recommendations.

The groups that came together to work out the model law recommendations are:

- American Congress on Surveying and Mapping (ACSM)
- American Society of Civil Engineers - Geomatics Division (ASCE)
- American Society for Photogrammetry and Remote Sensing (ASPRS)
- Management Association for Private Photogrammetric Surveyors (MAPPS)
- National Society of Professional Surveyors (NSPS)
- National States Geographic Information Council (NSGIC)
- Urban and Regional Information Systems Association (URISA)

You can download the report from

www.asprs.org/asprs/news/ncees_frame.html.

(source: *Point of Beginning*, 1/2001)

Leaves state GIS program in N.C.

Siderelis named GIO at USGS

by Bob Gurda

People active in state GIS programs across the country are well acquainted with Karen Siderelis from her service to the state of North Carolina. Now, many others in the federal sector will be working with her through a new position of Geographic Information Officer (GIO) at the U.S. Geological Survey (USGS) headquarters in Reston, VA.

GIO is a special version of a CIO

The responsibilities of the GIO at the USGS will be similar to those of a Chief Information Officer (CIO), a position mandated for all Cabinet departments and recommended for all federal agencies since 1996. The USGS is unique among federal agencies, however, in specifically designating this position as a Geographic Information Officer.

"The USGS is widely recognized for providing reliable scientific information," said USGS Director Charles Groat. "By establishing the position of a GIO, we want to fully develop the rich potential of geographic information for integrating our scientific findings and for making our science even more accessible to the public."

Broad responsibilities in new role

As the GIO, Siderelis will be responsible for guiding the formulation of agency strategies that will provide innovative information management solutions and ensure the integrity of USGS scientific information. She will ensure that USGS information management policy supports its mission and will provide leadership in coordinating USGS scientific information management with other government agencies.

From the state to national level

Siderelis has been involved in the geographic information business for two decades at the state level, and in recent years has broadened her experience through service at the national level, including the presidency of the National State Geographic Information Council.

While serving most recently as director of the Center for Geographic Information for the state of North Carolina, she managed the state's GIS service center and oversaw the development and maintenance of a statewide geographic database. From 1981 to 1991 she was the director of the Land Resources Information Service of the N.C. Department of Environment, Health, and Natural Resources. She has also been a member of the Mapping Science Committee of the National Academy of Sciences since 1994.

(source: USGS press release)

First state GIS leader so honored by USGS

Lambert given Powell award

by Bob Gurda

Susan Carson Lambert, Executive Director of the Kentucky Office of Geographic Information, has received the John Wesley Powell award from the U. S. Geological Survey. The award is given annually to individuals who have made significant contributions to the advancement of USGS's mission.



The USGS notes Susan's contributions include "...successful partnerships with the USGS to implement the Kentucky State Basemap initiative,key contributions to the National Spatial Database Infrastructure as a leader and proponent of partnerships and data standards issues,and in her role in the growth of the National States Geographic Information Council and the development of progressive strategies for furthering relationships with the USGS....".

Currently, Lambert is serving as President of the National States Geographic Information Council (NSGIC).

(source: USGS press release)

Takes on other duties at DOA

Hoffmann leaves OLIS

by Bob Gurda

One of the more prominent players on the state's land information stage the last several years has taken a turn away from that limelight. Loren Hoffmann, previously the manager of the Wis. Dept. of Administration's GIS Service Center, has a new position in that department as Information Technology Coordinator for the Division of Housing and Intergovernmental Relations. His first assignment deals with developing a grants management system that later may become adopted in other parts of the Division.

Especially since the department formed its Office of Land Information Services (OLIS) in 1997, Hoffmann had been active in a number of statewide activities including the Wis. Land Council's Technical Working Group and WLIS Project Team.

As of now, there is no replacement in Loren's vacated position at OLIS. Lisa Olson-McDonald continues on as the other permanent staff at the GIS Service Center.

February 27-March 3, 2001, the **Association of American Geographers** will hold their annual meeting in New York City at the New York Hilton. Visit www.aag.org.

February 28-March 2, 2001, **The Wisconsin Land Information Association (WLIA) 13th Annual Conference** will be held at the Radisson Inn in LaCrosse, WI. Contact WLIA at 800/344-0421 or visit www.wlia.org.

March 1, 2001, The **Wisconsin Land Information Board** will meet in LaCrosse. Contact OLIS at 608/267-2707.

March 4-7, 2001, The **Geospatial Information and Technology Association** will hold its annual conference at the San Diego Convention Center in San Diego, CA. Contact GITA at 303/337-0513 or visit www.gita.org.

March 8-9, 2001, **Foundation of Electronic Government in America's Cities: A Multi-Disciplinary Workshop** will be held at the Chicago Hilton & Towers, Chicago, IL. Contact: John bertot at mjcbertot@lis.fsu.edu, or visit www.uic.edu/cuppa/mpa/egov2001

March 13, 2001, **Accessing Wisconsin GIS Data Sets** at UW-Madison, B102 Steenbock Library. Visit www.lic.wisc.edu, email: tlmcclin@facstaff.wisc.edu, or call 608/263-5534.

March 17-21, 2001, the **American Congress on Surveying and Mapping Spring Conference** will be held at the Riviera Hotel and Casino in Las Vegas, NV. visit www.acsm.net/spring01.html.

March 22, 2001, The **Wisconsin Land Council** will meet (location unknown at this time). Contact OLIS at 608/267-2707.

April 8-11, 2001, **14th Annual Geographic Information Systems for Transportation Symposium (GIS-T 2001) The Next Generation of GIS-T** will be held at the Crystal Gateway Marriott, Arlington, VA. Contact: Diane Pierzinski, 916/654-3379, Fax: 916/654-6583, email: pierzinski@dot.ca.gov or visit www.gis-t.org/gist2001.htm

April 10-11, 2001, **Illinois GIS Association (ILGISA) Spring Conference** will be held at the Holiday Inn, Champaign-Urbana, IL. Contact: Ruth Anne Tobias, 815/753-0922, email at rtobias@niu.edu or visit www.cagis.uic.edu/ilgisa.

April 13, 2001, **How to Develop and Understand RFP's, RFQ's and Contracts for Local Government GIS Projects** will be held from 8:30am - 12:00 noon at the Indiana University Purdue University Indianapolis (IUPUI). Contact: Kevin Mickey 317/278-2582, email at kmickey@iupui.edu, or visit www.thepoliscenter.iupui.edu.

April 23-27, 2001, **American Society for Photogrammetry & Remote Sensing Annual Conference** will be held in St. Louis, MO. Contact: Temperence Battee at 301/493-0290 ext. 106 or visit www.asprs.org.

April 24, 2001, **Creating and Using Orthophotography for GIS Applications** at UW-Madison, B102 Steenbock Library. Visit www.lic.wisc.edu, email: tlmcclin@facstaff.wisc.edu, or call 608/263-5534.

April 25-26, 2001, **3D Visualization of GIS Data** at UW-Madison, B102 Steenbock Library. Visit www.lic.wisc.edu, email: tlmcclin@facstaff.wisc.edu, or call 608/263-5534.

May 3-4, 2001, **Land Use Planning, Smart Growth and Data Access using GIS** at UW-Madison, B102 Steenbock Library. Visit www.lic.wisc.edu, email: tlmcclin@facstaff.wisc.edu, or call 608/263-5534.

June 7-8, 2001, **Wisconsin Land Information Association Quarterly Meeting** will be held at Barker's Island in Superior, WI. Contact: WLIA at 800/344-0421 or visit www.wlia.org.

August 12-14, 2001, **Street Smart and Address Savvy 2001** will be held at the Hyatt Regency, Milwaukee, WI. Contact: 847/824-6300, or visit www.urisa.org

Sept. 6-7, 2001, **Wisconsin Land Information Association Quarterly Meeting** will be held in St. Croix, WI. Contact: WLIA at 800/344-0421 or visit www.wlia.org.

October 20-24, 2001, **URISA 2001 Annual Conference and Exposition Convention Center** will be held at the Hyatt, Long Beach, CA. Contact: 847/824-6300, or visit www.urisa.org

November 5-6, 2001, **Illinois GIS Association (ILGISA) Fall Conference** will be held at the Radisson Hotel, Lisle, IL. Contact: Ruth Anne Tobias at 815/753-0922 or email at rtobias@niu.edu.

Dec. 6-7, 2001, **Wisconsin Land Information Association Quarterly Meeting** will be held in Wisconsin Dells, WI. Contact: WLIA at 800/344-0421 or visit www.wlia.org.

To see a more extensive calendar of regional events, and to use hot links to other calendars, visit the SCO website.



April 23-27

ASPRS to meet in St. Louis

by Bob Gurda

It's been 18 months since a major GIS conference was held at site near Wisconsin, but this spring brings a fresh opportunity. ASPRS (the American Society for Photogrammetry and Remote Sensing) will hold their annual convention in St. Louis, MO the week of April 23-27.

The schedule includes two days of workshops (Mon. & Tues.) and well over 200 sessions on a variety of topics (Wed. - Fri.) plus tours and social events.

For details, surf to the ASPRS web site at www.asprs.org.

About the SCO...

The State Cartographer's Office (SCO), established in 1973, is a unit of the University of Wisconsin-Madison. The SCO is located on the 1st Floor of Science Hall.

Our permanent staff consists of five people—Ted Koch, State Cartographer (608/262-6852), Bob Gurda, Assistant State Cartographer (608/262-6850), A.J. Wortley, Outreach Specialist (608/265-8106), Brenda Hemstead, Administrative Assistant (608/263-4371), and Ana Rumm, Financial Specialist, plus several part-time graduate and undergraduate students.

The State Cartographer's position and mission is described in Wis. Statute 32.25 (12m). In addressing this role, the SCO functions in a number of ways.

- publishes the *Wisconsin Mapping Bulletin*, catalogs, guides, brochures, and other documents and maintains a web site to inform the mapping community.
- inventories mapping practices, methods, accomplishments, experience, and expertise, and further acts as a clearinghouse by providing information and advice in support of sound mapping practices and map use.
- participates on committees, task forces, boards, etc. The State Cartographer is one of the 15 voting members of the Wisconsin Land Information Board and one of 17 voting members on the Wisconsin Land Council.
- develops experimental and prototype products.
- serves as the state's affiliate for cartographic information in the U.S. Geological Survey's Earth Science Information Center (ESIC) network.

About our Internet Web site...

We maintain a "homepage" on the World Wide Web.

Here, you will find links mentioned in *Bulletin* articles, information on a wide range of mapping topics, news items, functions and activities of the SCO, our on-line aerial photography catalog, a calendar of events, and links to related web sites. We encourage those of you with Internet access check out the SCO's homepage at

www.geography.wisc.edu/sco



About the WISCLINC Web site...

A second Internet resource is the on-line Wisconsin Land Information Clearinghouse (WISCLINC). Its address is:

www.wisclinc.state.wi.us

At this site you can search and read metadata files, download certain data files, learn about our continuing work in this area, and link to other state clearinghouses.

Wisconsin Mapping Bulletin

Published quarterly by the Wisconsin State Cartographer's Office. A University of Wisconsin-Madison outreach publication distributed free upon request.

News is welcome on completed or ongoing projects, published maps or reports, or conferences/workshops. Local and regional information is especially encouraged. The editor makes all decisions on content. Deadline for the next issue is March 30, 2001.

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