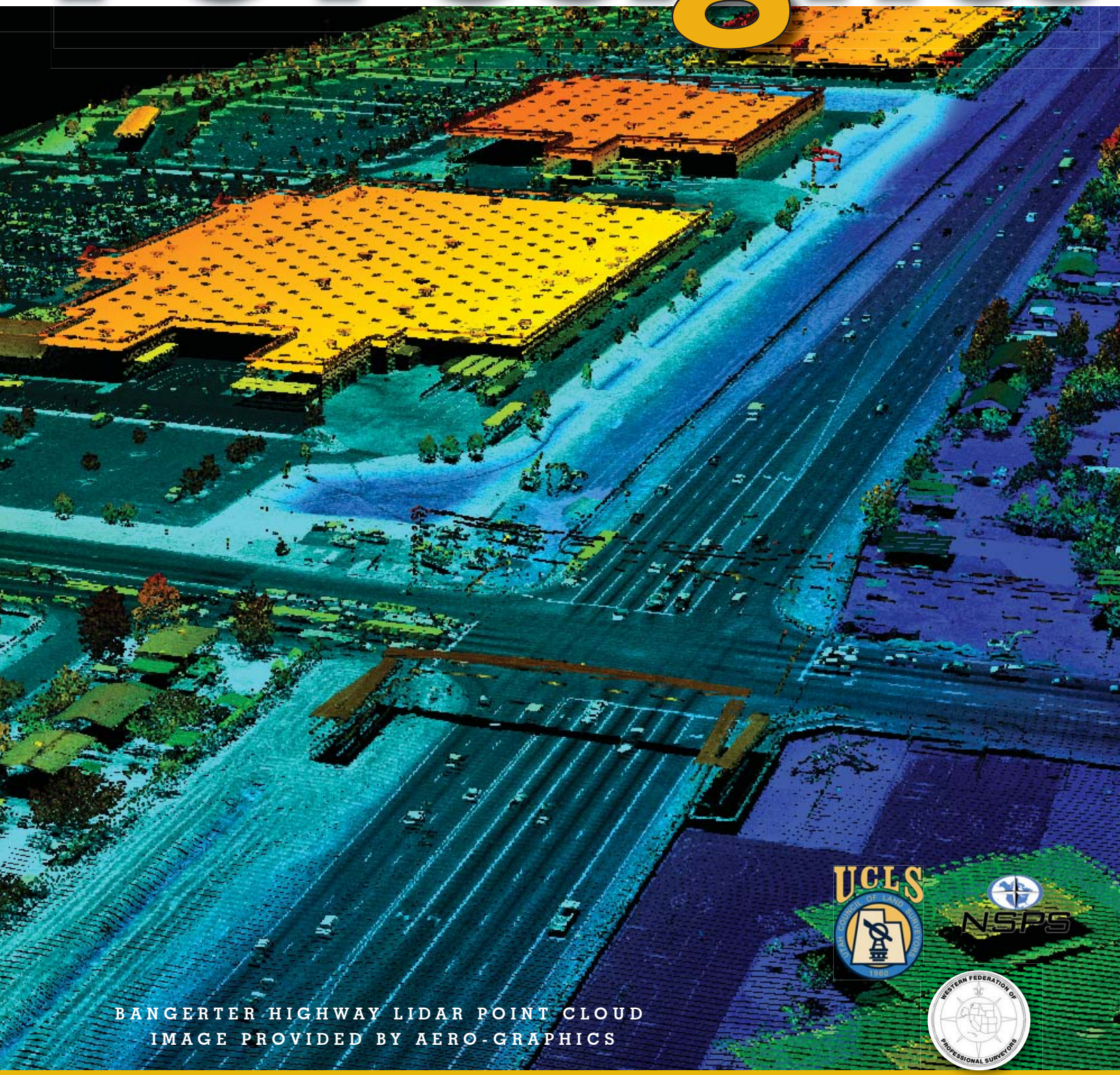
Issue 2 2013

UCLS Foresights



BANGERTER HIGHWAY LIDAR POINT CLOUD
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In conjunction with the National Society of Professional Surveyors, and The Western Federation of Professional Surveyors

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inside

From the Editor

STEVE KEISEL

For my two cents, the symbol of surveying is…

In August 1998, *Point of Beginning (POB)* magazine asked their readers to submit sketches to define a national symbol that would represent the surveying profession. The following year, POB published those entries and asked readers to vote for their favorite. After receiving hundreds of votes, POB took the top five vote getters and published them online at POBonline.com, after which they again invited their readers to vote for a favorite symbol. The process was long and drawn-out, but POB was not running a contest – they were serious in their efforts to proclaim a national surveying symbol.

The winning selection to the POB survey (no pun intended) was the Transit, Tripod, and Plumb Bob. Three enduring images that readers, voters, and surveyors indicated would best define the surveying profession. Choosing a symbol was respectful, but taking these three images and giving them public meaning, would be a challenge.

A symbol is worthless if nobody knows what it represents. Conversely, a symbol can be a powerful tool when it invokes a universal reaction. Consider a Nazi swastika or a raised middle finger as negative examples of destructive purposes. However, we also recognize positive symbols such as the peace sign, the "OK" sign, the "scales" of justice, the "staff" of medicine, etc. Universal symbols are, in reality, a "language" we all share.

The mid-70's was an exciting time for the surveying profession(al). Up until then everything had been analogue, but this was a watershed moment and change was in the air. Hewlett Packard was bringing digital technology to the average surveyor with the first affordable EDM--electronic distance meter and some of the most user-friendly software ever created for the desktop. This was the start of the digital era of surveying and mapping.

A symbol is worthless if nobody knows what it represents. Conversely, a symbol can be a powerful tool when it invokes a universal reaction.

My roots run deep in the surveying profession and it pains me to say that surveyors are their own worst enemy, at least here in the U.S. Time and time again, we have had opportunities to re-assume leadership roles as managers/stewards of the land and as technology experts/advocates. However, we as a profession always seem to be behind the curve.

Some may attribute this to a need for independence while others might blame the lack of educational opportunities. It is difficult to pinpoint the exact cause and its effect, but it seems to coincide with the shift to digital technology. Surveyors have been through enough periods of opportunity that they could have done something about it - if they had wanted to do something about it.

I believe the most significant lost opportunity involves geographic information systems (GIS) and land information systems (LIS). For whatever reason, the surveying profession was reluctant to embraced and/or champion GIS/LIS and therefore the leadership opportunity eroded away. A simple requirement that all boundary surveys be tied to a state plane coordinate system would have provided a positive difference in how surveyors participated.

The second lost opportunity of significance, albeit to a lesser extent, involves the Global Positioning System (GPS). Although the surveying profession has taken advantage of this wonderful technology – our use has been in a utilitarian way and therefore we have not established our profession as the "go to" resource for the much broader consumer applications that have made GPS a household term.

Similarly, the surveying profession is losing an opportunity to be the recognized expert in the use of 3D laser scanning. This is particularly evident when it comes to mobile LiDAR where an in-depth understanding of error theory, geodetic coordinate systems, and map projections are required. The lack of expertise in these subjects is causing confusion in the marketplace and in some cases a bad name for the technology.

EDITOR *continued on page 8*

Chair's Message

ERNEST ROWLEY

Survey control, especially original control, is vital and critical for the surveying community to be able to properly perpetuate property lines and property rights.

This is a busy election year in New Jersey. The death of U.S. Senator Frank Lautenberg necessitated a special U.S. Senate Primary election in August and Special General Election in October. All this on top of the regularly scheduled election in November, when every seat in the New Jersey Senate and General Assembly, as well as the Governor and Lieutenant Governor positions are on the ballot.

NADA and the Dealers Election Action Committee (DEAC) handle elections on the national level. NJ CAR and CAR-PAC stay focused intensely on the State legislature and gubernatorial races.

That is because new car dealers have a huge stake in the outcome of the November 5th election.

It is critical that CAR-PAC have the resources to support candidates who support the industry. Many dealers honor their quarterly, $150 solicitation from CAR-PAC. Many other do not. What you may not know is that New Jersey election law allows contributions of up to $7,200 per election cycle.

Without the generous support of dealers, CAR-PAC cannot ensure that the industry's voice is heard on many political and regulatory issues that directly impact the retail automotive sector. In some cases, dealers may be responding to a proposed law, such as Right-To-Repair or the current proposal to repeal the ban on the sale of motor vehicles on Sundays. In other cases, dealers may approach legislators or regulators in an effort to strengthen protections for the industry, such as our periodic amendments to the Franchise Practices Act or procedural issues with the Motor Vehicle Commission.

None of the many legislative and regulatory victories the industry has celebrated over the years would have been possible without the grassroots support from dealers throughout the State. Picking up the phone and sending a letter in support or opposition to a specific proposed regulation or piece of legislation are just two examples of grassroots support. Making financial contributions to CAR-PAC is another way to show your support of the industry's objectives.

As I stated earlier in this column, many dealers honor their quarterly CAR-PAC solicitation and some have gone above and beyond in this election cycle. I want to thank every dealer who has honored their commitment to support the political action committee that is working tirelessly on your behalf. And to those who have not yet supported CAR-PAC this cycle, I ask that you please reconsider. Every dollar raised helps our political action committee show our elected leaders in Trenton that we can offer them both political and financial support.

CHAIR *continued on page 8*

Fall Forum: September 27th

"Pay Attention to Detail"

7:30 a.m. to 5:00 p.m.

Salt Lake Community College

AGENDA

7:30 am - 8:30 am	Registration and Continental Breakfast (Student Events Center)
8:30 am-10:00 am	Photogrammetry 101 Presenter: Kelly Francis
10:00 –10:30 am	Morning Break
10:30 a.m. - Noon	Scanning for Surveyors 101: High Definition Survey Data Collection Presenter: Joshua Vandiver
Noon - 1:30 pm	Break for Lunch: Oak Room, second floor of the Student Center
1:30 pm–3:00 pm	Scanning for Surveyors 101: High Definition Survey Data Collection Presenter: Joshua Vandiver
3:00 pm–3:30 pm	Afternoon Break
3:30 pm-5:00 pm	Lost, Obliterated and
Replacing Section	Corners Presenter: Jim Kaiserman

Parking validations available upon request. For a map of parking options and directions to the parking lot just north

PRESENTERS

Kelly Francis, CP

Mr. Francis has over 18 years of experience as a project manager (all with AG). He has successfully managed numerous projects for engineering firms, highway departments, utilities, mining operations, and public sector entities. He has a thorough understanding of photogrammetry concepts and a proven ability to oversee all aspects of a mapping project from start to finish.

Photogrammetry 101 Class Description: This presentation will focus on the basis elements of photogrammetry, including camera systems; film scanners; stereo plotters; photo and stereomodel orientation; image radiome- try; analytical aerotriangulation; orthophoto production; and raster/vector data conversions. We will discuss a typical photogrammetric workflow, from project planning to imagery acquisition to data compilation. Other topics will include:

- Control survey techniques and accuracies
- Field verification of photogrammetric surveys
- Levels of precision and accuracy standards
- Basics of LiDAR

James C. (Jim) Kaiserman

Born in Great Falls, Montana

Married to Carolyn Hurzeler Kaiserman

Five children, 24 Grand Children, Five Great Grand Children

Resides in Heber City, Utah since 1992

BSCE Montana State College, Bozeman, Montana Professional Engineer, Utah, previously licensed in Nevada, California and Wyoming

Professional Land Surveyor, Utah (1972)

Elected County Surveyor for Wasatch County 2003 to present

Served six years as President of Utah County Surveyor's Association

Plays Golf, has clubs, will travel, call if you need partner.

Joshua Vandiver

Regional Sales Manager, HDS, Leica Geosystems, Inc., San Diego, CA (6 years) Civil Engineer & Land Surveyor, United States Army Corps of Engineers, Fort Leonard Wood, MO & De-troit, MI (8 years)

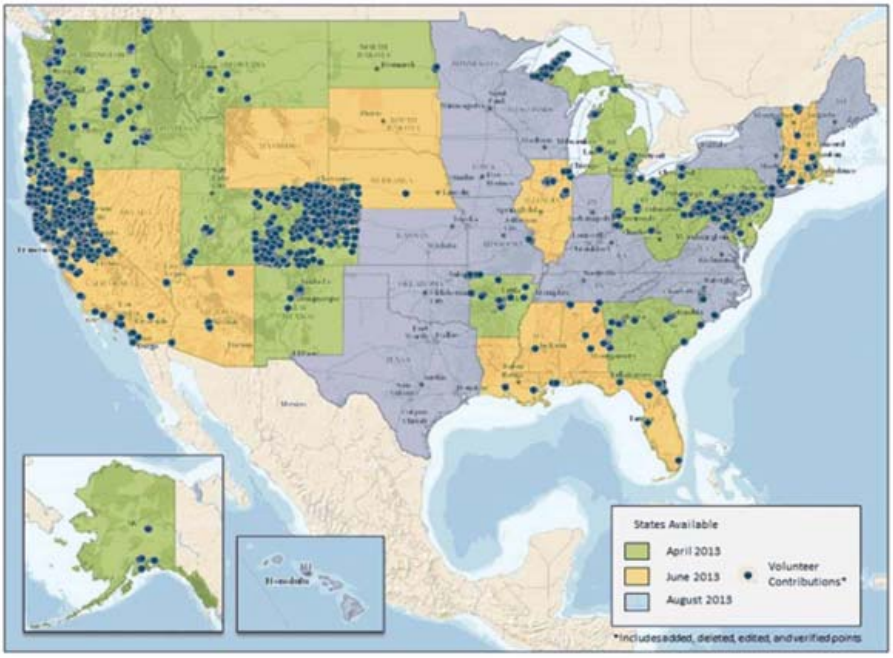
Scanning for Surveyors 101 Class Description:

High Definition Survey data collection with the ScanStation P20 will be performed. Post processing will continue with Cyclone Register, Survey, Model and Publisher. Our Virtual Surveyor tool will display point cloud clean up, data extraction, TIN creation and work flows for 2D or 3D deliverable creation. Ad-vanced modeling features such as 'pipe run' will also be on display with Cyclone Model. Finally, Cyclone Publisher will be used to generate TruViews of the data collected for all to view, measure and share.

Crowd-Sourcing the National Map: Now a National Effort

BY USGS

The USGS continues to expand its crowd-sourcing of geographic data and is seeking volunteers nation-wide to contribute structures information.



The mapping crowd-sourcing program, known as The National Map Corps (TNMCorps), encourages citizens to collect structures data by adding new features, removing obsolete points, and correcting existing data for The National Map database. Structures being mapped in the project include schools, hospitals, post offices, police stations and other important public buildings.

Since the start of the project in 2012, more than 780 volunteers have made in excess of 13,000 contributions. In addition to basic editing, a second volunteer peer review process greatly enhances the quality of data provided back to The National Map. A few months ago, volunteers in 35 states were actively involved. This final release of states opens up the entire country for volunteer structures enhancement.

To show appreciation of our volunteer's efforts, The National Map Corps has instituted a recognition program that awards "virtual" badges to volunteers. The badges consist of a series of antique surveying instruments ranging from the Order of the Surveyor's Chain (25 – 50 points) to the Theodolite Assemblage (2000+ points). Additionally, volunteers are publically acclaimed (with permission) via Twitter, Facebook and Google+.

"I enjoy mapping structures, it's a unique combination of validating structures from aerial photography and web-based sources," says TNMCorps volunteer Don Kloker. "My structures contributions have provided me with an excellent geography lesson and I have learned many things about communities that I most likely would not have been otherwise able to experience." Don has contributed more than 2,000 points and quickly reached the highest recognition badge, the Theodolite Assemblage.

The citizen geographers/cartographers who participate in this program make a significant addition to the USGS's ability to provide accurate information to the public. Data collected by volunteers become part of The National Map structures dataset which is available to users free of charge. "TNMCorps allows me to update structure locations and their official names from the Geographic Names Information System (GNIS)," said Corey Plank, Cartographer for the US Bureau of Land Management. "These updates allow The National Map and US Topo map series to better represent ground structures and official labels."

As part of an effort to engage civilian organizations, this year's 4-H National Youth Science Day, planned for October 9, 2013, will feature geographic technology projects that are part of TNMCorps data collection efforts.

Tools on TNMCorps website explain how a volunteer can edit any area, regardless of their familiarity with the selected structures, and becoming a volunteer for TNMCorps is easy; go to The National Map Corps website to learn more and to sign up as a volunteer. If you have access to the Internet and are willing to dedicate some time to editing map data, we hope you will consider participating!◀

See more at: http://www.gisuser.com/content/

EDITOR *continued from page 4*

A key part of the problem may be not understanding who we are or defining what we do. If we want to be recognized as skilled professionals, we have to establish measurement criteria and rules that support this status and then promote who we are and what we do.

I believe it was the French poet and philosopher, Paul Valery who predicted that the poets of the twenty-first century would not be writing poetry. To a poet, such a thought could be considered blasphemous. Yet the idea presents an open-ended list of opportunities.

The next generation may not recognize surveying as a symbol or function of boundary but rather the term "surveying" may be associated with obnoxious inquiries regarding the status of whom what and when?

We should be proud of whom we are and look forward to the day when people say, "He or she, was a Surveyor." ◀

CHAIR *continued from page 5*

Automotive sales continue to rebound and remain one of the primary drivers of both the New Jersey and national economies. No doubt, $7,200 is a lot of money. Not everyone is able to make that kind of commitment. But every dealer SHOULD honor their $150 quarterly contribution. And, in this election year, we ask every dealer to consider digging just a little deeper to make a supplemental contribution of $500, $1,000, $1,500 or more.

If you have already contributed to CAR-PAC, thank you. If you haven't been supporting CAR-PAC, I encourage you to step up and share the burden of supporting this critical organization that represents your interests in Trenton. ◀

If you haven't been supporting CAR-PAC, I encourage you to step up and share the burden of supporting this critical organization that represents your interests in Trenton.

Salt Lake Chapter Report

BY DAVID MORTENSEN

We had a great summer in the Salt Lake Chapter. We are so grateful to Bill Rowley from National Title and Matthew Jensen from Parr Brown Gee & Loveless for presenting to us. We are also grateful to Brad Daley for preparing a great barbeque for us all in August. It was good to be able to meet everyone's families and socialize a little bit. Hopefully we can continue this in the future and have more members come. During this meeting we were able to witness Dale Robinson receive a recognition reward for his volunteer work as the Chairman of the Legislative Committee over the past few years. We are so grateful for all that volunteer to help the UCLS and the Land Surveying community in the state grow. We are looking forward to good meetings this fall and look forward to seeing you all in October and November. October we will be meeting at Joe Morley's BBQ on the 17th. Please come with some ideas for nominations for the new officers for the Chapter President and Vice President and for next year's Chair Elect. Please let me know if you have any ideas for topics that you would like to hear about. Please email me at dmortensen@bushandgudgell.com. Thanks again for your support and we look forward to seeing you in the near future. ◀

Do I Need My Property Surveyed? A Few Points to Consider

BY DANIAL L. PERRY. MBA, PLS

Abstract. Four important considerations regarding the need for a property boundary survey are outlined. Geographic Information Systems (GIS) maps are most often NOT a correct representation of true property lines, accuracy of the legal description of the deed, there are many factors which determine the location of property boundaries, and a survey is NOT always required in order to convey property.

1. Geographic Information Systems (GIS) maps are most often NOT a correct representation of true property lines

These are the maps that we find online and are often provided by state, county, or city governments. Although they are very useful for governance and organization these maps are not the panacea to answer all things regarding geography and land tenure. The apparent conflicts (overlaps and gaps) in property lines most often are a result of errors in deeds or deed entry which can often be observed in the representation of property lines in various Geographic or Land Information systems (GIS/LIS) employed by counties and other public entities. The organizations producing GIS wish to provide their constituents with myriad land information such as parcel; size, value, tax data, etc. all of which are very useful and invaluable to professionals who work with real estate as well as the general public. However, for surveying GIS is used ONLY as a starting point for much broader and deeper investigation of properties and boundaries. It is CRITICAL for the user of GIS information to understand that these maps (online or printed) are most often not a representation of ACTUAL physical "on-ground" observations and measurements but are rather extractions of dimensional information taken from written legal descriptions of deeds. The dimensional basis of which is found in the Public Land Survey System (PLSS). When a basis of bearing is extracted from the legal description it is not well understood by the GIS personnel and often mistakes and false assumptions are made which are not in conformity with the Manual of Surveying Instructions (BLM 2009) which is the legal document governing the PLSS. For this reason developers and disseminators of GIS data and maps have wisely provided a disclaimer regarding their maps. For example Utah County has such a disclaimer quoted verbatim as follows:

"This on-line parcel map is for reference purposes only. Utah County assumes no liability for its accuracy, correctness or possible variations on actual survey."

2. Accuracy of the legal description of the deed

The purpose of a legal description in a deed is to provide sufficient enough information to the public and interested parties to be able to correctly identify the location of the property on the ground. The fact is, some deeds are written better than others. Legal descriptions in deeds can be and often are constructed by individuals who have received little or no training in the writing of legal descriptions. This has resulted in patent and latent ambiguities and other critical errors which result misunderstandings as to the location of the given property boundary. Admittedly, some legal descriptions that are written by licensed surveyors have incorporated errors in measurement or judgment as to the best manner in which to represent the location of a given parcel in writing. These factors and more have resulted in inaccurate and/or incorrect legal descriptions.

3. There are many factors which determine the location of property boundaries

One of many key questions in boundary law is what have the property owners been using or occupying as boundary line(s) between them and how long have they been in use. (I.e. driveways, fences, hedges, trees, walls, etc.). The evidences supporting such lines of occupation are many and varied but the governing principles are the same regardless of the property. There are many professional books dedicated to the explanation of boundary laws, legal descriptions, procedures for investigation, etc. not the least of which are Black's Law Dictionary (Garner, et.al.), Elementary Surveying

PROPERTY *continued on page 12*

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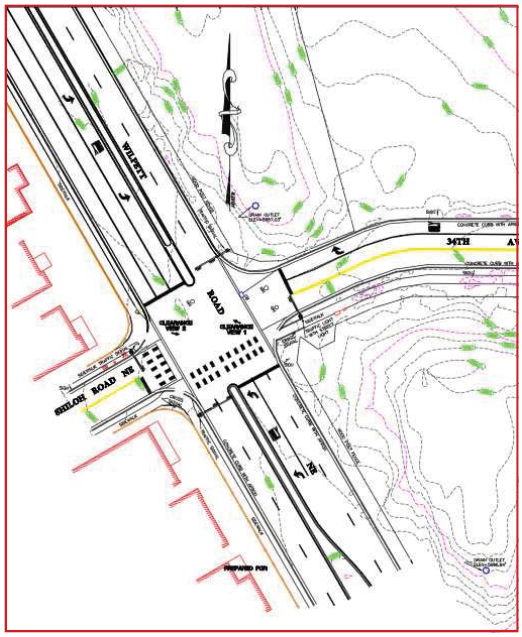

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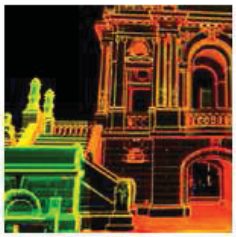

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- Building Information Modeling (BIM)
- Heritage

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- Construction

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- Crime Scene Investigation (CSI)
- Accident documentation
- Security

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PROPERTY *continued from page 10*

(Ghilani), Brown's Boundary Control and Legal Principles (Robillard), Evidence and Procedures for Boundary Location (Robillard), Professional Surveyors and Real Property Descriptions (Estopinal), Forensic Procedures for Boundary and Title Investigation (Wilson), and Interpreting Land Records (Wilson). There are also hundreds of Appellate and Supreme Court cases related to boundaries and their determination, I don't have time to explain or even review these volumes as they pertain to the subject property so sufficient to say this is what licensed surveyors are expected to know and understand proficiently so that they can properly advise the general public as the need arises. One must always keep in mind that any given boundary line represents not only the "clients" property but also all adjoining properties.

4. A survey is NOT always required in order to convey property

The purpose of a property survey is to correctly define or redefine the location of a parcel of land relative to current and accepted monuments which are used by other surveyors and which physically exist on the ground. These monuments are often a part of the United States Public Land Survey System (PLSS) such as section or quarter corners maintained by the county surveyor's office. Ultimately, a survey and the resultant plats, records, maps, legal descriptions, and drawings of property lines represents the professional and competent opinion of the licensed land surveyor who has employed professional experience as well as physical/site evidence and many other factors to determine a particular boundary. Regardless, multiple and sequential conveyances of many parcels of land in the United States and Utah have been fully executed without the aid of a land survey regardless of how helpful and essential they are in assisting owners in resolving disputed and conflicting boundaries.◀

Danial L. Perry, MBA, PLS is a Professional Land Surveyor (PLS), and an Associate Professor of Geomatics (surveying and mapping) at Utah Valley University, 800 University Parkway, MS148, Orem, UT 84058, email perrydl@uvu.edu.

For additional information and answers to other frequently asked questions please take a few minutes to learn more about land surveying at the following websites:

Salt Lake County Surveyor
http://www.surveyor.slco.org/information/faqs/surveyingfaq.html#fifth

Utah County Surveyor
http://www.utahcounty.gov/Dept/Surveyor/FAQ.asp

Utah Council of Land Surveyors (UCLS)
http://www.ucls.org/

National Society of Professional Surveyors (NSPS)
http://www.nsps.us.com/index.cfm?fuseaction=Page.viewPage&pageId=673&parentID=525&nodeID=2

Twitter

The best way to figure this out is to just do it. Have fun, and try a couple posts.

If you are unsure of Twitter, or would not know a "tweet" from a twit, please read on...

Twitter.com provides a free platform to host a social media network. A social media network is a "new" way people, businesses, and organizations communicate with each other. Facebook is a form of social media network. LinkedIn is another social media network. A social media network can be useful for many purposes - one use of a social media network is to share imagery. For example, instead of physically posting a photograph on your cubical wall at work, you can post that same photo to a social media site for a predetermined set of people to view, or with twitter... everyone.

Twitter.com (referred to simply as 'Twitter') provides a service to connect you with your friends, but also to monitor some personally favorite subjects. Unlike Facebook, Twitter keeps communication short, by limiting the number of characters to 140 or less per post. Surveyors typically use an economy of verbal communication, so this should be a pleasant transition for most. Digital communications have been around for decades, email being one of the oldest forms. Unlike email, where you send your communications to a specific set of recipients, when you post to twitter, you are essentially broadcasting your message.

Briefly, when a person or organization uses Twitter, they decide on a message to send, determine how "fancy" they want to make it, and then "post" it. A Twitter message is always going to be composed of 140 characters or less, and you can incorporate some meta data such as an image, a hyperlink to a URL (Uniform Resource Locator - a web address), and even your geo-located position. Other Twitter users will see your post either indirectly if they search you out or directly if they have subscribed to your "twitter feed."

Why?

Participating in twitter is for fun, so do not get too serious about this. The main function of an organization like the UCLS is to enter into the twitter arena will primarily be for marketing and outreach. Heavy usage times will be during quarterly meetings and the annual meeting, during publicly appropriate times. For example, during the Annual Meeting, we typically have an auction, and some of the more interesting objects being auctioned off might be of interest to folks who cannot physically be there. A twitter feed could provide a real-time blow-by-blow of the action. Again, this is for fun, and to show other state societies, members, and potential members what we are up to.

How?

Create a twitter account by visiting www.twitter.com on a computer, or download the "app" onto your smart phone or tablet. Personally, I think the twitter experience is much more fun on a smart phone or a tablet, but a computer or laptop will work just fine.

Pick a handle for yourself. Your handle will always begin with the "@" symbol. Sort of like email, but different. If you have a smart phone or tablet, install the app. Even if you used a computer to initially set yourself up.

Do a search for "@UCLS" and then select the "follow" button. Once you have found us, you can see whom we are following, and who is following us.

The best way to figure this out is to just do it. Have fun, and try a couple posts. Eventually you'll see that you can directly message people, and receive direct messages, in addition to the "normal" twitter feed action. ◀

Share Your Experiences!

- What is your company doing?
- What are your employees doing?
- Are you involved in your community?
- Any interesting projects?
- Anything you'd like to share!

NSPS is looking for stories, activities, experiences from its members to feature in News and Views and on our Facebook page. Send your content and photos to trisha.milburn@nsps.us.com.

Did you know...?

Nearly one third of the licensed professional land surveyors who reside in Utah are not members of the Utah Council of Land Surveyors.

According to the Utah Division of Occupational and Professional Licensing (DOPL), 786 individuals are licensed professional land surveyors. Of these, 491 claim Utah residency and 295 are out of state land surveyors.

The membership of the Utah Council of Land Surveyors (UCLS) reflects 321 resident and 84 non-resident professional land surveyors. Therefore, 65% (321 of 491) of the professional licensed land surveyors, who reside in Utah and 28% (84 of 295) of the non-Utah resident surveyors land surveyors, are members of UCLS.

Membership includes many benefits at an unbelievably low annual price of $75.00/resident $50.00/non-resident.) Why would any licensed professional land surveyor not be a member of UCLS? ◀

Western Federation of Professional Surveyors Report

BY WFPS REPRESENTATIVE MICHAEL NADEAU, PLS/CFEDS

"The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy."
– Martin Luther King, Jr.

As another hot Utah summer draws to a close, I sit here writing this report thinking of everything that WestFed has undertaken in the last 6 months since the last *Foresights*. Since that time we have only had two board meetings; a March meeting in Salt Lake City and a June meeting in Oakland, but much has been accomplished.

The first item of business that was accomplished was organizing speakers to come in and speak at our annual convention in Salt Lake City. We had some great speakers present to us and I have yet to hear one negative comment about any of the WestFed speakers that showed up – Aaron Smith did two presentations, one on Legal Descriptions and the other on Land Surveyors and Marketing. Linda Smith presented on a personal experience she had "In search of the Baptiste Mineral Surveys". And last but not least, Earl Morriss presented on Water Rights. They all did a terrific job and James Olschewski, the chairman of the convention committee, extended all of them an offer to come speak at future UCLS conventions and forums anytime in the future.

The next and biggest accomplishment is the successful running of the TwiST program; a program that was well publicized and marketed by WestFed with matching NCEES funds of up to $25,000 for state societies to send teachers to Vancouver, Washington. This program was one week long and provided these teachers with a rigorous training in "Teach with Spatial Technology" (TwiST). The teachers learned how to use GIS and GPS in the classroom to create meaningful and challenging lesson plans for their students. The UCLS, having matching funds from NCEES, did send two teachers on behalf of Utah. Walt Cunningham summed his experience up in a very well written report to the UCLS executive board:

WESTFED *continued on page 16*

WESTFED *continued from page 15*

Respectfully to the State Executive Board of the Utah Council of Land Surveyors,

The Teaching with Spatial Technology (TwiST) Workshop sponsored by the Oregon Institute of Technology, and held at Clark College in Vancouver, WA this past June 24-28, was a great success, and one of the most interesting educational experiences I've had in my lifetime.

The Conference personnel – Mason Marker, John Ritter, and Tim Kent – were efficient, effective, well organized, and experienced masters in their specific areas of expertise which included GIS, GPS in an interesting mix with Geomatics and some basic surveying field techniques. They are great Teachers (with a sense of humor) who were not afraid to push us to the limits. The facilities and equipment at Clark College were top-knotch, and the Clark Campus was absolutely green, beautiful, and sometimes wet… it's the Pacific Northwest… of course it's wet!

The Students, who came from many of our western states, were mostly Elementary, Junior High, and High School Teachers, interspersed with a University Professor from Alaska, and two Community College Professors from Utah: Adam Dastrup and myself. About two thirds of the twenty-four who attended were Women, who asked several great questions. Many were Mathematics, Science, Physics, and History teachers… most of whom were dedicated and seasoned veterans of education. All who came were focused on using geospatial technology to create meaningful learning experiences in the classroom, and with hands-on field exercises.

From the first day to the last, we were challenged to learn in the classroom (a computer lab) during the morning, and by the on-campus field applications in the afternoons. I, along with others, felt overwhelmed with the vast amount of information and knowledge imparted to us in just a few days. Being a military veteran it brought back positive memories of Boot Camp. YES, positive!

Adam and I discussed what we learned from TwiST, and how it could operate in Utah to strengthen and bolster the teaching and dissemination of geospatial knowledge in our schools, disciplines, and professions. We most enthusiastically and respectfully recommend that the UCLS consider hosting one of the next TwiST workshops at either Salt Lake Community College or Utah Valley University in the near future. Can you imagine having at least two teachers from every school district in our state attending a TwiST workshop, and the beneficial ripple effect it would have in our classrooms? Also, working in concert with TrigStar and the NSPS CST program, it would be magnified.

On behalf of Adam Dastrup and myself, we thank you, WestFed, and NCEES for affording us the wonderful opportunity of attending a TwiST workshop. Please feel free to contact us if you feel a need for more detailed information about our TwiST experience.

Earnestly yours as always, Walt Cunningham

Thank you to Walt Cunningham and Adam Dastrup for attending the TwiST program and representing the UCLS and Utah so well. Being able to have a TwiST program in Utah would be a benefit to the profession in this state and Walt's report leaves me with high hopes that we can make TwiST just as successful in Utah. This is a great program that will help push the profession forward, and at the same time, market the profession to the next generation. If you would like to see more information about the TwiST program, check out http://www.wfps.org/files/TWIST.html.

Another accomplishment in the last few months…that was somehow bestowed upon yours truly…was **the addition of a WestFed Facebook page**. I guess that's what I get for being the new kid on the block. At any rate, I'm still looking for more people to "like" the page, since the WestFed Facebook page is still in its infancy. Next time you login to your Facebook page, search for "Western Federation of Professional Surveyors" or just click this link while you are logged into your page - https://www.facebook.com/westfed. Once you are there, just click the LIKE button!

Our September meeting is planned a little closer to home in Las Vegas, then another meeting in early 2014 in Albuquerque. As your representative, I represent you. If you would like anything survey related discussed on a regional level at these upcoming meetings, don't hesitate to contact me at MikeNadeau.UCLS@gmail.com. ◀

WFPS REPRESENTATIVE:
MICHAEL NADEAU
PLS/CFEDS

Summary of Test Review

BY DARRYL FENN, COMMITTEE CHAIR

Over Thursday and Friday (August 22 and 23, 2013) the testing committee convened along with Mr. Clinton Kelly. Mr. Kelly works with PSI. PSI is a national testing administration company, contracted through Utah State's Division of Professional Licensing (DOPL) to administer and maintain the Utah State Land Surveyor's examination.

The meeting was held in Salt Lake City with a representative cross-section of qualified professional land surveyors, all with local history and unique expertise in various aspects of surveying. On a personal note, I was truly impressed with the wealth of knowledge that was available and provided on behalf of the UCLS for the test review.

Let me explain the test review process with numbers:

1. The Goal:

a. Every question reviewed must be scrutinized using the following mandates:

i. Is it readable and grammatically correct?

ii. Is it applicable and relevant to surveying in Utah?

iii. Is the question specific to Utah and have the examinee's already been tested on similar questions during the national exam (Such as certain PLSS questions)?

iv. Are all aspects of Utah surveying covered in the questions?

v. Is the correct answer (the key) defendable or verbatim by Utah Code (code) or the Manual of Survey Instruction 2009 (MSI09)?

vi. Are the wrong answers (the detractors) logical and not giveaways?

2. An Examinee's Requirements:

a. Simply to sit for the Utah State surveyor's exam, what requirements are lawfully mandated by current Utah code? Therefore, based on the sitting requirements, what level of knowledge should the examinee possess?

3. The Examination:

a. Is the publication provided with the candidate's application correctly stating the process and reference material?

b. How should it be structured?

c. How many questions are appropriate for the time allotted?

d. Should it be weighted by exam division or questions?

e. Is the overall test fair and not subjective or opinionated?

With the criteria set and the official test application publication reviewed, the committee's next step was to review the questions.

The original question pool contained 136 pool questions. These questions are separated into like three main divisions which are expanded to include various categories relative to the parent division. Based on this arrangement, questions are selected randomly by division and category to form an examinee's text.

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TEST REVIEW *continued from page 17*

As such, it is unlikely that any two tests are the same.

The next step included:

Each division and category was discussed to ensure validity and weighted importance. In some cases, the main categories within the divisions were expanded, in others they were contracted. A typical division with its categories would read:

1. Professional Engineers and Professional Land Surveyors Licensing Act and Rule;

a. Licensing,

b. Unlawful Conduct and Unprofessional Conduct,

c. Practice Standards

After the divisions and categories were decided, each question would be projected and reviewed fitting it into a division and category.

In several instances the individual questions or keys, were found in error or sufficiency based on current code or MSI09. In this case, the keys would be corrected or the questions would either be edited or deleted. Upon completing this process for all existing 136 questions, a tally was created to see how many questions we had in each division and category. If it was determined too many questions were included in any certain category or if not enough questions were included to provide for a random selection; adjustments would be made either by writing new questions or deleting weaker questions.

Finally, a high level review was made of the overall questions and categories to determine if every aspect of surveying in Utah was represented and included. This high level review resulted in a negative conclusion which required the committee to author 16 new questions which would better represent a cross-section of instances a local surveyor may come across. An example of this would be the "3-Mile" method of a PLSS subdivision and code requirements relative to the surveying of cemeteries and mineral/mining circumstances.

In summary, our review of the divisions, categories and questions resulted in:

* 1 deletion of an existing category

* 2 edits of an existing category

* 2 additions of new categories

* 94 edits of existing questions

* 12 deletions (beyond editing) of existing questions

* 16 additions of new questions

The reviewed pool now consists of 140 questions in 3 divisions separated into 13 categories with a minimum 100% redundancy for random question selection. The test was modified from 40 questions to include 50. Each defendable by state code or MSI09 and given within the specified time frame.

It should be understood that this report is only offers a summary and for obvious reasons detailed specifics have been intentionally left out. This includes committee member's names, main exam-divisions and categories along with their associative weighting and specific questions or answers.

I trust our efforts have improved the test resulting in new licensing of qualified surveyors. Should you have any questions, please feel free to call.

Darryl Fenn ◀

BOOK CLIFFS CHAPTER REPORT

The Book Cliffs Chapter met on the evening of August 9th in the Carbon County Building in Price, Utah.

Sean Fernandez, from the State AGRC office gave the presentation on the status of the upgrades being made to the State VRS network. The members had several questions regarding the effect the new upgrades will have on existing coordinate values of previously surveyed monuments. The actual adjustments will be made in the next few weeks according to Sean. His office will be getting more information out to subscribers as the change approaches.

Eleven members were in attendance. We always appreciate Carbon Counties willingness to accommodate our meetings. Thanks to Ben for the hall and Sean for the presentation. ◀

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