WISCONSIN MAPPING BULLETIN

Vol. 15 No. 4 September 1989



REPORTING ON LAND INFORMATION AND MAPPING SCIENCES IN THE STATE OF WISCONSIN

STATE LAND INFORMATION BOARD CREATED; TO RECOMMEND FEATURES OF NEW PROGRAM

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Governor's Appointments Awaited

Wisconsin has moved one big step closer to a full-scale land information program. One of the many amendments to the biennial state budget bill, which was signed by Governor Thompson early in August, has created the Wisconsin Land Information Board (WLIA). This language also has partly defined the scope and structure of a program which the new Board is to implement and further develop.

The new program—that is now law—is a somewhat modified and significantly reduced version of the proposal embodied in Assembly Bill 269 (AB 269) that was advanced by the Wisconsin Land Information Association (see the April and July, 1989 issues of this <u>Bulletin</u>). As AB 269 moved through the legislative process in May and June, its chief legislative sponsors realized that passage would be more likely after some compromises. As a result, the modified version of the original bill that emerged as budget amendment #17 no longer carried a specific funding mechanism for grants-in-aid to local governments; the use of general purpose revenue for support of the Board and its Office also shrank to one temporary position.

After the budget bill passed the legislature, the Governor used his line-item veto authority to make several additional changes. The effect of these vetoes is not as significant as those changes made earlier by the legislature.

As of this writing, the Governor has not announced any of his eight appointments to the Board. However, there are good indications that an announcement will occur prior to publication of our next issue. The total of thirteen members also includes the State Cartographer and four state agency heads (Administration; Transportation; Agriculture, Trade, and Consumer Protection; and Natural Resources). We hope to be able to report in our next issue on the full membership of the Board, and the direction that the Department of Administration expects to go in filling the staff position which is funded to support the Board's work.

The law charges the new Board with forwarding recommendations to the legislature for fully constituting the program, particularly including user fees to fund the program. Because the new statutory language does not speak to mechanisms for distributing funds to local governments, the Board will also have to address this issue. The \$100,000 maximum grant per county, provided there is a 25% match, and provided that the county has identified a land information unit or office, is part of the new law.

While the Board has not been fully formed yet, and thus has no schedule for its meetings, it could benefit counties and other local governments to proceed to identify their land information officer, office, unit, or committee---however it might best function in each local setting. The establishment of this mechanism will help local governments be prepared so that they can act and react on a timely basis once the Board begins to function.

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NEWS FROM THE SCO

PROTOTYPE 1:12,000 ORTHOPHOTOMAPS BEING EVALUATED IN DANE COUNTY

The State Cartographer's Office is coordinating the evaluation of a set of maps which could be the model for a nationwide product. Three federal agencies have cooperated along with the CONSOIL Project at the University of Wisconsin-Madison to produce corrected airphoto maps of Dane County.

The set of orthophotomaps consists of 4 sheets for the area covered by each of the existing USGS 7.5-minute topographic quadrangle maps which show any part of Dane County. As a result, there is a block of 14 (east-west) by 10 (north-south), for a total of 140 sheets each covering 3.75 minutes of both latitude and longitude. Scale is 1:12,000, the image is black-and-white (derived from color infrared film), and the acquisition dates range from summer into fall of 1987.

Orthophotos are aerial photographs from which distortions have been removed. As such, they have a fixed scale across the image and can be used for accurate measurements such as distance or area. If converted into digital form, they can also be relatively easily integrated or registered with other digital information.

The USGS has been producing orthophotomaps over Wisconsin for a number of years. Somewhat over 40% of the state has been mapped in this format. These existing maps are at a smaller scale (1:24,000); a relatively small number have been sold, perhaps in part because many of the more recent ones have not been published, but have been available only as special-order diazo prints (inexpensive but prone to fading) or on stable-base materials (expensive).

Since the production of ortho-corrected imagery requires significant processing, the cost of a set of orthophotos is much higher than that of the aerial photography alone. For this reason, the Dane County set is being subjected to a broad user evaluation to test the assumptions upon which this particular product was based. The results of the evaluation will be presented to the federal agencies (SCS, USGS, and ASCS) for their consideration.

The idea for this product is derived from attempts to streamline the operations of local offices which

implement federal agriculture programs. These "field offices" would benefit from use of a common and standard base for planning and monitoring practices on the land. Beyond the field offices, there are many other users who might find such a product valuable.

To provide an evaluation in a reasonably short period of time, the SCO is limiting evaluation sessions to the Dane County area. However, anyone outside Dane County is welcome to schedule a visit to see this set of maps. In addition, they will be on display at various conferences around the state over the upcoming months.

We will summarize the results of the evaluation in a future issue.



AERIAL PHOTOGRAPHIC COVERAGE SURVEY

Over the next several months the Office will conduct a survey to collect information about publicly available aerial photography acquired over Wisconsin since 1984. Our intention is to issue in early 1990 a supplement to our <u>Catalog of Aerial Photography 1977-1984</u>, Third Edition. This new information will also be incorporated late in 1990 into a new fourth edition which will include imagery acquired to coincide with the 1990 national census.

Aerial photography can be extremely useful for many different purposes. It is also quite expensive—often too expensive to be acquired fresh for each new use. As a result, it can be valuable to have knowledge of what imagery is available—from whom, at what price, at what scale, in which format, on what film, from what date, from what flying height, etc.

If you know about aerial photography that has been acquired since 1984, or about plans to acquire imagery during 1990, please contact Tom Ruzycki of our Office at (608) 262-8776.

NEWS FROM THE SCO

WISCONSIN MAPPING BULLETIN TO BE ISSUED BI-MONTHLY

Starting with this issue the Office will be publishing the <u>Wisconsin Mapping Bulletin</u> on a bi-monthly basis. The <u>Bulletin</u> will be published in the months of July, September, November, January, March and May. Previously, the <u>Bulletin</u> was issued four times each year. We have converted to the more frequent schedule to make the <u>Bulletin</u> more current in information disbursement, announcements and meeting/conference schedules. The format has also been revised to accommodate desktop publishing and some economies in printing. Your comments would be appreciated.



COUNTY CARTOGRAPHIC CATALOG DEVELOPMENTS

The following is a brief update on County Cartographic Catalog production at the SCO:

DANE: Published in June; distribution of complimentary copies completed in August; copies available for sale from Map Sales, Wisconsin Geological and Natural History Survey. (see July Bulletin, page 3)

CHIPPEWA: In final stages of production; scheduled for printing in November.

GREEN: in process, scheduled for printing early 1990.

CLARK: in process, scheduled for printing early 1990.

WINNEBAGO (2nd edition): in process, scheduled for printing mid 1990.

MARATHON: in initial phases.

WOOD: in planning stage.

PORTAGE (2nd edition): in planning stage.

REMONUMENTATION OF THE PLSS: A STATUS REPORT

Over the past ten years the SCO has been collecting information on survey activity in the restoration of Section and Quarter Section monumentation for the Public Land Survey System (PLSS). This collection has been aided by the cooperation of both the Wisconsin County Surveyors Association and the Wisconsin Society of Land Surveyors.

The PLSS was laid out during the 1800's as the (nominally) one mile square grid upon which real property ownership would be based. The surveyors who installed this system on the land placed various types of monuments to mark locations; many of these monuments disappeared over the years, due to any one of a number of reasons. Yet they can be of critical importance in determining the spatial extent of rights and responsibilities tied to land ownership. As a result, a considerable amount of effort has gone into recovering, remarking, and documenting these locations. In some cases, measurements amongst nearby section corners, and determination of state plane coordinates have also been part of the effort.

During recent months, the Office has accelerated its collection of information on the PLSS, with the goal of publishing a catalog documenting the current status of various aspects of remonumentation statewide. In the upcoming weeks, final decisions will be made on informational content as well as the method of displaying the status of remonumentation across the state. If you are contacted for data as part of this effort we will appreciate your support.



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CONFERENCES AND TECHNICAL MEETINGS

October 11-14, North American Cartographic Information Society, (NACIS IX), will hold its Ninth Annual Meeting in Ann Arbor, MI at the Ann Arbor Inn. Contact: Diana Rivera, NACIS Program Chair, University Libraries, Michigan State University, East Lansing, MI 48824-1048, phone 517/353-4593.

October 17-19, **Third Annual Midwest/Great Lakes ARC/INFO Users Conference**, Madison, WI. Contact: ARC/INFO User Conference Coordinator, Wisconsin Geological & Natural History Survey, 3817 Mineral Point Road, Madison, WI 53705, 608/262-1705.

November 6-9, GSA 1989 Annual Meeting, held in St. Louis, MO. Contact: GSA Meeting Department, P.O. Box 9140, Boulder, CO 80301, 303/447-2020.

November 7-9, Developing Geographic Mapping and Analysis Systems, a class offered in Madison, WI by the Univ. of Wisconsin-Madison. Contact: Patrick Eagan, Dept. of Engineering Professional Development, 432 N. Lake St., Madison, WI 53706, 608/262-2061

November 9, Intergrating AM/FM Applications, at the Country Inn in Pewaukee, WI. Contact: Leo Schueller, Wisconsin Electric, 414/221-3043.

November 12-15, NCGA Mapping and Geographic Information systems '89. Westin Bonaventure Hotel, Los Angeles, CA. Contact: Education Coordinator, National Computer Graphics Association, 2722 Merrilee Dr., Suite 200, Fairfax, VA 22031, 800/225-NCGA; 703/698-9600.

November 13-15, Infrastructure Information Management Systems, a class offered in Madison, WI by the Univ. of Wisconsin-Madison. Contact: Patrick Eagan, Dept. of Engineering Professional Development, 432 N. Lake St., Madison, WI 53706, 608/262-2061 November 26-30, 1989, GIS/LIS '89 will be held at the Marriott Orlando World Center, Orlando, FL. Sponsored by ACSM, ASPRS, URISA, AAG, and AM/FM. Contact: GIS/LIS, 210 Little Falls St., Falls Church, VA 22046, 703/241-2446.

December 11-15, 1989, NAVSTAR GPS for Engineers, A Comprehensive Introduction to GPS Technology to be held at the Radisson Inn Maingate, Orlando, FL. Call: 703/931-0500 for more information.

1990

January 24-26, Wisconsin Society of Land Surveyor's Institute, Stevens Point, WI. Contact: Les Van Horn at 414/284-9411.

February 19-20, Third Annual Conference of the Wisconsin Land Information Association, Stevens Point, WI. Contact: State Cartographer's Office, 155 Science Hall, University of Wisconsin-Madison, Madison, WI 53706-1404, 608/262-3065.

March 13-16, GIS '90, Vancouver, British Columbia, Canada. Contact: Symposium Office, 134 Abbott Street, Suite 303, Vancouver, B.C., Canada V6B 2K4, 604/688-0188.

March 19-24, ACSM/ASPRS Annual Convention, Denver, CO. Contact: Ronald Wolbach, 10420 Glennon Dr., Lakewood, CO 80226, 303/236-5812.

April 23-26, **AM/FM International Conference**, will be held at Stouffer Harborplace Hotel, Baltimore, MD, 303/779-8320.

August, URISA's 28th Annual Conference, Edmonton, Alberta, Canada

September 23-28, ACSM/ASPRS Fall Convention, Atlantic City, NJ.

WLIA TO MEET IN WAUKESHA NOVEMBER 14 ANNUAL CONFERENCE SET FOR FEBRUARY 19-20 IN STEVENS POINT

The Wisconsin Land Information Association will hold a general membership meeting on November 14, at the Holiday Inn on Bluemound Road in Waukesha. The focus of this meeting will be the appointment of the new Wisconsin Land Information Board and recommendations by the WLIA to this Board for funding mechanisms to support the Board and its Land Information Program.

WLIA is an independent organization of over 300 individuals, association, institutions, and businesses from across the state, whose collective goal is the modernization of land records and land information management capabilities. To date, WLIA has focussed its efforts on developing a state land information program, on its annual conferences, on standards for simplifying the handling of land information, on networking land information professionals, and on educational initiatives.

The November 14 meeting will begin at 10 am and conclude by 3 pm. A nominal registration fee will include a buffet lunch. WLIA members will receive an announcement with an agenda, map, and registration information. Non-members are welcome. For further information, contact WLIA Secretary Bob Gurda at (608) 262-6850.

WLIA is in the planning process for its third Annual Conference, to be held February 19-20, 1990, in Stevens Point. Attendance is expected to exceed 400. Watch for further details.

THIRD ANNUAL MIDWEST/GREAT LAKES ARC/INFO USER CONFERENCE OCTOBER 17-19, 1989 MADISON, WISCONSIN

The Third Annual Midwest/Great Lakes ARC/INFO User Conference will continue in the tradition of excellence established by the first and second conferences. The aim of this conference is to provide an inexpensive forum for users to share their ARC/INFO experiences, ideas, questions, concerns, frustrations, and successes. This meeting will be of interest to anyone interested in GIS, novices and veterans alike. Potential benefits to attendees include greater efficiency in the use of ARC/INFO software, improved management of resources, and the chance to show off the results of hard work. This conference will provide an opportunity to talk face-to-face with ESRI representatives, ask them questions, and provide them with feedback to shape the future direction of ESRI products. A new feature of this year's conference is a plenary session focused on data providers and their products. These presentations will provide an overview of some of the available products and will be of special interest to regional planners and local governments. If you have an active interest in GIS and/or ARC/INFO technology, this conference will provide an opportunity for learning and interacting with others in the user community.

REGISTRATION FEE

Full registration: \$50; student registration, \$30. The fee includes all conference materials, 2 breakfasts, one lunch, and all break and evening refreshments. Registration for Wednesday only: \$30, includes full day of user presentations, breakfast, lunch, breaks, and vendor display.

HOTEL ACCOMODATIONS

Conference hotel: Inn on the Park, 22 South Carroll Street, Madison, Wisconsin 53703.

Reservations: Make your reservations toll-free, (800) 528-1234. Each conference participant is responsible for making his/her own reservation. Room cancellations must be made 72 hours prior to check-in. *Conference rates for standard rooms*: single, \$41; double, \$63 (plus 7% city room tax and 5% state sales tax). If more than two people share one room, there will be an \$8 charge for each additional person.

Method of payment: Cash, personal check, or credit card (American Express, Master Card, Visa, Diners Club, Discover, Carte Blanche, Amoco).

Cut-off date: You must reserve your room(s) by October 1, 1989 to receive the special conference rate.

TUESDAY, OCTOBER 17

WELCOME AND OPENING ADDRESS 1:00 p.m. to 1:30 p.m.

PLENARY SESSION GeoData for GIS: Availability, Costs, and Applications.

1:30 p.m. to 5:00 p.m.

This session will feature presentations by geodata producers and users.

1. Large-scale mapping 1:30 p.m. to 2:30 p.m.

Data collection methods, costs, user-specific applications, David Baraniak, Donohue and Associates, Inc.

Potential applications and logical design issues for parcel layers, Ed Crane, M.J. Harden Associates, Inc.

BREAK 2:30 p.m. to 3:00 p.m. 2. Imagery 3:00 p.m. to 4:00 p.m.

The role of imagery and earth observation in GIS, and applications interfacing SPOT Satellite imagery with ARC/INFO, Blake Burns, SPOT Image Corporation

Techniques and examples of using digital imagery in ERDAS and ARC/INFO, Steve Sperry, ERDAS, Inc.

3. Census TIGER 4:00 p.m. to 5:00 p.m.

Off-the-shelf databases - What users can expect from TIGER and derivative products from public and private suppliers, William Folchi, ETAK Corporation

Arrangements for the second talk have not yet been completed. This talk may focus on the use of Census TIGER databases for political reapportionment.

POSTER SESSION

5 p.m. to 7 p.m.

Users will present posters and demonstrations of ARC/INFO applications and methodologies. Topics will include mine and landfill site analysis, soil and water conservation management, satellite imagery integration, Digital Line Graph use, and base-map development. Attendees will have the opportunity to mingle in a congenial atmosphere and discuss the posters in depth with presenters. Hors d'oeuvres will be served; cash bar.

WEDNESDAY, OCTOBER 18

Breakfast

7 a.m. to 8 a.m.

CONCURRENT SESSIONS

8 a.m. to 5 p.m.

Users will present general and technical papers about topics related to ARC/INFO software and geographic information systems.

LUNCHEON

12:30 p.m. to 2 p.m. Keypote Address: Jack Dar

Keynote Address: Jack Dangermond, ESRI president.

VENDOR DISPLAY

5 p.m. to 7 p.m.

See the latest hardware and software developments and talk with vendors. Representatives of companies providing geographic databases, remote-sensing products, data-automation services, and computer hardware, software and peripheral products will display their products. Refreshments will be provided by the vendors.

THURSDAY, OCTOBER 19

BREAKFAST

7 a.m. to 8:30 a.m.

Special session breakfast rooms will provide an opportunity to meet in small groups and discuss special topics.

ESRI PRESENTATIONS/FEEDBACK

8:30 a.m. to 11:30 a.m.

What's new in ARC/INFO? ESRI representatives will discuss the new features in ARC/INFO Rev. 5.0, and pcARC/INFO Version 3.3, including the user interfaces and ARCSHELL. Learn about the new application starter kits and training materials, including self-paced workbooks and videotraining kits. Plans for future revisions with double-precision coordinates and new RDBMS interfaces will be discussed. Break into interest groups for question/answer feedback sessions.

CONCURRENT SESSION PAPERS

The following papers have been accepted for the concurrent sessions; others are under consideration and may be added.

Data Exchange

1. Digital Cartographic Data Exchange: Getting from Here to There, Paul Tessar, Wisconsin Department of Natural Resources, Will Craig and Niaz Ali Kahn, University of Minnesota, Center for Urban and Regional Affairs 2. Documentation for Geobase Creation: Quality Control and a First Draft Data Quality Report, Tom Ries, Wisconsin Department of Transportation 3. Geodata Quality Documentation: Prerequiste for Data Sharing, Michael Bohn, Wisconsin Geological and Natural History Survey, Robert Gurda, Wisconsin State Cartographer's Office, Tom Ries, Wisconsin Department of Transportation, and Steve Ventura, University of Wisconsin-Madison Land Information and Computer Graphics Facility

4. Aspects of Data Sharing, Robert Gurda, Wisconsin State Cartographer's Office

GIS Procedures

 Creating a User Interface, Mike A. Krueger, Wisconsin Department of Transportation
 Datanet Plus: Statistical Mapping for the Masses, Craig R. Perreault, Minnesota Land Management Information Center

3. Integrating Network Data into a Transportation Oriented Geographic Information System, David Fletcher and Tom Ries, Wisconsin Department of Transportation

4. Geographic Base Creation: Using AMLs (Macros) in Production, John G. Hoggatt, Wisconsin Department of Transportation

5. Attribute Management with ARC/INFO and d:BASE III in Dane County Offices, John Amundson, Dane County Division of Information Management

Publishing

1. Linking GIS Digital Technology to Printing Technology for Producing Publication-Quality Color Graphics, Greg Allord and Kerie J. Hitt, U.S. Geological Survey, Water Resources Division 2. Cartographic Production Using Postscript, Mark Joselyn, Illinois Natural History Survey

Decision Support System Applications

1. Geographic Information System Application for Coal Mine Permit Review in Illinois, George D. Graettinger, Robert J. Krumm, Jim C. Ploetz, and Gail H. Taylor, Illinois State Geological Survey 2. GIS Applications of the Office of Research and Planning, Illinois DENR, Robert Lindquist and Sheryl G. Oliver, Illinois Department of Energy and Natural Resources

3. *Major Systems Development Using ARC/INFO*, David Fletcher, Wisconsin Department of Transportation

4. Potential Applications of GIS to Political Reapportionment, Jerry Sullivan, University of Wisconsin-Madison, Land Information and Computer Graphics Facility

5. GIS Applications for Urban Revitalization Planning: East St. Louis, a Case Study, Kate Hunter, Illinois Natural History Survey

Employing a GIS to Enhance the Illinois Environmental Regulatory Analysis Program, Tom Heavisides and Timothy J. Johnson, Illinois Department of Energy and Natural Resources
 Application of EPPL7 Viewshed in the Evaluation of Potential Radio Transmission Towers, Ken Pekarek and Timothy Loesch, Minnesota State

Planning Agency, and Will Craig, University of Minnesota, Center for Urban and Regional Affairs

Ecological Research and Landscape Analysis
1. Exploiting the Synergism Between Satellite
Remote Sensing and GIS, Thomas M. Lillesand,
University of Wisconsin-Madison, Environmental Remote Sensing Center
2. Ecological Research Applications of Geographic
Information Systems, Carol Johnston, U.S. Environmental Protection Agency
3. A Landscape Analysis of Farm Woodlots, Eva
Serra, University of Wisconsin-Madison Department of Landscape Architecture
4. Nebraska Statewide Arboretum Project, John Eno,
Donn Rodekohr, Center for Advanced Land
Management Technologies, and Jim Weir,
University of Nebraska-Lincoln

Water Resources Planning and Management 1. GIS Applications for Local Water Planning, Renee Johnson and Susanne Maeder, Minnesota State Planning Agency

2. The Central Sands Geographic Information Project: Development of a Prototype GIS for Groundwater Management, Tim Prescott, Golden Sands Resource Conservation and Development Area 3. Groundwater Database Development within the pcARC/INFO Environment, Keith Rice, University of Wisconsin-Stevens Point, and Michael Bohn, Wisconsin Geological and Natural History Survey

Surface-Water Modeling

1. Application of ARC/INFO GIS Software for Runoff and Sediment Modeling, N.R. Bhaskar and R.S. Devulapalli, University of Louisville, Department of Civil Engineering

2. Monitoring Changes in Nonpoint Pollution Runoff at the Urban Fringe Using an Automated Land Information System, Peter G. Thum, Bernard Niemann, and Steve Ventura, University of Wisconsin-Madison, Land Information and Computer Graphics Facility

3. GIS and Image Processing for Urban Stormwater Modeling, Ming Lee and Michael Terstriep, Illinois State Water Survey

Wildlife Management

1. Development of a GIS for Registered Furbearer Management, Ed Boggess and Glenn Radde, Minnesota Department of Natural Resources 2. Current and Historical Distributions of Minnesota's Timber Wolves, Todd Fuller, Bill Berg, and Glenn Radde, Minnesota Department of Natural Resources

Forest Management

 Applying pcARC/INFO to a Forest Inventory in Private Industry, Timothy Krohn, Potlatch Corporation, Minnesota Wood Products Division
 The Northern Highlands State Forest GIS Pilot Project: Forestry Applications Using ARC/INFO and EPPL7, Paul Tessar and Lance Perry, Wisconsin Department of Natural Resources
 ARC/INFO - EPPL7 Integration: Forest Management in Minnesota, Tim Loesch, Minnesota Land Management Information Center

Soils and Geologic Resource Management

1. Producing Derivative Geologic Maps from Automated Map and Tabular Well Data, Lisa R. Smith, Sally L. Denhart, Curtis C. Abert, E.D. McKay, Illinois State Geological Survey 2. Surficial Deposit Thickness Maps Using the TIN Module of ARC/INFO: A Computational Method, Anne Erdmann, Illinois State Geological Survey 3. Techniques for Automating Data from a County Soil Survey: A Case Study for Champaign County, Illinois, Robert J. Krumm, Robert J. Pool, and George D. Graettinger, Illinois State Geological Survey

4. GIS Implementation in a Local Soil Conservation Office, Steve Ventura, University of Wisconsin-Madison, Land Information and Computer Graphics Facility

We regret that we are unable to offer any URISA workshops.

REGISTRATION FORM

Detach and send completed form with payment to:

ARC/INFO User Conference Coordinator Wisconsin Geological and Natural History Survey 3817 Mineral Point Road Madison, Wisconsin 53705 Telephone (608) 262-1705

Type of registration:

\$50, full registration

□ \$30, student registration

□ \$30, Wednesday-only registration

Make check or money order for registration fees payable to University of Wisconsin-Extension. Registration fees must be paid in U.S. dollars and drawn on a U.S. bank.

Name	
Title	
Organization	
Address	 <u> </u>
Telephone	

NOTE: REGISTRATION BY MAIL CLOSES OCT. 12TH

ON-SITE REGISTRATION WILL BE AVAILABLE, HOWEVER, MEALS WILL NOT BE GUARANTEED. PLEASE CALL 608/262-1705 BEFORE NOON, OCTOBER 12TH FOR PHONE REGISTRATION.

WLIA LEGISLATIVE PROGRESS, COMMITTEE ACTIVITY

Members of the Wisconsin Land Information Association (WLIA) met in DePere on September 6. State Representative Robert Welch (R-Redgranite) provided his perspective on what actions the Association should focus on. He emphasized the appointment process to fill the 8 seats on the new Land Information Board. He also underlined the importance of a solid study and presentation of recommendations for funding for the new program.

As a ranking member of his party in the legislature, Welch has a particular interest in the redistricting activity that will take place after the 1990 census. He believes that the decision by the legislature to utilize GIS to assist in the process carries with it the opportunity to expose many more persons to the potential of the technology.

Mike Bacon, Chair of the WLIA Technical/Research Committee, announced that a series of informational meetings would be held to discuss the issue of a new standard horizontal datum being adopted by the state. The National Geodetic Survey has switched from NAD 27 to NAD 83. The Wisconsin DOT is establishing an even more accurate horizontal control network through use of GPS. A statewide resolution of this situation could be beneficial to everyone in the long run. Bacon indicated that he expected the meetings to be scheduled for December/January, and that his committee hoped to have a recommendation for consideration at the WLIA Annual Meeting in February.

DOT GPS PROJECT UPDATE

In the last 3 issues of this <u>Bulletin</u>, we have reported on plans and activities of the Wisconsin Department of Transportation (DOT) in developing a new horizontal geodetic control network across the state. DOT continues to implement this program, which has now acquired the title "Wisconsin High Precision Geodetic Network". Global Positioning System (GPS) technology is being used to provide the measurements that will be used to define the positions of points in the network.

The following is the current status of the WHPGN:

DOT has completed the installation of monuments (97 primary stations plus 97 azmuiths).

DOT expects to complete GPS observations at its control stations by the end of 1989. These will be done such that Order B accuracy (1 part in 1 million) can be obtained for the network. As part of the cooperative agreement between DOT and the National Geodetic Survey (NGS), NGS will calculate the adjusted positions of the control stations within 6 months of receipt of DOT's data. Thus, useable coordinates may be available by next summer.

The NGS will be in the state early in 1990 to acquire GPS data over additional stations and azimuths, and to obtain control on the ends of 43 airport runways as part of the ADAM system being developed by the Federal Aeronautics Administration.

LEGISLATURE TO USE GIS WITH TIGER FILES FOR REDISTRICTING

The Wisconsin Legislature will be using state-of-the-art automated capabilities to assist in their redrawing of district lines for both the State Senate and Assembly. A cooperative program involving the four party caucuses, the Legislative Reference Bureau, the University of Wisconsin-Madison, and the Wisconsin Department of Transportation (DOT), will utilize customized features of ARC/INFO (a geographic information system software) operating on the TIGER files produced by the U. S. Census Bureau.

For tabulation of the 1990 Census, the Census Bureau will be using an automated system including structured graphics files called TIGER (Topologically Integrated Geographic Encoding and Referencing system). Early versions of the TIGER files are already available, but are not simple to use. In addition, the new Census data will not be available until later next year.

DOT will be a taking the raw TIGER files as produced by Census for the entire state, and converting them into a more useable form. Once converted, these files will be particularly useful as support for planning applications, beyond their immediate use for the redistricting effort. Much of the TIGER file content is similar to USGS Digital Line Graphs (from the 1:100,000 scale series) in resolution. As such, this data will not support some local needs such as tax mapping.

The University has several roles in the program. It will provide computer storage and processing capabilities, as well as developing the appropriate graphics workstations, customized software, and training.

We will report in much more detail on these developments in forthcoming issues. There are a number of potential long-term opportunities which might be of particular interest to local governments and regional planning commissions.

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STATUS OF COUNTY GEOLOGICAL MAP SERIES AS OF JUNE 30, 1989



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COUNTY PLAT BOOKS

The following Wisconsin County Land Atlas and Plat Books are now available for 1989: *Columbia, *Dane, *Dodge, and Winnebago Counties. These Plat Books sell for \$22.50 plus tax and shipping, except that those marked with an asterisk sell for \$20.00 plus tax and shipping. For ordering details contact: Rockford Map Publishers, Inc., P.O. Box 6126, Rockford, IL 61125. Phone (orders only) 800/435-0712 or for customer service information call 815/399-4614.



HISTORY OF CARTOGRAPHY

Two University of Wisconsin cartographers are engaged in a long term effort to document the history of cartography. Professor J.B. Harley (UW-Milwaukee) and Professor David Woodward (UW-Madison) are editors of the six-volume <u>History of Cartography</u>, which presents a comprehensive history of mapping from prehistory to the present.

Harley and Woodward lead an international multidisciplinary team of specialists in examining maps and cartographic processes in the context of the cultures which create them. Analyzing the range of maps, from those of estates and local regions to those of the world and the entire cosmos, chapter themes explore the close interaction among the sciences, cartography, and the arts and humanities. What emerges is the value of maps, not just as tools to record space and events, but also as political, magical, and ritual images revealing how people in a variety of cultures perceive space.

A major goal of the <u>History of Cartography</u> is to provide an accessible, fundamental, and authoritative synthesis of this history. The series is published by the University of Chicago Press. Volume 1, *Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean*, appeared in 1987; the initial printing was quickly exhausted and a second printing has been made. Volume 1 may be purchased from the University of Chicago Press, 5801 S. Ellis Avenue, Chicago, IL 60637. Its price is \$100.00. Volume 2, now in preparation, is devoted to the cartography of the major islamic and Asian civilizations. Publication is expected in 1991.

For more information contact the History of Cartography Project, UW-Madison, Room 470 Science Hall, Madison, WI 53706, telephone 608/263-3992.

USGS PUBLICATIONS

The 1:100,000-scale topographic quadrangle map "Wisconsin Rapids" has been published by the USGS. Its contour lines depict intervals of 10 meters (with 5 meter supplemental coutours). It is based on field surveys from 1982-1985. This new map covers an area 30 minutes in latitude by 60 minutes in longitude; its south east corner is 44 degrees north latitude and 89 degrees west longitude.



UWM TO JOIN IN MAJOR COLUMBUS MAP EXHIBITION

The University of Wisconsin-Milwaukee will play an important role in an extensive exhibition of rare historical maps from the 14th to 16th century. The National Endowment for the Humanities has awarded UWM \$280,000 in direct funds and \$100,000 in matching support for "Maps and the Columbian Encounter." The project is one of many international events being planned in recognition of the 500th anniversary of the 1492 voyage of Christopher Columbus.

The American Geographical Society Collection at the UWM Golda Meir Library, the largest geographical research collection of its kind in the western hemisphere, will be used extensively for research and development.

A traveling exhibit of original maps will visit Illinois, Minnesota, and Michigan before concluding its tour at the Milwaukee Public Museum.

(source: Wisconsin Ideas, April, 1989)

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NEW SPOT PRODUCTS

Image maps produced from the SPOT satellite are announced as a new offering from SPOT Image Corporation. The maps are available in a number of sizes and formats. In most cases, the information content is less than one year old.

SPOT QuadMapsTM are the same scale (1:24,000) and cover the same area as any USGS 7.5-minute quadrangle. Complete coverage of the U.S. is available in either digital (\$500) or photographic (\$600) format.

SPOT CountyViewsTM are 1:24,000-scale black-andwhite photographs of any U.S. county. These are produced as panels, each of which can be up to 50" X 100", depending on county size. Cost is 2.00/sq. mile.

SPOT BasinViewsTM come in digital black-and-white format only, and can be ordered for any geologic basin in the world. Minimum area that can be ordered is 2500 square miles; cost is \$.95/sq. mile.

For more information on these and other SPOT products, contact SPOT Image Corporation, 1897 Preston White Drive, Reston, VA 22091-4368, or telephone (703) 620-2200.

(Source: <u>SPOT Image Corporation</u>)

SPOT-2 LAUNCH SCHEDULED FOR NOVEMBER

November, 1989 has been chosen for launch of SPOT-2. This new satellite will be configured identically to SPOT-1 which has been operating since February, 1986. SPOT-3 will be similar to the first two satellites, and will be launched as needed to maintain coverage.

The first major sensor modifications in the SPOT satellite series will be introduced on SPOT-4, scheduled for launch during the second half of the 1990's. At this time these modifications include the addition of sensing capabilities in the middle infrared and blue wavelength bands.

(Source: <u>SPOTLIGHT</u>, June 1989)



Wisconsin Mapping Bulletin

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News is welcome on completed or ongoing projects, published maps or reports, conferences/workshops. Local and regional information is especially welcomed. The Editor makes all decisions on content. Deadline for the next issue is November 10, 1989.

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