



Annual Report, 2011-12

About the State Cartographer's Office

Established in 1974, the Wisconsin State Cartographer's Office (SCO) is a resource for information about maps, cartography, geographic/land information systems, and geospatial technology. We support Wisconsin's geospatial community and the general public through presentations, workshops, consulting, publications, catalogs and services, and information about events, jobs and emerging trends.

The SCO serves as a liaison between professionals in government, education, non-profits and the private sector, helping to expand the effective use of geospatial technology. We maintain ties with geospatial communities in other states and nationally to stay on top of trends and policies, and we collaborate on statewide initiatives with mapping agencies and associations.

As a unit within the Geography Department at UW-Madison, the SCO embodies the "Wisconsin Idea" by facilitating the transfer of knowledge and ideas between the university and citizens of the state.

This report summarizes SCO activities between July 1, 2011 and June 30, 2012 (Fiscal Year 2012), the second year covered by our 2010-13 Strategic Plan. Our activities for 2011-12 include a number of data-oriented projects: statewide orthophotography planning; a pilot study for Public Land Survey System data; a "virtual" statewide parcel integration effort; work on the midscale cartography project; efforts to enhance access to LiDAR data and update landcover data; and ongoing maintenance of our "Finder" applications.

This report includes an assessment of progress relative to our Strategic Plan, as well as a list of high-priority projects for 2012-13 identified in our annual business planning process.

Contents

Major Projects and Initiatives	2
Statewide Orthophotography	2
PLSS Pilot Project	3
Statewide Data Integration	4
SCO Publications	5
Conference Presentations	6
Grants	7
SCO in the News	7



Coordination and Outreach	8
Conference Attendance	8
University Activities	8
Professional Associations	9
Mapping Agencies	10
Strategic Plan Performance	11
Business Plan, 2012-13	12
Staff, Students and Support	13

Major Projects and Initiatives

Statewide Orthophotography Planning

Background

In February 2011, the State Cartographer's Office received funding through the Federal Geographic Data Committee (FGDC) Cooperative Agreements Program (CAP) for a project entitled "Business Plan Development for a Wisconsin Aerial Imaging Program." The project is examining existing models used to manage orthophotography projects in the state, and based on considerable community input, analyze the lessons learned from these past projects.

Expected Outcome

The expected outcome of the project is a formal implementation plan for an aerial photography program that meets the needs of the widest possible audience of users in Wisconsin.

Status

An outside consultant (GeoPlanning Services, Orlando, Florida) has been hired to develop and implement the community input phase of the project, gather and review documents detailing past experiences, and draft the final report. GeoPlanning Services has past experience developing state geospatial and orthophoto business plans.

A steering committee has been established with members drawn from local government, state agencies, regional planning commissions, the federal government, utilities, and academia.

A series of interviews, online surveys and workshops are planned for the summer and fall of 2012 to reach out to stakeholders and gather information.

The final report is to be completed by February of 2013.



Additional Resources

SCO Web site project description:

<http://www.sco.wisc.edu/projects/statewide-orthophotography-planning.html>

SCO orthophotography Infosheet:

http://www.sco.wisc.edu/images/stories/publications/SCO_CAP_orthophoto_planning_2012.pdf

SCO proposal:

http://www.sco.wisc.edu/images/stories/download/WI_SCO_Ortho_Business_Plan_Proposal.pdf

Wisconsin Regional Orthophotography Consortium Web site:

<http://www.ncwrpc.org/WROC/>

WLIA Orthophoto Task Force final report:

http://wlia.affiniscap.com/associations/11328/files/task_force_ortho_final_report.pdf

Wisconsin Location Matters Strategic Plan:

http://www.sco.wisc.edu/images/stories/download/WI_GIS_StrategicPlan_Jan_05_2007.pdf

Major Projects and Initiatives

Public Land Survey System (PLSS) Pilot Project

Background

The SCO is conducting a pilot study to develop and test data integration methods for statewide production of contemporary Public Land Survey System (PLSS) data. The study focuses on including improved local (county) PLSS data where available. The project seeks to identify methods and barriers to integrating accurate local PLSS data into a wider statewide dataset. © Google

Goals

- Develop a data integration model that is capable of consolidating different datasets into one statewide data model which can be reproduced for use with other data types.
- Produce a more accurate PLSS dataset derived from local data wherever possible.
- Develop methods to produce an authoritative PLSS dataset that provides comprehensive statewide coverage.
- Develop and test methods to complete the first step in producing an updated and more accurate statewide PLSS database.

Status

- Data for a multi-county study area in north-east Wisconsin has been acquired and validated.
- A provisional data model has been developed to accommodate necessary attributes and relationships. The data model allows for the inclusion of multiple coordinates for each PLSS corner by differentiating between corners, corner points, and corner coordinates.
- Outreach has been performed to inform stakeholders of the project and solicit feedback. This has been achieved through conference presentations, discussions and online surveys. Stakeholders include local governments, state agencies, federal mapping agencies, and the surveying community.

Additional Resources

SCO Web site project description

<http://www.sco.wisc.edu/projects/plss-pilot.html>

Introduction to the Public Land Survey System

<http://www.sco.wisc.edu/plss/introduction-to-plss.html>

PLSS Data

<http://www.sco.wisc.edu/plss/plss-data.html>

The Public Land Survey System in Wisconsin

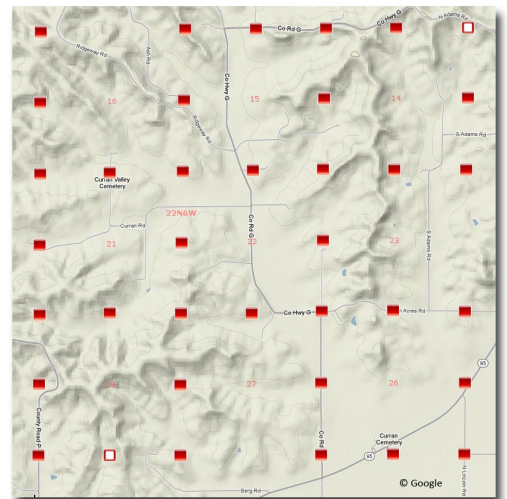
<http://www.sco.wisc.edu/plss/public-land-survey-system.html>

PLSS Origins

<http://www.sco.wisc.edu/mapping-topics/plss-origins-in-wisconsin.html>

Original PLSS Field Notes and Plat Maps

<http://digicoll.library.wisc.edu/SurveyNotes/>



Major Projects and Initiatives

Statewide Data Integration Efforts

Background

The SCO is conducting several projects that seek to build statewide datasets or integrate datasets from local sources. Statewide data integration continues to be an elusive target in Wisconsin, and an issue of great importance to the geospatial community. The biggest beneficiaries of integrated data include state agencies, scientific researchers, non-profits, regional planning commissions, economic development agencies, emergency managers, public health practitioners, and many others. Integrated statewide datasets are an essential element to the use of geospatial technology for more effective decision making and more efficient governance.

Specific Projects

- The SCO continues to pursue outreach to local units of government, professional organizations, state and federal agencies, and the private sector to acquire and integrate geospatial datasets for our **ControlFinder** and **PLSSFinder** applications. These online applications are recognized as a central point of access for geodetic control and PLSS corner information for Wisconsin. The Wisconsin County Surveyor's Association has officially endorsed PLSSFinder as a point of access for PLSS data.
<http://www.sco.wisc.edu/controlfinder/controlfinder.html>
<http://www.sco.wisc.edu/plssfinder/plssfinder.html>
- The SCO is working on a **virtual parcel viewer** project to integrate parcel map services from individual counties to create a view of parcel data over the whole state. Our project partner is UW-Eau Claire. Outreach for this project has focused on state associations including LION (Land Information Officers Network), WCSA (Wisconsin County Surveyors Association) and WLIA (Wisconsin Land Information Association).
<http://www.sco.wisc.edu/news/sco-and-uw-eau-claire-launch-qvirtual-data-integrationq-research-project.html>
<http://www.sco.wisc.edu/news/virtual-parcel-data-integration-project-update.html>
- The SCO is working with partners to update **statewide land cover data**. The most recent statewide Wisconsin-specific land cover database, WiscLand, is from the 1990s. With faculty in Forest and Wildlife Ecology at UW-Madison, and the Department of Geography at UW-Milwaukee, the SCO has submitted several grant proposals to kick-start a statewide update to WiscLand. In addition, teams have met with the Wisconsin Department of Natural Resources, and with the Deer Trustee (Dr. James Kroll), to discuss options for an update to this dataset. These efforts have been endorsed by the Secretary of the Wisconsin Department of Natural Resources and the Secretary of the Wisconsin Department of Agriculture, Trade, and Consumer Protection.
<http://dnr.wi.gov/maps/gis/datalandcover.html/>
<http://www.sco.wisc.edu/news/deer-trustee-report-highlights-geospatial-needs-in-wisconsin.html>
- The SCO's **midscale cartography** project seeks to develop GIS-based cartographic data for mid-scale mapping of the state. To date most work has focused on an unincorporated place layer and an online pronouncing gazetteer. The gazetteer work has been supported by community members with an active interest in place name pronunciations, including MissPronouncer.com. The SCO is also an official partner in Esri's online Community Maps program.
<http://www.sco.wisc.edu/projects/mid-scale-cartography.html>
<http://www.misspronouncer.com>
<http://www.esri.com/software/arcgis/community-maps-program>
- The SCO is working with the Wisconsin Geographic Information Coordination Council (WIGICC) Elevation Working Group to develop an **inventory and repository of LiDAR data** in the state. The State Cartographer also served as the state's point of contact for the US Geological Survey's recent National Enhanced Elevation Assessment (NEEA) program.
<http://www.wigicc.org/NETWORK/CommitteesandWorkingGroups/ElevationDataWorkingGroup/tabid/345/Default.aspx>
<http://www.dewberry.com/Consultants/GeospatialMapping/FinalReport-NationalEnhancedElevationAssessment>

Major Projects and Initiatives

SCO Publications

Background

Publications are a primary way for the SCO to communicate with our constituents. As in past years, the office continues to look for ways to increase publication rates and look for new publication formats.

Results

We published 80 Mapping Bulletin articles in the period covered by this report, up from 48 in the previous year, and surpassing our goal of 75.

We introduced a new publication format — the SCO “Technical Paper” series — and published three of these new publications:

Quick and Easy Web Maps with Google Fusion Tables.

http://www.sco.wisc.edu/images/stories/publications/SCO_quick_and_easy_web_maps_v1.1.pdf

Concepts and Methods for Rule-based Web Cartography.

http://www.sco.wisc.edu/images/stories/publications/SCO_web_map_concepts_v1.0.pdf

Creating Web and Mobile Maps using ArcGIS Online.

http://www.sco.wisc.edu/images/stories/publications/SCO_ArcGIS_Online_v1.0.pdf

We are currently completing a paper for publication in a conference proceedings:

H. Veregin & AJ Wortley. (2012). Analysis of Web-usage statistics to evaluate the effectiveness of online maps for community outreach. *Proceedings, AutoCarto 2012.*

One of the publications listed in our previous annual report appeared in print:

H. Veregin. (2011). GIS and geoenabled cartography. *Cartography and Geographic Information Science*, 38(3), 299-301.

One of the publications listed in our previous annual report is still in press:

H. Veregin & T. Kennedy. (2011). Online information dissemination at the Wisconsin State Cartographer's Office using map services and APIs. In M. Peterson (Ed.), *Online Maps with APIs and Mapservices*. International Cartographic Association Commission on Maps and the Internet.



Mapping Bulletin - Wisconsin Geospatial News

FEATURES

Deer Trustee report highlights geospatial needs in Wisconsin

July 13, 2012
A recently published report commissioned by Governor Scott Walker suggests Wisconsin has fallen behind as an innovator in geospatial information services, and offers specific recommendations to address this problem.

New export option in SCO Finder applications

July 12, 2012
OPFS format now available in ControllFinder and PLUSFinder.

Is the Google Map Partners program in your future?

July 12, 2012
Program allows geospatial content providers to send their data to Google.

MOST POPULAR

- Deer Trustee report highlights geospatial needs in Wisconsin
- Is the Google Map Partners program in your future?
- New export option in SCO Finder applications
- 133 map categories! How the US Department of Agriculture solved a complex cartographic design problem.
- Managing information overload with Web feeds
- SCO and UW-Eau Claire launch "virtual data integration" research project

MORE NEWS

How did we get to the National Horizontal Adjustment of 2011?

June 28, 2012
The National Adjustment of 2011 (NAJ 63 (2011)) was just released. Learn how the effects of technology have influenced the various horizontal adjustments.

WIGCC seeks nominations

June 18, 2012
The Wisconsin Geographic Information Coordination Council is looking for representatives in seven different sectors.

Project to develop Wisconsin orthophotography business plan moving forward

June 15, 2012
New SCO-led project seeks to gather input from the Wisconsin geospatial community on past orthophotography projects, and develop a business plan that makes incremental improvements to the current situation.

UWSP offers new training opportunities

June 15, 2012
The GIS Center at UW-Stevens Point recently unveiled two new training courses, with more on the way.

Virtual parcel data integration project update

June 14, 2012
An update on the SCOLM-Eau Claire "virtual parcel data integrator" project that uses county Web map services to create a statewide view of parcels.

WLIA Foundation announces scholarship opportunities for students

May 24, 2012
The Wisconsin Land Information Association is accepting applications for their Memorial Scholarship Awards.

Updated 2012 UCGIS Education

June 14, 2012
The Wisconsin Cartographic Society is accepting applications for their Memorial Scholarship Awards.



Quick and Easy Web Maps with Google Fusion Tables

SCO Technical Paper

Version	Date	Notes	Author/Contact
1.0	July, 2011	Initial document created.	Howard Veregin
1.1	Dec., 2011	Updated to reflect integration into Google Docs. New sections added: additional symbolization methods; using HTML and Shapefiles; tool maps; and known problems.	John J. Czaplewski

Copyright © 2011 The Board of Regents of the University of Wisconsin System

GIS and Geoenabled Cartography

Howard Veregin

There is nothing new about the idea of using GIS to make maps. But over the last decade there has been a dramatic increase in the ability to produce high-quality cartographic maps using geoenabled GIS-based systems. A recent example is the 2012 edition of *MapInfo User's World Map Viewer*, which is the world's largest map viewer. This is a significant milestone for the 2012 East Spatial Advancement Awards, a Wisconsin mapping company, for their work on the world's largest map viewer. The 2012 East Spatial Advancement Awards are presented to individuals or institutions who have made significant contributions to the field of GIS. The 2012 East Spatial Advancement Awards are presented to individuals or institutions who have made significant contributions to the field of GIS. The 2012 East Spatial Advancement Awards are presented to individuals or institutions who have made significant contributions to the field of GIS.

Conference Presentations

- H. Veregin & B. Hemstead. *Data Access for Surveyors*. Wisconsin Society of Land Surveyors (WSLS) Chapter Meeting, Sept. 2011, Platteville.
- H. Veregin & C. Pulford. *State Geospatial Coordination Councils*. National States Geographic Information Council (NSGIC) Annual Meeting, Sept. 2011, Boise, Idaho. (Discussion session)
- J. Lacy. *Wisconsin Orthoimagery: Status and Future Directions*. Minnesota GIS/LIS Annual Conference, Oct. 2011, St. Cloud, Minnesota.
- T. Kennedy, H. Veregin & AJ Wortley. *From Conceptual to Actual – Deliberations in Automated Cartography*. North American Cartographic Information Society (NACIS) Annual Meeting, Oct. 2011, Madison.
- M. Bricknell, D. M. Mickelson & H. Veregin. *Modeling Ice Age lakes of Wisconsin using PaeloDEMs*. North American Cartographic Information Society (NACIS) Annual Meeting, Oct. 2011, Madison.
- T. Kennedy, H. Veregin & AJ Wortley. *Deliberations in Automated Cartography: A Web-Based Cartographic Map Service for Wisconsin Surveyors*. GIS Day, Nov. 2011, Madison.
- J. Schwichtenberg & H. Veregin. *WIGICC: Your State, Your Resource, Your Council*. GIS Day, Nov. 2011, Madison. (Presented by J. Schwichtenberg)
- H. Veregin, J. Stoltenberg & AJ Wortley. *The Changing Landscapes of Wisconsin: Statewide Historic Aerial Photographs Online*. The Wisconsin Idea Symposium: Principled Partnerships for the Public Good, Nov. 2011, Madison. (Poster)
- B. Hemstead, H. Veregin & T. Kennedy. *Developing a Statewide PLSS Dataset*. 63rd Annual Surveyor's Institute, Wisconsin Society of Land Surveyors (WSLS), Jan. 2012, Wisconsin Dells.
- H. Veregin & J. Mundt. *Coordination Council Discussion*. National States Geographic Information Council (NSGIC) Mid-Year Meeting, Feb. 2012, Annapolis, Maryland. (Discussion session, via videoconference)
- J. Lacy. *Wisconsin Aerial Photography: 2015 and Beyond*. Wisconsin Land Information Association (WLIA) Annual Conference, Feb. 2012, Stevens Point.
- T. Kennedy. *Building a Statewide PLSS Database*. Wisconsin Land Information Association (WLIA) Annual Conference, Feb. 2012, Stevens Point.
- J. Lacy. *Panel Discussion: Minor Civil Divisions*. Wisconsin Land Information Association (WLIA) Annual Conference, Feb. 2012, Stevens Point. (Facilitator of panel discussion)
- H. Veregin. *Panel Discussion: GIS and Economic Development*. Wisconsin Land Information Association (WLIA) Annual Conference, Feb. 2012, Stevens Point. (Facilitator of panel discussion)
- AJ Wortley & B. Hemstead. *Overview and Interface with County Departments*. Wisconsin County Code Administrators Conference, March 2012, Mosinee.
- AJ Wortley & J Stoltenberg. *Geospatial Data Preservation: A Work in Progress*. UW-Madison Geospatial Summit, April 2012, Madison.
- J. Lacy. *Learning from the Past: A Blueprint for a Wisconsin Aerial Imaging Program*. Wisconsin Land Information Association (WLIA) Spring Regional Conference, May 2012, Minocqua.
- H. Veregin. *Virtual Data Integration Research Project*. Land Information Officers Network (LION) meeting at Wisconsin Land Information Association (WLIA) Spring Regional Conference, May 2012, Minocqua.

Grants

Funded/Pending

Business Plan Development for a Wisconsin Aerial Imaging Program

Source: Federal Geographic Data Committee (FGDC) Cooperative Agreements Program, \$39,999
Principal Investigator: H. Veregin
Status: Awarded February, 2011; End date February 2013
Description: SCO is the lead organization in collaboration with the Wisconsin Department of Military Affairs and North Central Wisconsin RPC on this grant which seeks to develop a business plan for aerial image acquisition.

US National Grid Adoption

Source: Wisconsin Office of Justice Assistance/Homeland Security Program, \$8000.
Status: Pending.
Description: Subcontract to Wisconsin Department of Military Affairs for Web site development for a US National Grid adoption program.

Not Funded

Mapping environmental change in Wisconsin

Source: Baldwin Wisconsin Idea Endowment
Principal Investigators: M. Ozdogan (Forest and Wildlife Ecology), T. Kennedy and H. Veregin (SCO)
Status: Not funded
Description: Utilize newly developed methodologies to map Wisconsin's forest land-cover on a repeatable and low-cost basis. This grant application received letters of support from the Secretaries of the Dept. of Agriculture, Trade and Consumer Protection, and Dept. of Natural Resources.

Mapping Wisconsin land cover

Source: Inter-campus Research Grants Program
Principal Investigators: T. Kennedy (SCO), M. Ozdogan (UW-Madison, Forest and Wildlife Ecology), C. Wu and W. Choi (UW-Milwaukee, Geography)
Status: Not funded
Description: Develop a satellite-based methodology to map Wisconsin's land cover through a pilot study focusing on Madison and Milwaukee.

SCO in the News

Kroll report

Dr. James Kroll was commissioned by Governor Scott Walker to analyze how the Department of Natural Resources can better manage Wisconsin's whitetail deer population. Kroll's final recommendations mention geospatial technology and data in numerous places. The report also recommends that a statewide geospatial information system be coordinated by the SCO.

http://doa.wi.gov/secy/documents/final_report_recommendations13.pdf

GOOD Magazine Interview

Makin' It: Howard Veregin, Wisconsin's Postmodern State Cartographer. "Makin' It" is a GOOD Magazine series highlighting unique professions. The interview was conducted over a number of weeks by email.

<http://www.good.is/post/makin-it-howard-veregin-wisconsin-s-postmodern-state-cartographer/>

National News Feeds

Visionary Geospatial Leaders Interviewed. GOOD Magazine interview picked up by Directions Magazine.

<http://apb.directionsmag.com/entry/visionary-geospatial-leaders-interviewed-not-jack-dangermond/235743>

UW-Madison News Feeds

Birdseye view of Wisconsin's past wins governor's award.

University of Wisconsin-Madison News, Oct. 11, 2011.

<http://www.news.wisc.edu/19881>

Coordination and Outreach

Conference Attendance

National States Geographic Information Council Annual Meeting, Sept. 2011, Boise, Idaho. (Veregin, Lacy)

Wisconsin Counties Association Annual Conference, Sept. 2011, Wisconsin Dells. (Lacy, Hemstead)

Free and Open Source Software for Geospatial (FOSS4G) International Conference, Sept. 2011, Denver, Colorado. (Wortley)

Wisconsin Society of Land Surveyors (WSLS) Chapter Meeting, Sept. 2011, Platteville. (Veregin, Hemstead)

Crime Information Bureau Conference, Sept. 2011, Green Bay. (Hemstead)

North American Cartographic Information Society (NACIS) Annual Meeting, Oct. 2011, Madison. (Veregin, Kennedy, Wortley)

WhereCamp MSN 2011 Unconference, Oct. 2011, Madison. (Wortley)

Wisconsin National Emergency Number Association Conference, Oct. 2011, Wisconsin Dells. (Hemstead)

Wisconsin Land Information Association (WLIA) Fall Regional Conference, Oct. 2011, Neenah. (Veregin, Hemstead, Wortley)

Minnesota GIS/LIS Association Annual Conference, Oct. 2011, St. Cloud, Minnesota. (Lacy)

Esri Wisconsin Users' Group (EWUG), Nov. 2011, Green Bay. (Veregin, Lacy, Kennedy)

National Digital Orthophoto Program Steering Committee Fall Meeting, Nov. 2011, Indianapolis, Indiana. (Lacy)

The Wisconsin Idea Symposium: Principled Partnerships for the Public Good, Nov. 2011, Madison. (Veregin, Wortley)

GIS Day, Nov. 2011, Madison. (Veregin, Lacy, Hemstead, Kennedy, Wortley)

Annual Surveyor's Institute, Wisconsin Society of Land Surveyors (WSLS), Jan. 2012, Wisconsin Dells. (Veregin, Hemstead)

Wisconsin Land Information Association (WLIA) Annual Conference, Feb. 2012, Stevens Point. (Veregin, Lacy, Hemstead, Kennedy, Wortley)

American Society for Photogrammetry and Remote Sensing Western Great Lakes Regional Conference, Feb. 2012, St. Paul, Minnesota. (Lacy)

Wisconsin County Code Administrators Conference, March 2012, Mosinee. (Hemstead, Wortley)

Wisconsin Land Information Association (WLIA) Spring Regional Conference, May 2012, Minocqua. (Veregin, Lacy, Hemstead)

University Activities

Department of Geography, UW-Madison

- Partnered with Robinson Map Library on the Geospatial Multi-State Archiving and Preservation Partnership (GeoMAPP). (Wortley)
- Participation in Science Saturday, UW-Madison Institutes for Discovery, Nov. 2011. (Veregin, Kennedy)
- Participation in Science Hall Open House for Science Expeditions, April 2012. (Lacy, Hemstead)
- Coordinated subunit report on outreach activities for departmental self-study. (Veregin)
- External Relations Committee. (Veregin)
- Science Hall Computing Committee. (Wortley)
- Geocomputing Committee. (Lacy)
- Guest lecture in GEOG 377 (Introduction to GIS). (Veregin)
- Guest lecture in GEOG 377 (Introduction to GIS). (Wortley)

Geospatial Alliance (formerly SIAC)

- Organized and hosted the annual Geospatial Summit on April 26, 2012. Approximately 80 faculty and staff attended, including attendees from UW-Madison, UW-Milwaukee, UW-Eau Claire, UW-Stevens Point, UW-La Crosse, UW-Stout, and Carthage College. Keynote speaker was David DiBiase of Esri. Nineteen presentations were delivered, including one by the SCO and Robinson Map Library. All sessions were chaired by SCO staff.
- Coordinated and chaired quarterly Geospatial Steering Committee meetings. (Veregin)
- Member of Geospatial Steering Committee. (Lacy)
- Developed searchable faculty/staff/student listing for the Geospatial Alliance Web site. (Lacy)

Coordination and Outreach

UW-Madison

- Presentation entitled “The Geospatial Revolution.” Wednesday Night @ the Lab series. (Lacy)
- Outreach and presentation, Humanities Research Bridge. (Wortley, with J. Stoltenberg — Robinson Map Library)
- Assistance with UW Sea Grant Web Atlas. (Wortley)
- Worked with WisconsinView to help establish specs for statewide imagery and develop an online repository of LiDAR data. (Veregin, Lacy)
- Outreach to linguistic research centers, including DARE (Dictionary of American Regional English) and the Center for the Study of Upper Midwestern Cultures, to discuss linguistic mapping projects. (Veregin)
- College of Letters and Science Committee on Academic Staff Issues. (Lacy)
- Guest lecture in Urban and Regional Planning. (Wortley)

UW Eau Claire

- Joint project with Martin Goettl, UW-Eau Claire, Department of Geography and Anthropology, focusing on virtual parcel data integration using existing county Web map services to produce an online multi-county parcel map viewer. (Veregin, Hemstead)
- Outreach visit and guest lecture in Department of Geography and Anthropology, UW-Eau Claire. (Veregin)

UW System Campuses

- Participation in UW-Milwaukee GIS Council meetings. (Veregin)
- Outreach to UW-La Crosse. (Veregin)
- Coordinated intercampus meeting at the Geospatial Summit, April 2012. (Veregin, M. Goettl — UW-Eau Claire)

Other Universities

- Member, Advisory Board, Masters of Geographic Information Science Program, University of Minnesota-Twin Cities. (Veregin)
- Participated in MGIS Advisory Board meeting, May 2012. (Veregin)

Professional Associations

Wisconsin Geographic Information Coordination Council (WIGICC)

- Ex officio member of WIGICC. (Veregin)
- Member, Internal Operations Team. (Veregin)
- Member, Outreach/Communications Team. (Veregin)

- Participation in WIGICC face-to-face and conference call meetings. (Veregin)
- Participation in Permanence Working Group, formed to identify a pathway for the council to obtain permanency. (Veregin)
- Participation in Elevation Data Working Group, created to develop an inventory of elevation data in the state, provide education and outreach, and develop standards for quality assurance and data acquisition. (Veregin)
- Participation in Economic Development Working Group, created to develop a plan for the state to use GIS in economic development applications. (Veregin)
- Administrative support to WIGICC, including coordinating and hosting meetings, maintaining WIGICC Web site, posting WIGICC news and events, and helping organize elections. (Veregin)

Wisconsin Land Information Association (WLIA)

- WLIA President (through Feb. 2012). (Wortley)
- Member, Board of Directors (through Feb. 2012). (Veregin)
- Chair, Membership Committee (through Feb. 2012). (Veregin)
- Member, Legislative Committee. (Lacy, Wortley)
- Member, Technical Committee. (through Feb. 2012) (Veregin)
- Member, Education Committee. (Hemstead)
- Member, Communications Committee. (Hemstead)
- Member, Conference Committee. (Hemstead)
- Presentations at WLIA conferences.

County Land Information Offices

- Outreach to Land Information Offices in Milwaukee county, Eau Claire county, Green Lake county, Waushara county. (Veregin, Wortley)

Wisconsin Society of Land Surveyors (WSLS)

- Liaison to the professional geodetic and surveying community to facilitate the discovery of user needs related to office online Finder applications. (Hemstead)
- Coordinated with WSLS and WCSA regarding management and maintenance of online county surveyor’s directory. (Hemstead)
- Presentations at WSLS Annual Conference and WSLS Chapter Meeting. (Veregin, Hemstead)

Wisconsin County Surveyors Association (WCSA)

- Participated in all WCSA Board meetings, Neillsville, Aug. 2011, Nov. 2011, March 2012, May 2012. (Hemstead)
- Presentations given on SCO activities including: Public Land Survey System pilot study; Surveying Wisconsin in a Day;

Coordination and Outreach

ControlFinder and PLSSFinder; virtual parcel data integration project. (Hemstead)

State Agency Geographic Information Coordination team (SAGIC)

- Coordinated and attended SAGIC Meetings. (Lacy)

Wisconsin President's Council

- Coordinated and led October 2011 meeting. (Lacy)
- Attended October 2011 meeting. (Veregin, Lacy, Wortley)
- Maintenance of agendas and meeting notes on SCO Web site. (Lacy)

National States Geographic Information Coordination Council (NSGIC)

- Wisconsin State Representative. (Veregin)
- Member, state caucus. (Veregin, Lacy, Wortley)
- National Digital Orthophoto Steering Committee Liaison. (Lacy)
- Member, Communications Committee. (Lacy)
- Member, GIS Inventory Working Group under Technical Committee. (Wortley)
- Participation in virtual state caucuses and face-to-face state caucuses. (Veregin, Lacy, Wortley)
- Presentations and panel sessions at conferences. (Veregin, Lacy)

American Society for Photogrammetry and Remote Sensing (ASPRS)

- Treasurer and Board Member, Western Great Lakes Chapter. (Lacy)

Mapping Agencies

GIO (Wisconsin Geographic Information Office)

- Share WIGICC ex officio duties with Curt Pulford, GIO. (Veregin)
- Co-chaired discussion session on coordination councils at National States Geographic Information Council Annual Meeting, Boise, Idaho. (Veregin)
- Numerous informal meetings and discussions.

Wisconsin Department of Transportation (DOT)

- Collaborated with Surveying & Mapping Section on WISCORS and Height Modernization Program status and datasets. (Hemstead)

Wisconsin Department of Administration (DOA)

- Participate in monthly teleconferences between DOA, Land

Information Officers Network, and Wisconsin Land Information Association. (Wortley)

Wisconsin Department of Military Affairs (DMA)

- Collaboration with WI DMA on successful Federal Geographic Data Committee grant, "Business Plan Development for a Wisconsin Aerial Imaging Program." (Lacy, Veregin)
- Collaboration with WI DMA on Wisconsin Office of Justice Assistance/Homeland Security Program grant for US National Grid adoption program. (Veregin)

Wisconsin Department of Natural Resources (DNR)

- Ex Officio Member, Wisconsin Geographic Names Council. (Veregin)
- Discussion of Wisconsin land cover data with Dr. James Kroll (Deer Trustee). (Veregin, Kennedy, M. Ozdogan — Forest and Wildlife Ecology, UW-Madison)
- Discussion of Wisconsin land cover data with DNR staff. (Veregin, Kennedy, M. Ozdogan — Forest and Wildlife Ecology, UW-Madison)
- Discussion of Public Land Survey System (PLSS) pilot study with DNR personnel. Additional outreach via online survey to DNR and other agencies. (Veregin, Hemstead, Kennedy)

Regional Planning Commissions

- Collaboration with North Central Wisconsin RPC on successful Federal Geographic Data Committee grant, "Business Plan Development for a Wisconsin Aerial Imaging Program." (Lacy, Veregin)

United States Geological Survey (USGS)

- Coordination with staff from Upper Midwest Environmental Sciences Center, La Crosse, to develop elevation data inventory and online data access. (Veregin)
- State Champion and UW liaison for USGS National Enhanced Elevation Assessment. (Veregin)

National Geodetic Survey (NGS)

- Coordinated and reported issues and recommendations pertaining to station condition report forms submitted by surveyors. (Hemstead)

Bureau of Land Management (BLM) and US Forest Service (USFS)

- Meetings and conference calls to discuss joint interests in statewide Public Land Survey System (PLSS) data. (Veregin, Hemstead, Kennedy)

Strategic Plan Performance

In the spring of 2010 the SCO developed a new strategic plan for 2010-13. The plan identifies five strategic priorities, each with a number of strategic initiatives. This page summarizes how we think we're doing so far.

Priority I. Develop methods and best practices for statewide data development and data integration initiatives.

- ✓ Working on statewide PLSS data integration pilot project, including outreach, data model development, and data integration.
- ✓ Secured and began work on FGDC grant to support statewide air photo business plan development.
- ✓ Began work on statewide mid-scale cartographic database, including unincorporated places layer, pronouncing gazetteer, and participation in Esri Community Map program.
- ✓ Initiated virtual parcel data integration project to demonstrate how Web map technology can be used to model a statewide data integration scenario.
- ✓ Continued to seek funding opportunities for updating statewide land cover data.

Priority II. Improve online data discovery and access for the geospatial community with the goal of providing efficient access to best available local and state data sources.

- ✓ Improved access to statewide control and PLSS data through upgraded Finder applications.
- ✓ Provided discovery and download access to 38,000 historic air photos of the state through the new WHAIFinder application.
- ✓ Partnered with the Robinson Map Library and UW Digital Collections in seeking sustained funding for the historic air photo repository, through a grant application to the National Endowment for the Humanities. (not funded)
- ✓ Increased completeness of ControlFinder and PLSSFinder coverage through expanded relationships with data contributors. Continue to pursue outreach to local units of government, professional organizations, state and federal agencies, and the private sector to acquire and integrate geospatial datasets for these applications.

Priority III. Develop and maintain a coordination role between and within campuses of the UW system and other institutions of higher education in Wisconsin.

- ✓ Created and continue to maintain new Web site for the

Geospatial Alliance (formerly SIAC).

- ✓ Organized and hosted annual Geospatial Summit for geospatial practitioners on campus.
- ✓ Coordinated Geospatial Steering Committee meetings.
- ✓ Increased visibility of non-traditional geospatial users on campus (e.g., public health) through Geospatial Summit.
- ✓ Interacted with other UW campuses including Eau Claire, Milwaukee, Stevens Point, Platteville and La Crosse through meetings, guest lectures, and outreach visits.
- ✓ Initiated joint "virtual parcel" project with staff from UW-Eau Claire.
- ✓ Collaborated with other units of the UW-Madison Geography Department on mutual projects.

Priority IV. Engage in applied research and innovation to develop and disseminate information about new methods and practices.

- ✓ Presented information on SCO projects at national conferences (e.g., NACIS and AutoCarto).
- ✓ Published professional articles in journals, books and conference proceedings.
- ✓ Developed new SCO Technical Paper series to improve leveraging of geospatial technology.
- ✓ Developed and implemented cartographic standards for the ControlFinder, PLSSFinder and WHAIFinder applications, as a model for implementing cartographic design practices in a web environment.

Priority V. Continue efforts to engage, educate, and support the Wisconsin geospatial community.

- ✓ Served in leadership roles on various state and national organizations, including WLIA, WIGICC, NSGIC, ASPRS, and others.
- ✓ Supported professional organizations at the state and national level through coordination efforts.
- ✓ Worked toward establishment of permanent coordination council (WIGICC) through efforts to sustain the interim council, achieve visible successes, and develop a pathway to permanence.
- ✓ Redesigned and rolled out the new SCO Web site with enhanced content, functions and design.

For a detailed copy of our 2010-13 strategic plan see http://www.sco.wisc.edu/images/stories/SCO/SCO_Strategic_Plan_2010-2013.pdf

Business Plan, 2012-13

In the spring of 2012 the SCO developed its business plan for 2012-13 (Fiscal Year 2013) with several key initiatives tied to our strategic plan.

Initiative I. Complete upgrade to WisCLINC.

- ✓ Enhance functionality to provide data access paths for download. The purpose of the new WisCLINC is to catalog only data that is directly accessible via download or as a Web service.
- ✓ implement a new, more sustainable framework to support geospatial cataloging efforts.
- ✓ Provide simple mapping interface to preview Web services.
- ✓ Support online authenticated access to Robinson Map Library data holdings and additional funnel for SCO main Web site informational materials.
- ✓ Better define staff roles and responsibilities for ongoing maintenance of catalog holdings.

Initiative II. Complete grant-based air photo business plan development project.

- ✓ With the aid of consultants, plan and implement a comprehensive information-gathering process to assess needs for statewide image acquisition.
- ✓ Develop a written business plan outlining the steps necessary to implement the program.
- ✓ Outreach throughout the state to reach a broad spectrum of stakeholders.

Initiative III. Complete PLSS integration pilot project.

- ✓ Develop methods to integrate local data into common data model.
- ✓ Integrate nine counties of local data and populate all necessary attributes and relationships.
- ✓ Distribute database for external review. Document results and findings.

Priority IV. Complete mid-scale digital cartography project.

- ✓ Complete data development work on key layers (cities and villages, unincorporated places, counties, hydrography, transportation, public lands, and elevation). Includes all feature selection and generalization work.
- ✓ Release pronouncing gazetteer as an online application.
- ✓ Complete attribution of all layers to support cartographic needs.

- ✓ Distribution of data and/or map in digital format. Complete metadata and documentation.

Priority V. Virtual parcel data integration project.

- ✓ Complete integration of parcel services into a single map application/viewer.
- ✓ Analyze research questions, i.e., ability to resymbolize services; identify limitations on querying and analysis due to lack of a common data model across services; assess service configuration differences and the need for standards; investigate feasibility of including open source services.
- ✓ Publish and disseminate results.

Priority VI. Finder application maintenance.

- ✓ Implement fixes and enhancements to improve the usefulness and utility of ControlFinder and PLSSFinder.
- ✓ Implement project management methods to track status of fixes and enhancements more easily.
- ✓ Continue to build relationships with data providers to increase access to local, state and national datasets.
- ✓ Continue developing methods to improve data ingest.

Other initiatives.

- ✓ Geo-enable the SCO geospatial jobs page.
- ✓ Investigate options for mobile development for the "Finder" applications.
- ✓ Formalize WISCRS coordinate systems submission to EPSG database.

Staff, Students and Support

Permanent Staff

Howard Veregin, State Cartographer
veregin@wisc.edu 608-262-6852

Jim Lacy, Associate State Cartographer
lacy@wisc.edu 608-262-6850

Brenda Hemstead, IS Data Services Professional
hemstead@wisc.edu 608-263-4371

AJ Wortley, Senior Outreach Specialist
lwortley@wisc.edu 608-265-8106

Tim Kennedy, Admin Program Specialist
tkennedy@wisc.edu 608-890-3793

Affiliated Staff

Suzanne Harris, IT Manager, Science Hall (through June, 2012)
Jay Scholz, IT Manager, Science Hall (beginning June, 2012)
Susan Sauer, Financial Specialist, Geography Dept.
(The SCO provides support to the Science Hall IT Manager and shares a Financial Specialist with the Geography Department.)

Student Assistants

John Czaplewski
Jessica Moths
Derek Grisbeck
Scott Moucka
Erik Myers
Kim Ness
Shuguang Hao

Funding

The SCO is a unit within the Department of Geography, in the College of Letters & Science (L&S), at the University of Wisconsin-Madison. The SCO receives most of its funding from an annual base budget allocation from L&S.

In addition, ongoing financial support from the Division of Continuing Studies has directly facilitated the SCO's role in promoting the Wisconsin Idea through presentations, workshops, and participation in a variety of professional organizations focused on mapping and GIS technology.

Committee on State Cartography

The Committee on State Cartography (CSC) is the SCO's steering committee, providing advice and feedback on office initiatives. CSC members are drawn from the SCO's broad user community, and are appointed to two-year terms by the Dean of the College of Letters & Science at UW-Madison.

Traditionally, the CSC has been chaired by a faculty member in the Department of Geography at UW-Madison. Beginning in August 2011, our newest CSC chair is Robert Roth (<http://www.geography.wisc.edu/faculty/roth>).

Additional CSC members are as follows:

UW-Madison Non-Geography: Mutlu Ozdogan (Forest and Wildlife Ecology)

Higher Education: Ian Muehlenhaus (UW-La Crosse)

State Geographic Information Officer: Curtis Pulford

National Geodetic Survey Advisor: John Ellingson

Local Government (LION): Fred Iausly (Dane County)

State Government (SAGIC): Tony Van Der Wielen (Legislative Technology Services Bureau)

Federal Government: Kent Peña (Natural Resources Conservation Service)

External At Large: Nancy von Meyer (Fairview Industries)

Private/Non-Profit At Large: Adam Derringer (Mapping Specialists)

Contact Information

Wisconsin State Cartographer's Office
384 Science Hall
550 N. Park Street
Madison, WI 53706-1491

Phone: (608) 262-3065
Fax: (608) 262-5205

Email: sco@wisc.edu
Web: <http://www.sco.wisc.edu>



Wisconsin State Cartographer's Office
384 Science Hall
550 N. Park Street
Madison, WI 53706-1491



Wisconsin State Cartographer's Office



WISCONSIN
UNIVERSITY OF WISCONSIN-MADISON

Annual Report 2011-12

Contents UPDATE

Major Projects and Initiatives

- Statewide Orthophotography
- PLSS Pilot Project
- Statewide Data Integration
- SCO Publications

Conference Presentations

Grants

SCO in the News

Coordination and Outreach

- Conference Attendance
- University Activities
- Professional Associations
- Mapping Agencies

Strategic Plan Performance

Business Plan, 2012-13

Staff, Students and Support