

*Minnesota Society of
Professional Surveyors*



**61st
ANNUAL
MEETING**

**FEBRUARY
6-8, 2013**

**RAMADA MALL
OF AMERICA
BLOOMINGTON, MN**

**REGISTER ONLINE AT
WWW.MNSURVEYOR.COM**



WEDNESDAY, FEBRUARY 6, 2013

7:30-8:15 REGISTRATION & CONTINENTAL BREAKFAST
8:15-10:15 BEGINNING OF FIFTH PRINCIPAL
MERIDIAN SURVEYS IN MINNESOTA
STARTING WITH THE STATE LINES

Don Borcherding

This session will include original detailed instructions for Guide Meridians and Standard Parallels; in what order and how they were run; examination of original closures, possible sources of errors such as offsets and lake triangulations, and remonumentation considerations for Guide Meridians and Standard Parallels.

10:15-10:30 BREAK

10:30-12:00 FIFTH PRINCIPAL MERIDIAN SURVEYS –
CONTINUED

12:00-1:00 LUNCH

1:00-2:15 FIFTH PRINCIPAL MERIDIAN SURVEYS –
CONTINUED

2:15-2:35 BREAK

2:35-4:35 THE 4TH PRINCIPAL MERIDIAN: ITS
HISTORY AND RESURVEY IN MINNESOTA

Jordan Ketola

Compressed between Lake Superior and the Canadian border in the Northeastern tip of Minnesota, runs 25 miles of the 4th Principal Meridian. Although the 4th originates in Western Illinois, this is the only portion that intersects Minnesota. This topic will cover its history and resurveys from 1858 to present.

4:35 ADJOURN

4:35-7:30 ICE BREAKER & JAM SESSION

Musicians — bring your instruments. No amps, please. Everyone is welcome to attend.

6:45-9:45 OPTIONAL DINNER

Wednesday dinner is open to all conference attendees who wish to register for this optional event. A bus will transport you to Crave in downtown Minneapolis for cocktails and dinner. After dinner, the group will socialize at the Rock Bottom Brewery and then be bused back to the hotel. If you are interested in attending, please sign up on the registration form (the additional \$75 fee charged for this event includes transportation, dinner, two drink tickets at Crave). The number of tickets is limited, and will be offered on a first-come first-served basis.

THURSDAY, FEBRUARY 7, 2013

7:30-8:15 REGISTRATION, EXHIBIT HALL OPENS,
CONTINENTAL BREAKFAST

8:15-9:15 BUSINESS MEETING

9:15-9:45 BREAK WITH EXHIBITORS

9:45-10:40 CONCURRENT SESSIONS

A1 CASE STUDIES OF BLM EASTERN STATES
CADASTRAL SURVEYS INTERPRETATION OF THE 2009
MANUAL OF SURVEYING INSTRUCTIONS WHEN
SUBDIVIDING A SECTION AND EVALUATING LOCAL
CORNERS AND EVIDENCE

Ken Roy

A brief look at the interpretations and conclusions during recent subdivision of sections performed by the BLM Eastern States Cadastral Survey program.

B1 PLSS CORNER CERTIFICATE OF LOCATION

Robin Mathews & Lisa Hanni

Preview of Minnesota Statutes and Administrative Codes that are applicable to the Certificate of Location of Government Corner. Certificate examples will be presented. Content of certificates will be discussed. Questions are encouraged.

C1 GOOGLE EARTH FOR SURVEYORS

Chris Ambourn

Google Earth is free software for project planning, cost estimating, creating customized maps and animations, and for company project databases. This session will demonstrate the uses and capabilities of Google Earth and give some good sources of data for the program.

10:45-11:40 CONCURRENT SESSIONS

A2 PLS SECTION SUBDIVISION – DEALING WITH
RETRACEMENT & OCCUPATION ISSUES

John Freemyer

No other topic seems to be more controversial than the issue of how to properly subdivide a section — when there are retracement and occupational considerations. A careful analysis of controlling laws and the quasi-judicial functions of land surveyors can often simplify these seemingly perplexing problems. Practical solutions will be explored.

B2 NAVIGATING WEB-BASED RIGHT OF WAY INFORMATION AT MnDOT

Jay Krafthefer

Right of Way Mapping & Monitoring (RWMM) and other MnDOT Internet-based applications provide public access to a statewide collection of right-of-way maps and related information. We will cover unique features about the data and their organization. This session also includes a brief review of the tools and methods necessary to find, download, and use right-of-way maps, right-of-way plats, railroad maps, Commissioner's orders, survey records, highway construction plans, and other MnDOT records.

C2 MINNESOTA'S NEW STATEWIDE PARCEL DATA INTEGRATION BUSINESS PLAN

MnGeo staff

The Minnesota Geospatial Information Office (MnGeo) has been working with stakeholders to develop a business plan to help guide the development of and sustaining of an authoritative statewide parcel data layer. This session will be a review of the business plan and its development.

11:45-12:55 LUNCH

1:00-1:55 CONCURRENT SESSIONS

A3 REAL PROPERTY LAW UPDATE

Scott Lucas

A review of recent case law and statutory changes impacting on the use and ownership of real estate.

B3 WHAT EVERY SMALL BUSINESS SHOULD KNOW ABOUT WINDOWS 8, CLOUD COMPUTING AND MALWARE

Joe Malmberg

Technology is an ever-moving target. How can we use our computers most efficiently? What will cloud computing mean to your company? Will Windows 8 be a game-changer? What can we do about viruses and malware and why do they exist?

C3 LAKE COUNTY FORESTRY GIS USE FOR PLS CORNER MONUMENT DATABASE

Nathan Eide & Fran Kaliber

This presentation will describe how Lake County Forestry uses GIS in the management of and searching for public land survey monuments. Using GIS, original survey notes, rectified aerial photos and topographic maps, and local knowledge, corner searches have become much more efficient. Corner location information can then easily be interfaced with timber management and other county parcel management purposes.

1:55-2:20 BREAK WITH EXHIBITORS

2:20-3:15 CONCURRENT SESSIONS

A4 FINDING AND MANAGING MINNESOTA'S UNRECORDED CEMETERIES

Scott Anfinson

Minnesota law requires that the State Archaeologist authenticate and help manage "unrecorded" burial grounds. This includes over 12,000 prehistoric burial mounds and thousands of historic period graves and cemeteries. The State Archaeologist has been developing new strategies to find and manage unrecorded cemeteries including LiDAR, ground penetrating radar, conducting extensive literature searches, and building agency accessible online databases.

B4 PROFESSIONALS AND PARTNERS: SURVEYORS AND TITLE INSURERS

Nancy Landmark

Title Insurance Professionals and Surveyors often work hand-in-hand to produce the best possible products for their customers. This session will include a discussion of the role of the Title Company and how we work with Surveyors to achieve these results.

C4 BYOB: BUILD YOUR OWN BASEMAP

Preston Dowell

This two-hour session will show you how to build a GIS basemap for daily use in your Land Surveying business. Topics include: Basic tips on getting started with GIS, building a basemap with freely available data, integration of CAD systems with the basemap, examples of final surveying, and mapping products developed utilizing GIS.

3:20-4:15 CONCURRENT SESSIONS

A5 CEMETERY PLATting

Arlee Carlson & Connie Villari

Minnesota Statutes relating to private, public and institutional cemeteries in the state will be covered. Examples of cemetery plats and interpretation of the issues not directly covered by existing statutes will be explored and discussed.

B5 THE PUBLIC LAND SURVEY RECORDS—THE NEXT STEP?

Rod Squires

Creating a database that contains all public land surveying records relating to a particular corner monument or line segment is many years away. But what could or should such a database contain and is this a worthwhile goal? The presentation will review (a) what we know about the public land surveys in Minnesota, (b) what we still need to know, and (c) what we need to do.

C5 BYOB: BUILD YOUR OWN BASEMAP – CONTINUED

4:15-6:30 EXHIBITOR RECEPTION & MLS
FOUNDATION LIVE AUCTION

FRIDAY, FEBRUARY 8, 2013

8:00-8:30 REGISTRATION & CONTINENTAL BREAKFAST

8:30-9:25 CONCURRENT SESSIONS

A6 RAILROAD RIGHT OF WAY CORRIDOR RETRACEMENT

Dennis Pederson & Mike Welling

This session will address survey issues related to retracement of railroad right of way and adjoining property boundary lines along railroad corridors being converted to recreational trails and other uses.

B6 THE REAL ESTATE OF THE UNIVERSITY OF MINNESOTA

Rod Squires & Sue Weinberg

The University of Minnesota manages the 56,000 acres it owns. Sue Weinberg will outline the role and responsibility of the University of Minnesota's Real Estate Office, which provides real estate services for buying, selling, and leasing University property. Rod Squires will describe the State-owned University Trust Lands.

C6 SCSU LS & MS PROGRAM: THE MAPPING SCIENCE COMPONENT

Eric Fuller

This presentation will describe the mapping science courses required for Bachelor of Science Land Surveying and Mapping Science degree at St. Cloud State University, to include overview of content covered in courses and some representative projects completed by students.

9:30-10:25 CONCURRENT SESSIONS

A7 RAILROAD RIGHTS-OF-WAY IN THE CHAIN OF TITLE

Dulcie Brand

How do Railroads acquire land interests? Is it fee title or easement or something else? Why does it matter?

B7 THE CONCEPT OF ETHICS

Curt Sumner

The concept of Ethics in general, and its applications to business practice will be discussed. What are the factors that influence the development of one's ethics? How, or should, personal ethics affect the way one conducts business? How, or if, ethical standards should be set by law, professional conduct standards, etc.?

C7 MINNESOTA TREE IDENTIFICATION

Jason Meyer

The ability to recognize and identify the native tree species of Minnesota is important in the search for bearing trees and original survey evidence as well as identification requirements of regulatory agencies in relation to Survey Maps. This session will discuss how to identify native trees commonly found in Minnesota, some follow up resources to tree identification, and how knowledge of tree identification can help in the survey profession.

10:25-10:50 BREAK WITH EXHIBITORS

10:55-11:50 CONCURRENT SESSIONS

A8 CHAPTER MEETINGS

C8 MNDOT CORS NETWORK REVIEW

MnDOT Staff

Panel presentation by the Minnesota Department of Transportation's Office of Land Management staff. Topics will include benefits of the GPS network to the citizens of the State of Minnesota, the future of the network, how to access the network, best surveying practices for network users, and the coordinate system used by the network. A question and answer period will follow the presentations to address any other items of interest concerning the CORS Network.

11:55-1:35 LUNCH, SCSU FACULTY/STUDENT
PROGRAM, AWARDS, MLS FOUNDATION
SCHOLARSHIPS, AND INSTALLATION OF
NEW OFFICERS

1:35 EXHIBITS CLOSE

1:40-2:35 CONCURRENT SESSIONS

A9 RAILROAD SAFETY ISSUES

Dale Bucholtz

How to contact the railroad — who owns the tracks? Railroad infrastructure, right of entry, on-track safety, and utilities.

B9 BUILDING INFORMATION MODELING (BIM) FOR SURVEYORS

Jerry Bartels

BIM is changing the Surveying profession. While it has roots in architecture, the principles and benefits of BIM can apply to everything in the built environment and all AEC disciplines, including surveying. As a result, the ability to produce as well as work with BIM models is becoming a requirement on many projects. Understanding how to move to BIM is going to change your business — and preparing for that change will be critical.

C9 HOW GNSS SIGNALS ARE IMPACTED BY ENVIRONMENTAL FACTORS

Steve Richter

How does the increase in solar activity affect GNSS signals? Look, I can get a fix under the tree canopy! How close to that building can I get and still get a good GNSS position? Solar activity, loss of signal, multipath, and other environmental factors contribute to the quality of your GPS or GNSS measurements. We will talk about these factors and how they negatively impact the quality of our GNSS positions, how to better interpret the real-time quality control data we see while using RTK GNSS, other tools we can use to avoid these negative environmental factors, and discuss the RTK algorithms used to determine your solutions and how these factors are considered in that solution. The result will be more error free measurements and higher quality GNSS data.

2:40-3:35 CONCURRENT SESSIONS

A10 RETRACING MONUMENTS & PROPERTY LINES AND PLATTING FROM TERRITORIAL TIMES THROUGH 2013. FROM COMPASS TO GPS

Ron Murphy

Statutory Law and monuments in the historic and modern eras of plat monumentation, how plats were made, laws and court cases affecting retracement surveys, surveyor education and equipment, sources of retracement records and traditional and high tech retracement surveys.

B10 BUILDING INFORMATION MODELING FOR SURVEYORS - CONTINUED

C10 RTK COMMUNICATION INTERNET AND RADIOS

Chris Rotegard

This session will discuss the communications options for GNSS RTK. We will cover the new FCC law regarding narrow band radios and cell internet options using MnDOT CORS Network.

3:45 BOARD MEETING

CONFERENCE INFORMATION

REGISTRATION

The full meeting fee includes: program materials (available online), certificate of participation, refreshments, luncheons, ice breaker, exhibits and silent auction. Registration forms will also be posted on our website at www.mnsurveyor.com. Reciprocity Programs: MSPS will offer a \$20 discount from its non-member fee for those attending from neighboring associations of professional surveyors. MSPS also extends a fee reciprocity to ACSM/NSPS members who are also members of a state society other than Minnesota.

Mail registration form and payment to:
Minnesota Society of Professional Surveyors (MSPS)
1000 Westgate Drive, Suite 252
St. Paul, MN 55114

CANCELLATION POLICY

Full refunds (minus a \$25 processing fee) for cancellations prior to January 9, 2013; 50 percent prior to January 28, 2013; and no refunds thereafter. Substitutions are permitted. Please fax cancellation/substitution requests to MSPS at 651-290-2266 or email bonniey@mnsurveyor.com.

LOCATION AND LODGING

A block of rooms has been reserved at the Ramada Mall of America which is this year's conference headquarters. Reservations should be made directly with the hotel, referring to the MSPS Annual Meeting, and should be made prior to the cutoff date of **January 14, 2013**.

Ramada Mall of America
2300 E. American Boulevard
Bloomington, MN 55425
952-854-3411

Room rates: \$92 single or double;
all rooms are non-smoking.

HANDOUTS

A link will be provided prior to the conference for attendees to download speaker materials.

CONTINUING EDUCATION

Minnesota PDHs —PDH forms will be given to attendees when they register. Attendees are responsible for tracking and keeping record of which sessions they attend, particularly if they deviate from their registration selections.

EXHIBITS

Exhibits for 2013 take place on both Thursday and Friday. Stop by and visit with our exhibitors and sustaining members, as well as representatives of educational institutions. Continental breakfast and refreshments will be served in the exhibit hall. Exhibits open at 7:30 a.m. on Thursday.

MSPS CONFERENCE 2013: 20TH ANNUAL MAP CONTEST ENTRY

PLEASE CHOOSE ONE OR MORE OF THE FOLLOWING CATEGORIES:

- A. Subdivision Plat, C.I.C. or Registered Land Survey (RLS)
- B. Boundary and/or Topographic Survey
- C. A.L.T.A. Survey
- D. Student Entry — any category (must be a class assignment project)

AWARDS: Certificates, \$100 cash, and free attendance to the Friday sessions at the 2014 Annual Meeting will be awarded for first place in each category. Winners will receive the book, *Fant, Freeman & Madson on Writing Land Descriptions*. Special awards will be presented upon decision of the judges.

Date: _____ Name: _____
Employed by: _____
Address: _____ City: _____ State: _____ Zip: _____
Telephone: _____ Fax: _____
E-mail: _____

Enclosed are two (2) prints for each category entered and a check in the amount of \$5 per category payable to the Minnesota Society of Professional Surveyors.

Total amount enclosed: \$ _____

Mail entry maps, form and check to:
MSPS • 1000 Westgate Dr., Ste. 252
St. Paul, MN 55114
(800) 890-LAND or (651) 203-7256 • fax (651) 290-2266

(For office use only)

initials		fin.
date		
CK/CC		
amt. paid		
bal. due		

MAP CONTEST RULES

1. With the exception of student entries, all maps must be of an actual survey or subdivision of Minnesota land, drawn in the calendar year 2012. Only maps following state statutes Chapter 505 and/or MSPS Recommended Procedures will be reviewed. Design details and engineering construction details will not be reviewed.
2. Title blocks should not be blocked out.
3. Must be drawn by submitting individual.
4. With the exception of student entries, all maps must bear the name of a Licensed Minnesota Land Surveyor.
5. Entries shall be unmounted blue, black line or color prints, which will become the property of MSPS.
6. Entries (submitted in duplicate) must indicate category and be accompanied by an entry form and fee of \$5 per category. One entry is allowed per category per individual.
7. Entries will be displayed at the conference.
8. First-place awards will be presented and all winners will be announced at the conference.
9. Maps and fees must be postmarked by January 7, 2013. Student entries must be postmarked by January 7, 2013. Late entries will not be judged or returned. All decisions of the judges are final. Results will be published in the MSPS *Minnesota Surveyor* magazine.

JUDGING

All entries will be checked for compliance with Minnesota Statutes and/or MSPS Recommended Procedures. No map will be judged if it does not comply with the law and standards.

GUIDELINES

1. Compliance with the law and standards.
2. Originality.
3. Overall Appearance: Neatness, balance, consistency.
4. Lettering: Clear, unmistakable.
5. Qualifying notes or statements: Clearly, unmistakably stated. Signature and seal are optional.

BASIC INFORMATION

Name: _____ Employer: _____ Registration # _____
 Work Address: _____ City: _____ State: _____ Zip: _____
 Telephone: _____ Fax: _____ E-mail: _____
 Date: _____ Are you an MSPS member? Yes No Is your company a firm member? Yes No

WEDNESDAY PROGRAM:

	Early (By Jan. 14, 2013)	Late (After Jan. 14, 2013)
MSPS Members	<input type="checkbox"/> \$160	<input type="checkbox"/> \$180
Non-Members	<input type="checkbox"/> \$170	<input type="checkbox"/> \$190
Life Members	<input type="checkbox"/> \$45	<input type="checkbox"/> \$65
Optional Wednesday Dinner:	# of tickets _____ x \$75 = \$ _____ Guest name: _____	
WEDNESDAY SUBTOTAL: \$ _____		

	THURSDAY ONLY		FRIDAY ONLY		THURSDAY & FRIDAY	
	Early	Late	Early	Late	Early	Late
MSPS Members	<input type="checkbox"/> \$190	<input type="checkbox"/> \$220	<input type="checkbox"/> \$245	<input type="checkbox"/> \$275	<input type="checkbox"/> \$305	<input type="checkbox"/> \$335
Non-Members	<input type="checkbox"/> \$265	<input type="checkbox"/> \$295	<input type="checkbox"/> \$320	<input type="checkbox"/> \$350	<input type="checkbox"/> \$380	<input type="checkbox"/> \$410
Firm Members	<input type="checkbox"/> \$180	<input type="checkbox"/> \$210	<input type="checkbox"/> \$235	<input type="checkbox"/> \$265	<input type="checkbox"/> \$295	<input type="checkbox"/> \$325
Life Members	<input type="checkbox"/> \$55	<input type="checkbox"/> \$85	<input type="checkbox"/> \$55	<input type="checkbox"/> \$85	<input type="checkbox"/> \$100	<input type="checkbox"/> \$130
Technician	<input type="checkbox"/> \$155	<input type="checkbox"/> \$185	<input type="checkbox"/> \$215	<input type="checkbox"/> \$245	<input type="checkbox"/> \$270	<input type="checkbox"/> \$300
Student	<input type="checkbox"/> \$40	<input type="checkbox"/> \$40	<input type="checkbox"/> \$40	<input type="checkbox"/> \$40	<input type="checkbox"/> \$65	<input type="checkbox"/> \$65
THURSDAY/FRIDAY SUBTOTAL: \$ _____						

Special Meal Requirements (please specify): _____

GRAND TOTAL: \$ _____

SESSION SELECTIONS: Check 1 box per time slot. See program for descriptions.

THURSDAY, FEBRUARY 7

9:45-10:40 a.m. A1 B1 C1
 10:45-11:40 a.m. A2 B2 C2
 1:00-1:55 p.m. A3 B3 C3
 2:20-3:15 p.m. A4 B4 C4
 3:20-4:15 p.m. A5 B5

FRIDAY, FEBRUARY 8

8:30-9:25 a.m. A6 B6 C6
 9:30-10:25 a.m. A7 B7 C7
 10:55-11:50 a.m. A8 C8
 1:40-2:35 p.m. A9 B9 C9
 2:40-3:35 p.m. A10 C10

PAYMENT:

Note: Payment must accompany registration to reserve your space. All fields required if paying by credit card.

Visa/MC Check (payable to MSPS) P.O. # _____
 Credit Card # _____ Exp. Date _____
 Cardholder Name (print) _____
 Phone _____ Security Code _____
 Cardholder Signature _____

BILLING ADDRESS is the same as above. If not:

Address: _____
 City: _____ State: _____ Zip: _____

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(For office use only)

initials		fin.
date		
CK/CC		
amt. paid		
bal. due		



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Saint Paul, MN 55114
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CONFERENCE INFORMATION (CONTINUED)

ANNUAL MAP CONTEST

Entries will be judged in three categories: Subdivision Plat, C.I.C., and RLS; Boundary and/or Topographic Survey; and A.L.T.A. Survey. A student category is also included. The entry fee is \$5 per map. Submission deadline is **January 7**. Cash, prizes, and certificates will be awarded, and maps will be displayed in the Exhibit Hall Thursday through early Friday afternoon. See map contest form for details.

MLS FOUNDATION LIVE AUCTION

Held in the exhibit hall Thursday from 5:00 to 6:00 p.m. in conjunction with the Vendor Social. Outbid your friends and coworkers on donated items up for sale. Cash bar opens at 4:15 p.m.

MLS FOUNDATION SILENT AUCTION

Held in the exhibit hall from 9:15 a.m. Thursday through 1 p.m. on Friday to raise scholarship funds. Winners will be announced Friday at lunch.

PLANNING COMMITTEE

Chairman: Terry Freeman
Members: Rick Blom, Tony Blumentritt, Preston Dowell, John Freemyer, Mike Nelson, Rod Squires, Connie Villari and Paul Vogel.

INTERESTED IN EXHIBITING?

Download the exhibitor brochure at www.mnsurveyor.com.

2013 GUEST PROGRAM

Guests are cordially invited to join us for a continental breakfast in the exhibit hall on Thursday and Friday morning. Following breakfast, pair up or head out on your own to shop or explore. The Mall of America and IKEA are within walking distance of the hotel, and a free shuttle is available. Local attraction information will also be available. No formal registration is necessary. If you have any questions, please contact Bonnie Young at 651-265-7842 or bonniey@mnsurveyor.com.