The UCLS Newsletter

Volume 5 Issue 6

October 2019

Where is it?

As one travels through the great state of Utah, they often stop at local museums or visitor centers to learn more about the area. Within the local museum or visitor center, one might find a display of ancient surveying equipment and explore the history of the artifacts.
The first UCLS member that correctly identifies the location of this monument is eligible for a free lunch at their next chapter meeting.

Answers may be emailed to Susan at srmerrill@ucls.org. The earliest date and time of response will determine the winner.

In this issue: Expand your knowledge as you learn about the ever-changing magnetic north, the value of research, and the unique partnership of land surveyors and GIS professionals. Be informed about the activities of UCLS and its relationship with the Western Federation of Professional Surveyors.

We offer our condolences to the families of two past members. Additionally, we ask you to nominate a fellow surveyor or yourself for a leadership position in the Utah Council of Land Surveyors.

We invite you to share charismatic photos of yourself and/or a coworker, panoramic images of Utah's scenic wonders, or pictures of survey related tools and equipment. Additionally, we need interesting and unique descriptions or survey related stories to share with our membership. Remember, if you do not participate you have no right to complain. Please let us know your thoughts, recommendations, suggestions, or complaints.

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INDEX TO PAGES:

"Between stimulus and response, there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom."
-Victor Frankl

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Man Who Thought he Bought First House Furious after it turn out to be 30 cm strip of land

If you're feeling a bit anxious about buying your first property, take some comfort in knowing you will probably do better than this bloke.

South Florida man Kerville Holness, a first-time auction bidder, thought he'd just landed an absolute steal after his $13,000 bid won the online auction.

Unfortunately for old Kerville, his villa turned out to be a strip of land, measuring 30cm by 30m.

It's only worth $72 (USD$50)

The strip runs down the driveway of two adjoining villas, and extends under the mutual wall separating the properties.

Adding insult to injury, officials say there's not much he can do about it.

"If I'm vindictive enough, I can cut right through the garage wall and the home to get to my air space, but what use would that be to me?" Holness said told the Sun Sentinel.

"It's deception.

"There was no demarcation to show you it's just a line going through [the villa duplex], even though they have the tools to show that."

Holness said the property appraiser photos linked to the auction site shows a villa being on the parcel he made a bid on.

But the newspaper says the appraiser's site and information on the county's tax site show no building value.

-With Associated Press

How it happened:

A Ray White real estate spokeswomen has explained the intricacies of such a sale to 7NEWS.com.au.

She said the plot of council-owned land would have first been auctioned off to the two neighboring villas.

It's not uncommon, she said, for homeowners to try to extend their property by a few square metres to add value.

However, Holness swooped in and most likely outbid the neighbors in an attempt to snatch a bargain - instead being left with the measly strip of land.

Without consulting a lawyer and doing his due diligence, she says, the blunder cost him thousands of dollars.

Why sell the plot?

The spokeswomen says it's common for small plots of land to be sold by the council once they serve their purpose.

For most, it's land that used to cover piping which has since been made redundant.

But a map with dimensions of the land is always included in the contract, and oversight the spokeswoman says falls on Holness' shoulders alone.

It's unclear what he will do with his 'villa', but it seems he's stuck with it for the time being.

Magnetic North Just Changed. Here's what that means?

By: Maya Wei-Haas

Magnetic north has never sat still. In the last hundred years or so, the direction in which our compasses steadfastly point has lumbered ever northward, driven by Earth's churning liquid outer core some 1,800 miles beneath the surface. Yet in recent ears, scientists noticed something unusual: Magnetic north's routine plod has shifted into high gear, sending it galloping across the Northern Hemisphere - and no one can entirely explain why.

The changes have been so large that scientists began working on an emergency update for the World Magnetic Model, the mathematical system that lays the foundations for navigation, from cell phones and ships to commercial airlines. But then the U.S. government shut down, placing the model's official release on hold, as Nature News first reported earlier this year.

Now, the wait for a new north is over. The World Magnetic Model update was officially released on Monday, and magnetic north can again be precisely located for people around the world.

Questions still likely abound: Why is magnetic north changing so fast? What were the impacts of the update's delay? Was there really a geologic reason Google maps sent me off course? We've got you covered.

What is magnetic north?

Magnetic north is one of three "north poles" on our globe. First, there's true north, which is the northern end of the axis on which our planet turns.

But our planet's protective magnetic bubble, or magnetosphere, isn't perfectly aligned with this spin. Instead, the dynamo of Earth's core creates a magnetic field that is slightly tilted from the planet's rotational axis. The northern end of this planet-size bar magnet is what's known as geomagnetic north - a point sitting off the northwest coast of Greenland that's changed position little over the last century.

Then there's magnetic north, what your compass locates, which is defined as the point at which magnetic field lines point vertically down. Unlike geomagnetic north, this position is more susceptible to the surges and flows in the swirl of liquid iron in the core. These currents tug on the magnetic field, sending magnetic north hopping across the globe.

"The north magnetic pole is quite a sensitive place," says Phil Livermore, a geophysicist at the University of Leeds.

What is the World Magnetic Model?

James Clark Ross first located magnetic north in 1831 in the scattered islands of Canada's Nunavut territory. Since then, the pole has largely marched north, traversing hundreds of miles over the last several decades. (Curiously, its polar opposite, magnetic south, has moved little during this time.)

To keep up with all these changes, the U.S. National Oceanic and Atmospheric Administration and the British Geological Survey developed what eventually became known as the World Magnetic Model, "so they would all be on the same map, essentially," says Ciaran Beggan, a geophysicist with the BGS.

The model is updated every five years, with the last update in 2015. Between each update, scientists check the model's accuracy against data from ground magnetic observatories and the European Space Agency's Swarm mission-a trio of magnetic-field mapping satellites that zip around Earth 15 to 16 times each day. Until now, this seemed sufficient to keep up with magnetic north's march toward Siberia.

In the mid 1900s, the north magnetic pole was lumbering along at less than a hundred feet each day, adding up to less than seven miles of difference each year. But in the '90s, this started to change. By the early 2000s, magnetic north was chugging along at some 34 miles each year.

"Things are acting very strangely at high latitude," says Livermore, who notes that this increase seemed to coincide with a strengthening jet in the planet's liquid outer core. Though the events could be linked, it's not yet possible to say for sure.

By early 2018, scientists realized that the model would soon exceed the acceptable limits for magnetic-based navigation. Something had to be done before the model's next regular update, slated for 2020.

Magnetic North Just Changed. Here's what that means? continued...

Did the government shutdown upset navigation?

To correct the model, NOAA and BGS scientists tweaked it using three years' worth of recent data. This updated version was pre-released online in October 2018. As Beggan explains, these include the model's primary users in defense and military - the U.S. Department of Defense, the U.K. Ministry of Defense, and the North Atlantic Treaty Organization.

The government shutdown delayed the comprehensive public release of the information, which includes online calculators, software, and a technical note describing the changes. In principal, everyone who uses magnetic navigation could benefit from this update, says Arnaud Chulliat, a geomagnetist at the University of Colorado in Boulder and a NOAA affiliate who worked on the update.

The model has found its way into many of our modern mapping systems, including Google and Apple, Beggan adds. But the difference is minor for most civilian purposes, and the changes are mainly limited to latitude above 55 degrees.

"The average user is not going to be overly affected by this unless they happened to be trekking around the high Arctic," Beggan says.

What caused all this weirdness?

Interest in these unexpected jolts is about more than mapping. The dance of Earth's magnetic field lines presents one of the few windows scientist have to processes that happen thousands of miles below your feet.

At the 2018 American Geophysical Union fall meeting, Livermore presented what he calls a magnetic field "tug-of-war" that may offer an explanation for the recent odd behavior. The north magnetic pole seems to be controlled by two patches of magnetic field, he explains, one under northern Canada and one under Siberia. Historically, the one under northern Canada seems to have been stronger, keeping the magnetic pole in its clutches. But recently, that seems to have changed.

"The Siberian patch looks like it's winning the battle," he says. "It's sort of pulling the magnetic field all the way across to its side of the geographic pole."

This may be a result of a jet within the core smearing and thus weakening the magnetic field under Canada, he says. The jet's increase in speed seems to have coincided with the last few decades of the magnetic pole zipping north. But he cautions about jumping to any definite conclusions.

"There may be a link there," he says. "It's not certain, but it could be."

What's next for magnetic north?

It's tough to predict what will happen to the magnetic north pole - or whether it's even going to maintain its speed as it staggers toward Siberia, notes Robyn Fiori, a research scientist with Natural Resources Canada. The only thing that seems certain about magnetic north is its unpredictably.

Rocks hold geologic maps of even weirder movements of the magnetic poles, suggesting that in the last 20 million years, magnetic north and south have flipped places multiple times. This seems to happen roughly every 200,000 to 300,000 years. The exact causes behind these reversals remains uncertain. But the latest movement shouldn't have you in knots about an imminent flip.

"There's no indication that there's a reversal," Beggan says. "And even if there was a reversal, geological records show these things tend to take a few thousand years, at the very least." (What really happens when the magnetic field flips? Here's what we know.)

Models of magnetic north suggest that this latest leap isn't even the strangest thing the pole has done in more recent history, Fiori adds. Before 1900, its wanderings likely once had a lot more wiggle and may include several hairpin turns in northern Canada that could have sent the pole on a brief southward stint.

"It all has to do with changes in the fluid motion of that outer core," she says. It's therefore hard to say if magnetic north's newfound speed is the new normal.

"We know that the pole now is moving faster than it has for decades, but how often does that happen in the long historical record?" Inquires Geoff Reeves, a space scientist at Los Alamos National Lab.

"We don't have any idea. What we know is what it's doing now is different, and that's always exciting scientifically."

"This would get me lots of candy 'cause I'd look really hungry."

WESTERN FEDERATION OF PROFESSIONAL SURVEYORS REPORT

Since the last Western Federation of Professional Surveyors (WFPS) report in the previous Foresights, the WFPS board has met in Anchorage, Alaska on February 16,2019 and on June 14, 2019 in Las Vegas, Nevada. Quite a bit was discussed at these meetings including state reports, finalization of the new Western States Disaster Relief fund as well as the finalization of the new scholarship application to include two-year degree schools. Here are the highlights from the last two meetings .

HIGHLIGHTS FROM THE 13 WESTERN STATES

ALASKA (ASPLS) Steve Buchanan - Current membership is 187. ASPLS has implemented a go-to-meeting service for Board of Director meetings and are looking at scheduling more frequent meetings for members dispersed throughout the state. The University of Alaska Anchorage Geomatics program continues to attract students and produce graduates (12-15 annually for the last 5+ years). Current enrollment is approximately 85 full-time students.

ARIZONA (APLS) Mike Fondren - Current membership is 578. Conference was held May 7-9 in Scottsdale with approximately 165 attendees. NSPS is revitalizing their Certified Floodplain Surveyor program and APLS has provided Arizona information to NSPS and has indicated their willingness to participate in the program. APLS has developed a right-of-entry (ROE) door hanger and is working on a Surveyors Guide to ROE. APLS is participating on a task force to revise the minimum standards previously adopted by both APLS and the Board of Registration. APLS is working with Mesa Community College to determine if a survey unit can be added to their construction/GIS program.

CALIFORNIA (CLSA) Ray Mathe & Rob McMillan - Current membership is 1684. CLSA Education Foundation provided several scholarships at the annual conference. CLSA legislative committee following SB 556: The bill includes a potpourri of items including issues on scope of practice, issues relating to protection of terms, some requirements on the Board of Professional Engineers, Land Surveyors & Geologists to notify other agencies regarding violations of law and penalty provisions. The bill passed out of the Senate Business and Professions Committee. BPELSG and ACEC are not in favor of the bill at this time.

COLORADO (PLSC) Roger Nelson & Todd Beers - Colorado AES Board is in the process of transferring the responsibility for approving SI exam candidate applications to NCEES. There will be emergency meetings over the next few weeks regarding the subject. The PLSC is attending meetings and participating in the discussions.

Western Federation of Professional Surveyors Report continued...

HAWAII (HLSA) Meyer Cummins - Current membership is 88. HLSA worked with its members and crafted a bill, SB 898, to amend the current Land Court Deregistration Legislation and require land owners seeking deregistration to submit a File Plan and Regular System description of the deregisered parcels as part of the deregistration process. HLSA is also working on a new bill to address the lack of a statute of limitations for Land Surveyors in Hawaii.

MONTANA (MARLS) Dick Smith & Russ Kluesner - Current membership is 427. MARLS is continuing efforts to update their Standards of Practice Manual. Work is in progress for a 2020 update to the MSSLR to include new legislation from the most recent legislative session. MARLS is looking into offering both the LSI and CST exams on site at the 2020 Conference to be held in Great Falls, February 19-21, 2020.

NEVADA (NALS) Nancy Almanzan & Matt Gingerich - Current membership is 256. NALS recently held a strategic planning session which yielded 6 initiatives and several proposed bylaw changes. The initiatives are: 1) Recruit leaders at the chapter and state level; 2) Support the 4-year degree program; 3) Increase outreach and workforce development; 4) Representation; 5) Communications; 6) Develop benefits for unlicensed members. NALS board approved the formation of a Nevada Young Surveyors Network. They will be charged with identifying the young surveyors within the state and recruiting them to the YSN. The YSN will assist NALS in outreach and develop programs. Nevada passed a resolution in support of the requirement for the 4 year degree requirement for land surveyors. WFPS Delegates discussed a similar resolution and are working on a draft resolution for approval at the September meeting.

NEW MEXICO (NMPS) Allen Grace - Current membership is 230. New Mexico has a very active Young Suveyors Group and they are working with NMPS on high school outreach including a sandbox, scanning and drones. Legislation has been passed to allow the Board of Registration to develop a scholarship program which includes outreach projects as well as providing scholarship funds (up to $100,000 annually) to engineering and surveying students.

UTAH (UCLS) Mike Nadeau - Current membership is 399. The Surveyors Historical Society Rendezvous will be in Salt Lake City September 18-21, 2019. UCLS currently supports TrigStar, the CST program and the boy scout merit badge programs. UCLS is working with a county in southern Utah that is requiring surveyors to show the entirety of a subdivision plat even if only amending one or two lots in the subdivision.

WASHINGTON (LSAW) Ben Peterson & Jeff Lynch - Current membership is 790. House Bill 1176 signed by the Governor May 21st separates the professional licensing Board from the general Dept. of Licensing and gives them control over their own finances. The Survey Map Recording Fee is increasing by $4.50 to $187.50 per survey map. New prevailing wage rates took effect in March 2019, in 26 out of 39 counties, increasing construction surveyor wages to $132,620/yr for Party Chiefs, $130,437/yr for Instrument persons, an $122,574/yr. for Chainman. The union rate automatically becomes the prevailing wage rate in those 26 counties and are slated to increase by $3/hr. in March 2020 and another $3/hr. in March 2021.

WYOMING (PLSW) Mark Corbridge - Current membership is 262. PLSW is working with the GIS Community on a possible joint conference in 2020. County Clerks in Wyoming are no longer required to keep track books and are moving toward electronic only information. The University of Wyoming has a Minor in Land Surveying as well as a Land Surveying Certificate Program. PLSW is working with the Board of Registration and the University of Wyoming on an outreach program to elementary through high school students.

WFPS OFFICERS 2019-2021

The following board members ascended or were elected as officers for the 2019-2021 WFPS term. They will be installed at the meeting on September 14, 2019 in Reno, Nevada.

Mike Nadeau (Utah) - Chair
Ben Peterson (Washington) - Chair-Elect
Mark Corbridge (Wyoming) - Secretary/Treasurer
Matt Gingerich (Nevada) - Immediate Past Chair

Western Federation of Professional Surveyors Report continued...

WFPS FOUNDATION

The WFPS Disaster Relief and Scholarship fund has been established through the NSPS Education Foundation. Donations are now being accepted. The criteria and application information has been sent to all State Associations and can be found on the WFPS website. Urgent assistance is needed for land surveyors that have been affected by the California wildfires.

The WFPS Foundation has awarded a California surveyor relief funds to aid after their home and all belongings were lost in the recent California wildfires.

Donations can be made mailed to WFPS: 526 South E Street, Santa Rosa, CA 95404
https://www.nsps.us.com/donations/donate.asp?id=18191

WFPS AREAS OF FOCUS

Providing Resources to Benefit State Associations

WFPS is dedicated to providing resources to state associations. Following are a few of the resources that are available:

1. **Speakers Burearu**
2. **Article Bank for Assocation Magazines**
3. **STEM Outreach Flyer**

Serving as a Regional Voice

WFPS has adopted a resolution to support Quality Based Selection (QBS). The resolution is attached for your use. Should your state need a letter of support from WFPS regarding a QBS issue please contact the WFPS Office at admin@wfps.org.

WFPS sent a letter of support of the Amicus Brief prepared by NSPS to the Louisiana Supreme Court in the case of Crooks vs. the State in support of the effort to the reconsideration of the court ruling.

WFPS has adopted an elevator pitch to provide a quick response to what a surveyor does: "We're really good at math and measuring. We use light beams, satellites and drones. You know that GPS in your car or phone? Well, that's accurate to about 10 feet. Good enough to get you to a restaurant or Home Depot. The stuff we use? We're talking millimeters - about the thickness of a dime. Did you know there's four faces on Mt. Rushmore and three of them are surveyors. The other guy started the Panama Canal and got teddy bears named after him. We also show you the limits of what is probably the most expensive thing you will ever own - your property - so you stay friendly with your neighbor and out of court. And when you make your fortune, and that ship pulls into harbor with your new jet-black BMW? Well, we surveyed the sea floor to make sure it doesn't bottom out. you know those steep curves on the NASCAR tracks? A surveyor laid those out ... just right so the cars don't jump over the top. Well, sometimes they do anyway! And when you get back from your Caribbean cruise, and it's been pouring rain and your plane lands at 200 miles per hour at (name of airport)? You know why you don't skid off the runway and make the 11 o'clock news? Because we banked the runway so the water runs off. We saved your life. Your welcome."

About WFPS - PowerPoint

Get to know WFPS and how we serve the 13 western state surveying association. Visit the WFPS website, click "About WFPS" and download the WFPS PowerPoint.

What can WFPS do for you

As always, I challenge the UCLS members to bring up surveying issues that can be brought to WFPS on a regional platform. As your director to the WFPS and incoming chairman of WFPS, I represent you. So please don't hesitate to contact me at Mike-Nadeau.UCLS@gmail.com.

Michael Nadeau, PLS/CFedS

Sight Distances - Seeing What Really is There

This is a story of reading between the lines of a subdivision approval, and the enduring need to "dig a bit deeper".

A land owner (let's call him Bill) wanted to subdivide a piece of property on a fairly busy public road. The planning board told Bill hey would not approve the plan unless he satisfied sight distance requirements by clearing trees located on the abutting lot to the north. Problem was, the abutting lot was owned by someone who did not want the trees removed (or just didn't want Bill subdividing his land).

The abutting lot had been created in 2001. The subdivision plan identifies a strip of land between the road and a dotted line as "Proposed Roadway Easement" and "Proposed Road Widening Easement." The trees the town wanted removed were located within this area. The initial questions, therefore, was whether Bill had the right to force his neighbor to cut the trees.

In researching that question, we reviewed all the records we could find concerning the 2001 subdivision. We also reviewed the town ordinances in effect at that time.

The planning board minutes indicate the board noted the road was a "collector" road, requiring a width of 60 feet. The minutes indicate the applicant agreed to make "the easement notations on the plan." That is where the matter fell of the rails.

The subdivision plan does, indeed, characterize the additional land required to get the 60 degree as an easement, but the planning board mandated a 60 degree wide road, not a road with a private easement appended to it. In fact, the planning board only had the power to require a 60 degree public road, and the abutter could have acquired subdivision approval only with a 60 degree wide public road.

In other words, notwithstanding the loose language stated in the minutes and thus on the plan, what actually transpired was the dedication of the amount of additional land needed to widen the existing Class V road 60 degree. (There is no such thing as a Class VI shoulder within a Class V highway.) Given that the majority of town highways are in the nature of easements rather than fee title, referring to the new section of road as an easement is not inconsistent with the intent to widen the highway. As with the interpretation of town meetings, intent governs - not the wordsmithing.

The existence of the trees in the public way implicated the town's obligations under RSA 231:150. Municipalities have an obligation to "cause to be cut and disposed of, from within the limits of town maintained highways, all trees and bushes that may...pose a safety hazard...to the traveling public..." Given the town itself, through its planning board, insisted the trees in question be removed for safety (sight distance) reasons, the town's obligations were clear.

Clearing trees and other growth within the right of way has certain requirements set for 231:139 - 156, one being notice to abutters for trees having a circumference of 15 inches or more at a point 4 feet from the ground.

The moral of this story might be to "question authority," particularly in the context of roads. Had we simply seen the word "easement" and assumed no public road was implicated, we may not have gotten very far, and our client may not have obtained approval of their modest subdivision. Taking the additional step of reviewing the 2001 subdivision records completely changed the meaning of what was written on the subdivision plan.

Reprinted from the TBM - the New Hampshire Land Surveyors Association Newsletter

July "Where is it"

Timothy Wolf of Artisan Surveying was the first UCLS member to identify the location of the first weather station in Utah.

In 1870, the first United States Government weather station in Utah was erected in the Town of Corinne in Box Elder County. The War Department Signal Services, U.S. Army Division of Telegrams and Reports installed the station for the benefit of commerce. William W. McElroy was its observer until March 13, 1874 when the station was moved to Salt Lake City.

LAND SURVEYING AND GIS: IT'S TIME TO EMBRACE THIS PARTNERSHIP

Published on May 23, 2017

By: Tim Hoffer VP Underground Services (Softdig)

Binary thinking is one of the quickest ways to underperform in a three-dimensional world. That there ever was a dichotomy between land surveying, or creating precision measurements of a landscape, and GIS, enabling modern applications to make optimized use of these measurements, is unfortunate. GIS pros call surveyors stodgy, while surveyors look at GIS as unscientific. Supposing that the worst of these stereotypes were true. Wouldn't this naturally cause one to think of a collaborative effort as the way to shore up weaknesses in both philosophies?

The truth is that GIS is as accurate as it has to be to fulfill its core competency - systems integration. Land surveying is as innovative as it needs to be to fulfill its core competency - canvassing. In order to optimize the positive aspects of both disciplines, we first need to understand where the problems come from.

THE WAR OF MISUNDERSTANDING BETWEEN LAND SURVEYING AND GIS

Because land surveyors and GIS professionals are both assessing the same basic asset - land - professionals from either side may consider the way assessments are made on the "opposing" side to be pointless or inefficient. However, the purpose for which a surveyor and a GIS man would be taking stock of a parcel is completely different. For instance, a homeowner who is looking to precisely locate the boundary line around a property cannot call either a surveyor or a GIS guy. That homeowner would need to call a land surveyor specifically. A reputable GIS professional would be quite up front that assessing land for the purposes of taxation or boundary location are beyond the scope of his jurisdiction or competence.

However, if a landowner is looking to create a suitability analysis for a construction project, the surveyor would have to take a backseat. The GIS specialist is the person to call for this type of assessment, although the surveyor may be looking at a very similar data set.

Consider a huge rock sitting in the middle of an acre of land. Both the surveyor and the GIS specialist will be able to tell you it is there. However, only the surveyor can tell you if the rock is completely within the boundaries of your land parcel, and only the GIS guy would be able to assess the tools it might take to remove the rock to put a house there.

Surveyors may automatically assume that anyone calling himself a "geographic information systems" professional should have the same capacity as the surveyor. GIS pros may assume the same thing. The truth is that both disciplines are far too complex for either to master the other without specialized training. This will only become more true as technology improves and becomes more demanding of its human monitors.

A VARYING SCOPE OF PRECISION

Both GIS professionals and land surveyors become incredibly precise, but at two completely different times and for different purposes.

The land surveyor may not be as precise when measuring the horizontal coordinate of a topographic feature. However, the surveyor is incredibly precise when placing this feature in relation to other features. The GIS professional perceives location as the single most important aspect of every topographic feature that it measures, and its relative position is less important.

MATCHING TECHNOLOGIES

According to some GIS-survey hybrid professionals, GIS tech has yet to catch up with the amount of data that a surveyor can generate. The original purpose of GIS was for natural resource management, and hardware development companies are only beginning to see returns from investing in other applications. The scale of data that surveyors currently create is also better served in a database, a cultural shift that GIS pros have yet to fully implement.

At the same time, 3D tools, HD imagery, terrestrial scanning and light detection and ranging (LiDAR) are, at times, giving surveyors mare than they can handle. Surveyors should not overlook the fact that they are perhaps expecting GIS tech to expand at a rate faster than surveyors themselves have been able to cultivate. For instance, GIS is making CAD obsolete on some projects requiring full-scale system management of assets-a shift that many surveyors are less than willing to acknowledge, much less implement.

LAND SURVEYING AND GIS - TWO COMPLEMENTARY DISCIPLINES

Surveying and GIS are fraternal twins growing up beside each other, play fighting in the sandbox to the greater end of improving the strength of both. When both of these brothers grow beyond their training stage and realize they better serve each other in cooperative tandem, we can expect to see some incredible strides forward in environmental surveying. Hybrid technologies are already being established that foreshadow this stage of technology.

The markets that can fully employ HQ survey data are increasing - legal land surveys are no longer the only application of elite surveying efforts. Volumetric modeling, 3D visualization, architecture measurement and precision farming are relatively new disciplines that will require the cooperation of surveyors and GIS professionals to get to the money. Governments have also begun to require hybrid tech efforts to complete huge projects, including the European initiative SESAR and ERTMS and America's Gen Air Traffic Control and Positive Train Control.

New economies are driving new technologies. Open standards, such as those advocated by the Open Geospatial Consortium and Open GIS, are being used more often to generate a higher degree of interoperability between systems and less time spent porting applications. GIS technology is quickly applying itself to surveying techniques, most notably LiDAR.

Land Surveying and GIS: It's Time to Embrace this Partnership continued...

GIS is the already preferred philosophy/technology for managing data culled from modern surveying tech-mobile mapping, LiDAR and laser scanning. As these tools become more precise, surveyors will have no choice but to rely on the only technology with the scale and power to handle them.

In short, leaders in the surveying and GIS industries are all beginning to recognize the opportunities that come with cooperation. For those professionals on both sides who are looking to expand their horizons, it is time to embrace this partnership.

For more information on GIS services that we provide, call us at (800) 545-1531 or use our online estimate request form.

Kim Lundeberg

Kim was born on August 7, 1951 and passed away on Thursday, July 5, 2018.
Kim was a resident of Murray, Utah at the time of passing.
Kim was an active member of the US Navy during Vietnam.
A viewing will be held on Friday, July 13, 2018, at 2:00 p.m. at Jenkins-Soffe Funeral Home, 4760 S. State Street, Murray, for close friends and family, followed by a memorial service at 3:00 p.m.

Dan E. Knowlden

Dan E. Knowlden, of Springville, returned to his spiritual home on Sunday September 8th, 2019, surrounded by his devoted family.

Dan was born in Tooele, Utah on February 21, 1947, the son of Jack D. and Lucille Lawrence Knowlden. He was raised in a large military family. He moved a lot while growing up and lived in Japan, Taiwan, and Alaska.

Dan graduated from Anchorage High School. During the summer after graduation he worked for the FAA doing surveying in remote areas of Alaska. He loved this work and decided to make it his career. After completing the necessary training and earning the required certifications, he worked for the state of Utah for 31 years as a Design Engineer, and as a Right of Way Engineer until his retirement. He received a prestigious award for the work he did on the Intersection of University Parkway and State Street in Orem. (At that time, it was the busiest intersection in Utah). Dan was one of the few engineers asked to be on the design committee for the I-15 corridor project. He was well known and respected for his work. Additionally, he worked for two private surveying companies after his retirement. Dan was also a member of UCLS (Utah Council of Land Surveyors).

Dan married his Eternal Companion and Sweetheart, Patricia Ann Mitchell on November 4th, 1970 in the Salt Lake City Temple.

Dan was a member of the Church of Jesus Christ of Latter-Day Saints. He served an LDS mission in the Central Atlantic States. He has held many church callings including Bishop and Branch President. Later in life he and his wife Patricia served an LDS mission in Seoul, Korea. He absolutely loved the Korean culture, food, and the people there. He has been a man of service and is well loved by those he has served.

Dan loved to read- especially action-packed books. He enjoyed yard work and home improvement projects until his health no longer allowed it. He loved to travel. He had been on many cruises, a return trip to Korea, Hawaii several times, and of course the yearly family trip to Snowbird for a week in September.

Dan is survived by his wife Pat, five children Jennifer (Russell) Robbins of Wasilla AK; Emily (Roger) Edwards of Pleasant Grove UT; Collette (Randee) Robbins of Evanston WY; Dan E. (Shelly) Knowlden of Spanish Fork, UT; and Kimberly (Dave) Carroll of Springville UT, Mother Lucille Knowlden, Siblings Jean Arbogat, Kathleen Smith, Diane Knowlden, Emma Berry, Faith Ball, Becky Rahimzadegan, Chris Knowlden, his 12 grandchildren Sarah, Kory, Kyle, Kade, Casey, Mattison, Hunter, Austyn, Jett, Bren, Charli, and Parker, and 6 great-grandchildren Tucker, Addison, Tage, Paisley, Jack, and Sophie. Dan was preceded in death by his Father Jack D. Knowlden, Brothers Dennis Knowlden and Jay D. Knowlden, and his precious twin sons Jeremy and Jeremiah Knowlden.

Dan was diagnosed with terminal liver cancer in May of 2018 and fought so hard to stay here with us. We are so proud of him for his positivity, strength, and courage - he truly endured to the end. "Behold, I am the law, and the light. Look unto me, and endure to the end, and ye shall live; for until him that endureth to the end I will give eternal life." 3 NE. 15:9

Why are ice cream and fruit concoctions called "sundaes?"

The year was 1881 in the small town of Two Rivers, Wisconsin and it was a Sunday. A patron was on his way to a local drug store and ice cream parlor. When he arrived at the small ice cream parlor, he ordered an ice cream soda which was a very popular treat at that time. Unfortunately for him, the owner of the ice cream parlor, couldn't serve him his ice cream soda because recent "Blue Laws" had labeled soda as "scandalous" and not appropriate to be sold or consumed on the Sabbath. Instead of sending George away empty handed, Edward served him a generous scoop of ice cream with chocolate syrup drizzled on top; an ingredient that was previously only used in ice cream sodas. Even though the treat was missing an important ingredient, soda, it grew in popularity and earned the name, "Treat for Sundays." It wasn't long before more and more customers began asking for the "Sunday" treat, further solidifying its name. To avoid offending those devoutly religious, the treat received an official title of "ice cream sundae." The misspelling of Sunday was purposeful to assure religious leaders that the treat was not named after the Sabbath.

Why are boxing rings called "rings", despite being square-shaped?

The name boxing "ring" is a relic of ancient times when a physical fight between two opponents took place within a roughly drawn circle on the ground. Also, viewers gathered around the two fighters in a roughly circular manner, forming a "ring" of spectators. Although boxing matches are now conducted in square-shaped areas, such spaces are still called "rings." Almost a hundred years after that set of standardized rules emerged for the sport of boxing, the Pugilistic Society introduced the first square ring in the year 1838, which was basically a 24 foot square. This is another reason why the ring where two boxers fight is also referred to as the 'square circle'.

Why is a drink given to you after a drinking binge called "the hair of the dog?"

The fuller version of this phrase, that is, "the hair of the dog that bit me", gives a clue to the source of the name of this supposed hangover cure. There was a medieval belief that,when someone was bitten by a rabid dog, a cure could be made by applying the same dog's hair to the infected wound. I wonder how many people managed to get bitten again when trying to approach the aforesaid dog to acquire the hair to achieve this completely useless remedy. While the "hair of the dog that bit us" is a useless rabies treatment, the taking of additional alcohol to cure a hangover has some scientific basis. The symptoms of hangover are partly induced by a withdrawal from alcohol poisoning. A small measure of alcohol may be some temporary relief, even if in the longer term it makes the hangover worse.

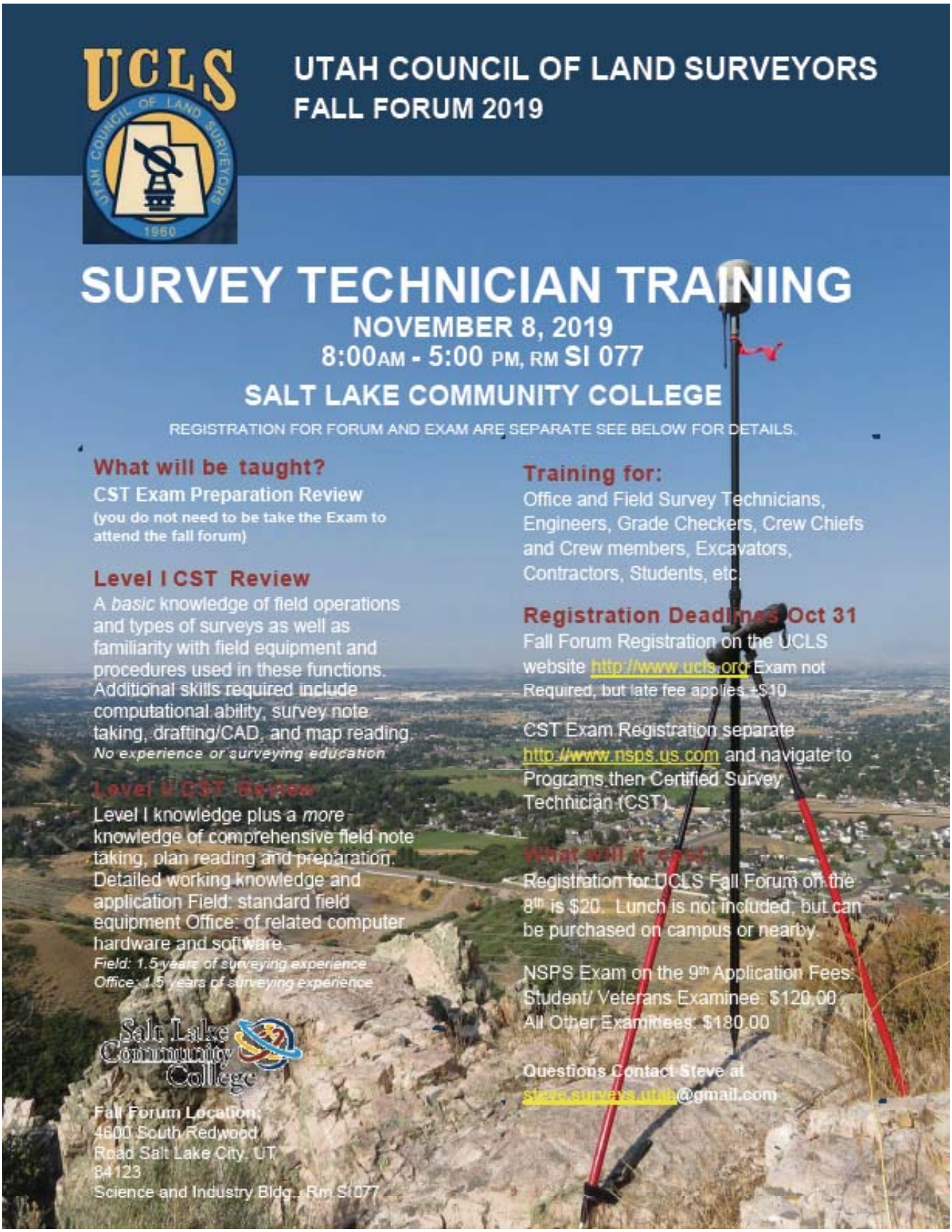
Quick Facts:

If you look at a computer keyboard, any keyboard, you'll notice two little bumps on both the F and J keys. If you ever took a class in high school on how to type, you probably know why those bumps exist on those keys. For the rest of you, those bumps are there so users can find their way on the keyboard while keeping their eyes on the screen. If you are typing with two hands the proper way, your hands will be set up so that your left pointer finger is on F and your right pointer finger is on J. Without having to look at the keyboard, you just have to feel these bumps with your fingers to know that your hands are aligned properly and ready to get to work.

An estimated 80 percent of creatures on Earth have six legs.

The first email was sent over the Internet in 1972.

The distress signal before SOS was CQD, which meant "come quick danger."


UTAH COUNCIL OF LAND SURVEYORS
FALL FORUM 2019
SURVEY TECHNICIAN TRAINING
NOVEMBER 8, 2019
8:00AM - 5:00 PM, RM SI 077
SALT LAKE COMMUNITY COLLEGE
REGISTRATION FOR FORUM AND EXAM ARE SEPARATE SEE BELOW FOR DETAILS.
What will be taught?
CST Exam Preparation Review
(you do not need to be take the Exam to attend the fall forum)
Level I CST Review
A basic knowledge of field operations and types of surveys as well as familiarity with field equipment and procedures used in these functions. Additional skills required include computational ability, survey note taking, drafting/CAD, and map reading.
No experience or surveying education
Level II CST Review
Level I knowledge plus a more knowledge of comprehensive field note taking, plan reading and preparation. Detailed working knowledge and application Field: standard field equipment Office: of related computer hardware and software.
Field: 1.5 years of surveying experience
Office: 1.5 years of surveying experience
Training for:
Office and Field Survey Technicians, Engineers, Grade Checkers, Crew Chiefs and Crew members, Excavators, Contractors, Students, etc.
Registration Deadline Oct 31
Fall Forum Registration on the UCLS website http://www.ucls.org Exam not Required, but late fee applies +$10
CST Exam Registration separate http://www.nsps.us.com and navigate to Programs then Certified Survey Technician (CST).
What will it cost:
Registration for UCLS Fall Forum on the 8th is $20. Lunch is not included, but can be purchased on campus or nearby.
NSPS Exam on the 9th Application Fees:
Student/ Veterans Examinee: $120.00
All Other Examinees: $180.00
Questions Contact Steve at
@gmail.com
Salt Lake Community College
Fall Forum Location:
4600 South Redwood Road Salt Lake City, UT 84123
Science and Industry Bldg., Rm SI077

Utah Council of Land Surveyors

2020 OFFICERS NOMINATION FORM

Nominees must be Licensed Members of UCLS

Please nominate yourself or those you would like to see serve as officers of UCLS. The nomination ballot must be received by the UCLS Nomination Committee on, or before November 8, 2019. If additional space is needed for the biography, please add a second page. Those people nominated who have no biography attached will appear that way on the voting ballot.

STATE OFFICERS

STATE CHAIR-ELECT
Job Description State Chair-Elect: Attend approximately six UCLS State Executive Board meetings held throughout the state per year. Assume State Chair position during the second year and past chair position during the third year. As State Chair attend and conduct the above-mentioned board meetings, oversee all state UCLS business, appoint committee chairs, and attend or appoint an attendee to various meetings.

CHAPTER OFFICERS

CHAPTER PRESIDENT
Job Description Chapter Presidents: Hold chapter board meetings to carry out chapter business, plan and conduct at least 4 chapter member meetings, attend the UCLS State Board meetings mentioned under Chair-Elect duties, serve as a liaison between the state board and a UCLS committee.

CHAPTER VICE-PRESIDENT
Job Description Chapter Vice-President: Assist chapter president, attend chapter meetings, and assume responsibilities of the chapter president in his absence

GOLDEN SPIKE CHAPTER REPRESENTATIVE – 1 YEAR TERM
Job Description Chapter Representative: Assist chapter president, attend chapter and board meetings, represent chapter at the state board meetings mentioned under Chair-Elect duties, serve as liaison between the state board and a UCLS committee.

Name _____

Office Nominated For _____

Chapter Affiliation _____

Years in Surveying _____

Years in UCLS Association _____

Accomplishments and Current Survey Activity _____

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Why you wish to run for office or nominate this person?

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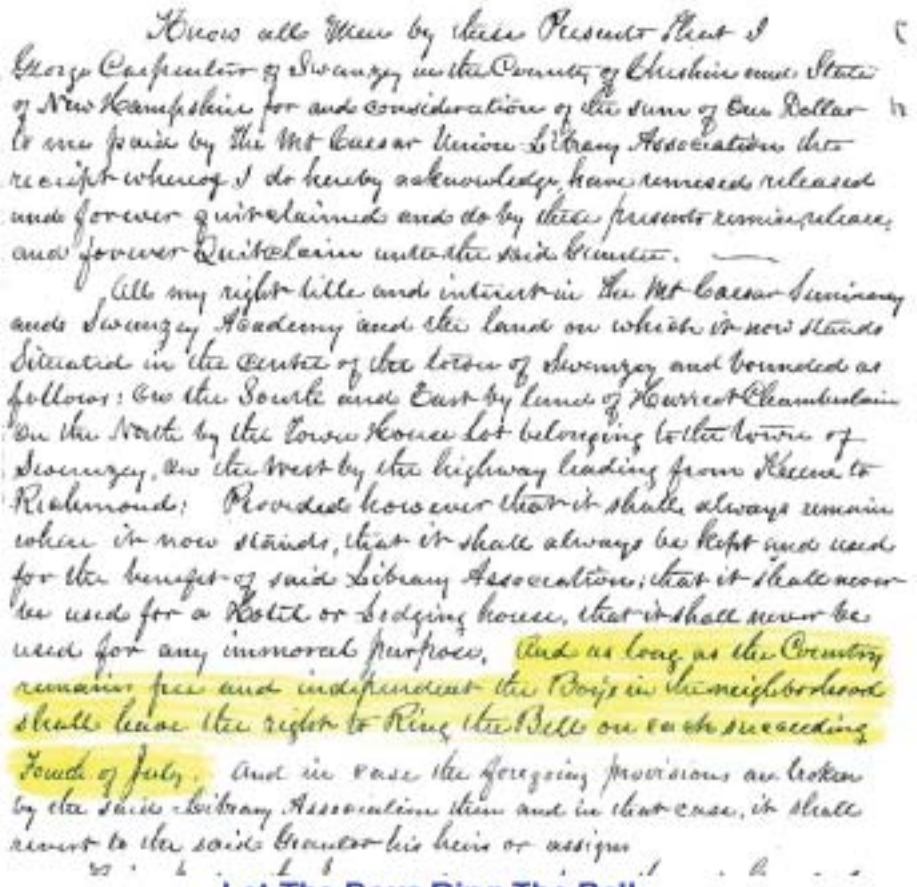
Dastardly Deed



Know all Men by these Presents That I George Carpenter of Swanzey in the County of Cheshire and State of New Hampshire for and consideration of the sum of One Dollar to me paid by the Mt Caesar Union Library Association the receipt whereof I do hereby acknowledge, have remised released and forever quitclaimed and do by these presents remise release and forever Quitclaim unto the said Grantee.

All my right title and interest in the Mt Caesar Seminary and Swanzey Academy and the land on which it now stands Situated in the Center of the Town of Swanzey and bounded as follows: On the South and East by lands of Harriet Chamberlain On the North by the Town House Lot belonging to the Town of Swanzey, on the West by the highway leading from Keene to Richmond; Provided however that it shall always remain where it now stands, that it shall always be kept and used for the benefit of said Library Association; that it shall never be used for a Hotel or Lodging house, that it shall never be used for any immoral purpose, And as long as the Country remains free and independent the Boys in the neighborhood shall have the right to Ring the Bell on each succeeding Fourth of July. And in case the foregoing provisions are broken by the said Library Association then and in that case, it shall revert to the said Grantor his heirs or assigns

Let The Boys Ring The Bell

Mt. Caesar Union Library, Swanzey, New Hampshire
By: Wendy Pelletier

"And as long as the United States shall remain free and independent, the boys in the neighborhood shall have the right, unmolested, to ring the bell on each succeeding Fourth of July."

Life was a little simpler when this deed was written on May 16, 1885, 134 years ago from the writing of this article. Times have changed as we are all aware. Finding deeds of this nature make me pine for the days when it was still important to ring the bell to remember our freedom, before parties and picnics became so big on this day that we have forgotten why we celebrate.