Missouri Surveyor

A Quarterly Publication of the
Missouri Society of Professional Surveyors

Jefferson City, Missouri

June 2010

MISSOURI SURVEYOR

CALENDAR OF EVENTS

2010-2011

July 9-10, 2010
Board Meeting and MS Workshop
Lodge of Four Seasons
Lake Ozark, MO

October 7-9, 2010
53rd Annual Meeting and Convention
Tan-Tar-A Resort
Osage Beach, MO

December 4, 2010
Board Meeting
MSPS Office
Jefferson City, MO

May 6-7, 2011
Spring Workshop
Lodge of Four Seasons
Lake Ozark, MO

October 13-15, 2011
54th Annual Meeting and Convention
University Plaza Hotel
Springfield, MO

John Alan Holleck, Editor

Notes from the Editor's Desk

by John Alan Holleck

Hard to believe it but we are nearly half way through the year also being the end of the first decade of the third millennium. Just when I would like time to slow down a little, it seems to have sped out of control. It is hard to believe that we are more than ten years away from worrying whether or not our computers would crash. We had all those doomsayers preaching to us about the vulnerability of our computers and their inability to understand the year 2000. So much for memories of the not so recent past, at least it was a good memory. On to the June issue of my favorite quarterly publication, the *Missouri Surveyor.*

Following my "Notes" is President Riggs message who comments on the most recent legislative session. Our opening article features Knud Hermansen, writing on a much misunderstood subject, "Parol Testimony." As long as Knud offers his writing for publication, the staff of the *Missouri Surveyor* will continue to publish one of our foremost practitioners. Next Don Martin offers a primer on QBS, "Quality Based Selection for Surveying Services"—a very timely article. Gary John Bockman ruminates over a very touchy subject, "Missouri 'Minimum Standards' are a Realistic Guideline?" Our next article is a collaborative effort by Chris "State Fair" Wickern and Don Martin entitled "Professional Judgment." It is a well thought out and well reasoned treatise—thanks guys. Please take a little time to look over our two page middle section in color. These pictures are of the exhibitors from the Spring Workshop and worth your time.

The second half of the *Missouri Surveyor* opens with Ron Kliethermes expressing his observations at "MACS Honors Robert L. 'Pop' Elgin (1914 – 2007)," a function sponsored by the Missouri Association of County Surveyors. The event was well attended. Next is "Griner and Schmitz, Inc., a Kansas City-Based Surveying Technology Company, Celebrates Centennial Anniversary." Congratulations to Jim Martin, his father and the staff of Griners. An article entitled "Recommended Reading: Great Surveys of the American West," by Richard A. Bartlett. Good reading for anyone interested in the western surveys of 1865 to 1900, more or less. Ron Kliethermes returns with his thoughts in "MSPS Presents Eye-Opening Session 'Why Can't Two Surveyors Agree?' at Missouri Land Title Association Title School." His comments are a glowing report for the presenters as well as the attendees. 'How the States Got Their Shapes,' a book by Mark Stein. The book talks about all fifty states but the author of the review focuses on Montana—the Treasure State.

Cover: A fisherman 'plays' a trout above the falls of Montauk State Park, Dent County, MO. Photo by Ron Kliethermes, MSPS Newsletter Photographer.

THE MISSOURI SURVEYOR

Published quarterly by the
Missouri Society of Professional Surveyors

COPY DEADLINE

June Issue - May 1
September Issue - August 1
December Issue - November 1
March Issue - February 1

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President's Message

by Ralph Riggs

Summer is finally here, vacations are being planned, hopefully survey work is picking up and... the second regular session of the 95th General Assembly has come to a close. We had three bills that were finally passed. Our Cadastral Mapping legislation in HB 1692, the lien law changes in HB 2226 and the Registration Board changes in HB 2226 were all passed on the final day of the session. I regret that the financial issues for the Land Survey Program were not addressed. We have a flagship Program that warrants our efforts to push for some kind of fiscal solution. There were other issues that did not fare well but will be continued into the next legislative session. Many thanks to Mo McCullough, our legislative consultant, Sandy Boeckman, Rich Barr and Troy Hayes for their efforts in this session. There were many others who sacrificed their time and efforts to lobby, testify before committees, make phone calls and write letters. The dedication of all involved is what made this session a success and as plans are being made for next year's attempts, I would urge MSPS members to become involved in the process. All committees are open to any MSPS member.

Membership is down somewhat but historically any economic downturn affects membership. Remember 9-11? Our numbers were down the year following the terrorist attacks but we soon returned to a normal membership status. I fully expect our membership numbers to bounce back. Due to the past leadership of MSPS, including our executive director, we are financially in good shape. Looking at the quality and dedication of the directors coming forward I expect that trend will continue.

I would like to remind everyone to make plans to attend the MSPS Annual Meeting at Tan-Tar-A this fall. We have a great line-up of speakers, we always have great exhibitors, we get to meet and share war stories with our fellow professionals, and generally have a great time.

Everyone have a great, safe summer!

Center pages of this newsletter include photos from our Spring Workshop.
Thanks to our exhibitors including:
Laser Specialists, Missouri DNR, Griner & Schmitz, Surveyors Materials, Rotolite of St. Louis, ICM Inc., Surdex Corporation, Klein Survey Systems, and Seiler Instruments.

Parol Testimony

by Knud E. Hermansen, P.L.S., P.E., Ph.D., Esq.

Parol testimony or verbal testimony is an important source of information for retracing boundaries. Few surveyors would ignore a landowner who describes how to find the corner monument or the elderly resident who shows where the corner tree once stood. Yet, not all parol testimony should be considered. There are four hurdles to be considered before relying on parol testimony.

Useful

The first hurdle is that the parol testimony be useful. The testimony should advance the surveyor's efforts at arriving at an opinion.

Of course, there is often parol information that is not useful. All surveyors are familiar with landowners who want to talk but do not provide useful information. Most surveyors have experienced a landowner who tags along with the survey crew and maintains a constant flow of questions and gossip about the neighborhood. This later parol testimony is not useful and not helpful.

Acceptable

The second hurdle is that the parol testimony be acceptable. The parol testimony must be of a source and circumstance that the testimony would more likely than not be used by other competent surveyors in the same or similar situation. This hurdle is codified in the Federal and many state rules of evidence as the following sample illustrates:

> The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted. Facts or data that are otherwise inadmissible shall not be disclosed to the jury by the proponent of the opinion or inference unless the court determines that their probative value in assisting the jury to evaluate the expert's opinion substantially outweighs their prejudicial effect. (Underline mine) Federal Rules of Evidence, Rule 703.

It is important for the surveyor to understand that the standard for acceptance is measured against what other reasonable surveyors would do, not what one particular surveyor would do. Put in other words, if most surveyors would readily use the testimony, it is acceptable to use. If only a few (minority) of surveyors would use the testimony, it is not acceptable to use under the rules of evidence.

Admissible

As the last part in the underline portion of the previous quote states, not all parol testimony the surveyor finds useful and acceptable to aid in retracing a boundary will be admissible in court (nor does it need to be). However, parol testimony that is not admissible yet forms the basis of the surveyor's opinion could place the surveyor in a difficult position – the surveyor has an opinion but can't disclose how the opinion was reached. The result is the surveyor on the witness stand can provide an opinion but the foundation of the opinion is deemed inadmissible and therefore the surveyor's opinion is suspect.

As a general rule, parol testimony will not be admissible where parol testimony will contradict, vary or change the written terms of the contract, agreement, or deed (known as the parol evidence rule). Conversely, parol testimony is generally admissible to aid in the construction, clarification, or interpretation of an ambiguity in the deed or when a deed description is applied to the site. Parol testimony may be used to explain that which is not clear or a latent ambiguity such as the meaning of words and site conditions at the time of conveyance.

. . . There are four hurdles to be considered before relying on parol testimony.

For example, parol testimony is not admissible to prove the corner tree is a maple contrary to the deed description that cites an oak to be a monument to the corner. On the other hand, parol testimony is acceptable to show which of two oaks is the one intended by the deed to mark the corner.

Therefore, parol testimony is generally admissible to identify the monument cited in the deed, explain its disappearance, show its former location, and show a replacement is in the position of the original, to name a few applications of parol testimony. Also, parol testimony can be used to show elements of equitable claims or defenses such as acquiescence, practical location, and adverse possession.

Credible

The final hurdle is that the parol testimony be credible. Credibility does not prevent the information from being accepted as evidence. The credibility affects how the

Parol Testimony (continued)

information is perceived by the judge, jury, arbiter, etc.

The lack of credibility, I believe, is the most common deficiency of parol testimony used by surveyors. Many surveyors claim not to be an advocate for their client, yet accept, rely, and adopt parol statements from the client or the client's witnesses that lack credibility. Therefore the surveyor becomes an extension of the advocacy of their client or client's attorney.

Of course, there is often parol information that is not useful. All surveyors are familiar with landowners who want to talk but do not provide useful information. Most surveyors have experienced a landowner who tags along with the survey crew and maintains a constant flow of questions and gossip about the neighborhood.

There are three elements involved in determining the credibility of parol statements: 1) The person making a statement would be unaffected by the outcome of the decision. 2) The person would or has some basis for the knowledge sufficient to "sear" the knowledge into memory. 3) When the memory of the witness was formed or the memory recounted there was no actual or an appearance of bias at the time.

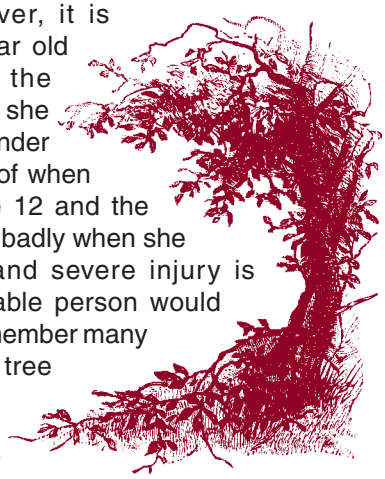
Unaffected: The first element of credibility requires that the person making a statement be unaffected by the outcome of the decision. This element would generally make any statements by the client or neighboring property owner suspect. Both the client and neighbor stand to gain if their statements were accepted and relied upon. Even prior owners are suspect if they gave a warranty deed and may be called upon to defend their warranty should the boundaries not reside where they claim the boundaries reside.

There is one exception to this element of credibility. The exception is when the statement of the witness is against the interest of the witness. For example, if the client were to agree with the neighbor's assertions regarding the former location of a boundary stone, the client's testimony regarding the stone's location would be judged credible since it is a statement against their interest.

Basis for Knowledge: The second element affecting the credibility of a parol statement requires the witness have some basis for their knowledge sufficient to "burn the knowledge" into their memory. The basis for the knowledge must be such that logic and experience would compel a reasonable person to believe the witness would remember the facts they testify about. Was there something unique or noteworthy that would cause the witness to remember or retain the knowledge in their memory? In the instance of a corner location, it is often insufficient for a witness to merely state they remember there was a corner pin at a certain location. The witness must be able to relate their memory gained in the past to an existing location on the ground in a manner that is logical, reasonable, and trustworthy.

"*The pin was right at the top of the ditch and the ditch hasn't moved.*" "*I watched my dad put a stone right on the old stump and after the stump decayed that stone was still there.*"

Consider an 83 year old witness who insists that she remembers the location of a pin she saw in her cousin's yard when she was 12 years old. That statement without some other supporting information is not credible because logic and experience suggest that 12 year old children have trouble remembering to feed the dog that day, let alone the location of a corner pin the elderly witness saw 70 years earlier. However, it is believable that the 85 year old witness can remember the location of the corner pin if she recounts that the pin was under a tree branch she fell out of when playing in the tree at age 12 and the corner pin injured her very badly when she landed on it. The tree and severe injury is something that a reasonable person would believe someone could remember many decades later. Since the tree and the branch the witness climbed on still stands, the witness is able to accurately place where the pin stood 70 years previously.



Of course knowledge gained last week does not need the same intensity of experience (if any) in order to accurately recount the knowledge. On the other hand, knowledge gained a decade ago would require some extraordinary experience to retain a credible memory.

Impartial: The disposition, temperament, or bias of the person when the memory was created or the statement is made also forms an element of credibility. Statements by close

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Parol Testimony (continued)

friends and family of the client or neighbor are suspect. Also, witnesses who were angry or emotional to the extent their judgment may be impartial or biased against or for a party may hurt the credibility of the witness.

Documenting parol testimony using an affidavit should incorporate the criteria that was discussed previously.

Affidavit of Leroy Cameron

My name is Leroy F. Cameron. I am 62 years old. I reside at 3049 Ames Lane in the town of Lincolnville.

From the age of 9 until I was 18 years old and went into the service, I lived at what is known as the Wooster farm. The Wooster farm was owned by my grandparents during the time I lived there.

At the southeast corner of the farm there was a large oak tree with three blazes. I spent hours sitting in a tree stand that I built in this tree to hunt deer. I spent countless hours in this tree and shot several deer that came to eat acorns at this tree. From this tree I could see down a woods lane in one direction and along a fence-row in another direction.

Recently, I returned to the location of the oak tree. From the alignment of the woods lane and remains of a fence-row, I was able to determine the former location of the oak tree. A month ago, I placed a pile of six to 12 inch diameter stones at the location of the oak and indicated this location to Sarah Kener, a surveyor.

While I have often met the person who owns the Wooster farm and the neighboring property, I am not related or know them outside this occasional meeting that occurs while hunting. I continue to hunt on this farm and the neighboring property.

Dated the 3rd day of August 2010.

Leroy Cameron

Leroy Cameron

This article has focused on parol testimony, yet many of the criteria would also apply to other forms of extrinsic evidence. The age, loss of information over time, and unreliability of the surviving information often do not allow the surveyor to be very discriminating as to the information the surveyor uses. Yet, where there is conflicting information, including parol testimony, the surveyor must be prepared to critically examine the parol testimony before relying on it or making it superior to other possibly more reliable evidence.

Knud is a professor in the Surveying Engineering Technology program at the University of Maine and operates a consulting firm specializing in boundaries, real estate title, easements, alternate dispute resolution, professional liability, and land development.

Missouri Society of Professional Surveyors Awards

Surveyor of the Year Award has been given since 1987. This award is given to an MSPS member who has given freely of his time and efforts to the organization and toward the betterment of the surveying profession.

- Must be a Member of MSPS.
- Should enjoy an outstanding reputation for his/her knowledge, integrity and professional competency.

Robert E. Myers Service Award has been given since 1990. This award is given to an MSPS member who, over an extended period of time (ten years minimum) has given exemplary service and dedication to the surveying profession and in particular to the Society.

PAST RECIPIENTS INCLUDE:

Surveyor of the Year

John Teale, Mike Gray, Don Martin, Dan Lashley, Richard Cox, Jim Mathis, Robert Shotts, Troy Hayes, Craig Ruble, Gerard Harms, John Holleck, John Stevens, Richard Barr, Erwin Gard, Charles Kutz, Robert Myers, Dan Govero, Jim Anderson, Mike Flowers, Bob Pirrie, and Jerry Day.

Robert E. Myers Service Award

Robert Myers, John Teale, Jim Mathis, Robert S. Shotts, Stan French, Dan Lashley, Gaylon Smith, Gerard Harms, John A. Holleck, J. Michael Flowers, Erwin Gard, Rich Norvell, David Krehbiel, Richard Elgin, Dan Govero, Jim Anderson, Rich Barr, Norman Brown, and Harold Schulte.

RTI Drafting & Design Student Richard Kemper awarded the O. Dan Lashley Scholarship

On May 18, 2010, Richard Kemper was awarded the O. Dan Lashley Scholarship at Rolla Technical Institute (RTI) in Rolla. Presenting the scholarship were selection committee members Darrell Pratte, PLS and J. Michael Flowers, PLS. Richard is from Newburg and will graduate from the Rolla Technical Institute Drafting & Design Program in May 2011.

The annual $500 scholarship was commissioned by O. Dan Lashley, a long-time Department of Natural Resources surveyor and Rolla resident, specifically for an RTI Drafting & Design second year student interested in land surveying. Mr. Lashley had a love of surveying, educating young people about the profession, and encouraging them to consider a career as a Professional Land Surveyor.

Pictured from left: Darrell Pratte, PLS, Richard Kemper, J. Michael Flowers, PLS

Qualification Based Selection for Surveying Services

by Don Martin

Those working in the public sector are often charged with broad areas of responsibility. Working with resources associated to infrastructure, capital improvements and the management of publicly held real estate they may often need the services of land surveyors. Like their private land owning counterparts public institutions deal with the critical issues of land management. One of the most basic and most important of these issues is the concern regarding the location of land boundaries. This is a great responsibility of those holding the public's trust and managing public funds. When clarity on such matters is needed, land stewards must turn to land surveyors. Land surveyors are the only professionals recognized by statute that may measure and delineate boundary locations.

In communities, states and the federal government agencies most often address their land boundary service needs through consultant contracting. Good public/private partnerships are forged through interaction with and contracting of consultant surveyors. In return public entities receive the professional land services they needed. Seeking these services is not a simple matter. Public institutions need to seek and obtain land surveying services in manners that identify qualified professionals that will deliver services competently, efficiently and for their best value. Such a means exists; it is called *Qualification Based Selection* (QBS).

QBS

Land surveying is one of three professional services that fall under the contracting domain of "demonstrated competence and qualifications" for a contract selection process. This is known as QBS contracting and is generally associated to the Brooks Act. The Brooks Act is a federally legislated requirement that public agencies utilize QBS procedures when procuring architecture, engineering or surveying services. Enacted in 1972 as Public Law 92-582 the Brooks Act was the result of a multi-decade effort by private sector professionals to assure fair, competitive, quality driven attainment of services for public works. In Missouri these requirements are endorsed and specifically authorized through our own laws. Addressed in Chapter Eight (8) of Revised Statutes, QBS is defined and prescribed under the title "*Policy on contracts for architectural, engineering, land surveying services.*"

How to Contract for Surveying Services

To understand the QBS manner in which surveying services are contracted non-qualification based procedures must be identified as well. For the contracting of surveying services it is not proper for public entities to seek and base selections on low bid criteria. Land surveying services are not to be obtained through a request for bids. Public agencies are forbidden to initiate or engage in such practices. To do so is to execute public policy in a manner that does not comply with law.

The American Council of Engineering Companies has developed a concise list that provides an organized approach

(continued on page 11)

MO Colleges/Universities Where Land Surveying Coursework is Available

The following list will be updated quarterly as new information becomes available.

Longview Community College - Lee's Summit, Missouri
Contact: David Gann, PLS, Program Coordinator/Instructor - Land Surveying MCC - Longview, MEP Division
Longview Community College
Science and Technology Bldg.
500 SW Longview Road
Lee's Summit, Missouri 64081-2105
816-672-2336; Fax 816-672-2034; Cell 816-803-9179

Florissant Community College - St. Louis, Missouri
Contact: Ashok Agrawal
Florissant Community College
3400 Pershall Road
St. Louis, Missouri 63135
314-595-4535

Missouri State University - Springfield, Missouri
Contact: Thomas G. Plymate
Southwest Missouri State University
901 So. National
Springfield, Missouri 65804-0089
417-836-5800

Mineral Area College - Flat River, Missouri
Contact: Jim Hrouda
Mineral Area College
P.O. Box 1000
Park Hills, Missouri 63601
573-431-4593, ext. 309

Missouri Western State University - St. Joseph, Missouri
Contact: Department of Engineering Technology
Missouri Western State University
Wilson Hall 193
4525 Downs Drive
St. Joseph, MO 64507
816-271-5820
www.missouriwestern.edu/EngTech/

St. Louis Community College at Florissant Valley
Contact: Norman R. Brown
St. Louis Community College at Florissant Valley
3400 Pershall Road
St. Louis, Missouri 63135-1499
314-595-4306

Three Rivers Communitiy College - Poplar Bluff, Missouri
Contact: Larry Kimbrow, Associate Dean
Ron Rains, Faculty
Three Rivers Community College
2080 Three Rivers Blvd.
Poplar Bluff, Missouri 63901
573-840-9689 or -9683
877-TRY-TRCC (toll free)

Missouri University of Science and Technology - Rolla, Missouri
Contact: Dr. Richard L. Elgin, PLS, PE
Adjunct Professor
Department of Civil Engineering
1401 North Pine Street
211 Butler-Carlton Hall
Rolla, Missouri 65409-0030
573-364-6362
elgin@mst.edu

University of Missouri-Columbia, Missouri
Contact: Lois Tolson
University of Missouri-Columbia
W1025 Engineering Bldg. East
Columbia, Missouri 65211
573-882-4377

Missouri Southern State College - Joplin, Missouri
Contact: Dr. Tia Strait
School of Technology
3950 E. Newman Rd.
Joplin, MO 64801-1595
1-800-606-MSSC or 1-417-782-MSSC

Missouri "Minimum Standards" are a Realistic Guideline?

by Gary John Bockman, LS-2334

For several months, I have read about potential disciplinary actions regarding two surveyors who have conducted boundary surveys that are the subject of a Missouri Court of Appeals case decided by the Southern District last year. Most recently, Chris Wickern, PLS, CFedS provided me a copy of the court decision in **Ronald E. Adamson and Sheryl Adamson v. Innovative Real Estate, Inc., and Robert F. Arnold, Individually, and d/b/a Robert F. Arnold & Associates Land Surveying** and asked for my thoughts. His concern was that some surveyors have interpreted this court decision to invalidate Missouri's Minimum Standards for Property Boundary Surveys.

After reading order issued by the Court and reflecting upon other surveying situations with which I have familiarity as well as recalling some of the basic ideas presented by Brown, Robillard and Wilson, a few of my personal thoughts about boundary surveys have come to mind.

The case in question involves a dispute over an access easement that resulted in two court cases and an appeal. The surveying issue involves a survey by Arnold Surveying that utilizes a point of commencing identified as "an existing pipe" that was accepted as the Northwest corner of the North Half of Government Lot 1 of the Southwest Quarter of Section 19, Township 38 North, Range 16 West and a survey by Greg Hasty which was based upon a location of that corner some 16.95 feet east and 35.23 feet north of the "existing pipe". This difference in the location of the point of commencing changed the location of the access easement from being on the property of the easement granting property owner to the property of the grantee.

After reading order issued by the Court and reflecting upon other surveying situations with which I have familiarity as well as recalling some of the basic ideas presented by Brown, Robillard and Wilson, a few of my personal thoughts about boundary surveys have come to mind.

In rendering its decision, the Court of Appeals stated "*the "Minimum Standards" are certain statutes, rules and regulations, as they pertain to Professional Land Surveyors, the purpose of which is to provide the surveyor and recipient of boundary surveys with a realistic guideline for adequate survey performance" 20 CSR 2030-16.010. The Minimum Standards further state that they "are not intended to be used in place of professional land surveying judgment". 20 CSR 2030-16.010.* This was included in the Court's decision because one of the appellant's arguments was that the Arnold Survey commenced at "an existing iron pipe" at the Northwest corner and the Hasty survey used a different location for the corner, but noted the location of "an existing iron pipe" and the appellants offered that difference as evidence of a defect in the Arnold survey, claiming that Arnold failed to meet Minimum Standards by not starting at a corner of the United States Land Survey System.

My concerns with the Court's decision are twofold. First, Missouri Minimum Standards for Property Boundary Surveys are not statutes, but are regulations that are authorized to be promulgated by statutes. If the courts do not properly distinguish between statutes and regulations, it is certain that many surveyors may be misled as to the priorities of statutes versus regulations. Second, the Court did not include the provisions of 20 CSR 2030-16.010 that states *"If the survey deviates from these minimum standards, this deviation shall be noted, described, and justified on the plat of survey by the professional land surveyor. This provision cannot be used to intentionally circumvent the basic tenets of these minimum standards"*.

In addition to Missouri Minimum Standards, RSMo 60.315 provides for re-establishment of lost corners and includes the cautionary statement *(The rules utilize proportional measurement which harmonizes surveying practice with legal and equitable considerations. This plan of relocating a lost corner is always employed unless it can be shown that the corner so located is in substantial disagreement with the general scheme of the original government survey as monumented. In such cases the surveyor shall use procedures that produce results consistent with the original survey of that township.)* It has been my experience that many surveyors are either unaware of this caveat or choose to ignore it and use proportional measurement as a basic procedure.

Detailed reading of the subject Court decision will reveal that, although the most recent Hasty survey used a different corner than the Arnold survey, a prior Hasty survey used the "existing pipe". Referring back to Brown, Robillard and Wilson, there is a principle that surveyor may properly change his opinion of a boundary if new evidence is found by him or made available to him.

Missouri "Minimum Standards" (continued)

Several years ago, our firm conducted a boundary survey for a MoDOT maintenance building near Lebanon. The information we obtained from the repository included recent subdivision plats and other surveys that utilized a section corner monument reported by one of the Laclede County surveyors, and we followed suit. When MoDOT took the survey to the recorder, the current County Surveyor noted that he had located what appeared to be an original stone some distance from the monument that we utilized. One can only imagine the confusion that would result if all subdivision boundaries, lot lines and parcel boundaries were to be moved long after the landowners used their land in reliance upon the recorded data. Justice Cooley referred to chaos when a surveyor attempts to move lines and Brown, Robillard and Wilson reported upon a Florida case when a similar situation occurred.

In my view, the lesson surveyors should take from this case is that the Court's decision to hold the Arnold survey location of the property was due to over 50 years of use of the "existing pipe" in deeds and surveys, even by both surveyors testifying in the case. The statement that Missouri Minimum Standards are realistic guidelines and do not overrule professional surveying judgment must be tempered with a sufficient amount of data to justify any deviation from those standards.

The statement that Missouri Minimum Standards are realistic guidelines and do not overrule professional surveying judgment must be tempered with a sufficient amount of data to justify any deviation from those standards.

Yes, the Court was correct in stating that professional judgment can override the written standards, but I believe the Court could have helped surveyors by placing more emphasis upon the large amount of data that was evaluated prior to deciding to utilize the "existing pipe".

For those of you who are wondering why I have not included detailed testimony from the Court decision, I have omitted such in the hope that your curiosity would impel you to obtain a copy and read it for yourself. It is always good for a land surveyor to stay up to date on recent court decisions. Only then can you begin to understand what the Court used for the basis of its decision and be sure that you have a case that fits the circumstances of the reported case.

Qualification Based Selection (continued)

by Don Martin

to QBS. Serving as a *road map* for public agencies the procedure is:

Missouri Revised Statutes
Chapter 8,
State Buildings and Lands
Section 8.285

Policy on contracts for architectural, engineering, land surveying services.
8.285. It shall be the policy of the state of Missouri and political subdivisions of the state of Missouri to negotiate contracts for architectural, engineering and land surveying services on the basis of demonstrated competence and qualifications for the type of services required and at fair and reasonable prices.

1. Review QBS materials and directories of qualified consultants.
2. Clarify project goals (checklist of project needs, project description, budget and timetable).
3. Request *Statement of Qualifications* (announcement, schedule for selection process).
4. Evaluate responses (evaluation forms, reference checks, notices to firms not selected).
5. Interview top ranked firms (plan interviews, conduct tours, provide selection criteria to firms in advance).
6. Select most qualified firm (negotiate contract with top ranked firm, including scope of service and compensation).
7. Notify firms not selected, and thank them for their interest.

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Meet Our Members!

LS Member

Robert Ross
Yukon, Missouri

Position:
Cadastral Section Chief
State Land Surveyor's Office

Focus of survey practice:
As my title would imply, my work definitely revolves around the restoration and reestablishment of USPLSS corners. Working in an urban setting sorting through a "chain of evidence"; looking for a corner that hasn't been mentioned since the original surveyor set it; or speaking with surveyors regarding standards, preservation, or retracement are typical examples of my work.

Most memorable project:
It's very difficult to single out one specific project. In nearly every project, the most memorable experience is when the "Eureka" moment occurs; after finding the corner or evidence that brings the situation into focus, revealing what has occurred throughout history in a particular area.

Likes about surveying:
Surveying is a combination of subjects that "fit" me; the outdoors, history, math, measurement, law, investigation and problem solving just to name a few. In simplistic terms, surveying to me is "one big Easter egg hunt." I really enjoy putting all the pieces of the puzzle together, and helping others in the process. When I'm no longer excited after finding the GLO Corner or that key piece of evidence by a previous surveyor, I'll find another profession.

Why a member of MSPS:
Membership with the Society is mandatory for the individual whose interest in the legacy we've inherited extends beyond "8-5". At meetings, seminars, and banquets, I enjoy discussing our work with my fellow surveyors. Many of the Society's members are interested in improving the quality of our work, protecting our profession, and returning the public's perception of the Professional Land Surveyor to the level it once was. I share these common goals, and will do what I can throughout my career to better the profession and our Society. The first step is membership.

Professional Judgment

A collaborative effort by Chris Wickern, LS & Don Martin, LS

Ours is a time that is noted for more conflict than consensus. You read it every day in the headlines; you hear it every day on the radio; you see it every day on news broadcasts. Whatever the issue, wherever the venue, parties will be drawing lines in the sand and taking positions. Seen in the great debates of our age such as *weather patterns vs. climate change* or *private health insurance vs. universal health care* one thing is for sure; opinions at the extreme points-of-view of the issue will be voiced (e.g. the mandatory recording debate). They will be heard. They may even come to control prevailing impressions of the matter at hand. So is the case of a 2009 Missouri court ruling that included matters of land surveying.

The Missouri Court of Appeals ruled on the circumstances of a driveway easement conflict in the Lake of the Ozarks vicinity. A disagreement between commercial neighbors over the location of a boundary line that determined the location of the easement was complicated by the fact that two surveys expressed differing opinions as to the location of the line. Such differing opinions are part-and-parcel (no pun intended) to the practice of land surveying. But this case and the Court's ruling have sparked a substantial degree of interests in the legal and land surveying communities of Missouri. It could be said that interest has been "to the extremes".

"Minimum standards for property boundary surveys are not to be used in place of professional land surveying judgment," is the headline proclamation from the *Courts Bulletin* of *The Missouri Bar.* This proclamation reflects much of the discussion and dialog occurring among surveying practitioners. Many are interpreting the case results in the spirit of this headline by juxtaposing minimum standards and professional judgment. In reality the ruling and the historic lore of surveying do not place the notions of standards and a surveyor's ability to exercise professional judgment at extremes counter to one another. Indeed this ruling and customary tenets of surveying affirm prevailing roles for both standards and judgment. Understood professionally and well within the range between extremes this decision lends precedence to the long-understood importance of profession opinion in matter of land surveying. But the triumph of professional opinion is not the demise or abandonment of minimum standards.

The Court didn't consider the 'how or why' two surveyors arrived at a conclusion that differs by many feet. They recognized that the difference was enough to cause neighbors to sue. In essence the two different results moved the parties to litigation. This Court did not consider the differences between an original survey and a retracement survey. The Court decided the matter based on what was presented at trial. Courts and the lawyers generally have little knowledge or understanding of how surveyors establish, reestablish, or restore boundary corners. At times evidence of an incorrect procedure may be revealed yet it is not refuted. Often issues of incorrect procedure are lost due to the quality of an opposing surveyors' testimony. That is the quality of testimony, not the quality of the survey. This is why the following axiom rings true to any a surveyor's ear, 'Boundary cases tend to make bad survey law'. Generally, the Courts are far more concerned with 'where a boundary is', and not greatly concerned with how two Surveyor's arrive at different conclusions of where the boundary *should* be.

In this case the Appellant contended that the Respondent's surveyor was negligent for failing to comply with the Missouri minimum Standards for Property Boundary Surveys. The negligent act? The Respondent's surveyor accepted an existing "iron pipe" as the controlling monument of the survey. It was contended this pipe was not properly tied to a government corner. The Appellant's surveyor had surveyed the line by relying on a tie to a government corner resulting in the differing location of the line between neighbors. The point was also made that by choosing the pipe of record and not complying with the Minimum Standards the Respondent's surveyor failed in his legal obligation to state and document on the plat the reasons for not adopting the specified practices as written in the Code of State Regulations.

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The Court received testimony that the "existing pipe" was not merely accepted out of convenience. It was given due consideration. It was a monument of great significance. It was referenced in adjoining deeds and was understood by the Court to have a pedigree of reliance and acceptance for the location of boundary lines for many years. It was understood to not be in complete harmony with the government plat, but it was congruent to the sense of title that was held in properties. With all of this considered and understood the Respondent's surveyor choose to accept the pipe. He exercised his professional judgment by asserting an expert opinion that didn't ignore Minimum Standards. He simply overrode one element of standards in lieu of his evidence-based professional opinion. The Courts recognized the validity of such an act and ruled favorably.

The Court also cited traditional rules of construction for analysis of boundary evidence. Backed-up by previous court rulings it was noted that measurement and subdivision calls can yield to natural objects or landmarks. The Court

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determined the "existing pipe" was such a landmark.

Beyond this Missouri case, a broader understanding of the role and function standards affirms the relevance of governing regulations and guidelines. Some think last year's decision essentially set aside our Minimum Standards by stating, the Surveyor failed to "… start his survey from a government corner based on … 20 CSR 2030-16.020 and 20 CSR 2030-16.030." Our statutes have detailing instructions for the establishment of corners while there is very little written concerning retracement, perpetuation, and reestablished of what was existing. Establishment rules are clear-cut, well written, and well understood procedures for surveyors. These procedures enhance a surveyor's ability to make tough decisions; they do not make the decisions for a surveyor. Did this ruling go to an extreme and set aside our Standards? No, it did not. Just as we have vast rules to establish corners overcome with a few sentences requiring the restoration of the existing, we also have pages of Minimum Standards that are overcome by the following "regulation"; "The Missouri Minimum Standards for Property Boundary Surveys are not intended to be used in place of professional land surveying judgment." The Court cited the Minimum Standards in its decision and stated that it was reasonable for the surveyor to rely on the "existing pipe" referred to in 50 years of deeds. The surveyor "did not breach his duty." He properly exercised his professional judgment to perpetuate the existing boundary.

This is the gray area so many find uncomfortable. Boundary determination has no 'clear cut rules, procedures, or statutes' clearly outlining what should be done. It requires us to think beyond what is easily quantified. It requires us to think beyond the technical aspects of rules, instructions, and measurements. We are obliged to render our Professional opinion regarding the location of boundaries based on our Professional Judgment. This Court decision is nothing new, and it is well established in our history. The acceptance of Profession Judgment and the citation of guiding standards has a long lineage. The following are but some of the historic references that have addressed the very challenges the Missouri case entailed.

> On September 21, 1835, Ethan Allen Brown, Commissioner GLO, wrote a letter that is representative of correspondence to local authorities: "… it may be ascertained to be impracticable to apply the ordinary principles of Surveying the public lands to these tracts without producing great confusion and embarrassment to the Settlers in dividing their improvements among tracts different from those designated by the original entry… Rather than Subject this meritorious class of our citizens to anticipated embarrassment of such a character, I would prefer an application … of, or departure from, the ordinary mode of Surveying as would Secure to each individual the boundaries of the particular tract or quantity of land which he had under cultivation, and believed to be his own, although the quantity might either rather exceed, or be a little less than for which payment was made to the United States, and leaving any excess or deficiencies to be Settled and arranged according to the circumstances of the case. -In this way each individual would Secure his farm, and no injury whatever result to the public survey."

Similar notions appeared in instructions issued by District Surveyors General in 1856: "… and it is impossible to frame instructions so minute in detail as to meet every case, and enable a deputy or county Surveyor to do equal and exact justice to all parties concerned. **After all that might or could be said, much will depend upon the judgment and experience of the Surveyor on the ground.** It is not intended, by what is here recommended for renewing missing corners or subdividing Sections, to give any positive directions to county Surveyors. This office has no control over them whatever, but it is believed that the information here given will enable the Surveyor in most cases to do justice to the parties interested, without any further correspondence with the Surveyor General on the subject… When the lines of a Section are found to be badly surveyed, and the corners are somewhat out of their proper places, the corners must nevertheless govern, if they can be identified; **and the Surveyor who subdivides such a Section must, in some instances, have to exercise his own judgment, unless the matter can be compromised by the parties interested.**" The Government Land Office and later the Bureau of Land Management continued with these thoughts: Restoration of Lost & Obliterated Corners, 1893 & 1896: "… **No definite rule can be laid down as to what shall be sufficient evidence in such cases, and much must be left to the skill, fidelity, and good judgment of the surveyor in the performance of his work.**" Manual of Instructions 1902: "… **Skill and judgment are required, to produce these lots in the most convenient and equitable form for both the purchaser and the Government**. "Restoration of Lost & Obliterated Corners 1906: "… **No definite rule can be laid down as to what shall be sufficient evidence in such cases, and much must be left to the skill, fidelity, and good judgment of the surveyor in the performance of his work**." The same or similar language is found in all Manuals of Instructions through today's 2009 Manual.

The Commissioners and Surveyors General were applying lessons learned through our legal system and the Courts. Justice Thomas M. Cooley's spoke about these very issue in January, 1881: "When a man has had a training in one of the exact sciences, where every problem within its purview is supposed to be susceptible of accurate solution, he is likely to be not a little impatient when he is told that, under some circumstances, he must recognize inaccuracies, and govern his action by facts which lead him away from the results which theoretically he ought to reach… If now the disputing parties call in a surveyor, it is not likely that any one summoned would doubt or question that his duty was

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to find, if possible, the place of the original stakes which determined the boundary line between the proprietors. However erroneous may have been the original survey, the monuments that were set must nevertheless govern … where it appears that they have accepted a particular line as their boundary, and all concerned have cultivated and claimed up to it. Public policy requires that such lines be **not lightly disturbed or disturbed** at all after the lapse of any considerable time. **The litigant, therefore, who in such a case pins his faith on the surveyor, is likely to suffer for his reliance and the surveyor himself to be mortified by a result that seems to impeach his judgment**… No statute can confer upon a county surveyor the power to establish corners, and thereby bind the parties concerned… it is a question of property right. The original surveys must govern, and the laws under which they are made govern, because the land was bought in reference to them; and any legislation, whether State or Federal, that should have the effect to change these, would be inoperative, because of the disturbance to vested rights…The general duty of a surveyor in such a case is plain enough. He is not to assume that the monument is lost until after he has thoroughly sifted the evidence and found himself unable to trace it. Even then he should hesitate long before doing anything to the disturbance of settled possessions. Occupation, especially if long continued, often affords very satisfactory evidence of the original boundary when no other is attainable; and the surveyor should inquire when it originated, how, and why the lines were then located as they were, and whether a claim of the title has always accompanied the possession, and give all the facts due force as evidence. **Unfortunately, it is known that the surveyors sometimes, in supposed obedience to the state statute, disregard all evidences of occupation and claim of title, and plunge whole neighborhoods into quarrels and litigation by assuming to establish corners at points with which the previous occupation cannot harmonize.** It is often the case when one or more corners are found to be extinct, all parties concerned have acquiesced in the lines which were traced by the guidance of some other corner or landmark, which may or may not have been trustworthy; **but to bring these lines into discredit when the people concerned do not question them not only breeds trouble in the neighborhood, but it must often subject the surveyor himself to annoyance and perhaps discredit,** since in a legal controversy the law as well as common sense must declare that the supposed boundary long acquiesced in is better evidence of where the real line should be than any survey made after the original monuments have disappeared…Two lot owners quarrel, and one of them calls in a surveyor, that he may make sure his neighbor shall not get an inch of land from him. This surveyor undertakes to make his survey accurate, whether the original was so or not, and the first result is, he notifies the lot owners that there is error in the street line, and that all fences should be moved, say one foot to the east. Perhaps he goes on to drive stakes through the block according to this conclusion. **Of course, if he is right in doing this, all lines in the village will be unsettled;** but we will limit our attention to the single block. **It is not likely that the lot owners generally will allow the new survey to unsettle their possessions, but there is always a probability of finding some one disposed to do so. We shall then have a lawsuit; and with what result?** ... He has no right to mislead, and he may rightfully express his opinion that an original monument was at one place, when at the same time he is satisfied that acquiescence has fixed the rights of parties as if it were at another. **But he would do mischief if he were to attempt to establish monuments which he knew would tend to disturb settled rights; the farthest he has a right to go, as an officer of the law, is to express his opinion where the monument should be, at the same time that he imparts the information to those who employ him, and who might otherwise be misled, that the same authority that makes him an officer and entrusts him to make surveys, also allows parties to settle their own boundary lines, and considers acquiescence in a particular line or monument, for any considerable period, as strong if not conclusive evidence of such settlement. The peace of the community absolutely requires this rule.**

A.C. Mulford's Treatise on Boundary Surveying, 1912: "…No attempt is made to describe how the lines should be measured; the intent is rather to furnish suggestions as to the method of locating the line to be measured - in short, finding it. **It is far more important to have faulty measurements on the place where the line truly exists, than an accurate measurement where the line does not exist at all**… The training of the surveyor consists essentially in practice in turning angles, measuring lines and getting over obstructions… He is considered preeminently a measurer of land… But in the vast majority of cases the actual measuring of land forms the smaller portion of his duties. **His hardest work is often, to use a colloquial phrase, to find the land to be surveyed.** In a large part of our land, through the generations past, the precise boundaries of holdings have received little attention… Since no two problems present exactly the same complications, **it is useless for any one to attempt to lay out any fixed rules of procedure, yet it may be fairly said that from experience each surveyor acquires a certain amount of definite information concerning boundaries and landmarks and certain definite conceptions concerning the relative importance of different kinds of evidence, both direct and circumstantial. He is compelled to formulate for his own use certain general methods of procedure, and it is probable that the methods**

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worked out by different surveyors bear a much closer resemblance to each other than would be supposed at first thought. As far as my observation goes, in his preparatory studies the surveyor receives little help or suggestion to enable him to grapple with this important but elusive part of his work… Curiously enough the Surveyor is isolated in his calling, and therein lie his responsibility and his temptations. The lawyer comes nearest to understanding the work, yet of the actual details of a survey most lawyers are woefully ignorant. The business man who can judge to a hair the fulfillment of a contract has no eye for the shortened line or the shifted landmark. To the skilled accountant of the bank the traverse sheet is a closed book. Dishonesty in ordinary business life cannot long be hid and errors in accounts quickly come to light, but the false or faulty survey may pass unchallenged through the years, for few but the Surveyor himself are qualified to judge it. I maintain that in the hands of the Surveyor, to an exceptional degree, lie the honor of the generations past and the welfare of the generations to come; in his keeping is the Doomsday Book of his community, and who shall know if he is false to his trust? Therefore I believe that to every Surveyor who values his honor and has a full sense of his duty the fear of error is a perpetual shadow that darkens the sunlight."

The Court's decision from last year did not set aside our Standards; it reinforced them.

So did the ruling disclaim Minimum Standards? No. The Court considered evidence derived from Professional Judgment. It referenced and considered legal rulings, customs of practices, and governing standards. The case disavowed nothing; but it did affirm what all professional surveyors should know – we are a regulated profession because we are empowered to render opinions and execute actions that are significant and impact the welfare and wellbeing of individuals, communities and institutions. The Court's decision from last year did not set aside our Standards; it **reinforced** them. It reinforced them by validating the Surveyor's proper exercise of Professional Judgment. It is just what we have been called, directed, and implored to do for at least 200 years of consistent laws, rules, decisions, and instructions.

Meet Our Members!

LS Member

Joe Clayton
Jefferson City/Joplin, Missouri

Position:
Land Surveyor
Missouri Dept. of Conservation
MSPS Liaison
Missouri GIS Advisory Committee

Focus of survey practice:
My main surveying focus is in land boundary; urban or rural, aliquot or metes & bounds, along riparian or land bounds. Along with land boundary surveying I have an extensive background in control and topographic surveys.

Most memorable project:
Not a particular project but a specific time and place. The early 1980's, based in Bavaria I served as a US Army surveyor performing geodetic surveys in Western Europe. The arduous duty was made memorable by the glory and splendor of Edelweiss, the Alps and the mysterious Black Forest. It reminded me of Missouri without chiggers and ticks!

Likes about surveying:
Being able to work outside or inside; a Paul Bunyan one day, an Albert Einstein the next. As a surveyor I'm the guy that figures out why, who, what, when and most importantly where!

Why a member of MSPS:
I enjoy the fellowship, the mentoring and the general exchange of information at MSPS events. There is no other place in Missouri for professional surveyors to have an open dialog about surveying issues with their peers. As a career public servant I respect and honor the responsibilities granted to the surveyor by the public. Paramount among these responsibilities is to perform my professional duties, while protecting the public's interest. Bearing that in mind I feel a responsibility to ever expand my knowledge of the profession. While having done so by achieving undergraduate course studies from four universities and currently pursuing more courses, it is the knowledge that is available from our cadre of surveyors I find most informative. Their life experiences exceed all that may be taught or learned in a course's syllabus. Now that's worth the membership!

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MACS Honors Robert L. "Pop" Elgin (1914-2007)

by Ron Kliethermes

Following the Missouri Association of County Surveyors' spring meeting at the State Land Surveyor's office in Rolla this past March 20, 2010, a large group of members, as well as many friends and family gathered at the historic Old County Courthouse here to dedicate a plaque to be added to the memorial of long-time Phelps County Surveyor, Robert Lewis Elgin.

The "Old Courthouse" of Phelps County is currently an on-going restoration and museum/memorial project in Rolla.

The largest room in the Old Courthouse was not nearly room-enough to hold all those who came to honor Robert L. Elgin, a 'monument' to Missouri's County Surveyors.

Land Surveyors as a group tend to practice their art and science with great care – understanding the importance of recovering and preserving evidence of land boundaries that have been established by past surveyors, and recording and archiving several types of documents to assist new and future land transactions and surveyors.

Missouri's duly-elected and appointed County Surveyors of the past and present do take their duties most seriously, knowing full well that the plats of all surveys he or she conducts for the landholders of the county must be filed in the public record. Every County Surveyor is also a source of advice and information to the county citizens and government – usually with little or no compensation – but with the satisfaction that the public's welfare is being served.

Among those attending, Robert E. Myers, retired Missouri State Land Surveyor – and fellow co-founder of MACS, testifies of his deep appreciation for Bob Elgin's leadership and dedication to the land survey profession and service to the citizens.

Well-known and younger son of "Pop" Elgin, Richard Elgin, PLS, PE, PhD delivers an account of his father's long career and service to the public and the profession – and explaining to some less knowledgeable in the crowd the difference between a 'rock' and a 'stone'.

Respectfully called "Pop" by those who knew him, Bob Elgin was a co-founder of MACS some twenty-nine years ago when the first meeting of a group of County Surveyors was held on March 7th, 1981 – also in Rolla. The association was initially founded to foster cooperation and assistance between the many County Surveyors and the State Land Surveyor's office. This would serve to protect and improve land surveying practices and survey records preservation – and so also, would protect the welfare of the citizens.

Per the official minutes, those attending that first meeting in 1981 were;

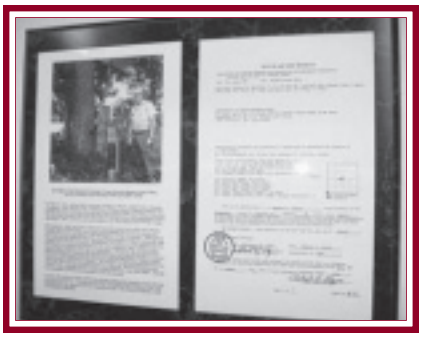
Thomas J. Kuster, Osage County
Robert Elgin, Phelps County
Bill Meyer, Lafayette County
Bob Myers, State Land Surveyor
Don Griffin, Boone County
Norbert Wunderlich, Franklin County
Charles Liscombe, Dent County
Gene Buzzard, Buchanan County and
Robert L. Lewis, Warren County

Now at this association's memorial gathering in 2010, held to dedicate a plaque to recognize Bob Elgin, they not only acknowledged him as a co-founder of MACS, but more importantly as an excellent example of professionalism, integrity, and what any Professional Land Surveyor might aspire to become; well-respected and admired among his or her peers, his family, and the public that they serve.

Robert Lewis Elgin served Phelps County as their elected County Surveyor for thirty-six years. Having been the longest continuously-elected county official in Missouri speaks to how well the citizens were aware of his abilities and integrity. Having been 'opposed' by another surveyor only once in those 9 contests spanning 36 years may speak to the respect that other surveyors had for "Pop" and his land surveying skills.

Robert L. Elgin certainly had a long and interesting life and career: At the age of nine he lost his father to a farming accident, and then was raised and home-schooled by his

MACS Honors Robert L. "Pop" Elgin (continued)



This new plaque is the latest addition to items of the exhibit honoring the professional career of Robert L. "Pop" Elgin. The photo was taken upon completion of the 1974 restoration and re-monumentation, (with the assistance of his son Richard), of the Standard Township Corner of Townships 39 and 40 North, Ranges 6 and 7 West, also being a tri-county corner, where a 'stone' of record and an original GLO 12-inch post oak witness tree were found. A recent visit finds the monument and now 34-inch diameter witness both in good condition.

mother and grandmother while working on the family dairy farm. Later he graduated from Platte County High School, and then the Rolla School of Mines with a BSCE in 1937. He worked for Phillips Petroleum in Bartlesville, Oklahoma, where he met Caroline Corley in 1940, and they married in October of 1941. He was commissioned as an officer in the Navy's Civil Engineering Corps, serving in the 3rd and 37th Seabees building airfields in the south and west Pacific, and later was the Public Works Officer at Cabanis Field in Corpus Christi, Texas. After the War, Bob and Caroline moved to St. James, Missouri where in 1947 he became the first local Director of the James Foundation. At that time there was no Maramec Spring Park – only the ruins of the iron works and remnants of a dairy operation. During Bob's work there from 1947 to 1962, Maramec changed to Maramec Spring Park, and in St. James the James Memorial Library, the Lucy Wortham James Elementary School, and other community improvements were built under his direction. Upon his resignation from the James Foundation in 1962, Bob founded Elgin Surveying & Engineering, Inc., operating the business with Caroline's assistance until 1984 when he sold it to his son, Richard. Declining to run for re-election in 2000, he completed 36 consecutive years of service as Phelps County Surveyor.

In 2001 he was recognized by the Land Survey Program of DNR for restoring over 1,400 land corners in Phelps County. He was presented with the 'Chapman Award' by the Missouri Archeological Society for his early work in the 1960's identifying and mapping Native American rock art sites in Missouri. In 2006 he was honored with a 'Lifetime Achievement Award' by the St. James Chamber of Commerce for his many years of service to the community. He was a life member of the Missouri Society of Professional Surveyors, and co-founder and honorary member of the Missouri Association of County Surveyors.

The children of Robert Lewis Elgin, (l-r) Richard "Dick" Elgin, Jane Elgin Bartlett, and Robert "Pico" Elgin, pose beside the memorial exhibits to their father. A recognized career of dedicated service is not only appreciated and honored by ones peers – but just as much or more by ones family and friends.

Some of "Pop's" hobbies included woodworking, crafts, repairing and restoring furniture, collecting early American hand tools, archeology and zoology. He and Caroline were regulars at annual craft events such as 'Old Iron Works Days' at Maramec Spring Park, and 'Nordicfest' in Decorah, Iowa.

The Missouri Association of County Surveyors, in its effort to educate the general public about land surveying, interesting history, monuments and land surveyors, selects one or more historic or memorial "projects" each year. The "Pop" Elgin project began in 2008 under the direction of then newly-elected president Paul Dopuch, and for now is concluded with this newest addition to the memorial exhibit on display at the historic Old County Courthouse. We are please to have known Robert L. Elgin, honored yet humbled to be able to 'follow in his footsteps', and are proud to be associated with his beloved profession.

Information provided by family & friends.
Photos and opinions by the author.

After conclusion of the memorial dedication at the Old Courthouse where "Pop" Elgin served so many years, out-going MACS president Paul Dopuch, Gasconade County, 'passes the gavel' to in-coming president Gerald Bader of Ste. Genevieve County.

Lunch break discussion at the State Land Surveyor's Office during the MACS meeting - prior to the memorial dedication. The spring meeting is held each March in Rolla since the first meeting in 1981. (This summer's float trip and fishing tournament will take place on July 16th, and the meeting and c.e.u. 'workshop' will be on July 17th, both at Montauk State Park.)

Griner and Schmitz, Inc., a Kansas City-Based Surveying Technology Company, Celebrates Centennial Anniversary

In its 100th year of business, Griner and Schmitz, Inc. commemorates the rare milestone by doing what they have always done — staying at the forefront of surveying equipment technology, shunning automated phone systems, and taking customer service way too personally.

Kansas City, MO. April 27, 2010. No one knows or remembers the exact date Italian immigrant Oswald Griner opened Griner and Schmitz, Inc., originally Oswald Griner Co., in 1910 on E. 10th Street in downtown Kansas City. But when a company survives the Great Depression, weathers the changes in construction and surveying technology, and helps supply the country with instruments throughout a few wars, a yearlong celebration is more appropriate anyway. This is exactly what Griner and Schmitz is doing in 2010 — an era that will be considered economically lean in hindsight, if not a crisis, by future generations.

At a time when many companies are reeling from the downturn's effects, Griner and Schmitz's centennial anniversary serves as a beacon of hope for what is possible when advanced technology is balanced with old-fashioned customer service. Griner and Schmitz has long been recognized as an innovator in instrument repair and surveying equipment sales, rentals, and repair.

From its humble beginnings as a one-room ground floor instrument repair shop, the company has kept pace with the needs of their customers. Griner and Schmitz supplied surveying equipment to construction crews during the 1920's Kansas City building boom when Mr. Griner rubbed elbows with J.C. Nichols and Henry Massman, became a primary provider of instruments during WW II, refurbished surveying equipment for the U.S. Army during the Korean Conflict, and rented all new surveying equipment to the contractors laying the Kansas Turnpike.

Selling, renting, and servicing surveying equipment is still a major focus of the business, but today Griner and Schmitz has expanded to GPS through RTK Freedom Network, a subsidiary of Griner and Schmitz, the only provider of GEO++ GNSMART in the region. It's a unique network that allows surveying professionals to choose their hardware or use existing hardware since the network is not tied a specific brand. The company also developed its own in-house training program, GSU, hosting regularly scheduled or customized basic and advanced training courses in Kansas City and Springfield on new equipment and technologies.

Jim Martin, General Manager, shares his perspective on the company's formula for longevity and success, "We try to keep our business very personal. Everything we do and sell is taken personally. The sales team works the same way. It's never someone else's fault if something doesn't work right; it's ours. There is no finger pointing here. If it's not right, we make it right."

This applies not only to the company's surveying and GPS equipment, but to their customer service style as well. "Someone always answers our phones. It may be a technician, a sales person, or even a customer if he's the closest one to it. I didn't inherit my father's preference for doing spreadsheets or projections by hand, but answering the phones is a different story. It may sound old-fashioned, but we refuse to go automated," explains Martin who joined the company in 1996 and took over in 2003 when his father, an owner since 1973, retired from the business.

He has been in management for 14 years now, but Martin's history with Griner and Schmitz goes back to his childhood when his father brought him to the shop to help with inventory over the holidays or count "shiners" into 1 pound bags from a 55 gallon drum. He has his own stories of finding his giggling child in a drum of packing peanuts with feet sticking straight up. His management style reflects his Naval training; lead by example and know more than the opponent (or competition in this case). Despite his military background, Martin resists rigidity and leans toward flexibility with his staff. "You work to live and to support your family, not the other way around. There's an understanding that if you need to take time for your family, you take it. And with our dedicated team, being flexible with schedules doesn't mean the customer isn't taken care of. It means our people will work until whatever hour and do whatever is needed on their own time. Our customers know and appreciate that about us," says Martin.

Taking a personal stake in customer service, leading by example, and answering your own phones may sound too simplistic to be the key factors of success for a hundred year old business. However when combined with a knack for weeding out the technology that won't advance the surveying and GPS fields from those that will, it is a unique formula-one with a century old track record of milestones and innovations.

There are several milestones in Griner and Schmitz's recent history, each of which impacted the company's foundation and growth. "Though we've always remained steady in business, our location has changed a few times. Our last major move was in 1952 to the address we have today. The previous building at the location was razed and our current one built especially for us. It represented stability and pride of ownership as we no longer leased space; we owned it. Then in the late 1990s, we worked hard to establish a

In honor of their centennial anniversary, Griner and Schmitz, Inc. isn't resting on its heels.

Griner and Schmitz, Inc. (continued)

relationship with the Missouri Department of Transportation resulting in huge sales for us. Another that comes to mind is when my father retired and we experienced a changing of the guards so to speak," recalls Martin.

Having achieved a prosperous niche business by adopting new technology and supporting it with good old-fashioned customer service, Griner and Schmitz has also stepped outside of their comfort zone with their move into the GPS market. As co-owner of their subsidiary, RTK Freedom Network, the company has branched out offering a larger coverage area and more accurate readings for GPS users including surveying professionals and agricultural producers. The RTK Freedom Network means subscribers have the freedom to use their hardware of choice regardless of the software application.

Since everyone appreciates a good deal these days, the company launched GrinersGarage.com. It is an online garage sale where quality, used equipment and supplies from top manufacturers at reasonable prices are listed. Keeping with their reputation for superior workmanship and service, even the garage sale items are tested and calibrated by their service department.

In honor of their centennial anniversary, Griner and Schmitz, Inc. isn't resting on its heels. "Now doesn't seem like the time to brag. Sure, we're a century old this year, but our short-term goals are similar to a lot of other businesses right now. Make it through this economy. Federal stimulus money is beginning to trickle down and it's been a lifeline for some. Not enough to claim being out of the woods yet, but enough to survive for the moment. We know our industry. We know our products. More importantly, we know how to support our customers. Fortunately, we've been around a long time and aren't going anywhere. Sometimes we feel like we're older than the dirt our equipment is used to survey," Martin states.

Aside from the collective goals of all businesses to weather tough economic times, Griner and Schmitz has long-term goals in the works including building out their GPS network to cover 3 to 4 states, adopting surveying technology as shifts in their customers' occur, and of course taking the time to enjoy a slice or two of birthday cake should a customer walk through the door with one. "We have a hundred year history to protect and use as a solid foundation for the next ten decades. There's a responsibility to our legacy. Living up to that is our focus now."

For more information regarding Griner and Schmitz, Inc., visit their web site at http://www.grinerschmitz.com or contact Jim Martin directly.

Qualification Based Selection (continued)

by Don Martin

The Value of QBS

Management of publicly held lands entails many activities. The guiding principle to any actions taken to manage these lands is to return the best possible value to stakeholders. The QBS process is a means of returning "the best possible value." This may be questioned in terms of not allowing "low bid" contracting but QBS is a proven method of service contracting.

Due to the unique nature of architectural, engineering and surveying projects it is difficult to anticipate all services in a traditional bid process. It has been found that in price-based selection, proposals are frequently insufficient for the full scope of the work. The result is change orders, disruption of schedules and additional fees. With QBS fees are negotiated as the scope of work is defined. Only after an agency and the consultant have a detailed plan for the project is a contract executed. The result is a fully understood scope of services that allows the consultant to focus on their expertise and quality.

The *Way to Go*

As seen in this examination of survey contracting for the public sector QBS is *way to go*. Of course it is legally required and public entities must do business within compliance but it is also preferred for what it provides. It gives agencies and private consultants the opportunity to work in a collaborative spirit to maximize the quality, value, cost effectiveness and usefulness of the final service. This system assures the acquisition of the most capable professional, while at the same time obtaining a price that is "fair and reasonable" to communities, states on our nation.

A Parable on Price-based Selection

Senator John Glenn recalled a story from his astronaut days when a reporter asked one of his fellow astronauts "what is going through your mind as you sit atop the rocket waiting for blast-off?" His response was to paraphrase the aviator's axiom "I sit there thinking that every component and system in this space craft was manufactured by the lowest bidder!"

While the comment was made in jest, it does embody a truth. Low bid processes establish price as the ultimate criteria for contracting. It is fair to speculate that given a choice, the astronaut would have chosen QBS as the preferred contracting method.

In Committee

What's Happening in MSPS Committees

by Don Martin

GIS/Vision 21 Committee

Biggest news is the "wait" as the drafted Cadastral Mapping Standards make their way through the legislative process. In-the-mean-time, co-chair Joe Clayton has been dutifully attending meetings of the Missouri GIS Advisory on behalf of MSPS. In those meetings, State Geographic Information Officer Tim Haithcoat has reported the state will be issuing a broadband mapping RFP for point-based addressing and centerline specification.

History Committee

Chair Stan Emerick is familiarizing himself with the new image scanner. An interesting idea he has shared is the scanning of historic plats from the State Land Survey Archive for use as auction prints at the annual meeting.

Legislative Committee

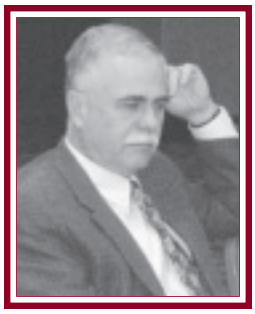
Co-chairs Rich Barr and Troy Hayes have been busy, busy, busy keeping-up with MSPS lobbyist Mo McCollough. The priority issue of funding for the State Land Program has fallen victim to the tough economic times for the State. Numerous legislators were approached as MSPS sought sponsorship but with the budget being so tight this effort garnered no support. On more positive notes a number of other MSPS concerns are in play and still active. Mo was able to attach the 1 to 3 acre parcel increase for the lien law, the mapping standards bill, the revision to mandatory recoding and statute of limitations changes to an omnibus bill.

MoDOT Liaison Committee

MSPS keeps trying! As part of a cooperative effort to enhance the right-of-way practices for Missouri roads co-chair Gary Bockman presented a *Records & Field Search* workshop at a MoDOT Statewide Surveyors Conference. He was joined there by MSPS member Rob Ross offering guidance on public corner preservation and recording. That's a good effort by a couple of MSPS *surveyors leading the way* in highway surveying practices.

Public Relations/Sales Committee

Chair Rich Howard manned the booth at the Spring Conference and reports it to be one of the most successful sales days for MSPS products. A lot of those attending bought BLM Manuals and many purchased the new MSPS polo's and oxford shirts. Committee members



Sharon Herman and Chris Wickern combined a couple of ideas; during the State Fair have a day where surveyors around the State attempt to set a record for the most GPS receivers in simultaneous use. Then add to that a PR notion of it occurring on Governor's Day. Then State Land Surveyor Darrell Pratte suggested having those GPS observations be included in the Height Modernization effort. Sounds like a lot to manage but these folks are working on pulling it off!

Trig-Star Committee

With chair Tim Morgan leading this effort was reactivated this year! Four participants competed and Alan Landers of Gainesville High School won. Alan will graduate in 2011 and will receive a $750 scholarship from MSPS. Good job Tim and congratulations Alan!

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Meet Our Members!

LS Member

Michael David Gray
Ash Grove, Missouri

Position:
VP, Associate Surveyor
Gray & Associates, LLC
President Elect
Ozark Chapter of MSPS

Focus of survey practice:
Topographic and boundary surveys for commercial development; construction staking; consulting services for governmental agencies and municipalities; residential boundary surveys; rural boundary surveys in northwest Greene County. In this economy, it pays to diversify!

Most memorable project:
There are many projects I recall, each with their own unique challenges and rewards. The first project I worked on with my dad and brother at our new company will always hold a special place. More memorable than projects are the people for whom and with I have worked. Among those people are many great surveyors, particularly my father, brother, brother-in-law.

Likes about surveying:
I enjoy the whole package! It is an "Indiana Jones" vibe (including a dislike of snakes) I get when I step out of the truck and into adventures of surveying the wild woodlands of southwest Missouri. My journeys transcend the wild spaces of our region; I also venture through time when searching for long-lost corners that are more than 100 years old. With aids of machete, handheld GPS, trusty quad map and notes from surveyors of old I journey back. Next day? I am staking a 21st Century airport terminal. What other profession has that diversity?

Why a member of MSPS:
Many reasons! But above all others is the fellowship with member surveyors. I learn from them. Together we influence the direction of our profession. We meet and educate one another and we strive to inform the public of the valuable services that surveyors provide. I am a proud member of MSPS and honored to be an Officer of the Ozark Chapter.

Associate Member

Diane Heckemeyer
St. Elizabeth, Missouri

Position:
Department Chair, Linn State
Technical College/Construction
& Civil Technology
Executive Choice Award Winner,
National Assoc. of Women in Construction

Focus of survey practice:
I direct a program for educating construction technologists. We seek to educate students and build a quality workforce serving the industries of general contracting, transportation, engineering and surveying. The Construction & Civil Technology program includes surveying courses. I seek to expand our surveying curriculum to develop the next generation of surveyors.

Most memorable project:
As a transportation engineer I have worked with many distinguished surveyors. One of Missouri's greatest geodetic surveyors was my DOT associate Neil Perkins. Neil and his lovely wife Phyllis joined me on my "most memorable project"; that of starting my career in academia. The students could not have had a better surveying instructor than Neil. He was respected and adored. I am honored and privileged that Mrs. Perkins has established a scholarship in Neil's memory; the Neil Perkins Memorial Scholarship of Linn State Technical College.

Likes about surveying:
As a wonderful blend of so many disciplines surveying is easily appealing to students. It is a joy to witness a student's pride when they master the mathematical concepts associated with surveying and see how useful trigonometry can be! Even better is when they come back after graduation and tell me about the success they are having in their careers!

Why a member of MSPS:
Membership in this professional society keeps me in touch with the surveying industry and its trends that affect what our students need to learn. Feedback from fellow members helps me understand what surveying businesses need from their future employees; my students. I'm grateful for the surveying friends I've made over the years and MSPS provides me with a way to stay in touch with them.

The shortest distance between two points
is not a trip back to the tripod.

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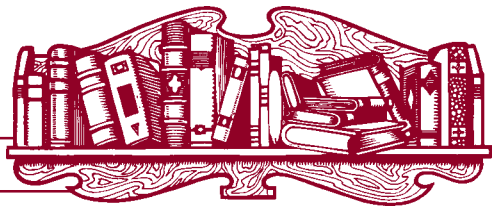
Recommended Reading

Great Surveys of the American West



by Richard A. Bartlett

Between 1867 and 1879, fresh off the destruction of the Civil War, the United States embarked on an effort to study, classify, and quantify the resources of the West. Before the War, the United States Army conducted these types of surveys. But in the midst of southern reconstruction, and in large part to a depleted military, the opportunities to carry out these surveys fell to three scientists and one Lieutenant. Hayden, King, Powell, and Wheeler; their names are preserved in our maps and gazetteers, and forever tied to the geography of the land they explored.

Ferdinand Hayden, whose name will sound familiar to Yellowstone Park vacationers, was an M.D. by education. When the notion of a life in medicine lost its luster, he set his sights on geographic and geologic exploration. Of all the great surveyors, Hayden spent the most time in the Treasure State and surrounding territory. With a tendency for broad, sweeping surveys lacking a lot of fine detail, his team of assistants was able to cover a lot of ground in little time.

Traveling through Virginia City, the Madison Valley, the Gallatin Valley and Bozeman, they received a warm welcome at Fort Ellis en route to Yellowstone. Just like today's tourists, they were fascinated with every step of their journey, remarking, *"Every hour of our march only increased our enthusiasm."* While surveying one of the area's geyser basins, they were especially fond of *"one of the most accommodating geysers in the basin,"* and noted how faithfully it *"played once an hour quite regularly."* Not quite done naming the area's unique features, the tall, sharp, jagged peaks south of Yellowstone reminded Hayden of a set of shark teeth. The others, perhaps growing tired of their unremitting male camaraderie, saw something else, and Les Grandes Tetones they remain.

Clarence King, only 25 at the beginning of his survey, possessed a maturity, discipline, and organization beyond his years. Armed with the task of surveying the 40th parallel for potential railroad routes, he excelled at assembling a team of young, educated assistants to study flora, fauna, and geology, and produce maps of the area.

They covered the Great Basin and Great Salt Lake areas, much of which still looks the same today as it did then, save for a thin strip of asphalt known as Highway 50. His work stood out against his peers', as it was detailed, accurate, and well preserved in scientific publications. Boredom was rare, especially the day a strike of lightning found King and his theodolite, and the time he killed a grizzly bear in its cave. King's triangulation network was impressive, extending from California to the 2" Humboldt Range, 120°-117°30' longitude and 39°30' to 41° latitude, angles measured at least eight times. Clarence King was named first director of the U.S.G.S. in 1879.

The best remembered of the surveyors may be John Wesley Powell. Beginning his career as a Wisconsin schoolteacher earning $14 a month, he ascended from humble, dairy-air beginnings to become one of America's most famous scientists. An assignment in the Civil War cost him his right arm, but that did not stop him from leading some of the most dangerous duties of all four surveys. Surveying the river that now holds a lake bearing his name, Powell and his men faced mystery, danger, and death on their way down the Colorado.

To accurately map this Grand drainage, Powell observed astronomic stations every 50 miles and took latitude/longitude/altitude recordings three times a day. Progressing through their trip, conditions deteriorated and the crew had to deal with souring flour, rancid bacon, intense sun, and increasingly treacherous rapids. Powell even had to save himself from an isolated precipice by grabbing a crew members' dangling pair of stripped pants. Fearful of the river's boil, three men abandoned party and attempted to leave the desert by land, only to be killed by Shivwit Indians when they were mistakenly taken for others. Every other member survived. Generally friendly with the Indians, Powell often relied on their help and guidance. And while they returned Powell's good nature, they sensed their country's inevitable fate and referred to his sextant as "Bad Medicine." Later years, upon surveying the Great Plateau, surveying practices were called into question when one dissenting member journaled, *"Sent over in Utah to hunt a place for a lunatic-asylum-for f I ever see a lot of men working on a bigger piece of tomfoolery than this, measuring base line with 3 fourteen foot rods, I am going to petition the powers for an asylum for the insane."*

First Lieutenant George Montague Wheeler led the fourth and final Great Survey. A star of his class at West Point, Wheeler wished to return the duty of mapping the country to the direction of the military. The Corps of Topographic Engineers, formed in 1813, performed most of this work during peacetime years. However, the stresses of the Civil War caused the government to abolish the Corps in 1863.

When the war was over, army numbers plummeted, and the remaining members were desperate for something to do. Wheeler convinced the government that the country needed accurate maps of the west for troop movement and western expansion. Manifest Destiny was going strong, and unlike the other three surveys, Wheeler's would emphasize human development.

While he had some early struggles, Wheeler and his team quickly hit their stride as they set out to survey everything west of the 100th meridian. Occasionally experiencing difficulty mixing men of science with strict military regimen, Wheeler was nonetheless able to include some very noteworthy men on his team, including Joseph T. Rothrock. Rothrock, the Harvard-educated "Father of Pennsylvania Forestry" has some of the most beautiful forests in central Pennsylvania named after him, including the fabled hills surrounding Nittany Valley.

Wheeler's survey differed from the others in two significant aspects; 1) Military leadership and 2) emphasis on mapping over science. In ten years of work, he and his men surveyed 219 mining districts, 143 mountain ranges, 202 mountain passes, 90 rivers, 395 peaks above 10,000 feet, and collected 61,659 specimens for the Smithsonian Institute. Debate raged over the government's role in the pursuit of science, and to the delight of the scientists and competing surveyors, the Wheeler Survey was decommissioned. Just as it had been hitting its stride, ten years of work and over $500,000 went for naught. Nothing was ever produced from Wheeler's survey.

This book will appeal to the history buffs, armchair travelers, and science geeks among us. After reading about their struggles and hardships, you might not be as quick to complain about a few branches in front of the EDM, or a slow "fix" in the brush with the GPS. This country has produced some amazing minds and mindsets, and Richard Bartlett's book features four great surveyors conducting four Great Surveys.

Reprinted from Treasure State Surveyor *July 2008.*

2010 ACSM/NSPS Scholarships and Awards

The American Congress on Surveying and Mapping (ACSM) and the National Society of Professional Surveyors (NSPS) are pleased to announce the following scholarships and awards, which will be presented during the Awards Ceremony being held on Sunday, April 25, 2010 as part of the ACSM/APLS Conference and Technology Exhibition in Phoenix, Arizona, April 24-28, 2010.

SCHOLARSHIPS

AAGS JOSEPH F. DRACUP SCHOLARSHIP
Provided by the American Association of Geodetic Surveying, this $2,000 award is for an undergraduate student committed to a career in geodetic surveying.
Winner: Erielle Lamb, California State University - Fresno

AMERICAN ASSOCIATION FOR GEODETIC SURVEYING GRADUATE FELLOWSHIP
For this $2,000 award preference is given to applicants having at least two years of employment experience in the surveying profession.
Winner: Lei Wang, Ohio State University

ACSM FELLOWS SCHOLARSHIPS
This $2,000 scholarship is available to a student with a Junior or higher standing in any of the ACSM disciplines.
Winner: Christopher Schafer, Ferris State University

THE LOWELL H. AND DOROTHY LOVING UNDERGRADUATE SCHOLARSHIP
This $2,500 scholarship is available to a student who has a junior or senior standing in a 4 year degree program at a university or college in the United States. In addition to a course in basic surveying, an applicant's program of study must include courses from at least two of the following areas: land surveying, geometric geodesy, photogrammetry/ remote sensing, or analysis and design of spatial measurement systems. Additional coursework is desirable but not required.
Winner: Patrick Vanhaverbeke, Alfred State College

NETTIE DRACUP MEMORIAL SCHOLARSHIP
These $2,000 awards were established by a donation from Joseph Dracup in the name of his wife. These scholarships are awarded through AAGS and the NSPS Foundation.
Winner: Keith Ream, California State University – Fresno
Winner: Michael Kral, University of Akron

SCHONSTEDT SCHOLARSHIP IN SURVEYING
Awarded to an undergraduate student who has completed at least two years of a four-year program in surveying. This award is for $1,500.
Winner: Brian Bellmore, Michigan Technological University

AL FRIEZE MEMORIAL SCHOLARSHIP
Awarded by the NSPS FOUNDATION, INC. to an undergraduate student who has completed at least two years of a four-year program in surveying. This award is for $1,500.
Winner: Jacob Heck, Michigan Technological University

NSPS SCHOLARSHIPS
A $1,000 award and certificate from the National Society of Professional Surveyors are given to each of two undergraduate students to be used toward a four-year surveying program.
Winners: James Carr, Texas A&M University - Corpus Christi
Tyler Rigazio, University of Maine

NSPS BOARD OF GOVERNORS SCHOLARSHIP
This $1,000 scholarship is awarded to a student enrolled in studies in surveying, entering their junior year of study in a four-year degree program of their choice. The applicant must have maintained a minimum 3.0 grade point average.
Winner: Clayton Yada, California State University – Fresno

BERNTSEN INTERNATIONAL SCHOLARSHIP IN SURVEYING TECHNOLOGY
Funded by Berntsen International, Inc. of Madison, Wisconsin, this award provides $500 in financial assistance to a full-time undergraduate student pursuing a two-year degree in surveying technology.
Winner: Patrick Unrein, Santiago Canyon College

BERNTSEN INTERNATIONAL SCHOLARSHIP IN SURVEYING
Funded by Berntsen International, Inc. of Madison, Wisconsin, this award provides $1,500 in financial assistance to a full-time undergraduate student pursuing a four-year degree in surveying.
Winner: Lucas Hanson, Ferris State University

CADY MCDONNELL MEMORIAL SCHOLARSHIP
This $1,000 scholarship recognizes a woman student enrolled in the field of surveying. The applicant must be a resident of one of the following Western states: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.
Winner: Roberta Lujan, New Mexico State University

TRI-STATE SURVEYING AND PHOTOGRAMMETRY KRIS M. KUNZE MEMORIAL SCHOLARSHIP
This $1,000 scholarship is available to candidates throughout the US. First priority candidates are licensed Professional Land Surveyors or Certified Photogrammetrists pursuing college level courses in Business Administration or Business Management. Second priority candidates are certified Land Survey Interns pursuing college level courses in Business Administration or Business Management. Third priority candidates are full-time students enrolled in a two or four-year degree program in Surveying and Mapping pursuing a course of study including Business Administration or Business Management.
Winner: Daniel Surface, Michigan Technological University

ACSM AWARDS

EARLE J. FENNELL AWARD
This award was established in honor of Earle J. Fennell, ACSM President 1966-1967, and ACSM Executive Director 1968-1971. The award is presented to an ACSM member in recognition of distinguished educational contributions to ACSM and the surveying and mapping profession.
Winner: Thomas "Mike" Besch, University of Akron

ACSM CONGRESS CHAIRMAN'S AWARD
Recipient: J. Peter Borbas

NSPS AWARDS

SURVEYING EXCELLENCE AWARD
This award recognizes outstanding contributions and dedication to the surveying profession.
Winner: R. Lee Frank, II

TRIG-STAR AWARDS

Richard E. Lomax National Trig-Star Awards
Winners of the State Champion competition for the National Trig-Star title.
First Place: Tommy Scott, Patuxent High School, Lusby, MD
Second Place: Anthony Pabillano, Flour Bluff High School, Corpus Christi, TX
Third Place: John Berman, John T. Hoggard High School, Wilmington, NC

Richard E. Lomax National Teaching Excellence Awards
Teachers of the winners of the National Trig-Star title.
First Place: Mr. Blaine Mably, Patuxent High School, Lusby, MD
Second Place: Mrs. Ghada Salem, Flour Bluff High School, Corpus Christi, TX
Third Place: Colleen St. Ledger, John T. Hoggard High School, Wilmington, NC

NSPS EXCELLENCE IN JOURNALISM AWARDS

Best Professional Newsletter: *The Pennsylvania Surveyor* (print and online) - The Pennsylvania Society of Land Surveyors
Honorable Mention: *The Cornerpost* – The Vermont Society of Land Surveyors
Honorable Mention: *L'Arpenteur Louisane* – The Louisiana Society of Professional Surveyors

Best Printed Professional Publication
First Place: *The California Surveyor*, The California Land Surveyors Association
Shared Second Place: *The Missouri Surveyor*, The Missouri Society of Professional Surveyors
Shared Second Place: *Side Shots*, The Professional Land Surveyors of Colorado
Third Place: *The Florida Surveyor*, The Florida Surveying and Mapping Society
Honorable Mention: *Point of Intersection,* The Arkansas Society of Professional Surveyors

Best Website: The Professional Land Surveyors of Colorado
Honorable Mention: The Minnesota Society of Professional Surveyors
Honorable Mention: The California Land Surveyors Association

NSPS MAP/PLAT DESIGN COMPETITION

ALTA/ACSM Survey Map
First Place: ALTA/ACSM Land Title Survey of 6 Apartment Buildings and Associated Property - Larry Blatchford, Wisconsin
Second Place: ALTA McDonald's USA, LLC, L/C 010-1316 - Steve Mitchell, Georgia
Third Place: ALTA McDonald's USA, LLC, L/C 010-1288 - Brad King, Georgia

Boundary/Cadastral Map
First Place: Boundary Survey for Columbia International University - Joe E. Frick, Jr., South Carolina
Second Place: Joppatowne High School - James M. Shaw, Jr., Maryland
Third Place: Tatnall Hospital Company, Tracts I, III and IV, Tattnall Bank - Charlotte Hinely, Georgia

Miscellaneous
First Place: Ventilation Map Rocklick Coalburg Deep Mine - Marshall Robinson, West Virginia
Second Place: An Easement Plat for Charleston Water System - Aaron Todd Taylor, South Carolina
Third Place: Special Purpose Survey, Compass Rose Stakeout, Montgomery County Airpark - Douglass H. Riggs, III, Maryland

Subdivision Plat
First Place: Subdivision Plat of Phase II Creekhaven at Prince Creek West - Sal J. Chaves, South Carolina
Second Place: Bel Air Academy - James H. Hunt, Maryland
Third Place: Phase 2, Rabun Estates Subdivision - Charlotte Hinely, Georgia

Topographic Map
First Place: HETF - Puu Waa Waa Unit Topographic Site Survey - Randy Schrank, Alaska
Second Place: Boundary & Topo for 4183 Berkford Circle - Zack Donnelly, Georgia
Third Place: Auke Lake Research Facility Site Survey - Randy Schrank, Alaska

NSPS SURVEYING STUDENT COMPETITION

Topic:	**Forensic Surveying**
First Place:	**University of Akron**
Second Place:	**Ferris State University**
Third Place:	**Michigan Technological University**
Participant:	**New Jersey Institute of Technology**
Participant:	**New Mexico State University**
Participant:	**University of Maine**
Participant:	**University of Puerto Rico**

STUDENT PROJECT OF THE YEAR AWARD
NO AWARD MADE THIS YEAR

AFFILIATE OF THE YEAR AWARD
NO AWARD MADE THIS YEAR

MSPS Presents Eye-Opening Session "Why Can't Two Surveyors Agree?" at Missouri Land Title Association Title School

by Ron Kliethermes

Columbia, MO:

The Public Relations Committee of the Missouri Society of Professional Surveyors can claim some success in delivering an informational presentation regarding 'factors that affect how surveyors determine the location of land boundaries' to attendees of the MLTA 'title school' held this past March 08, 2010 at the Holiday Inn Executive Center in Columbia, Missouri. It is the Public Relations Committee's hope that we have made good progress in our work to educate the title community in the answer to the question, (as quoted directly from a closing agent in attendance); *"So what good is the freaking survey?"*

"The planning": It is the goal of MSPS and its Public Relations Committee to explore and implement ways to improve the general public's knowledge and perception of our land surveying profession. This latest successful effort was made possible by several years of contact with MLTA through other similar short sessions at previous meetings.

MSPS, and generally most land surveyors, are interested in promoting and educating the public about the importance of quality land surveying. One excellent such opportunity availed itself this past winter when organizers of the Missouri Land Title Association 'spring title school' contacted Chris Wickern of our public relations committee. They asked if he would be interested in developing a half-day educational session concerning land surveying topics to land title professionals who would attend a "CEU"-earning two-day "title school" hosted by MLTA. (If you know Chris, you know he probably asked if he could have a full day.)

"The planning"

With input from many professional 'contacts', MSPS and the key presenter organized a "CEU-earning" session for the title school. They agreed the time would be devoted to explaining the processes and reasoning by which we surveyors determine the locations of boundary lines.

With this very real chance to make a good impression on a large group of our friends in the land title and real estate community, the committee decided that, if available, the first best choice for feature presenter was Gary R. Kent, PLS of The Schneider Corporation based in Indianapolis. Gary is well-known to Missouri's land surveyors, having been a featured speaker and presenter at many conventions and seminars hosted by the Missouri Society of Professional Surveyors and for many other states' societies as well. Luckily, Mr. Kent was available and most eager to 'promote' the surveying profession – especially to our friends in the land title industry. It should be noted here that Mr. Kent was happy to donate his time and expenses toward this effort.

Gary earned a Bachelor of Science degree in Land Surveying from Purdue University, and holds a surveyor license in Indiana and Michigan. He is Vice-Chair of the Indiana State Board of Registration for Surveyors, a liaison for the American Land Title Association to NSPS/ACSM, and chair of the ALTA/ACSM Standards committee. He is a past president of ACSM and the Indiana Society of Professional Land Surveyors.

Michael C. Freeman, PLS volunteered to assist Mr. Kent with the presentation. Mike owns and operates a land surveying company and a land title company in Hermitage, Missouri, and had served for twenty years as Hickory County Surveyor, retiring from that post in 2008. He is currently serving as the Chair of the Surveying Division of the Missouri Board for Architects, Professional Engineers, Professional Surveyors and Landscape Architects, and is a very active member of MSPS.

John Teale, PLS, is well known in the surveying community. He holds surveying licenses in four states, is appointed to the Missouri Board, and serves MSPS as co-chair of the GIS/Vision21 committee. Many surveyors don't know that John began in the title business. He owns and operates a land surveying/GIS company and a land title company in Maryville, Missouri. Just in case the attendees showed signs of the glassy eyed, deer in the headlights, I need a nap desperately after lunch continuing education reaction, John, who was attending as a 'title guy', was ready to assist with input, or launch some interesting 'ringer' questions from the floor. Fortunately, it wasn't needed, as it appears that the Title folks are as passionate about their work as we are about ours.

"The turn": As it turned out, adversely affected by the declining real estate market, the title school was shortened to one day – and the land surveyors' session was reduced to a two-hour allotment - to start after the lunch break.

Undaunted by such obstacles and parameters, the 'PR' committee contacted our fellow professionals and speakers for ideas and input. Just what topic might be best to present

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"The turn"

in such a limited amount of time? The most obvious 'topic' for discussion by land surveyors addressing our friends in the title services was decided upon and titled, "Why Can't Two Surveyors Agree?" Even though it seemed obvious that the two-hour time limit would not be sufficient to properly cover the complexities of 'boundary determination', it was a sure bet that the mere title and subject should keep the attention of most title professionals – even during that o-so-familiar after-lunch 'nappy time'.

When we land surveyors gather to discuss this complex topic, it is normally addressed in a workshop or seminar lasting one or two full days. However, most of our land title friends do not yet fully understand the number and complexity of the reasons 'why two surveyors can't agree', so they cannot know that two hours is not nearly enough time to present such material in an understandable form. But, satisfied for now with having our 'foot in the door', Mr. Wickern, Mr. Kent and Mr. Freeman decided to accept whatever time allowance they could get, and make the best of this 'out-reach' opportunity.

"The session"

"The session": This author's casual observation of the group of attendees in the room found that there was a fairly equal 'mix' of land title staff ranging from the entry-level employee, to closing agents and owners. During the more technical portions of the presentation I felt sympathy for those less-experienced of the group whom I observed with that 'deer-in-the-headlights' expression on their faces – no doubt wondering why they might be expected to understand some of these land surveying concepts – and perhaps praying that a post-session surprise exam was not scheduled. I suppose this gives good reason why we surveyors must continue to attempt to educate others that what we do requires some knowledge – and is a very important service provided to any land owner.

Being familiar with the often mind-numbing affects of convention center luncheon food, I expected that the 2-4pm slot in an all-day 'continuing education' seminar would contain quite a number of blurry-eyed 'nappers'. However, this reporter was pleased to witness that this was indeed not the case for this group of land title professionals. Whether this was the result of some inspiring topic covered in the previous 1pm-2pm slot before the surveyors, or possibly the simple-and-understandable power-point slides mixed with engaging oratory by Misters Kent and Freeman during the surveyors' presentations, my opinion as a fellow surveyor is skewed to accept the latter.

The power-point presentation by Surveyor Kent went very well. Care was made to show and explain how many different factors can affect the surveyor's reasoning in determining the location of a property boundary line 'on the ground'. Subjects ranged from boundary law, the interpretation of the written property boundary description itself, and recovery of past boundary survey evidence – and even the affects of 'occupation' all might serve to cloud a title or a surveyor's determination of where the 'line' or 'corner' is located. Only a few questions were raised from the floor at first – most waiting until the end of the session to make comments or ask for clarifications.

Mike Freeman, a land surveyor and title company owner, explained the time required and the expenses normally incurred to properly research and conduct a property boundary survey. Concluding in general that for the majority of circumstances; "Selecting the surveyor with the lower fee proposal usually insures that a lower amount of professional surveying services will be provided – and a lower possibility that the survey will be complete and accurate."

"Questions & Answers" – or probably more appropriately titled: "Why two hours is not nearly enough time to explain." - or, "One good reason why we surveyors have a public relations problem."

Near the end of our allotted time, a 'closing agent' bravely contributed the following statement and question; "A few years ago I had my 3 acres surveyed to build a fence. Later my neighbor's surveyor found that my surveyor was wrong – finding that the fence was three feet into my neighbor. My surveyor would do nothing. *So what good is the freakin' survey?"* (Author notes that there is not nearly enough punctuation available to reflect the genuine frustration heard in the voice and expressed on the face of the inquirer.) If there was a 'napper' in the room, they were now very much 'awake'.

The session ended all-too-soon for the presenters – as was also the case for the attendees. Comments by attendees ranged from; "I had no idea…" to "We must do this again soon – with more time for questions." Judging from the comments of the MLTA organizers, we believe that we will be invited back for more.

(Dare we accept???)

Some information and input was provided by the 'PR' committee and others.

(Unfortunately, quality photography during the 'power point' presentation was not possible due to poor lighting in the conference hall.)

Meet Our Members!

LS Member

Mark Wiley
St. Louis, Missouri

Position:
Associate,
Heideman|Associates Inc.
President,
Belew's Creek Watershed Partnership

Focus of survey practice:
I help clients understand their rights related to land ownership. Mine is the profession with the best working knowledge of the rules and customs regarding land tenure. As a surveyor nothing is more satisfying than removing the "I don't understand" question from a land owner's mind. I help them manage their land assets with sound property and boundary solutions.

Most memorable project:
I began surveying by helping my father (a great surveyor) while I was still in elementary school so I have had many memorable projects. Most exciting was the time I found cedar stabs set in the standard reverse direction on a glade – they were still set in the rock piles called for on the 1894 plat I was using for retracing. The compass bearings I took were within a degree of the correct bearings. Solving that and many similar historic "riddles" are not only memorable; they make survey work very satisfying.

Likes about surveying:
Snow and ice in winter/heat and humidity in summer … what is there not to like? And the fringe benefits are priceless! As I search for corners and stones I reap the bounty of nature, its beauty and the legacies of our lands. Spring brings mushrooms; fall provides vistas of turning leaves; and surveys take me on journeys through history. The tasks of surveying keep me fit, grounded and well-rounded.

Why a member of MSPS:
MSPS is the organization which represents our practice. More than merely a "member", I am active. All members should be! If we don't join in the dialog and direction of our profession – I do so within the committees of MSPS - we can't complain when the rules change and we are not in favor of them. It works a lot like voting, if you don't then your opinion is null.

Spring Workshop 2010

by Dan Govero

For those of you who missed the Spring Workshop, you missed a Good One! Mike Freeman and Gary Bockman gave an excellent presentation on how much research is needed when performing boundary surveys. The finding of the evidence we are missing in the field by Robert Ross was great! Remember, if you don't know what you are looking for you will never find it.

Larry Phipps presentation was excellent on land descriptions and how to make descriptions clear and concise. The best part was Accuracy and Precision by Larry Phipps. This was the best explanation and how to use least squares for positional accuracy; and why a traverse does not relay accuracy. He did a very good job of explaining why it works and how it works, and we may change our Minimum Standards to positional tolerance for accuracy standards.

The ratings for the speakers was very high, especially for Larry.

Thanks.

How the States Got Their Shapes

by Mark Stein

I love maps. I've always loved them. To this day I can easily lose the better part of an hour gazing over the names, shades, symbols, and lines on a map; even maps I've already seen a hundred times, like the Montana highway road map. I wonder why towns developed where they did, and why boundaries are located where they are. So I was excited when I discovered Mark Stein's recent book, *How the States Got Their Shapes*. With his book, Mr. Stein uncorks the history behind the boundaries of all 50 states, and explores the political and physical reasons for their locations.

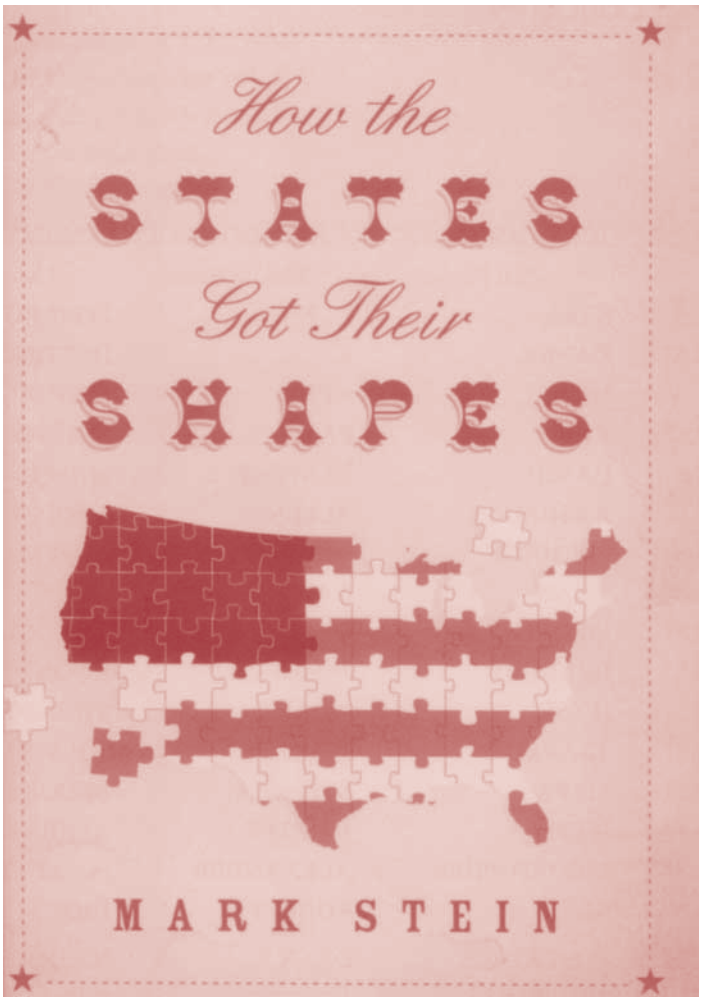
A goal of the newly formed United States Congress was to create states that were equal in size, and evenly shared the land's untapped resources. As a general rule, fairness in size was maintained throughout the Midwest, South, and West. This idea of fairness doesn't resonate through the original colonies nearly as well, as their boundaries were results of ambiguous charters, unclear legal descriptions, poor surveys, skirmishes, and English motives.

Of primary interest to us are, of course, the boundaries of Montana. There's not a whole lot of surprise to Montana's north boundary, it being the 49th parallel shared with Canada. This latitude was an agreed-upon boundary between the United States and England after the Convention of 1818. By setting the 49th parallel as the boundary between England's claims (Canada) and the former French claims (the portion of the Louisiana Purchase acquired by the United States), England was guaranteed access to the Great Lakes and ownership of the fur trading post, Winnipeg.

Montana's eastern border was established when Congress formed Idaho Territory. When they set this boundary at 104 degrees west longitude, it established the width of the existing Dakota Territory to 7 degrees. Resulting from the idea of fairness, several other western states also have 7 degrees of width; Washington, Oregon, Wyoming, and Colorado.

Montana's southern border also emerged from Congress' desire for fairness. In effect, this boundary was established during the formation of Colorado Territory. When Colorado applied for territorial status, Congress adjusted its southern and northern borders to 37 and 41 degrees latitude, respectively. This left 8 degrees of latitude from 41 to 49 degrees, enough for two tiers of states also being 4 degrees in height. We know those states today as Wyoming and Montana.

The western border of Montana is its most interesting. Beginning where the Continental Divide intersects the 111th meridian, it follows said Divide in a westerly direction until it reaches the crest of the Bitterroot Mountains. When I moved here, people told me the reason Montana's western border doesn't continue following the Continental Divide was because surveyors got lost and followed the wrong mountain crest, hence the name, Lost Trail Pass. That always seemed reasonable to me, but this book describes a juicier story.



When former congressman Judge Sidney Edgerton went to Idaho Territory, he was hoping for an appointment near the territorial capitol. Instead, he was appointed to a judicial circuit east of the mountains, cutoff from the action. Still feeling slighted when he went back to Washington to urge approval for Montana Territory, he used his influence with the House Territorial Committee and President Lincoln to push Idaho's boundary west to the Bitterroot Mountains (Idaho had proposed to use the Continental Divide for its entire boundary). It didn't hurt his cause to have $2,000 of gold packed into his pockets for the trip back east either! Still, Congress did concede a bit when they gave Idaho its northern panhandle, affording them the fertile Kootenai Valley and associated watersheds. Once again fairness, while not exactly ruling the day, was at least considered when separating Montana from Idaho.

One other question regarding Montana's borders has an interesting answer; why does Montana's southern boundary

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How the States Got Their Shapes (continued)

leave the 45th parallel and follow the Continental Divide/ Why doesn't it continue west along the parallel until it intersects the Divide? The answer to this can be found in the geography of the Centennial Mountains. If the boundary continued along the 45th parallel, Idaho would have had jurisdiction over inaccessible valleys. The Centennial Mountains cut off Idaho's access to the Red Rock and upper Madison valleys. Had these areas been under Idaho's jurisdiction, they would have certainly become breeding grounds for crooks, thieves, and lawlessness. Therefore, Congress gave these regions to Montana so law and order could be maintained.

How the States Got Their Shapes tells equally intriguing stories behind the boundaries of all 50 states. Without giving too much else away, you'll find out:

Which state used pacing as a measuring technique to determine one of its boundaries.
Why New York and New Jersey have different boundaries for lands above and below water.
Which state's border veers from cardinal due to the surveyors' fondness for the local moonshine.
How civil wars like the Toledo War and the Pennamite War erupted over disputed state boundaries, sometimes killing surveyors during their course.
Why one of Maine's borders was tweaked so it would look nicer when drawn on a flat map.
How social issues like slavery played a huge role in determining state boundaries.
Why Congress' desire for fairness led to two neighboring states being within 1% of each other's size.
Why, despite Congress' desire for fairness, Alaska, California and Texas were created so much larger than any other state.

This book is well organized, and the graphics will clearly help you through the situations being described. You don't have to be a surveyor to enjoy this book, but being one will give you an appreciation for the research that went into it. Give it a try, and then have some new fun looking over that map you've already seen a hundred times.

Reprint from Treasure State Surveyor

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