

A black surveying tripod with red legs stands in a forest with fallen leaves. A yellow total station is mounted on top. A red ribbon is tied around a tree trunk on the left. The title 'MISSOURI SURVEYOR' is written in large red letters, with a compass rose icon for the letter 'O'.

# MISSOURI SURVEYOR

A Quarterly Publication of the  
Missouri Society of Professional Surveyors

Jefferson City, Missouri

September 2015

## What's in this issue...

President's Message .....	3
Thomas Jefferson Sculpture .....	4
Best of Times - Poem .....	5
It is Time to Change Surveying Licensure .....	6
60,000 Reasons to NOT Record Land Surveys.....	10
Common Research Mistakes Surveyors Make .....	14
Why Should Land Surveying Remain Regulated? ..	15
Nominations for 2015-2016.....	20-21
High School Students Compete in State SkillsUSA Land Surveying Competition.....	22
MSPS Annual Meeting Agenda.....	32
Notes from National Geodetic Survey .....	36
Help Yourself, Help Our Society, Help Our Profession.....	38

# MISSOURI SURVEYOR

## CALENDAR OF EVENTS

2015-2016

### October 8-10, 2015

58th Annual Meeting and convention  
Tan-Tar-A Resort, Golf Club, Marina and  
Indoor Waterpark  
Osage Beach, MO

### December 5, 2015

Board Meeting  
Jefferson City, MO

### February 17, 2016

Board Meeting and Capitol Visitation  
Jefferson City, MO

### April 28-30, 2016

Board Meeting, Golf Tournament, and  
38th Annual Spring Workshop  
Lake Ozark, MO

### July 16, 2016

Board Meeting  
Jefferson City, MO

### August 24-26, 2016

Review Course,  
Best Western Capital Inn,  
Jefferson City, MO

### October 13-15, 2016

59th Annual Meeting and Convention  
Sheraton Westport Lakeside Chalet,  
St. Louis, MO

### December 3, 2016

Board Meeting  
Jefferson City, MO

Donald R. Martin, Editor



## Notes from the Editor's Desk

Donald R. Martin



Welcome to the September 2015 edition of *Missouri Surveyor*. As members wrap up another busy summer of surveying around the floods and through the heat MSPS gears up for its Annual Meeting in October at the Tan-Tar-A Resort in Osage Beach. As my pard' Tripod the three-legged ground hog winterizes the lawn mower and starts raking leaves he implores Society members to look to the middle pages of this edition in preparation for this year's Board and Officer Elections. We have a fine slate of nominees willing to take on the challenges of leading MSPS for the coming year. While our nation's political parties merely offer the usual suspects (and the unusual too!) this association is blessed with a queue of qualified candidates questing quorum service for four quarters of quarterbacking MSPS through the quibbles, quelling and quintessential quandaries of guiding our organization. Now, on to this edition...

After Adam Teale's final President's Message we have a photo of the *Jefferson the Surveyor* statue in front of the offices of Govero Land Services in Imperial. Then fellow MSPS member Jack Houseman shares his ode to surveying entitled *Best of Times*. Next Philip Adams of Richardson Texas addresses the challenges of the evolving qualifications and education of surveyors in *Is It Time To Change Surveying Licensure?* This is a "must read" particularly considering the news in the *President's Message* regarding the upcoming member's opinion poll on changing Missouri's education requirements for perspective surveyors. This is followed by an opinion piece from MSPS's own Chris Wickern. An articulate voice in the matter of recording issues, Chris brings us *60,000 Reasons to NOT Record Land Surveys*. Always informative Knud Hermansen of the University of Maine shares a cautionary lesson in *Common Research Mistakes Surveyors Make (Forward Search)*. Attorney and surveyor Jeffery Lucas of Alabama warns of the need for surveying to remain relevant in *Why Should Land Surveying Remain Regulated?* Mr. Lucas reports the threat of deregulation to surveying and licensed professions in a contemporary world of anyone doing anything for less. Hmmmm...

In honor of peers we respect and now miss we have obituaries for our own MSPS member *Ivan Ubben* and Berntsen International's co-founder *Philip Peterson*. After the somber news of our friends' departure we turn to the upcoming year and *the slate of nominees for officers and directors*. They have all provided good biographies revealing accomplished careers – thanks to them all for their willingness to serve. For a twist on programs of introducing young people to the surveying profession, check out the next article coming out of the *Texas Surveyor*. It features a unique youth outreach and learning adventure in *SkillsUSA Land Surveying Competition*. A reminder of continuing education opportunities is given by our member Joe Paiva. He calls particular attention to the availability of *Minimum Standards* training through MSPS partner GeoLearn. This is followed by a few pages of details for the *MSPS Annual Meeting* on October 8 – 10 at Osage Beach. Plan your participation by reviewing the agenda and speakers line-up. Next is the latest news from the National Geodetic Survey in this edition's *NGS Notes*. Last but not least MSPS member Rich Howard makes a call for volunteering and committee participation in *Help Yourself, Help Our Society, Help Our Profession*. Rich offers good reasons based on his own experience.

Before wrapping up my notes I must send out thanks to Mike Anderson, the Editor of POB Magazine. I relied on POB for two features in this edition and Mike welcomed the sharing of articles reprinted from his publication. The generosity of POB is appreciated. Enjoy this edition and remember, *Missouri Surveyor* is your voice...member submission are most welcome! 🇺🇸

Donald

# THE MISSOURI SURVEYOR

Published quarterly by the  
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Professional Surveyors

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## President's Message

Adam Teale



My final Presidents message....where do I start? It has been an honor and privilege to serve the society as an officer the last six (6) years. Truthfully I didn't know what I was getting myself into, but the knowledge gained about the land surveying profession and insight into how government works cannot be measured. Thank you to all current and former board members I have served alongside. A special thanks to Executive Director, Sandy Boeckman who made my job as President much easier and to Don Martin and Joe Clayton for editorial assistance.

MSPS along with the Board of Registration has been working on revising the educational standards for professional licensure the last 3 to 4 years. A survey was sent out along with the June issue of Missouri Surveyor giving membership the opportunity to weigh-in. A full report will be available at the Annual Meeting; however, the alarming truth is that only 34 members or 4% of the membership responded. This reminds me of a conversation I had a few years ago with my grandfather over the President of the United States, "Adam, if you aren't going to take 5 minutes to vote then don't bitch". I have not voted in every election or survey since that conversation, but I have been slow to voice displeasure when I didn't cast my ballot.

The Standards Committee has been revived with the signing of the MOU between the Department of Agriculture and Board of Registration the Standards Committee. The Standards Committee is currently evaluating the online Minimum Standards hosted by GeoLearn. They are looking for differences between the online Minimum Standards and the new standards. Once the new standards are promulgated, MSPS can move forward with editing or re-doing the online learning and production of the remaining two (2) hours.

Dates are always closer than they appear. Please note the following opportunities to stand alongside your fellow land surveyors in educational and/or outreach opportunities:

- October 8-10, 2015 MSPS Annual Meeting, Tan-Tar-A Resort
- October 17, 2015 Joseph C. Brown Memorial Dedication, Bellefontaine Cemetery
- December 5, 2015 Celebration 200<sup>th</sup> Anniversary of 1<sup>st</sup> USPLSS corner set in Missouri

Thank you again to all the officers, committee chairs, editors, and executive director for your support during my presidency and welcome to Jim Mathis, our next MSPS President. Jim has proven his leadership serving MSPS and as the former Chair of the Land Surveying Division of the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Landscape Architects. 🇺🇸

Adam

## Sculpture courtesy of Govero Land Services, Inc.



The sculpture we had done is by Stacey Robinson of Robinson Carving Company in Montgomery City, MO. All done by a chainsaw.

We had a 250 year old white oak that was dying and we decided to recycle what we could, this is the end result. This statue is of Thomas Jefferson, for which Jefferson County Missouri was named after, plus he was a Surveyor.

We have had a lot of visitors stopping by to take pictures. The feedback has been amazing - everyone loves it! We get a lot of questions and comments about it, especially at meetings I attend. It is probably the best advertising I have ever done. 🇺🇸

Dan  
President  
Govero Land Services, Inc.  
Imperial, MO

**Front Cover Photo:** December 20, 1815 – GLO Deputy Surveyor Prospect K. Robbins sets mile post corner to Sections 1 and 12, T37N, R1W, taking a 10” Pine at N71°E, 23 links and a 8” Post Oak at S82°E, 54 links. No other record of subsequent surveys exists. Two centuries later... January 14, 2015 – USFS Surveyors Ferguson, Throesch and Griffith: Found 15” burnt pine snag with window scar exposed (facing to SE) bearing N71°W at 23 links from a well embedded mound of small stones. Discernable stump hole depression bears S82°E, 54 links from mound. Measurements to other found monuments match Surveyor Robbins’ apparent index for bearing and chain measure in this type of terrain. Position was marked with aluminum pipe monument with alum. cap inscribed to identify corner installed over “Deep-1” magnet and new accessory bearing trees taken on February 4th. Corner document filed with the Land Survey Program of the Missouri Department of Agriculture.

**Back Cover Photo:** The closing corner of Sections 5 and 6 in T37N, R1E set by Lionel Browne in 1818 about 9.5 chains south of P.K. Robbins’ corner. The rock pile and two witness tree stump holes remain.

## Best Of Times

Some of the things I really love since I've been surveying.  
It can be as simple as a sign along the road or one person's saying.

My crew and I argued to see who had to go to this old cabin and knock.  
A little old lady we figured, but the hot farmer's daughter put us in shock!

I came across about a dozen or so Armadillos once when I was out.  
I motioned my instrument man over to see, trying not to shout.

But before he could make it over not knowing what he was about to meet,  
They got scared and ran, ducking in holes and running between my feet.

I found some fishing line and a paperclip during lunch one day,  
I actually caught a fish, even though it wasn't big enough to weigh.

If it's the right time of the season, heavens in the form of a blackberry bush.  
Or a bunch of mushrooms you carry in your shirt trying not to smush.

Once in Marionville I about got ran over by a squirrel that was white.  
I've been in the woods most of my life, but that wasn't quite right.

Looking for land corners is like putting together a giant jigsaw puzzle.  
I've found everything from a Train engine valve to an old rifle muzzle.

Trees and Stones with markings trying to make out what they say.  
Hopefully old corners marked during the original 1800's survey,

Way back in the woods I found an old fire pit all covered in moss.  
Where the original surveyors camped beside a creek they had to cross.

I seen the most beautiful babbling brooks that lead to the prettiest waterfall,  
Above it a continuous rainbow, the water dammed up by an old stone wall.

I've seen sunrises and sunsets that would bring a tear to your eye.  
Wait a minute, I'm a Land Surveyor, and Land Surveyors don't cry.

Jack E. Houseman  
PLS 2005019222

# It Is Time To Change Surveying Licensure

*Republished courtesy of Point of Beginning Magazine, August 3, 2015*

The surveying community has always been a small community, and our experiences and education vary from region to region and state to state. Over the last 20 years, or so, our profession has begun implementing certain rules requiring more education, up to holding a Bachelor of Science degree in land surveying in some states.

A well-educated workforce was the expected outcome. However, the mere requirement has not necessarily proved to be successful in providing a more qualified surveyor; in some cases, it has had the exact opposite effect. We have graduates who know a tremendous amount about geoid models, technology and Geographical Information Systems (GIS), but have never stepped foot on the ground and never found a pit and mound, or know what it means.

The National Council of Examining for Engineering and Surveying (NCEES) has been a driving force in the need for states to alter their requirements to have a bachelor's degree in order to be qualified for licensure in any given state. This has been explained as a way to provide more mobility in our profession; it would allow surveyors from other states to gain licensure in the other states easier. If all surveyors held a degree specific to land surveying and all states' histories, laws and rules were similar, then land surveying would be full of very qualified surveyors, capable of not only learning the laws and rules of a particular state, but applying those rules to each region within a given state. However, this is simply not the case; the rules, laws and histories are as varied as the people working in those states.

Moreover, after 20 years, we have not seen any real progress with universities providing "land surveying" programs with a focus on cadastral surveying. What has occurred are universities teaching GIS, computer technology and geodesy, but almost no instruction in cadastral surveying — which is what we are licensed to provide. The areas of instruction universities are instructing are really ancillary to land boundary. Numerous states including Texas allow degrees other than land surveying to qualify as an individual's education requirements; electrical engineering degrees qualify, as do liberal arts degrees with 32 semester hours in science.

## An Alarming Situation

As a member of the general public and especially as a Registered Professional Land Surveyor, the current accepted education and experience requirements should be alarming. After four years at a university studying general education, with 32 hours of science, an individual can work in an office for two years under a land surveyor and be "qualified" to take their state-specific examination without ever stepping foot in the field.

Our license is unique in that we are licensed to protect the public; are we really protecting the public? We deny a person who has 20 years of diverse experience working directly for a licensed land surveyor as a para-professional, but allow a person with an undergraduate in liberal arts and two years' office experience to be qualified? How could this possibly protect the public?

## Annual Conference

**Mark Your Calendar for October 8-10, 2015  
in the newly renovated Tan-Tar-A Resort in Osage Beach**

**Speakers will include**

**William Clark  
Dr. Dick Elgin  
Don Bordcherding  
Darrell Pratte**

**Steve Schmidt  
Stan Emerick  
Jim Mathis  
Steven Weible**

**Ron Heimbaugh  
Mark Wiley  
Bob Shotts**

We are witnessing a downward trend in the number of active land surveyors throughout the United States. Provided by the Texas Board of Professional Land Surveying, the numbers below represent a 20-year history of examinees and actual licensed land surveyors in this huge state.

Year	RPLS	Examinees
1995	3,185	416
1996	3,141	379
1997	2,879	236
1998	2,865	398
1999	2,858	413
2000	2,853	587
2001	2,897	556
2002	3,141	527
2003	3,060	630
2004	3,022	332
2005	2,926	350
2006	2,937	387
2007	2,943	359
2008	2,895	369
2009	2,979	415
2010	2,991	401
2011	2,980	334
2012	2,858	261
2013	2,885	214
2014	2,923	250
2015	2,897	272

The above list reflects a 10-percent drop in 20 years of Licensed Land Surveyors in Texas; the number of licensees averaged 460 per year prior to the degree requirement and 328 per year since the requirement for a degree went into effect. It appears we do not have enough qualified or interested candidates to apply for licensure. This may be for a multitude of reasons, but we simply do not have the numbers needed to maintain an adequate number of qualified land surveyors needed for a robust economy.

## There Is a Solution

There have been numerous suggestions on how to solve the problem. However, most have not been either implemented, or they have disappointed those trying to implement them, such as outreach programs to get primary school aged students interested in the profession. Even those who are interested in the profession cannot find a university program that provides an education in land boundary. The public interest is not being served when a state as large as Texas only has 2,897 licensed land surveyors, when the large majority of them are over 50 years of age and many do not live or practice in the state.

We often say that surveying is closely related to civil engineering; the numbers below reflect the Bureau of Labor Statistics latest numbers. States with the highest employment level in civil engineering (see chart above).

Notice there is 10 times the number of civil engineers compared to land surveyors in Texas. This may be partially due to the universities providing degree programs that are specific to civil engineering; it also may be that surveying is not a degree program common to universities and those who do graduate with GIS or related degrees drift towards related fields, but do not actually practice cadastral surveying.

We are now left with a dilemma — one we must either solve or risk becoming such a small number of licensed professionals that we become irrelevant or lose the profession all together. One suggestion is to change the rules to require two years of field experience prior to being allowed to take the NCEES exam, then another two years of experience in the office and responsible charge before taking the state-specific examination. However, as we have already witnessed, the degree requirement itself has had a tremendously negative effect on the numbers of examinees. We would expect to see yet another drop in examinees if we require two years of field experience before one is eligible to take the NCEES exam, mainly due to those graduating in related fields never intending to practice cadastral surveying.

Arkansas recognized this problem; in 2013, the state reversed course and placed into law an alternate path to licensure within the state rules. The following definition is from Surveyor Law (A.C.A. §17-48-101 et seq w/ amendments from 2013 Legislative Session).

(2) (A) A graduate holding an associate of science degree in surveying or an associate of applied science in surveying degree from a program approved by the board or its equivalent, as approved by the board, followed by

(continued on next page)

# It Is Time To Change Surveying Licensure (continued)

six (6) years or more of experience in responsible charge of land surveying under the supervision of a professional surveyor, and who has passed an examination for certification as a surveyor intern shall be admitted to sit for a written examination in a form approved by the board.

This appears to be a good compromise, as it does require an associate's degree in surveying as well as six years of responsible charge experience. It would require a change in the current rules to not allow just a bachelor's degree to qualify. Furthermore, it would allow the community colleges the opportunity to establish or refine their programs to provide either an associate's or certificate program for those who are already engaged in the profession or those coming out of high school and do not have the resources for a university degree. Most community colleges are already providing a robust program and are more qualified to provide the educational requirements our profession needs. If the rules changed to require an associate's degree or certificate in surveying, the students could continue on and obtain a higher degree if they choose. However, those who want to obtain a license to provide cadastral surveying could begin their work experience sooner and provide a much-needed licensed workforce in the near future, which is needed to continue to grow the economy.

State	Employment	Employment per thousand jobs	Location quotient	Hourly mean wage	Annual mean wage
California	38,060	2.52	1.29	\$47.87	\$99,580
Texas	23,770	2.11	1.08	\$48.25	\$100,350
New York	13,620	1.55	0.79	\$43.92	\$91,350
Florida	12,720	1.68	0.85	\$40.83	\$84,920
Pennsylvania	12,650	2.24	1.15	\$39.64	\$82,460

## The Common Good

Not all surveyors do the same work and not all surveyors need the same education or experience; some work in GIS, some use GNSS, some create subdivision plats, some provide construction layout, and some work in the energy field. The one thing all surveyors have in common and the one area all surveyors should be educated and have experience is land boundary. We are charged with the duty to protect the public by retracing the original surveyor's footprints. How can someone possibly do so when they have never spent a day in the field?

We all desire surveying to continue, grow and be recognized as a profession; however, we must recognize we simply do not have a university system in place to provide what is needed and we must rely on our community college system and work-related experience to achieve the means to an end — qualified land surveyors. Those who choose to educate themselves in related fields associated with surveying should continue to gain their education and experience, but those who simply want to provide land boundary surveying should be allowed to obtain their license and practice in the field they enjoy.

If we do not find the solution soon, we do risk becoming irrelevant and replaced, which will not serve the public's interest



Philip E. Adams, RPLS 5610, is the president of Adams Surveying Company, LLC, a complete land surveying services company based in Richardson, Texas. He brings reasoned passion to the greatest issue facing the surveying profession today, specifically who are we allowing to do the work. He can be reached at [padams@adamssurveyingcompany.com](mailto:padams@adamssurveyingcompany.com). 🇺🇸





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# 60,000 Reasons to NOT Record Land Surveys

by Chris Wickern, PLS

Recording of certain (not all) boundary surveys has been the subject of much discussion in our Professional Society and numerous articles in the *Missouri Surveyor*. Our modern recording requirements have a 200 year historical lineage forged through custom, instructions, common law, codified standards and Revised Statutes of Missouri (RSMo). RSMo 60's requirement for County Surveyors' records to be public record can be traced to when it was first enacted by the Territory of Missouri in 1814. RSMo 445, *Plats*, bears origins dating to early Missouri statehood. Recording requirements for any parcel smaller than a Quarter/Quarter Section described in RSMo 137.185 are traced to its first enactment in 1873.

The recording dialogue within our Society has been serious enough to formally take the pulse of where members stand on the issue. Poll after poll by the Society and others have clearly shown Missouri surveyors believe we should be recording more boundary surveys to protect the public.

Deeds and property boundaries are not private and have a direct effect on the whole community. The polled majority believing we need to be doing more is not a slim one. Over the course of several years and polls the margin has stayed about 80%. The polls also show a constant 15-20% who believe our existing requirements are either just right, too much, or should be abolished entirely. Legislative efforts to address these professional concerns have been derailed with a phone call from a member of the 15-20%. It really is that simple to kill consent bills in legislative committees!

The arguments against recording are ancient. Most are from a time when private surveying was strictly a business and not a regulated profession. The prevailing thoughts were; *'It's private and confidential; A survey is strictly between the surveyor and the client; No one else is concerned, and if they are, they can contract with me for a survey of their land interests; Recording requirements only apply to surveyors the State regulates.'* The practice of boundary surveys being proprietary work even led to some surveyors setting arbitrary 'offsets' to boundary corners. All in an effort to prevent the public and other surveyors from using "their work."



Territorial Governor  
William Clark

Land Surveying became a regulated profession in the 1950's. Yet, the early licensees were the same surveyors trained to believe *'these laws do not apply to their practice.'* An attitude perpetuated as they trained the next generation of surveyors - a practice we still see today. For example, Section 137.185 has a specific requirement for the land to be surveyed, described and recorded. The burden is placed on the owner to "cause" these actions to take place, and not the surveyor. Some hold to the practice handed to us from the days before licensing and state, *'It's for the owner to do. It doesn't affect us.'* The owner, hiring a professional surveyor, should have a level of confidence that our work will be performed to comply with all the relevant requirements of law.

Modern surveyors understand they are complying with statutes as they survey, describe and record plats in RSMo Chapter 445. Yet Chapter 445 has no requirements for these lands to be surveyed and platted by a surveyor. At the same time, we understand these are required to be surveyed by other statutes and regulations to comply with Chapter 445. On the other hand, Section 137.185 has very specific survey and recording requirements. Yet some proclaim *it is the owners responsibility, it doesn't affect us or it is never enforced.* Those choosing to selectively apply one while disregarding the other may be interested interesting to note that failure to apply either law carries non-selective penalties - both have the same penalty for failing to comply. (see RSMo Section 137.190 and 445.120) Both laws are also cited as authority to be complied with in many local county and city subdivision ordinances.

The only modern change to our laws is found in Section 60.650; and its requirement for "new parcels" of land. Many surveyors simply have the client prepare and record a deed for the parcel to be surveyed, and just like magic, it's no longer a "new parcel". It is now an existing parcel of record. Why are we (some of *we*) the professional working and advising land owners to circumvent the law? For those citing the same arguments noted above, *'it's proprietary, confidential and private'*... side stepping the law has an unintended effect. Surveying an existing parcel of land is defined as a resurvey in Minimum Standards. The intent of the owner was to have it surveyed



to create a new parcel of land. The client acting on that kind of surveying advice, unintentionally separates what was intended to be an original survey from the record.

The old arguments persist but with a modern twist. One which may be creating an ethical dilemma. The very definition of Land Surveyor in our statute states we must know and apply “the relevant requirements of law” that affect real property rights. ***What could possibly be more “relevant” than a law requiring land to be surveyed by a surveyor, described and recorded?*** Yes, Section 137.185 states the owner “shall cause” the surveyor to do this. Does that make it any less relevant to our practice? What does recording say about our accepted professional conduct if we advise clients to circumvent the relevant requirements of law in 60.650? Had we as professional surveyors chose to follow the clear intent of our existing recording laws, there would be little discussion about it today. Missouri has very sound recording laws when we see them and use them working together. The famous quote from Pogo seems appropriate, ‘We have met the enemy and he is us.’

All of this leads us to today’s writing and the latest *reasons not to record*. On June 22<sup>nd</sup>, one of our Missouri County’s passed an ordinance entering into an agreement with a private surveying company. The Recorder of Deeds will receive the company’s ‘private’ survey records from the early 20<sup>th</sup> century through this year.



The price? \$60,000.00. Apparently, all of the “*proprietary and confidential*” arguments as being between the surveyor and the individual client comes with a price tag. The ordinance that passed appears to make *all surveys* the company performed for over a century, a matter of public record. Once again, if we had followed our existing *relevant requirements of law*, the appropriate surveys, *not all*, would already be of record. Perhaps it is time for us to do some serious soul searching:

- Are we a profession licensed to protect the public through our practice as learned professionals?
- Do we perpetuate a stable land system by recording certain boundary surveys, or leave it for others to fulfill the relevant requirements of law?
- Do we comply with our Society’s stated purpose? “*to elevate the standards... benefitting the general public; to insure... land surveying that bring about an upgrading of land records...*”?
- Or are we simply practicing a trade where principals and lawful conduct are wagered for a price. -

If that is true, then we might as well bring the old arbitrary “offset” monuments back, and prevent the public and other surveyors from relying on “our work”. 🇺🇸

***See notations on page 28 of this newsletter.***

## **In Memory of Philip R. Peterson, 1924-2015**

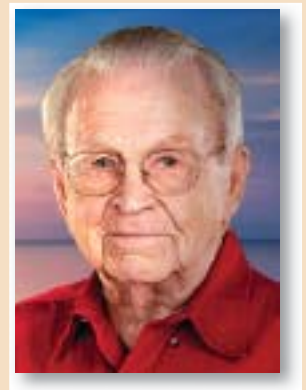
Phil Peterson, the Berntsen International chairman and co-founder who pioneered new marking products for the survey industry, passed away June 18 at the age of 90.

During his more than four-decade career, Phil Peterson helped transform how surveyors mark land boundaries. “The surveying industry has lost a visionary and champion and we have lost an amazing man, said Rhonda Rushing, Phil’s daughter and President of Berntsen. We will honor his memory by dedicating ourselves to continuing the work he loved so much.”

Phil and friend, Peter Berntsen co-founded Berntsen Cast Products, Inc. (now Berntsen International) in 1972 based on their ‘restaurant napkin design’ of the W-1 monument – a cast aluminum breakaway marker that was light-weight, resistant to corrosion, and detectable with a magnetic locator. The W-1 won the Governor’s New Product Award in 1975 and it became the core of a business that today sells survey monuments, caps, rods, and posts throughout the world.

Phil never stopped being an entrepreneur or a tireless promoter of surveying. He was responsible for many product innovations throughout his career and remained an active advocate to the end with his push to move Berntsen into a ‘smart’ marking world.

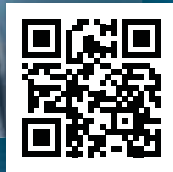
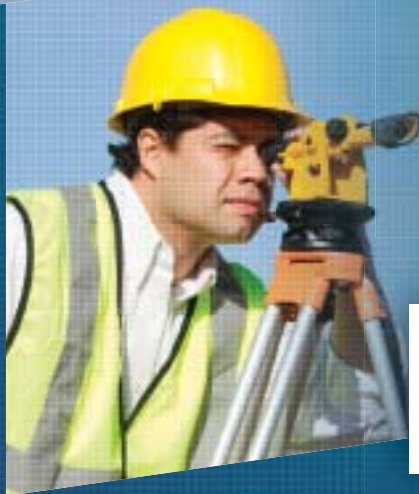
At the end of the day, Phil was committed to his family, his employees, and his customers – the surveyors in the field. “Salt of the earth people”, he called them, “we’re here to make sure that they can do the best job possible.”



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# Common Research Mistakes Surveyors Make (Forward Search)

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

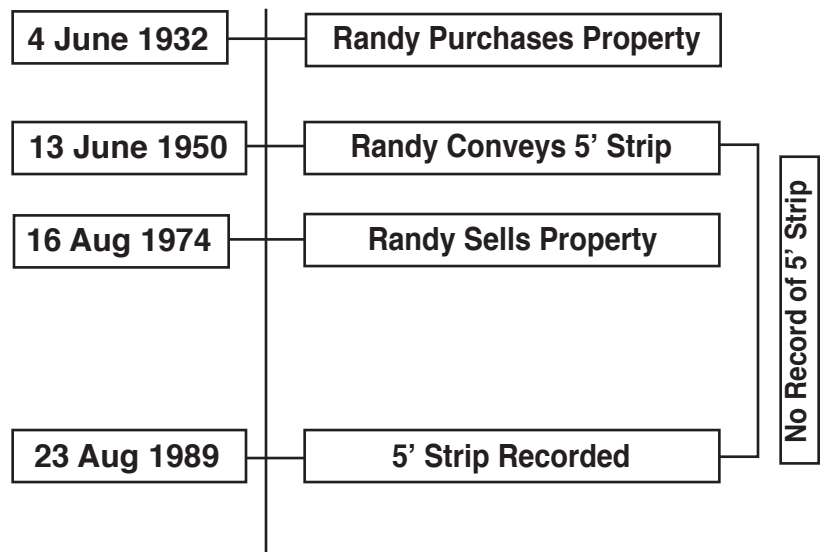
In a previous article I stated that surveyors often make five common mistakes in researching the records. In the first article I discussed mistakes made in determining senior title. The second of five common mistakes often made by surveyors when researching the records is the failure to perform a forward search.

Many surveyors perform a record research back in time but fail to perform a search forward in time. As a consequence, the surveyor will often miss recorded out-conveyances from a parcel. The surveyor will also fail to find other recorded documents (e.g., boundary agreement) related to the boundary of the parcel being researched.

Assume a research of the records has disclosed that Randy owned a residential lot from 4 June 1932 to 16 August 1974. On 13 June 1950, Randy conveyed a five-foot strip of his residential property to his neighbor, by a properly executed deed. The neighbor built a fence along the new boundary on 2 May 1954 (thereby providing notice).

On 16 August 1974, Randy conveyed the residential lot to Bill. The deed from Randy to Bill used the original description and did not mention the five-foot strip conveyed to the neighbor twenty-four years previously.

On 23 August 1989 the executrix (personal representative) of the neighbor's estate discovered that the deed for the five-foot strip from Randy to the decedent had never been recorded. The executrix recorded the deed for the five-foot strip on 23 August 1989. Although the deed was executed in 1950, the deed was indexed in the indices covering the 1989 time period when the deed was finally recorded. If a surveyor fails to perform a forward search, the surveyor will not discover the recorded deed conveying the five-foot strip of land to the neighbor. The surveyor, with Bill as a client, would believe the fence was encroaching on Bill's property.



What this example illustrates is that a complete record search entails using the name of a previous owner and searching every grantor index from the time the property was conveyed to a predecessor in title up to the present time. This procedure is known as a forward search. Unless a forward search is performed, the surveyor will not discover some conveyances that were made, properly indexed, and are effective against the title to real estate.

Bringing to light a surveyor's failure to perform a forward search will not necessarily convince surveyors to undertake the tedious and time consuming research necessary to overcome this limitation. Yet, the failure to perform this task could expose the surveyor to liability. At the very least, the surveyor should inform the client that these deficiencies in the research exist at the completion of services. Should the client want to compensate the surveyor for the time to perform a thorough search, these limitations can be overcome.

† Knud is a professor in the surveying engineering technology program at the University of Maine. He offers consulting services in the area of boundary litigation, title, easements, land development, and alternate dispute resolution. 🇺🇸

# Why Should Land Surveying Remain Regulated?

by Jeffery N. Lucas, P.L.S., Esq., First Published in POB Magazine, October 2014

As a threshold matter before we can even talk about why land surveying should remain regulated, we have to consider why land surveyors even exist. Whereas at one point in time it may have been for the surveyor's expert measuring ability, the need for the land surveyor as expert measurer is now gone. With the right tools, and in the very near future that will be a smart phone, anybody can be an expert measurer. See Figures 1 and 2. If it is to stakeout the measurements from the client's deed relative to some known control points, we don't need the land surveyor for that either. That can be accomplished in paper-space far easier and with much less cost and mess than can be done in dirt-space by the land surveyor.

No ... those days are gone. There is now an app for that. The only way the land surveying profession can distinguish itself from the rest of the geospatial community and not be replaced with an app is to provide services that no one else can provide. Too bad we don't have an exclusive niche service that no app or GIS'er can duplicate. ...

Well—actually—we do have a niche service that nobody else can provide and that there will never be an app for, at least not until they invent professional services robots that can gather and weigh boundary evidence, interview knowledgeable locals about property lines, consider the applicable law against the gathered facts in any given surveying situation and then render a well-reasoned opinion on the only question open to the land surveyor—the location question. And the only reason this is a niche service is because the land surveyor is the only professional licensed and sanctioned by the state, in the first instance<sup>1</sup>, to render such an opinion. A judge sitting on a bench or the lawyer sitting in the office, has no such authority<sup>2</sup>.

Now, I realize that many surveyors are making a lot of money doing other things besides boundary surveying<sup>3</sup>. And that's great and more power to them, but they are not alone in these endeavors, and in many instances, and in a multitude of applications, a license is not required to either acquire survey type data or to use the data however it may have been acquired. The focus of this article is, as the title suggests, to look at the only distinguishing characteristic between the licensed land surveyor and the rest of the geospatial community—all 850,000 of them.

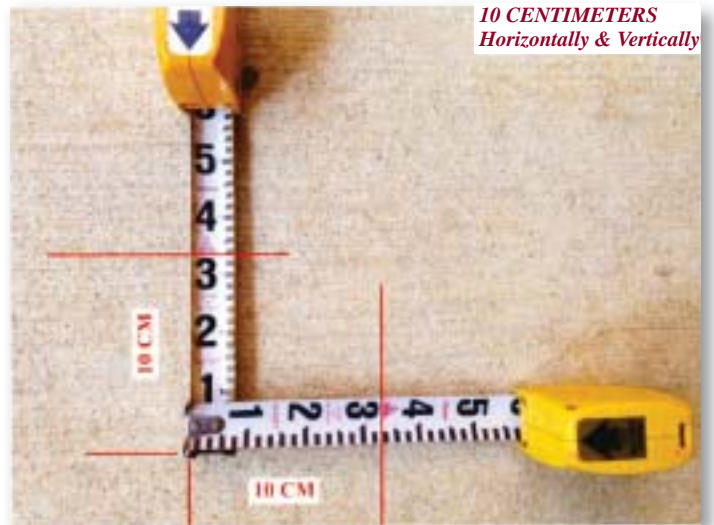


Figure 1: According to many experts, in the near future 10 centimeter measurement accuracy will be achievable with a smart phone, on the fly, without the need of a base station, at the 95% confidence level.



Figure 2: In the near future that will be just as good as very common surveying results.

## The Current Problem

The problem is that, by and large, surveyors are not fulfilling their obligations towards property boundaries, their duties as stewards of the nation's property boundaries, the fundamental principles of land surveying, or to the people of the state they are licensed to protect. This has not and will not go unnoticed by people who matter, such as

*(continued on next page)*

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# Why Should Land Surveying Remain Regulated? *(continued)*

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legislators and their landowning constituents. Admittedly, the cases I read about and the problems I hear about are generally the worst of the worst. Sure, I'm not going to read about the success stories. But this should be a sign to all surveyors. I only read about cases where the surveyor came along and upset the applecart and everybody goes to court for an adjudication, which is usually in favor of the status quo, not the upsetting new survey.

All of this begs a question. If land surveyors are not doing what they have been licensed to do, protect the property rights of the people of the state in which they are licensed, then why do land surveyors need to be licensed in the first place? Put another way, if all surveyors can do is measure expertly or slap some math on the ground and show people what their problems are, why do we need land surveyors to do this? There is an app for that and it's just as good as some very common surveying results. See Figures 1 and 2.

## The Solution to the Problem

Of course the solution to this problem is that the land surveying profession needs to take its responsibilities towards property boundaries more seriously than it ever has in the past. This is the most important work that land surveyors perform because it affects the health, welfare and property of the people surveyors are licensed to protect and this, of course, is the only reason surveyors are licensed, in any jurisdiction. The profession should not allow the minimally competent to perform the surveying equivalent of open-heart surgery. The medical profession certainly doesn't do this.

The real difference between the professional service provider and the technician is the application of special knowledge and acquired skills to a given problem affecting people and/or their health, safety and welfare, and rendering an intelligent, well-founded opinion on what the problem is and how to solve it. In any context, the individual can then decide on a course of action based on expert advice.

In the medical context, I imagine (maybe wrongly) that anyone of ordinary intelligence and with ordinary motor skills could eventually be trained to perform the steps to accomplish a heart transplant. No matter how many heart transplants this individual might perform, however, without more this person would never rise to the level of a true professional. The difference being that the professional surgeon could tell the patient what the problem is with the heart before the chest is opened up and

be reasonably certain as to the outcome of the operation, all things considered that a reasonably prudent practitioner would consider under like or similar circumstances. The same basic scenario plays out in the lawyer-client relationship.

What about the surveying profession? Are we rendering well-reasoned opinions or are we slapping math on the ground and letting the "chips fall where they may"? Are we performing rote routines that any person of ordinary intelligence could perform with a little training or the right tool? What are we doing that can't be accomplished with a suitable app? What are we doing that can't be replicated in a GIS?

## Moving Forward

If the land surveying profession, as we currently know it, is going to move forward and remain relevant well into the 21<sup>st</sup> century it is going to have to embrace its exclusive niche and do such a great job at it that no one would think of replacing it with a new system. Unfortunately, as we are already hearing from several different quarters, there is already a movement underfoot to closely examine the proliferation of regulated professions. A recent Wall Street Journal article<sup>4</sup> that has grabbed the attention of many surveyors reports that 5% of all occupations were regulated by the state in 1950. In 2000 that figure was up to 20% and now stands at 23%.

Some of this is coming from a cost perspective and the ability of government to continue to maintain the infrastructure to regulate so many professions. There is also the perspective of diversity, in particular, how many surveying and engineering boards look too white and too male. The above mentioned article focused in on the idea that many of these regulatory boards (the article was specifically about the dentistry board in North Carolina) are filled with members from the profession it regulates and the perception that they are in it to protect the profession and not necessarily the public; dentist looking out for dentist, land surveyors looking out for land surveyors, etc.

All of this brings me to my point. When these examinations of licensing boards take place, one of the primary questions will be why do we need this profession to be regulated? In other words, is protection of the public necessary in this arena and is it being accomplished? Certainly, one of the follow-up questions will be, what do these surveyors supposed to do and are they doing



it? This does not bode well for a profession that nobody understands and with a proven track record of actually trampling people's property rights as opposed to protecting them.

## A Deregulated Profession

Imagine a completely deregulated surveying profession. At that point there will be no distinguishing characteristic between what the land surveyor has to offer and what anybody else who claims to be an expert measurer has to offer, other than price. We have already turned our niche service into some of the cheapest services offered in the geospatial community by allowing the minimally competent to perform open heart surgery. When we are deregulated a survey of your property will be an extra added to your Domino's pizza order, gathered and delivered by a drone in 30 minutes or less. "Want a map with that?"

<sup>1</sup>By this I mean, in the field, on the ground, before any lawsuit is ever instituted. The surveyor's opinion, of course, is always subject to judicial review assuming the affected parties have the financial resources to do so. In the vast majority of cases, however, they do not. The practical reality is that in most cases, the surveyor's "adjudication" of the location question will remain unchallenged rendering it a final decision—good, bad or ugly.

<sup>2</sup>The judge's authority only comes into play after a lawsuit has been instituted and, by way of due process, the judge acquires jurisdiction over the parties. Even then, the judge must also have subject matter jurisdiction in order to adjudicate a boundary line between adjoining landowners. Likewise, the lawyer has no initial authority to render an opinion on the location of property lines. Only the land surveyor is licensed and sanctioned by the state to do this, and only because the land surveyor is deemed qualified through education and experience to be able to do this without trampling the property rights of the citizens of the state. These citizens include the surveyor's client as well as adjoining on all sides of the client.

<sup>3</sup>There are self-inflicted reasons for this that could be remedied by the land surveying profession and that I have discussed them at length in this column. I will address those again in the near future but I will not be going over that ground again in this column.

<sup>4</sup>Loten, Angus, Sarah Needleman, "State Licensing Boards Under Fire From Within," Wall Street Journal, August 2014. 🇺🇸

## In Memory of Ivan E. Ubben

Ivan E. Ubben, 79 passed away peacefully Thursday, May 28, 2015 with family by his side. Ivan was born November 26, 1935 the son of Mahlon and Caroline Ubben in Marshall County, KS. He grew up on a farm in Beattie, Kansas and graduated as a Beattie High School Tiger in 1953. He met his "best girlfriend ever", Ardith A. Justis, while in high school and she became his wife of 60 years in September of 1954. He served his country in the United States Marine Corp with the 3D Amphibian Tractor Battalion Fleet Marine Force at Camp Pendleton, California from 1952 to 1954. Ivan worked for the Kansas Department of Transportation as a land surveying crew member for 2 years after his honorable discharge from the Marines. He then attended Kansas State University and graduated with a Bachelor's Degree in Civil Engineering in August, 1962. After college Ivan and Ardith moved to Raytown, Missouri where he remained the rest of his life. Ivan began his career as a Professional Engineer at the Missouri Department of Transportation where he gained experience and many lifelong friends. In 1973 he accepted a job at Larkin Associates in Kansas City, MO where he continued his career as a Professional Engineer and became a Professional Land surveyor too. Ivan became a principal of the firm in 1985 and remained there until his first retirement in 1999. Ivan couldn't sit still and began working part time with a few of his former co-workers and great friends that formed the firm Affinis Corp in Overland Park, KS. In 2004 he went back to work full time for the City of Independence, Missouri where he worked until his second retirement in September, 2014. He really enjoyed his professions working to make our infrastructures better and safer, mentoring young engineers, and playing a card game of Pitch at lunch time. In his off time he enjoyed sharing meals with family, traveling, visiting zoos throughout the Midwest, and making people laugh. He also enjoyed watching high school sports and taking his grandchildren to KSU basketball and football games on weekends. His one "for sure" annual trip was to attend the Beattie Milo Festival with family and friends in August of every year. He was very proud of his youthful farming years, being a Marine, an Engineer and Land Surveyor, a KSU Alumni, and devoted family member.

He was preceded in death by one son, Douglas E. Ubben in 2013 and a brother, Arlyn Ubben in 2014. In addition to his wife Ardith of Raytown, MO, he is survived by two sons, Greg Ubben (Cindy) of Shawnee, KS and Robert Ubben (Mandy) of Raytown, MO; a daughter, Laura Davis (Bud) of Raytown MO; a daughter-in-law, Marcia of Shawnee, KS; one sister, Iola Albright; four brothers, Keith, David, Wendell, and Gary Ubben; twelve grandchildren and eight great grandchildren.

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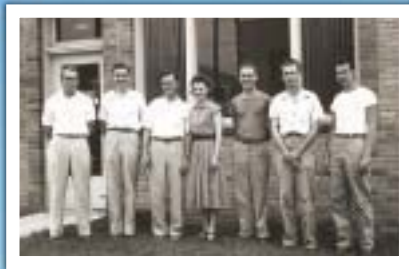
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# Nominations for 2015-2016 Officers



**President  
Jim Mathis**

Thomas J. "Jim" Mathis is a Professional Land Surveyor and Professional Engineer licensed in the states of Missouri and Arkansas. He graduated from the University of Missouri, Columbia in 1975, with a B.S. degree in Civil Engineering, and has been owner and operator of Mathis and

Associates, a surveying/engineering business which specializes in cadastral surveying and civil design projects, for 35 years. Jim was a member of the Missouri Board for Architects, Engineers, Land Surveyors, and Landscape Architects from 1998 to 2006, and in 2003 he was inducted into the Academy of Distinguished Alumni at the University of Missouri, School of Engineering. He has authored several articles in the *Missouri Surveyor* magazine and taught many technical and ethics classes for the Missouri licensing board and the Missouri Society of Professional Surveyors. He considers his best professional achievement to be the registration of over 3,700 corners of the U.S. Public Land Survey System.

**President-Elect  
Joe Clayton**

Joe Clayton is an eighth generation Missourian with over 30 years of experience in surveying and mapping. Joe has a diverse background that includes work in high-order geodetic surveys, transportation, land surveying, photogrammetry, technical support, training and project management.

Joe recently retired from the Missouri Department of Conservation; and is enjoying some time off before re-entering the work force.

Joe is a graduate of the U.S. Army Field Artillery Survey School; he has under graduate course studies from three Missouri Universities and is a certificate candidate of the Land Survey Program of the University of Wyoming.

Joe is a founding member of the Southwest Chapter of MSPS. He is the chair of the MSPS GIS/Vision 21 Committee and is an active member of the Legislative, Nominations and Standards committees.

Joe is honored to have this opportunity to serve the Society and the surveying profession.



**Vice President  
Gerald Bader, PLS**

Gerald is the President of Bader Land Surveying, Inc. which began operations in April of 1996. In the fall of 1996, Gerald was elected as Ste. Genevieve County Surveyor and is presently serving his 5<sup>th</sup> term. Gerald is an advocate for the protection of the Public Land Survey System and has been participating in

DNR's County Surveyor Cooperative Remonumentation Program and the Private Surveyor Remonumentation Program since 1996. In addition, Gerald is active in several local civic and professional organizations. He is presently serving on several MSPS committees. Gerald has served as MACS President from 2004-2005 and 2010 through 2012. Gerald coordinated MACS re-monumentation of the Tri-State corner in 2004 and the PK Robbins Memorial Bench in 2006. Gerald is also serving on the Board of Directors for MACS and the St. Agnes School Board.

Gerald and his wife, Denise have two children, Brett and Alina. They live in Ste. Genevieve. It has been an honor to serve MSPS.

**Secretary-Treasurer  
Rich Howard**

An incumbent Director on the MSPS Board, Rich Howard is honored to be a 2015 nominee for Secretary/Treasurer. A dedicated member of our Society Rich's longtime service and well-regarded professional standing was recognized in 2012 when MSPS bestowed the Robert Myers Service Award to Mr. Howard. He is currently in private practice with H & H Surveys and fellow surveyor Ken Hackmann of Linn serving client needs in both land and engineering surveys. He specializes in rural boundary surveys for farms and full service surveys for residential development. Previously he managed the land boundary program for Fisheries and Forestry of the Missouri Department of Conservation where he also supervised field operations for hundreds of hunting and natural areas throughout all of Missouri. The current MSPS Sales/Public Relation Committee co-chair, he is a graduate of the Land Surveying Certificate Program of the University of Wyoming.

Devoted to family, faith and community Rich and Gail Howard make their home in Vienna with daughters Malinda and Sarah, and son-in-law Matt nearby. Their pride and joy are grandchildren Tyler, Emily and new twins Jack and Ben! As a family they are members of the Vienna United Methodist where Rich has frequently served on the church board. A past-president of the local Lion's Club he is also a member of the Eagles, the NRA and the Conservation Pioneers. An avid hunter and fisherman Rich enjoys family time at his cabin on the Gasconade River and staying busy with grand-parenting duties. Rich Howard welcomes the opportunity to continue in service to the Society and the surveying profession.



# Nominations for 2015-2016 Board of Directors



## **Secretary-Treasurer Chris Wickern**

Mr. Wickern started surveying as an 82C Field Artillery Surveyor. Served as chairman, instrument operator, recorder, Party Chief, Instructor at the Field Artillery Surveyors School, Battalion Chief Surveyor and Brigade Chief Surveyor.

He was licensed in 2000 while working in southern Missouri and has worked in southern, western, eastern and throughout central Missouri. He has served the society in a variety of roles for several years.

## **Brad McCloud**

Brad McCloud is the acting Superintendent for Missouri Department of Conservation since September 2014, based out of Jefferson City, MO where he is responsible for the land boundary and engineering survey programs. Prior to this Brad was the Land Survey Coordinator/Photogrammetry Manager for Missouri Department of Transportation. While in this role he served as the department's expert for photogrammetric compilation and mapping as well as represented the department to state board of registration, surveyors' society, and state land surveyor's office. Also, while in this role he was part of the MODOT VRS network implementation team. During his career he has worked on a vast array of surveys including boundary, highway corridor, photogrammetry, LiDAR, engineering, hydrology, and caves. One interesting fact about caves-Stadin cave was named after Brad and his colleague after they discovered it in Southwest Missouri. He has a passion for speaking and teaching about surveying and LiDAR and has spoke on the subjects for the past 5 years at several forums across the state. Brad and his wife reside in Jefferson City where they are active raising their 4 children.



## **Mark Wiley**

Mark Wiley is a Second generation Surveyor who currently manages the Surveying Department for Heideman + Associates Inc. Licensed in Missouri and Illinois he has done course work at St. Louis Community College, Mineral Area Community College, and the University of Missouri Rolla in Surveying related courses.

He began his career prior to 1978 working for his father during the summers and on weekends and has continued in the surveying profession ever since. He opened and operated Advanced Land Surveyors Inc. in Ste. Genevieve from 1994 to 1999. He has worked in Metro St. Louis and

Springfield, as well as Jefferson, Ste Genevieve, St Francois, Franklin, and Washington counties during his 35+ year career.

He has donated time and effort over the years working with the Legislative and Standards committees believing that all evil needs to succeed is for good people to do nothing. Mark serves as the Pastor of the Son Light Parish in the Mineral area serving three Presbyterian congregations in the towns of Ironton, Fredericktown and Park Hills.

He is active in his community serving as the President of the Belews Creek Watershed Partnership. A group of local folks who are working to make a difference in the Watershed by both cleaning and stabilizing the creek.

## **Stan Emerick, PLS**

Stan began his career in surveying mapping archaeological sites for Southern Illinois University. He has been a licensed professional and a member of this Society for more that twenty-five years. He has served on the board and on numerous committees within this Society as well as chairing several. He has also chaired the Land Survey Advisory Committee and has contributed articles to the Missouri Surveyor. His primary focus as Director will be to persuade the Governor's office to complete the appointments of the Land Survey Commission. Stan currently works as a Senior Project Surveyor with the Farnsworth Group, located in Webster Groves. He and his wife Jo, reside in Chesterfield, Missouri.



## **Ron Lueck**

Ron is the owner of Lueck Surveying, a land surveying company in Columbia, Missouri. Previous to that he worked for Marshall Engineering and Surveying for 21 years as director of their surveying department. Ron has a Associates Degree of Applied Science in Civil Engineering Technology from Florissant Valley Community College and received his PLS in 1981. He is a member of MSPS, NSPS

and National Federation of Independent Business. In his spare time he is a member of the event staff for the handling of college and high school athletics for the University of Missouri Athletic Department in Columbia. He was also a co-owner of the 24 Raceway from 2003 until its sale in 2012 and is the president of Columbia Ski Club.

# High School Students Compete in State SkillsUSA Land Surveying Competition

by Shaun Piepkorn, TSPS SkillsUSA Chair, Reprinted from *The Texas Surveyor*, May 2015

High school students from across Texas competed in the 2015 SkillsUSA State Land Surveying Competition from March 26-28 in Corpus Christi. In total, there were 33 students making up 11 teams (or field crews).

The State competition was based upon a team's score out of 1,000 points and included taking a written exam, submitting a resume, and performing surveying field exercises. The written exam was worth 100 points per student (300 per team) and questions were similar to what might appear on the CST Level I exam – a handful of trigonometry problems, and even some surveying problems such as calculating bearings, distances, and areas. Two students scored a 75 on the written exam and are eligible to take the next CST Level I exam, paid for by the local TSPS chapters that represent the eligible student's District. The field exercises made up approximately two-thirds of a team's score. Students set up and used total stations

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to measure horizontal and vertical angles, performed closed level loops, and used steel tapes to measure points over 200 feet.

During these exercises, teams were scored on their procedure, field notes, and accuracy of their data. After all field exercises were completed, students took their recorded data and completed a field drawing, which included a sketch, azimuths, bearings, distances, areas, title block, legend, scale bar, north arrow, and other items that you would expect to see on a field drawing. Finally, all the points were tallied up, and we came up with our winners.

The results of the 2015 SkillsUSA State Land Surveying Competition are:

- 1st Place - Birdville Team A**
- 2nd Place - Birdville Team B**
- 3rd Place - Duncanville Team B**

This year's State competition was one of the closest ever. First and second places were decided by only nine points and first through fifth places could have been interchangeable,

*(continued on page 24)*



*Ted Harp directs a team to their foresight point.*



*John Margotta verifies a steel tape measurement.*



*Greg Webb judges field procedure and accuracy of a level loop.*

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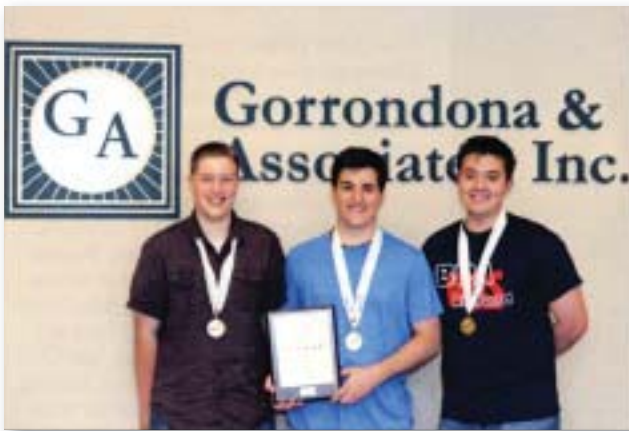


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# High School Students Compete in State SkillsUSA Land Surveying Competition *(continued)*



*First Place – Birdville Team A*



*Runner Up – Birdville Team B*

based on the results of just a few questions! Each year, schools are practicing and studying more, and their efforts are making this an extremely competitive event.

It was great to see members of TSPS come together to assist schools in preparation for the competitions and also judging the competitions. Some volunteers had to deal with non-favorable conditions like rain, cold temperatures, and even a Texas-sized blizzard (about one inch of snow). Unfortunately, these same volunteers did not get to experience the 80 degree, sunny weather underneath the palm trees in Corpus Christi! I hope the experience and free pizza was worth it!

There are a few people/organizations that deserve recognition for their efforts in assisting SkillsUSA this year. Bryan Gillis, Paul Van Oldenmark, and

*(continued on page 26)*



*Spencer McIntosh lines out students for their field exercise.*



*Students gearing up to perform the field exercises at the State Competition.*



*Jeff Montanya prepares teams to measure a horizontal angle.*



# Second Edition of “The U.S. Public Land Survey System for Missouri”

by Dr. Richard Elgin, PLS, PE

Having sold out of the first printing of *The U.S. Public Land Survey System for Missouri*, the Second Edition of this popular book is now available. Containing only minor expansions, this book is a complete synthesis of Missouri’s unique version of the USPLSS. Its chapters are: **1.** Early History of the U.S. Public Land Survey System, the French and Spanish in Missouri and Missouri’s Boundaries. **2.** Original Surveys on the U.S. Public Land Survey System for Missouri. **3.** Resurveys on the U.S. Public Land Survey System. **4.** Missouri Court Decisions Concerning Resurveys on the U.S. Public Land Survey System. **5.** Reestablishment of Lost Corners for Missouri. **6.** Example Protraction and Resurvey Problems. **7.** Some Missouri GLO Plats. The book has 419 pages, 24 figures, 20 example protraction problems, 28 example proportioning problems, 90 example GLO plats, 4 appendices and a glossary. The book is written by one uniquely qualified, Dr. Dick Elgin. Dick is a practitioner, surveying educator, researcher, and author.

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To order the second Edition of the US Public Land Survey System for Missouri contact MSPS at 573-635-7977 or email [mmps@missourisurveyor.org](mailto:mmps@missourisurveyor.org). The cost is \$120 for members and \$160 for nonmembers which included shipping and handling.

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# High School Students Compete in State SkillsUSA Land Surveying Competition *(continued)*



*Awards presentation in Corpus Cristi.*



*Students performing a closed level loop at the State competition.*



*Ryan Gruber demonstrates new technology in land surveying.*

Kristina Drysdale, from Texas A&M Corpus Christi, who assisted in the State competition and also brought total stations, levels, and other equipment to use. Ryan Gruber, from Western Data Systems, gave a demonstration of new technology in surveying such as UAVs, laser scanning, and robotic total stations. His demonstration sparked some interest in students whose only idea of surveying is what they practiced for competition. Western Data Systems also donated several of the supplies needed for competition. Ron Parker, from TSTC-Waco, has been directing District and State competitions for several years, and TSTC-Waco has provided him the resources and time to do so. Ron has also helped guide me in the process of becoming the SkillsUSA State Chair for TSPS. Lastly, Gorrondona and Associates, Inc. who has supported my efforts to continue to promote land surveying to high schools through SkillsUSA.

Looking forward to next year, I would like to invite any TSPS members who are interested in volunteering to certainly give it a shot. I started volunteering five years ago and have been hooked ever since! It is very rewarding to help guide these students and watch them succeed. I've also been able to see a couple students go on to study land surveying in college. If interested, please contact me at [spiekorn@ga-inc.net](mailto:spiekorn@ga-inc.net). I have all the information to get you started and will help guide you through the process of leading your own land surveying teams to Corpus Christi. 🇺🇸



*Philip Adams teaches a student how to set up a total station.*

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Below are abridged portions of Missouri Revised Statutes and the MSPS Constitution associated or referred to in Mr. Wickern's article. These references, selected by the Editor, are provided only for context and do not represent any endorsement of the article's reports and opinions. As with all Missouri Surveyor contents, viewpoints expressed may not reflect those of MSPS and are published as a service to members and readers. – Donald Martin

#### **“County Surveyors Records to be public record”**

Missouri Revised Statutes, Chapter 60, County Surveyors and Land Surveys, Section 60.185.1

*County surveyors, duties.*

60.185. The county surveyor of every county or city shall:

(1) Keep a fair and correct record of all surveys made by himself and his deputies, in a well-bound book, with a convenient index, to be procured at the expense of the county or city for that purpose, which books and indexes shall be the property of such county or city, and shall be known as the county surveyor's plat book, and every such surveyor shall record in such book a plat of all surveys executed by him or his deputies, within two weeks after the plat of survey has been certified to, and such books shall be kept at the county seat or city hall and subject to inspection by any person interested therein, under the supervision of the county surveyor for such county or city;

#### **“No requirement for survey”**

Missouri Revised Statutes, Chapter 445, *Plats.*

445.030. Plat to be acknowledged and recorded--acceptance by city.

445.040. Duty of recorder when plat delivered--certified copies to be evidence.

445.070. Penalty for selling lots before plat recorded--plat shall vest fee, when.

445.110. Unlawful to sell, trade or otherwise convey unless plan, plat or replat shall have been recorded (cities of 400,000).

#### **“Less than a Quarter/ Quarter Section”**

Missouri Revised Statutes 137.185

1. In all cases where any person, company or corporation may hereafter divide any tract of land into parcels less than one-sixteenth part of a section or otherwise, in such manner that such parcels cannot be described in the usual manner of describing lands in accordance with the surveys made by the general government, it shall be the duty of such person, company or corporation to cause such lands to be surveyed and a plat thereof made by a surveyor in the county where such lands are situated, which plat shall particularly describe and set forth the lots or parcels of land surveyed, as aforesaid; the lots and blocks shall be numbered in progressive numbers, and the plats shall show the number, location and quantity of land in each lot, and the description of the tract of land so divided; provided, that whenever it shall appear to the county commission of the county in which any such tracts are situated that tracts or parcels of land less than one-sixteenth of a section, and lying outside of the limits of any incorporated city, town or village, have been conveyed without having been surveyed and platted and the plat thereof recorded as herein provided, the commission may require the county surveyor, by order of record, to survey and plat such tract or tracts of land and record the plat so made, all of which shall be done at the expense of the owner of such tracts of land at the time the survey is made.

2. And when any tracts of land lying within the limits of any city, town or village cannot be described by lot or block number, or other description given in a recorded plat, the city council may have such tracts of land surveyed and platted by the city or county surveyor, or other competent surveyor. Such plat shall be given such appropriate name as will distinguish it from all other surveys and plats, and streets included therein appropriately named, and such plats hereafter or heretofore made by any city, town or village shall have the full force and effect as other plats made under the provisions of this section. Said plat shall be certified to by the surveyor and recorded in like manner as the plats of towns are required to be certified to and recorded. The description of real estate in any deed or conveyance, or for the purpose of taxation, in accordance with the number and description set forth in the plat aforesaid, shall be deemed a good and valid description of the lot or parcel of lands so described.

137.190. Any person, company or corporation that may hereafter violate the provisions of section 137.185 shall upon conviction be deemed guilty of a misdemeanor.

#### **“Relevant requirements of law”**

Missouri Revised Statutes, 327.272 *Practice as professional land surveyor defined.*

1. A professional land surveyor shall include any person who practices in Missouri as a professional land surveyor who uses the title of "surveyor" alone or in combination with any other word or words including, but not limited to "registered", "professional" or "land" indicating or implying that the person is or holds himself or herself out to be a professional land surveyor who by word or words, letters, figures, degrees, titles or other descriptions indicates or implies that the person is a professional land surveyor or is willing or able to practice professional land surveying or who renders or offers to render, or holds himself or herself out as willing or able to render, or perform any service or work, the adequate performance of which involves the special knowledge and application of the principles of land surveying, mathematics, the related physical and applied sciences, and the relevant requirements of law, all of which are acquired by education, training, experience and examination, that affect real property rights on, under or above the land and which service or work involves:

#### **“Modern change found in”**

Missouri Revised Statutes, Certain surveys to be filed with recorder 60.650. For the purpose of preserving evidence of land surveys, every surveyor who establishes, restores, or reestablishes one or more corners that create a new parcel of land shall file the results of such survey with the recorder of deeds in the county or counties in which the survey is situated within sixty days after the survey has been certified

#### **“Society's stated purpose”**

MSPS Constitution, Article III.

The purpose of the Society is to represent the interests of and be a primary spokesman for the surveying profession in Missouri; to elevate the standards of the surveying profession in Missouri, thereby benefiting the general public; to insure that the general public and offices of records receive superior land surveying that brings about an upgrading of land records; to sponsor legislation and educational programs beneficial to the public and Surveyors; and to improve the professional recognition of the surveying profession by the public and by other related professions.



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# MSPS Annual Meeting

## The Celebration of the Life and Times of Joseph C. Brown and the 200th Anniversary of the 5th Principal Meridian

### THURSDAY, OCTOBER 8, 2015

7:00 am	Registration and Continental Breakfast		
8:00 - 10:00 am	<b>CONCURRENT SESSIONS</b> <b>Minimum Standards</b> The Missouri Minimum Standards for Property Boundary Surveys are the rules, promulgated jointly by the Missouri Department of Agriculture Office of State Land Surveyor and the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Landscape Architects, that regulate the practice of land surveying. It is incumbent of all land surveyors practicing in Missouri to have a working knowledge of these standards. This session is provided to help land surveyors gain that knowledge, not only for licensure, but to produce a higher standard of land surveyor in Missouri. <i>Speaker: Darrell Pratte, PLS</i>		
	<b>Best Practices</b> MODOT VRS best practices, network update, coordinate systems and virtual base used in post processing of static data. <i>Tom Bryant, PLS, Seiler Instrument; Melvin Distler, LSIT, MODOT</i>	12:15 - 1:00 pm	Luncheon (included with registration)
		12:30 pm	Golf Tournament at The Oaks
		1:00 - 2:00 pm	<b>CONCURRENT SESSIONS</b> <b>Survey Research continued</b> <i>Jim Mathis, III, PLS</i>
			<b>Points from Pictures</b> Using Trimble V10 Imaging Rover data to create points in Trimble Business Center and Autocad Recap Software. <i>Matt Davis, Seiler Design Solutions; Pat Stack, Seiler Instrument</i>
10:00 - 10:15 am	Break		
10:15 - 11:15 am	<b>CONCURRENT SESSIONS</b> <b>Researching US Surveys and Odd Lots</b> The first part of this presentation will examine the facts that the surveyor needs to know about the confirmation and survey of private claims, series of U. S. Surveys and where to find the field notes. The second part of this presentation will attempt to offer some insight into finding answers to strange lotting arrangements found in the northern and western tiers of sections. <i>Steven Weible, PLS</i>	2:00 - 3:00 pm	<b>CONCURRENT SESSIONS</b> <b>Land Corner Document Registration</b> The purpose of this presentation is to review the Land Corner Document Registration process as required for Restoring, Establishing and Re-establishing USPLSS Corners. The governing rules and statutes, procedures for completing and filing corner documentation, monumentation requirements, acceptable methods to acquire and document State Plane Coordinates on forms, and the two form formats will be reviewed. This presentation will discuss common errors on submitted forms and provide a checklist for reference, as well as give an example of a completed Land Corner Document. <i>Ron Heimbaugh, PLS</i>
	<b>Emerging Technology</b> Using technology to quickly gather mass quantities of data in a safe, unobtrusive manner. <i>Travis LeMoine, Seiler Instrument</i>		<b>Emerging Technology</b> Using the Trimble MX2 Mobile Lidar unit to quickly and safely gather mass quantities of data safely and efficiently. <i>Travis LeMoine, Seiler Instrument</i>
11:15 - 12:15 pm	<b>CONCURRENT SESSIONS</b> <b>Survey Research: GLO, Deeds, Plats and Maps</b> This session will stress the importance of adequate research. Whether you're researching for estimating purposes or to recover controlling corners, it is imperative to know what is needed, where to get it, and how to interpret it. Where do we go to determine what work has been accomplished in the area? How do we tie into state plane coordinates? A special emphasis will be placed on both original and subsequent surveyor's	3:00 - 4:00 pm	<b>CONCURRENT SESSIONS</b> <b>Survey Cost Analysis</b> We understand the importance of researching records, solid and through field reconnaissance, obtaining reliable measurements and applying the appropriate legal principals to arrive at a sound boundary resolution. These are the elements of a good survey. What do we know about establishing and running a business? How much work should be invested in the survey before we have been



hired and selected for the work? To be good surveyors we need to run a good business one that the community is proud to support and have as part of the economy, contributing to the tax base; a resource for their own development. We should give some thought to the critical success factors of building and running a successful business model in today's ever changing economy.

*Mark Wiley, PLS*

**Trimble Access Field Software and Business Center Office Software**

This will be an open session where users can ask questions about using the Trimble Software. It will provide a high level overview of new features along with tips and tricks.

*Holly Urbain, Steve Tomps and Tom Bryant, Seiler Instrument*

4:00 - 4:15 pm

Break

4:15 - 5:15 pm

**CONCURRENT SESSIONS**

**Tree Identification**

Dendrology is the study of woody plants; typically trees but there are other things such as shrubs and vines that bear similarities to trees so they are studied as well. This portion of the workshop explores the basic skills of woody plants and tree species identification.

*Robert Shotts, PLS*

**Terrestrial LIDAR Scanning**

Using the SPAR 300 underground utility locator to map horizontal locations and DEPTHS of underground utilities and using the SeaFloor Systems Hydrolyte sonar measuring system to easily map the bottom of water features.

*Pat Stack, Seiler Instrument*

5:15 - 7:00 pm

Exhibitor Set up

**FRIDAY, OCTOBER 9, 2015**

7:00 am

Registration, Continental Breakfast and View Exhibits

8:00 - 9:45 am

Business Meeting

9:45 - 10:00 am

Break to View Exhibits

10:00 - 11:30 am

**Superintendent of Indian Affairs; Territorial Governor and Surveyor General**

William Clark was co-leader of the Lewis & Clark Expedition, Missouri Territorial Governor, and Superintendent of Indian Affairs for three decades. He had great influence in everything Missouri and the West in the 1810s, 20s & 30s. An "older" William Clark will share his perspective with us, on Jefferson's vision for surveying western lands, on Indian policy, military bounties and the need for the 5th principle meridian, and the significant role of Joseph C. Brown in early Missouri surveys.

*Patrick Lee as William Clark*

11:30 - 1:00pm

Awards Luncheon

1:00 - 3:00 pm

**Establishment and Surveying the 5th Principal Meridian**

The U.S. Public Land Survey System (USPLSS) as we know it was born in 1785, was first tested in southeastern Ohio, then further applied across the Northwest Territory (in what would become Ohio, Indiana and Illinois), Principal Meridians being established as the USPLSS was extended west. With the Louisiana Purchase and the close of the War of 1812, demand for lands west of the Mississippi River was high. In 1815, the GLO began surveys of the USPLSS in Missouri Territory. The 5th Principal Meridian came next, its Initial Point unceremoniously falling in a swamp. From there Deputy Surveyor Prospect Robbins surveyed the Meridian north and Joseph C. Brown surveyed the Base Line west. This talk describes the establishment of the Initial Point, Robbins' flawed survey of the meridian, and how the USPLSS framework was extended in Arkansas and Missouri. Robbins' survey measurement troubles in both distance and direction along the Meridian are described and analyzed. How these errors have affected and plagued surveyors ever since are lamented in this highly illustrated talk by Dick Elgin who "wrote the book" about the USPLSS in Missouri.

*Dr. Dick Elgin, PS, PE*

3:00 - 3:30 pm

Break to View Exhibits

3:30 - 5:30 pm

**History of the 5th Principal Meridian—Iowa, Minnesota and the Dakota Territory**

Captain Talcott is reminiscing about the survey he was in charge of in 1852. He will explain the difficulties in organizing the crews, their responsibilities, instruments and methods used in the running of the parallel of latitude of 43 degrees 30 minutes north. He will show you some of the original monuments that still exist on the line and explain the relative accuracy of the Border as it exists today.

*Don Borcharding as Captain Andrew Talcott*

5:30 pm

Reception with Exhibitors

**SATURDAY, OCTOBER 10, 2015**

7:00 am

Registration and Continental Breakfast

8:00 - 10:00 am

**Surveying and Shaping Missouri**

Long, long before the area which would become the State of Missouri (in 1821), governments which pre-date the United States and their surveyors were creating thousands of tracts for settlers and land speculators. Immediately following the 1803 Louisiana Purchase, boundaries were described (not surveyed) which defined treaty lines with Native Americans. Prior to the 1815 introduction of the USPLSS into what would become Missouri, other treaty lines were surveyed, others not. Early petitions for statehood proposed state boundaries which, if adopted,

*(continued on next page)*

# MSPS Annual Meeting (continued)

would have resulted in a shape for Missouri which is far different than today's. This talk describes the very early surveys in our state, the early petitions for statehood and what would have been our state's shape, and the surveys of Missouri's boundaries. Also discussed is Sullivan's Line (1816) and the years of controversy that ensued, continuing until 1850. (The Missouri-Iowa boundary.)

*Dr. Dick Elgin, PS, PE*

10:00 - 10:30 am

Break to View Exhibits

10:30 - 12:30 pm

## **The West and South Lines of Missouri**

Joseph C. Brown was the first surveyor to survey the west line of the Missouri Territory South of the Missouri River. He was then the first surveyor to survey the west line of the State of Missouri, along with the southern boundary. Though he was not the second surveyor on the south line. Joseph C. Brown may have surveyed more miles of line than any Deputy Surveyor to grace this great State. He certainly surveyed more miles of line that were re-measured, resurveyed, and rejected. This is the story of the trials and tribulations of a Deputy Surveyor and 631 miles, 54 chains, and 25 links that was re-measured, resurveyed, and rejected trying to define the west and south bounds of Missouri.

*Darrell Pratte, PLS*

12:30 - 1:30 pm

Luncheon

1:30 - 3:30 pm

## **747 Miles 73 Chains: Joseph C. Brown's Epic Traverse**

Step back in time when overland trade between the United States and Mexico was in its infancy, and everything west of Missouri was Indian Territory. This was a time of no EDMs, Total Stations, GPS, computers, or calculators.... no motels, restaurants, Laundromats, C-stores, pickup trucks or ATVs.... no Fed-Ex, cell-phones, over-time pay, or home-ever-other-weekend. This PowerPoint program will describe the 1825, 1826, and 1827 survey of the Santa Fe Trail, the survey being commonly known as the Sibley Expedition. Joseph C. Brown performed the surveying for the Expedition in 1825 and 1826. He prepared preliminary maps of the survey in 1825, and final maps and a travel guide for the official report produced in 1827. As late as 1855, Brown's survey was considered the most elaborate in the American West over the same route. The magnitude, detail, and accuracy of this survey are nothing short of astonishing, and provide insights into the early history of the Santa Fe Trail not available elsewhere. This survey stands as a monument to Joseph C. Brown's abilities and is one of his greatest accomplishments, yet the survey went virtually unnoticed and unappreciated in his own time. The program will begin with

an overview of the history of the Santa Fe Trail, the trail's significance, and events leading up to the survey. The progress, methods, and trials and tribulations of the survey will be described. The various maps produced by Brown will be discussed, including the rather unique way in which the maps are presented. Although the original field notes for 1825 and 1826 have not been located, field notes for the 1827 resurvey (performed by Sibley) of the first 140 miles of the route are available and shed light on the techniques used by Brown in performing his surveys in 1825 and 1826. A project to plot the survey of the Santa Fe Trail on modern maps will be described and the results discussed. The historical significance of information available from the survey will be described and opportunities for further research will be suggested.

*Steve Schmidt*

3:30 - 3:45 pm

Break

3:45 - 5:15 pm

## **Spanish Land Grants and School Lands; Border Disputes**

There were a large number of claims to land in the territory prior to the Louisiana Purchase. Most of the claims had been granted by the Spanish government, but few were ever confirmed. With the transition of authority after the Purchase, many of those claims became untenable. Congress and the federal government would spend the next half century attempting to adjudicate those claims and quiet their transference. Supplemental to this process were other Congressional Acts, offering relief from a natural disaster and support for a public school system. While these Acts all had noble intentions, their implementations were fraught with deceit. During this session we will discuss Brown's role amongst these Acts. How his skills were employed indexing inhabitant ownership, retracing French Surveys of Spanish Land Grants, ascertaining boundary disputes, positioning New Madrid Certificates, and surveying vacant tracts for the School Lands. All nestled within his terms as sheriff, tax collector, city engineer and statesman.

*Stan Emerick, PLS*

5:15 - 5:45 pm

## **Joseph C. Brown's Life and Dedication**

*Joseph Clayton, PLS*

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## Notes from National Geodetic Survey

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Thursday, August 7, 2015

### Updating the Vertical Reference Frame for the Great Lakes

NGS has initiated a geodetic (precise positioning) survey of the Great lakes to update the vertical reference frame (the reference system for elevation). The survey will monitor elevation changes across the Great Lakes to facilitate the development of the International Great Lakes Datum 2020 (IGLD 2020), to be released in 2025. Similar surveys were conducted in 1997, 2005, and 2010. Movement in the earth's crust due to postglacial land uplift requires revision of the vertical datum used to define water levels in the Great Lakes-St. Lawrence River system every 25-30 years. The update is essential to provide accurate geodetic and water-level products and services to the Great Lakes community.

July 13, 2015

### NGS "Bluebooking" process for GPS projects

The Adjust & Utilities program suite for GPS projects has been released to production. An update was required so that new GPS project results are consistent with the **NAD 83(2011/PA11/MA11) epoch 2010.00** realization. The main changes to the *Bluebooking* process are:

- computation of horizontal and vertical project error scale factors;
- use of variable weights on constrained stations;
- determination of network and local accuracies.

This version of Adjust should be used to submit all GPS projects to NGS; projects submitted using previous versions will no longer be accepted.

Thursday, July 30, 2015

### International Scholars Learn about Shoreline Mapping and Emergency Response

Four scholars from Japan, Kenya, Sri Lanka, and the Philippines visited NGS the week of July 20 to learn about its shoreline mapping and emergency response activities. The visit was part of the General Bathymetric Chart of the Oceans (GEBCO) program, an international nonprofit that produces charts and digital grids of the world's oceans by collating, interpreting, and contouring data using soundings and multibeam bathymetry with the aid of reconnaissance bathymetry derived from satellite gravity data. NOAA maintains relationships with hydrographic offices around the world to share and exchange knowledge on navigational charting products.

Thursday, July 23, 2015

### Hawai'i Site Survey Contributes to International Terrestrial Reference Frame

The week of July 13, NGS completed a site survey at the Very Long Baseline Array Observatory, located below the Mauna Kea volcano in Hawaii. Two space geodesy instruments co-located at the site, combined with the observatory's remote location in the Pacific Ocean, make the site an important component of the International Earth Rotation and Reference Systems Service (IERS) tracking network. IERS site surveys and space geodesy techniques are used to determine the International Terrestrial Reference Frame - the global coordinate system. The latest technology was employed to achieve a high level of survey accuracy.

Thursday, July 16, 2015

### NGS Shares Expertise in International Humanitarian Outreach Effort

NGS provided training and outreach to help developing nations attain self-sufficiency in monitoring volcanoes at the Center for the Study of Active Volcanoes from June 22-24. The international training program, held at the University of Hawaii at Hilo, introduced participants to a multitude of techniques, including GPS and Global Navigation Satellite System technology. NGS shared its

expertise in deploying and managing GPS equipment, networks, and related techniques in this humanitarian outreach effort.

Thursday, June 25, 2015

## NGS Updates Geoscientists at IUGG Assembly

From June 22 to July 2, NGS is providing updates on upcoming changes in geodetic reference frames (slated for 2022), its Gravity for the Redefinition of the American Vertical Datum (GRAV-D) project, and the agency's use of geoid studies to determine heights above sea level at the *International Union of Geodesy and Geophysics* (IUGG) assembly in Prague, Czech Republic. The IUGG advances knowledge of Earth systems and processes through international constituent associations specializing in geodesy, meteorology, atmospheric sciences, and ocean physical sciences. The assembly meets once every four years and brings together more than 6,000 geoscientists from all corners of the globe.

Thursday, June 18, 2015

## NGS Assists NIST with Atomic Clock Project to Make Time More Accurate

Einstein's theory of general relativity states that if a clock is "moved up" to a location with lower gravity (for example, away from the center of the Earth), it will run faster. The effect is far too small to notice with typical clocks over small elevation changes, but scientists at the National Institute of Standards and Technology (NIST) are developing atomic clocks with such precision that a change in height as small as two centimeters will cause a noticeable difference. To help them test and compare these clocks, NGS surveyors began performing a first-order geopotential (height and gravity) survey of NIST's atomic clock laboratories in Boulder, Colorado, on June 6. The survey is providing orthometric heights ("above sea level") accurate to within a few millimeters and absolute gravity values accurate to nine digits. One day the process may be "reversed," so that by networking similar clocks, height (geopotential) differences can be measured directly with time. 🇺🇸



# NSPS Insurance Program

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**East Crew:** "We received a change-order to add two left lanes."  
**West Crew:** "So did we."

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# Help Yourself, Help Our Society, Help Our Profession

## A Committee Chair's Call to Volunteer

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by Rich Howard, Sales/Public Relations Committee Chair

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A moment of your time please...and bear with me as I try and make a point. I am not a natural “communicator” but I want to communicate to you a matter of some importance. It is important to you, important to our Society and important to the profession of surveying. I want you to volunteer to serve on MSPS committees! Get in there and get involved. I have for years and based on my experience I want to share why I think volunteering is important.

I started as an Associate Member. Maybe part of it was because I am just a “joiner”; I am always involved in clubs, associations and church. But also because I knew that although I was learning surveying from good supervisors and interesting projects I needed to broaden the source of surveying information I was getting. By volunteering to actively work on committees I began meeting more surveyors and learning of their practices, their experiences and their ideas. I was thrilled by all we had in common, but amazed at all I DIDN'T know. But a lot can be learned from talking with fellow surveyors. It became part of my apprenticeship! Yes, working on committees helped me learn surveying from the best professors in the world, the people that do it!

Volunteering in this Society also enriched my life by giving me new friends. Interesting men and women that did what I did from all around Missouri. I looked forward to their views, their ideas, and their conversation. We found bonds beyond surveying which brought us closer and we were “there” for one another when the discussions did turn to surveys, boundaries or equipment. I found friends who shared my interest in hunting, my taste in music and rooted for the Cardinals along with me. Along the way they told me about instruments that worked well, pitfalls I should avoid, and how they broke-down a section. Working on committees gave me friends who helped engage me to the life of surveying.

Like all of us I viewed the surveying profession from the perspective of my own experiences, it's only natural to do so. But that is such a limited background. As a committee volunteer I learned of more ways surveyors were working and making their living than I ever imagined. My base reference was primarily rural boundaries, engineering and construction for a government agency. From other committee members I learned of surveys for municipal infrastructure, suburban development and accident scene investigation. I heard the challenges of balancing quality and profitability. I learned that the things I did know

could change depending on where a surveyor practices. Isn't it something else how different a boundary survey can be from other boundary surveys simply by being in a Mississippi River bottom, adjacent to a nation forest or along a railroad right-of-way? Serving on committees expanded my view of what we do. This really helps me in my new career as a small-time country surveyor squeezing a living out of our trade.

More than helping myself I also helped our Society. Selling MSPS labeled shirts, hats and such at meetings isn't easy for a naturally shy person like me but doing so helps our group. This is part of making the MSPS “brand”, wear it with pride! Plus, our sales do provide funds to service our Society's operating expenses. Committee work helps with the business of making MSPS happen.

Finally is the contributions made to the profession. While we serve the profession best by being the best surveyors we can be, working honestly for our clients and committing ourselves and our business to good ethical standards we also must come together and protect the privilege to practice this profession. This cannot be achieved alone. In our associations and committees we can unite to influence legislation, to limit regulation and to educate one another. Yes, participation in our groups gives us strength in guiding our profession, a say in what is done for or to our profession, and the power to protect our interest and the public welfare we serve.

Now the purpose of my writing wasn't to keep saying me, me, me. The point isn't “this is what I did” or “this is what I learned”. The point is – this can all be yours, and ours, and the profession's. Join in the learning, the fun, the perspective, the operation, the service. You need it, MSPS needs you, and the world needs surveyors. Meet those needs by joining an MSPS committee. If I am lucky, I might get to be there beside you! 🇺🇸

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