

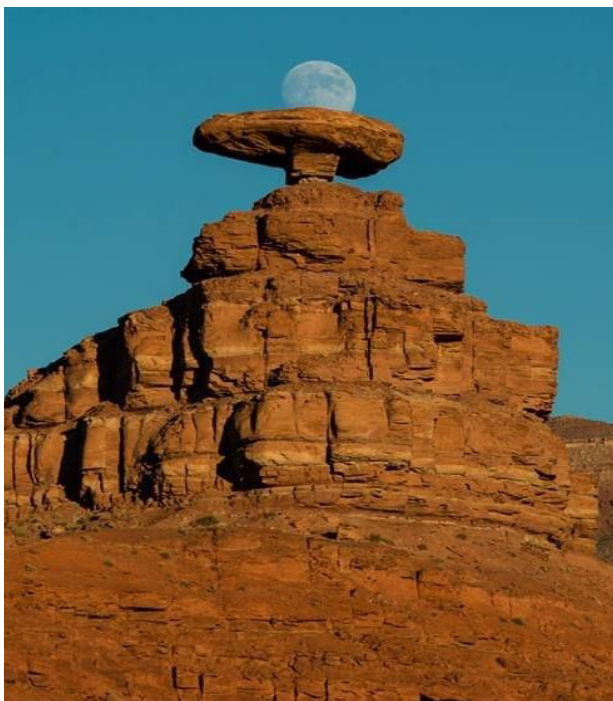
The UCLS Newsletter

Volume 4 Issue 18



January 2017

Where is it?



Do you recognize this unique and unusual land formation?

Be the first member to correctly identify this natural creation and you will be eligible for a free lunch at your 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: Procedures for the disposal of mobile devices and the business risks of using unmanned aerial systems are presented; two UCLS

Chair candidates share their thoughts on our organization; the value of a surveying education is discussed; and the latest conference schedule is provided.

Readers will be amused, entertained, and/or educated by the Dastardly Deed, Just for Fun, Did you Know, Natural Laws, and our North Arrow competition that are included in this issue.

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:

Page 2.....Officers &
Committees
Page 3.....Road History
Page 4-5..UCLS Elections
Page 6.....Surveying Education
Page 7.....Did you Know
Page 8..... North Arrow
Page 9.....New Year
Page 10.....Natural Laws
Page 11.....Dastardly Deed
Page 12-13 Mobile Device
Disposal
Page 14-16 UAS Risk Exposure
Page 17.....Surveying Tips
Page 18-19 UCLS Conference
Page 20.....Just for Fun

**"Take the first step in faith. You
don't have to see the whole stair-
case, just take the first step."
-Martin Luther King, Jr**

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Contributions are encouraged. Articles, Advertisements, Pictures, and Comments may be submitted to UCLS at ucls@ucls.org or uclsforesights@ucls.org

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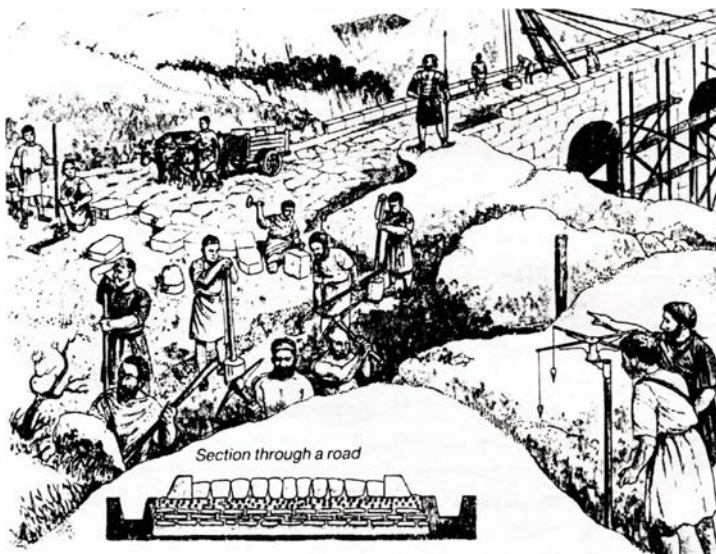
A Short History of Roads

by Jim Collins



Archaeologists believe our earliest roads emerged alongside the invention of the wheeled vehicle slightly before 3000 B.C., in the Neolithic period. As human settlements grew in size, trade expanded between villages. Some of the ancient wagon paths that formed between populated centers were routes of epic proportion. Trade roads known as "Amber Routes" linked Greece and Italy to the Baltic Sea. And the Chinese constructed a network of more than 2,000 miles of roads, which were hacked out of dry earth or carved into sandstone. The Royal Road of Persia stretched 1,775 miles from the Persian Gulf to the Aegean Sea. In northern Europe, logs laid corduroy style carried travelers over marshland.

To move their military might around an expanding empire, the Romans constructed the first engineered road system.



They built their roads straight and supported them with graded, bermed foundations that helped shed and drain water. On top of the foundations lay a bedding of sand or mortar; rows of large, flat stones; a thin layer of gravel mixed with lime; and a thin-wearing surface of flint-like lava. The depth of the roadbeds varied between three and five feet. At the height of the empire, some 53,000 miles of roads fanned out from Rome into the provinces, creating an elaborate feeder system that gave rise to the observation "all roads lead to Rome." Although the Roman roads demanded continual maintenance, they were strong and durable.

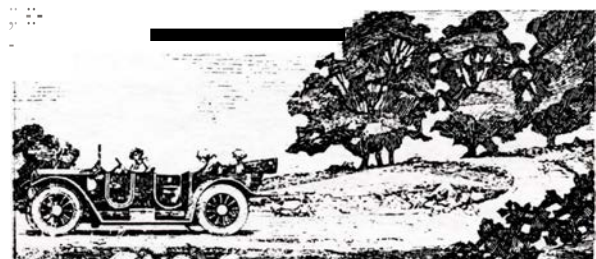
By the Dark Ages, most country roads in Europe had deteriorated to little more than dirt tracks, often mud tracks when it rained. Cobblestone streets in cities and villages were the major exception. Even the turnpike roads of eighteenth-century England were rutted and impassable.



It wasn't until the beginning of the 1800s that a Scotsman named John Loudon McAdam established the footprint of the modern highway. Shunning the heavy masonry foundations of the Roman engineers, McAdam proved that traffic - horses, wagons, bicycles - could be supported by a relatively thin subgrade of crushed granite or greenstone, compacted atop a soil foundation, and covered by an impermeable surface of smaller stones. Called "macadam" after McAdam, these structures took wear and sloughed water into drainage ditches. His method greatly reduced the time, space, and cost involved with traditional road building.

In the United States, however, that same century's legacy centered on railroad construction, not roads. Most of the burgeoning country was still rural or remote, the roads little more than improved dirt tracks. Until the late 1800s, paving was widespread only in urban centers. Common materials included cobblestones or wooden blocks, bricks, and crushed stones. The crushed stones provided the cheapest pavement, but its loose surface was difficult to maintain. Road builders began to use new materials - primarily asphalt, but sometimes-hot tar - to bind together the compacted stone base, establishing what we recognize as the formula for modern road construction. This asphalt mixture also became known as "macadam," for the macadam stone mixed into it. As automobiles roared into the 20th century, macadam was a mixture that stuck.

-Excerpted from "How It Works," a feature of US Airways magazine "Attaché," October 2002.



UCLS Officer Elections

Fellow Surveyors:

We're at an interesting time for our profession. This is highlighted by next year's UCLS Convention theme "Together Towards Tomorrow." It is evident that, as surveyors, we need to be looking to understand what the future holds not only for ourselves but for those that will be following in our footsteps.

It was relayed to me that a recent survey conference one of the speakers compared Land Surveyors to wagon-wheel makers in the year 1899, the implication being that in a decade, there will be no need for what we have to offer. We as a profession need to be diligent in ensuring that as technology progresses, we progress with it; rather than just lament the invention of the automobile, we need to begin making steel belted radial tires!

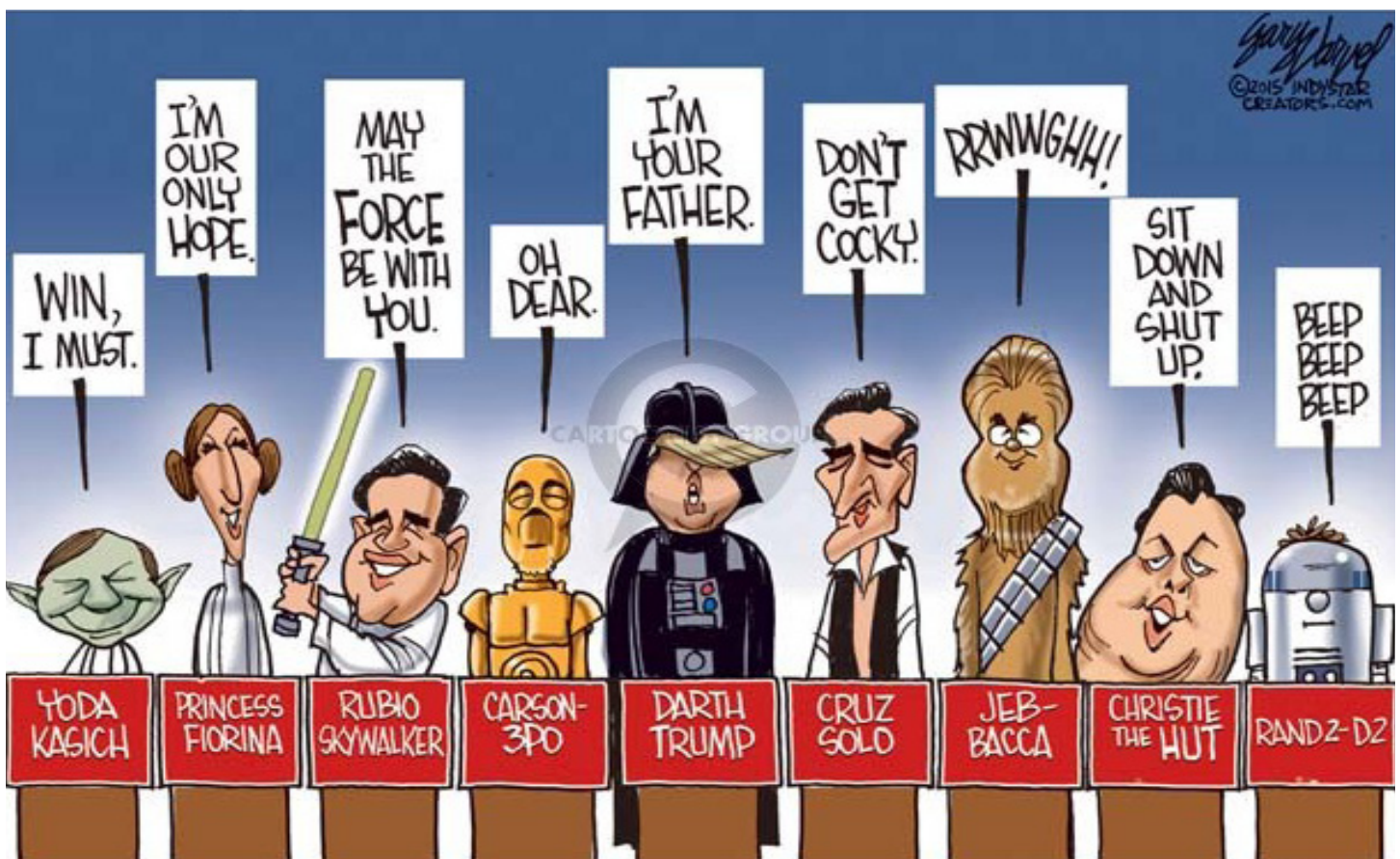
The UCLS is the principal organization where we can come together as surveyors, get involved, and take action. In addition to internally enhancing our profession with continuing education and strengthening relationships, the UCLS can and should be leading the charge to safeguard our profession in Utah. This begins by holding ourselves and our colleagues to a higher standard, by ensuring that licensed activities are performed only by licensed individuals, and that as technology progresses, surveyors are still the professional force behind activities we know to be under the umbrella of surveying.

You'll shortly be receiving an email with instructions on voting for this year's UCLS officer elections. The positions themselves come with the responsibility of not only representing our current UCLS membership but enhancing and protecting the profession for future generations of surveyors. As a second generation surveyor who has weathered the economic storms afforded to the private sector, I understand the importance of these responsibilities, and I hope that all of us understand the importance of the UCLS. So please, when you get the email, take a few minutes to follow the voting instructions, review the nominees, and cast your vote. Because we do need involvement, we do need action, and to be quite frank, we need to give a crap!

Thank you for your time, and if you plan to vote (regardless of who it's for), thank you for giving a crap!

Respectfully,

James Coutts, PLS



Season's Greetings!

It is amazing that we all just survived one election and here it is again. Time to vote for your National Society of Professional Surveyors (NSPS) Representatives along with those whom will represent you here in the great State of Utah on the Utah Council of Land Surveyors (UCLS) Board and Chapter Officers.



I am amazed at our organization. It's members are those who are willing to embrace our profession for all its value, spunk, excitement and opportunities. Yes, spunk and excitement! Clearly it takes a special person to want to become a Land Surveyor and follow in the footsteps of great men who have come before. Some who are memorialized on mountain tops, others in books and print, and majority I know, who are reading this now! Yes. You the UCLS member is both young at heart and who has a willingness to make your profession even better than it has been.

I am not going to propose that new need to make the UCLS "great again" as toted in the recent elections. However, I do recognize several monumental opportunities that are ahead of us as both an organization and as a profession. It should make your blood boil to hear that we are still compared to wagon wheels from the Pioneer Days or that we should be building radial tires in today's world to keep up. Our profession has so much to offer, advancements to learn, to embrace, and so much to teach those entering into this profession how to use technology correctly.

I didn't think I was that old, but I do to remember the automobile industry when 'Rockey Cars' were imagined to be on our streets, skies and in our garages by 2000. That hasn't exactly come to pass. However, the computer chips in each and every new car would more than be able to control the first Gemini and Apollo rockets that helped launch the space program and the former Senator John Glenn (God Speed John) into space and helped create the GPS program that we now enjoy. Back to the Future did get the World Series correct with the Cubs winning (or at least one year off)...

Let us look to our new convention theme "Together Toward Tomorrow" with the same desire and foresight that first motivated you into this profession whether by accident, desire or birth. Whether you are a second, third, fourth or new generation surveyor, this profession is yours (ours) and it's time to help move this into the next tomorrow. Each of us have an opportunity to decide the course our organization will move forward and the direction you want this to head in.

Are you a mentor? Does the next generation know why they are pushing the buttons they are and what the results truly mean or have we already lost this technology challenge? Are you one of those wondering what the UCLS has done for you lately? Are you concerned that the Surveying profession is falling behind? And falling behind who or what?

If you answered yes or no to any of the above questions (tricky), it's time to get motivated and more involved than you ever have been before! I have been able to be part of this great organization now for 13+ short years and 25+ years in the surveying profession and I am reaching out to other organizations to see, explore and continue to learn how we can improve our membership, our profession and even ourselves personally. The NSPS, WFPS, and UCLS are but a small part of many wonderful opportunities ahead of each of us. There are so many wonderful tomorrow's ahead of each of us!

Yes, all of this is my platform to move the UCLS forward into these exciting, opportunity filled tomorrows! If you agree, please vote for me. But, remember to take a moment and vote! You don't get to complain if you didn't cast your vote.

Sincerely,

James A. Olschewski, PLS, CET, SR/WA

Affording a Surveying Education

by

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

I am a faculty member in the surveying program at the University of Maine and a parent of three college educated children. I am often asked, mostly by parents, what financial aid is available for their children. I will share the guidance I provide on the subject of how to afford a quality four-year surveying education.

Apply for Surveying Scholarships -- Almost every state surveying society has scholarships available for aspiring surveyors. National professional societies such as the National Society of Professional Surveyors have scholarships available to students (<http://www.nsp.us.com/?page=Scholarships>). Scholarship committee members often lament how few scholarship applications they receive. The face is that a majority of surveying students do not apply for the numerous surveying scholarships that are available.

In order to encourage students to apply for scholarships, I will often suggest to students that the hour or two that may be required to prepare a complete and quality application will often garner some of the best hourly pay the student will ever earn. To obtain a \$2,000 scholarship for two hours of effort is equivalent to \$1,000 per hour.

My advice is usually ignored. (I suspect if the parents heard my advice, more scholarship applications would be forthcoming from their children.) Accordingly, those students that do apply for a scholarship have an excellent chance to obtain a scholarship. The odds of receiving a scholarship are much better than any lottery.

Apply for Work Related Scholarships -- Many employers offer scholarships to employees. In the past, the Bureau of Land Management (BLM) provided educational funding for students that worked for the BLM as summer survey interns. Several private surveying firms often provide scholarships to summer interns upon their return to college after working for the firm during the summer so long as there is a commitment to work for the firm in the future.

The most notable work related scholarships available to employees are National Guard and military reserve scholarships. Serving one weekend a month and two weeks a year will often provide a student with full tuition toward a four-year degree.

Apply for General Scholarships -- Numerous colleges offer general scholarships to students. Scholarships are often available to students that are in certain disciplines, the residents of certain towns, members of certain minority ethnic groups, or have achieved notable academic standards.

Community College -- Students can save considerable tuition expense by attending a community college. Tuition is often considerably less at community colleges when compared to the tuition for similar courses at a four-year university. Students should be encouraged to take as many credits as possible at a community college.

Mathematics, English, speech, physics, and many other general subject classes can be taken at a community college. These courses will usually transfer to a four-year surveying program. If there is some doubt, check on transfer credits at the four-year program before taking the course at a community college.

Students that are intending to embark on a surveying career should consider getting an associate degree in surveying at a community college before transferring to a four-year surveying degree program. In the alternative, the student can take almost all their general course work at a community college and take the engineering and surveying courses at a four-year college in order to complete a degree requirement leading to a bachelor of science degree in surveying.

Advice to My Children -- While I have given this advice to many students and parents, parents are curious and have asked me what advice I gave to my own children. How did I handle financing my children's education? My advice to my three children was simple and direct. They could go to any college they could afford.

I see so many young students enroll in university programs that have very little future for employment (not so in surveying). Students enrolled in majors without future employment prospects will pile up debt with little hope for paying off the student loans in a reasonable period, if at all. At least half of the students at the campus where I teach would have a much brighter economic future and a more rewarding career had they gone to a technical school and learned a trade rather than attend a university where they majored in, for example, Medieval Literature.

To further compound their future financial difficulty, many students attend expensive private colleges where the students enroll in majors with little prospect for future employment.

My advice and opinions were communicated to my three children. My daughter and son became engineers. My youngest son is a nurse. All are gainfully employed without student loan debt. Two financed their education with Army scholarships. One financed her electrical engineering education with a merit scholarship that covered all four years of her education.

In closing, you might ask how I funded my own education. I used the G.I. Bill (Marine Corp Veteran). I followed the advice I gave. I earned a two-year degree before transferring to a four-year program. My graduate degrees were funded by my employment as a teaching assistant. I will also give credit to my wife who also worked to support the family while I attended college.

I hope this advice helps prospective students and parents. We need more surveying students. In 2016, surveying graduates had at least three employment offers each. Surveying is a great major and rewarding career. Encourage more students to enroll in a surveying program and give the prospective students and parents my advice.

HEAR YE! HEAR YE!

The Utah Council of Land Surveyors are pleased to announce their 2016-2017 scholarship recipients

Elizabeth Draper \$500

Cory Albright \$1,000

Michael Stewart \$1,200

Sean Ireland \$1,000

Sierra Holz \$800



Did You Know?

In 2005, New York resident Zaq Landsberg acquired two acres of hostile land in Utah's Evaporated Basin of the Great Salt Lake from eBay, sight unseen.

Though it sounds like something one might do in the midst of a night of heavy drinking - akin to purchasing that Japanese knife set from late-night TV - Landsberg knew full well what he was doing. For a grand total of \$610, the 30-year-old had successfully acquired the keys to his own personal country, which he continues to operate over a decade later as a self-described "art project" whose goal is to "become a real country."

Since its founding, the Republic of Zaqistan has garnered national attention simply for existing; no permanent residents call the land home, though Landsberg and a cadre of Zaqistanis who've petitioned for citizenship from Zaqistan's Department of State make pilgrimages there once or twice a year. Features of the almost country include zero permanent shelters or roads connecting the interior, one unmanned immigration booth, a newly erected monument to the 10th year of Zaqistani Independence, one bed of plastic wildflowers, and a tiny natural rock formation deemed Mt. Insurmountable.

Despite issuing a Declaration of Succession, and beginning to issue passports, one technicality stands in the way of the Landsberg's creation receiving official micro-nation designation: no other sovereign nation has recognized Zaqistsan as extant. A recent wave of international media attention directed at Zaqistan may remedy this sooner than even its founder had foreseen.



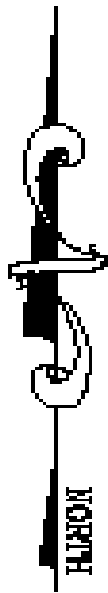
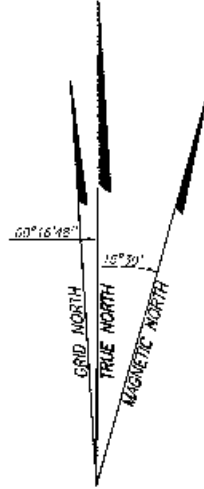
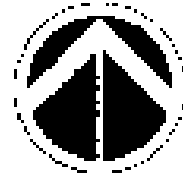


HORSEFLY

Vol.--Field Notes, Vol. 84
Page 154

Reported in Geo. MacKay's notes of West Boundary of T30s, R39e, "Large horsefly 3/4 of an inch long--outrageous--swarmed upon mule and bled her to death. Saved horses by rubbing them with tar and alligator oil mixed. May 17th 1844."

MATCH THE NORTH ARROW TO THE COMPANY

Company	A	B	C	D	E	
1 Cliff Peterson						1 = _____
2 PEC Consulting						2 = _____
3 LEI Consulting						3 = _____
4 Foresight Surveying						4 = _____
5 Thompson- Hysell Eng.						5 = _____

Answers on page 9




LESS	MORE
TALKING	LISTENING
PLANNING	DOING
SODA	TEA
JUNK FOOD	SALADS
COMPLAINING	ENCOURAGING
WORRYING	HOPING
DOUBTING	BELIEVING
LAZING AROUND	WORKING OUT
FROWNING	SMILING
INSECURITY	TRUST
WEAKNESS	CONFIDENCE
IGNORANCE	UNDERSTANDING
HATE	LOVE
UNGRATEFULNESS	GRATITUDE

20 Best New Year's Resolutions


1. Eat healthy foods.
2. Get a physical exam.
3. Set up a fitness routine.
4. Attend educational events.
5. Schedule time for hobbies.
6. Save money and pay off debts.
7. Maintain a healthy weight.
8. Volunteer with charities.
9. Get more sleep.
10. Organize your life.
11. Spend more time with family.
12. Reduce TV time.
13. Spend more time in nature.
14. Read a book.
15. Quit smoking.
16. Quit drinking.
17. Walk more and drive less.
18. Learn a new skill.
19. Conquer a fear.
20. Travel. Plan a vacation.


The internet


Natural Laws


 - **Law of Mechanical Repair** - After your hands become coated with grease, your nose will begin to itch & you'll have to pee.

 - **Law of Gravity** - Any tool, nut, bolt, screw, when dropped, will roll to the least accessible corner.


 - **Law of Probability** - The probability of being watched is directly proportional to the stupidity of your act.


 - **Law of Random Numbers** - If you dial a wrong number, you never get a busy signal & someone always answers.


 - **Law of the Alibi** - If you tell the boss you were late for work because you had a flat tire, the very next morning you will have a flat tire.


 - **Variation Law** - If you change lines (or traffic lanes), the one you were in will always move faster than the one you are in now (works every time).


 - **Law of the Bath** - When the body is fully immersed in water, the telephone WILL ring.


 - **Law of Close Encounters** - The probability of meeting someone you know increases dramatically when you are with someone you don't want to be seen with.


 - **Law of the Result** - When you try to prove to someone that a machine doesn't work...it surely will.


 - **Law of Bio mechanics** - The severity of the itch is inversely proportional to the reach.

 - **Law of the Theater & Hockey Arena** - At any event, the people whose seats are furthest from the aisle, always arrive last. They are the ones who will leave their seats several times to go for food, beer, or the toilet & who leave early before the end of the performance or the game is over. The folks in the aisle seats come early, never move once, have long gangly legs or big bellies & stay to the bitter end of the performance. The aisle people also are very surly folk.

 - **The Coffee Law** - As soon as you sit down to a cup of hot coffee, your boss will ask you to do something which will last until the coffee is cold.

 - **Murphy's Law of Lockers** - If there are only 2 people in a locker room, they will have adjacent lockers.


 - **Law of Physical Surfaces** - The chances of an open-faced jelly sandwich landing face down on a floor, are directly correlated to the newness & cost of the carpet or rug.

 - **Law of Logical Argument** - Anything is possible if you don't know what you are talking about.

 - **Brown's Law of Physical Appearance** - If the clothes fit, they're ugly.

 - **Oliver's Law of Public Speaking** - A closed mouth gathers no feet.

 - **Wilson's Law of Commercial Marketing Strategy** - As soon as you find a product that you really like, they will stop making it.

 - **Doctors' Law** - If you don't feel well, make an appointment to go to the doctor, by the time you get there you'll feel better...But don't make an appointment, and you'll stay sick.

Dastardly Deed

125432

(CORP. SW)

SRD NO. 106.1
 SECTION 89503-2601
 STATE ROAD
 MARTIN COUNTY
 Citrus Boulevard

SPECIAL WARRANTY DEED

THIS INDENTURE made this 7th day of March, A. D. 1967
 between BRIAR BAY PROPERTIES, INC.
 a corporation organized and existing under the laws of the State of Florida
 having its principal place of business in the city of Miami, County
 of Dade, State of Florida, as party of the first part,
 and the STATE OF FLORIDA, for the use and benefit of the State Road Department of Florida, Hol-
 land Building, Tallahassee, Florida, as party of the second part.

WITNESSETH: That the party of the first part, for and in consideration of the sum of One
 Dollar and other valuable considerations paid, receipt of which is hereby acknowledged, has granted,
 bargained, sold and conveyed and does hereby grant, bargain, sell and convey to the party of the
 second part, its successors and assigns forever, the following described land, situate, lying and being in
 the County of Martin, State of Florida, to-wit:

PARCEL NO. 106

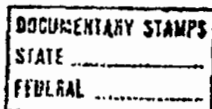
SECTION 89503-2601

A strip of land over, through and across a portion of those parts of Sections
 35 and 36, Township 39 South, Range 39 East, and those parts of Sections 2 and
 3, Township 40 South, Range 39 East, Martin County, Florida, which lie southerly
 of and contiguous to an imaginary line 600 feet northerly of and parallel to
 the northerly right of way line of the St. Lucie Canal, said strip of land
 more particularly described as follows:

BEGINNING on the East line of and 1352.19 feet South of the
 Northeast corner of said Section 36, run S 68°23'50" W a
 distance of 17,035.57 feet along the Base line of Survey of
 Section 89503-2601, Citrus Boulevard, and the above described
imaginary line to a point in a line 60 feet East of and par-
 allel to the west line of said Section 3; thence S 00°33'25" W
 a distance of 107.98 feet along said parallel line; thence
 N 68°23'50" E a distance of 3,945.0 feet along a line 100 feet
 southerly of the said imaginary line to the Westerly line of
 the Florida Power & Light Company Easement described in Deed
 Book 97, at page 180 of the Public Records of Martin County,
 Florida; thence N 34°13'30" W along the Westerly line of said
 Easement a distance of 30.74 feet; thence N 68°23'50" E a
 distance of 189.59 feet along a line 70 feet southerly of and
 parallel to the aforementioned imaginary line; thence
 S 34°13'30" E a distance of 30.74 feet along the Easterly line
 of said Easement in Deed Book 97, at page 180; thence N 67°23'50" E
 a distance of 7921.25 feet to the East line of said Section 36;
 thence North a distance of 107.88 feet along the East line of
 said Section 36 to the POINT OF BEGINNING;

Containing 39.03 acres, more or less.

An Imaginary Line?



FLORIDA STATE ROAD DEPARTMENT
 DIVISION OF RIGHTS OF WAY

JUL 25 1966

DESCRIPTION APPROVED
 4th DISTRICT BY R.L.H.



OUCH! | December 2016

The Monthly Security Awareness Newsletter for Everyone

OUCH!

IN THIS ISSUE...

- Your Information
- Wiping Your Device
- SIM & External Cards

Securely Disposing of Your Mobile Device

Overview

Mobile devices, such as smartphones, smartwatches, and tablets, continue to advance and innovate at an astonishing rate. As a result, some people replace their mobile devices as often as every year. Unfortunately, too many people dispose of their devices with little thought on just how much personal data is on them. In this newsletter we will cover what types of personal information may be on your mobile device and how you can securely wipe it before disposing

or returning it. If your mobile device was issued to you by your employer or has any organizational data stored on it, be sure to check with your supervisor about proper backup and disposal procedures before following the steps below.

Guest Editor

Heather Mahalik (@HeatherMahalik; +HMahalik) is a Principal Forensic Scientist leading the forensics effort for ManTech CARD. She is the course lead and co-author for the SANS Institute course Advanced Smartphone Forensics (FOR585) and instructor for Windows Forensic Analysis (FOR408). She blogs at smarterforensics.com.

Your Information

Mobile devices store far more sensitive data than you may realize, oftentimes more than even your computer. Typical information can include:

- Where you live, work, and places you frequently visit
- The contact details for everyone in your address book and applications, including family, friends, and coworkers
- Call history, including inbound, outbound, and missed calls
- SMS (texting), voice, and multimedia messages
- Chat sessions within applications like secure chat, games, and social media
- Location history based on GPS coordinates or cell tower history
- Web browsing history, search history, cookies, and cached pages
- Personal photos, videos, audio recordings, and emails
- Stored passwords and access to personal accounts, such as your online bank or email
- Access to photos, files, or information stored in the Cloud
- Any health-related information, including your age, heart rate, blood pressure, or diet

**OUCH! | December 2016**

Securely Disposing of Your Mobile Device

Wiping Your Device

As you can see, there is most likely a tremendous amount of sensitive information on your mobile device. Regardless of how you dispose of your mobile device, such as donating it, exchanging it for a new one, giving it to another family member, reselling it, or even throwing it out, you need to be sure you first erase all of that sensitive information. You may not realize it, but simply deleting data is not enough; it can easily be recovered using free tools found on the Internet. Instead, you need to securely erase all the data on your device, which is called wiping. This actually overwrites the information, ensuring it cannot be recovered or rendering it unrecoverable. Remember, before you wipe all of your data, you most likely want to back it up first. This way, you can easily rebuild your new device.

The easiest way to securely wipe your device is use its "factory reset" function. This will return the device to the condition it was in when you first bought it. We have found that factory reset will provide the most secure and simplest method for removing data from your mobile device. The factory reset function varies among devices; listed below are the steps for the two most popular devices:

- Apple iOS Devices: Settings | General | Reset | Erase All Content and Settings
- Android Devices: Settings | Privacy | Factory Data Reset

Unfortunately, removing personal data from Windows Phone devices is not as simple as a factory reset. More research is being conducted on methods to ensure your personal data is wiped from the device. If you still have questions about how to do a factory reset, check your owner's manual or manufacturer's website. Remember, simply deleting your personal data is not enough, as it can be easily recovered.

SIM & External Cards

In addition to the data stored on your device, you also need to consider what to do with your SIM (Subscriber Identity Module) card. A SIM card is what a mobile device uses to make a cellular or data connection. When you perform a factory reset on your device, the SIM card retains information about your account and is tied to you, the user. If you are keeping



When disposing of your mobile device, be sure to do a factory reset and remove the SIM and any SD cards if your device has them.

RISK INSIGHTS



Drones: The Risk Exposures to Your Business

While the military and hobbyists have been using unmanned aerial systems (UAS), better known as drones, for some time now, businesses are just starting to adapt the technology for their own uses. UAS are creating new opportunities—and new risks—for businesses to evaluate, and regulators and insurance carriers are scrambling to keep pace.

Regulation

The FAA currently considers UAS to be in the same category as manned aircraft, and the agency has released rules on the commercial use of drones that weigh less than 55 pounds:

- An operator may use a camera system to control a drone, but must also be close enough to see it if something unexpected occurs. Additionally, the operator must have a visual observer who remains in constant line of sight with the drone.
- Operators cannot fly the drone over anyone who is not directly participating in the drone's operation.
- Drones may carry an external load if it's securely attached and doesn't adversely affect the controllability of the aircraft.
- Operators may transport property for compensation within state boundaries.
- Commercial drone operators need a remote pilot airman certificate with a small UAS rating, or be

under the direct supervision of a person who holds such a certificate.

- Drones used for commercial purposes must be registered with the FAA.

UAS that are used only for recreation are still considered aircraft, and most of them must be registered with the FAA. Here are the basic guidelines for registering recreational UAS:

- UAS that weigh between 0.55 pounds and 55 pounds must be registered [online](#). If a UAS weighs more than 55 pounds, it must be registered [by paper](#).
- Once registered, the UAS operator will receive a registration number that must be placed on all applicable drones.

With UAS, it's often the loss of the payload—not the aircraft itself—that can be the most costly.

- Registration is valid for three years. Failure to register may result in regulatory and criminal sanctions.

The FAA also has regulations that apply to both commercial and recreational UAS:

Provided by NSPS Insurance Program

Drones: The Risk Exposures to Your Business

- UAS must fly below a height of 400 feet above ground level and weigh 55 pounds or less.
- An operator must maintain a visual line of sight with his or her UAS.
- UAS cannot be flown within 5 miles of an airport, and must remain clear of all manned aircraft and obstacles.
- UAS cannot be flown near people or open-air stadiums.

Because the FAA currently considers UAS to be in the same category as manned aircraft, any attempt to damage or destroy one can result in federal penalties — up to 20 years in prison and \$25,000 in fines.

Physical Loss: Beyond the Aircraft

With UAS, it's often the loss of the payload—not the aircraft itself—that can be the most costly. One of the most widespread applications to date has been in unmanned aerial photography. Businesses in real estate, agriculture, filmmaking and insurance all have interests in surveying and photographing land, and the cameras used to do so can get expensive.

Because of the increasing affordability of drones, the payload often has a higher intrinsic value than the aircraft itself. Additionally, cameras and other payloads are usually slung below the aircraft, meaning that in the event of a hard or emergency landing, damage to the payload is almost certain.

Planning for Obsolescence

Technology itself could prove to be especially costly in the event of a UAS loss. The production of UAS is neither regulated nor standardized, which means there are a number of manufacturers in the market, each adhering to different standards. Many haven't diversified, and should some technological advancement prove to be too costly for certain smaller companies to adopt, those companies could potentially go out of business.

Bankrupt or defunct manufacturers, coupled with a lack of industry standards for design, could mean that the loss

of a relatively inexpensive motor today would instead be a total financial loss on the aircraft five years from now, when replacement parts are completely unavailable.

Casualty and Liability

As with conventional aircraft, a UAS crash could mean a hefty casualty claim. While the crash rate is actually relatively low with conventional aircraft, UAS are not subject to the tight maintenance requirements or the stringent operator regulations that make conventional commercial aircraft crashes so rare.

Eventually, mechanical failures and operator errors will likely result in crashes. Businesses, especially those that operate UAS in populated areas, should make sure they are adequately covered in the event of property damage or injury to a third party.

Theft and Fraud

A couple of benefits of UAS—their portability and advanced technology—can also prove to be great liabilities. Small UAS make easy and attractive targets to thieves, and the industry hasn't developed many internal safeguards against stolen drones.

Broad Use

Another benefit that could become a potential liability is the flexibility of the technology—that is, a drone's potential as a broad-use aircraft. In theory, the same UAS that photographs a parcel of land for a realtor on one day could be used to survey a hazardous chemical spill the following day.

This kind of flexibility offers a broad number of business opportunities, but each new opportunity brings with it attendant exposures that compound upon one another. Businesses will have to think through how they plan on using their UAS in order to make sure that their FAA authorization and their insurance cover each arena of commercial use.

Who Watches the Watchers?

Drones: The Risk Exposures to Your Business

Privacy represents one of the largest exposures with regard to drones. A highly maneuverable technology that gives remotely operated cameras virtually unfettered access to any location is bound to result in claims of privacy breach. What's unclear, however, is how both the legal system and insurers plan to address these new exposures.

Currently, carriers exclude all privacy-related claims, but the increased exposure means that there's a potential market for such protection. However, without some kind of precedent, it's unclear how, if at all, the insurance industry will respond.

Understanding the Risks

As with all new technology, UAS create new opportunities and risks for businesses. Perhaps the greatest potential liability comes from the cyber risks posed by UAS. As technology advances, UAS will be able to remotely hack into computer systems and steal data. For more information on the technological risks of drones, contact us at 888-454-9562, and ask to see our additional Risk Insights article, "Drones: The Unconsidered Cyber Exposures."

RISK INSIGHTS

NOTICE OF FEE CHANGE

Effective January 1, 2017

In light of increasing costs, fees collected by the Salt Lake County Surveyor for Monument Preservation and Final Local Entity Plats have increased as of January 1, 2017 as noted below:

1. Monument Preservation Fee:

- a. \$200.00 per monument for the first 1 or 2 monuments
- b. \$125.00 per monument for the next 3-5 monuments
- c. \$100.00 per monument for the next 6 or more monuments

2. Final Local Entity Plat Review Fee

- a. \$200.00 per plat

EMPLOYMENT OPPORTUNITY

The Salt Lake County Surveyor's Office anticipates the hiring of a survey technician and a supervising party chief.

Please visit <http://slco.org/human-resources/jobs/> for more information.

November - December

What is it Challenge



Arthur LeBaron was the first UCLS member to correctly identify this as a DJi Phantom 4 Quadcopter. Arthur's response was received 10 minutes earlier than Dennis Jensen's guess.

Surveyors, engineers, and land developers have realized the value of using the drone for mapping, land assessment, modeling, and gathering topographic data.

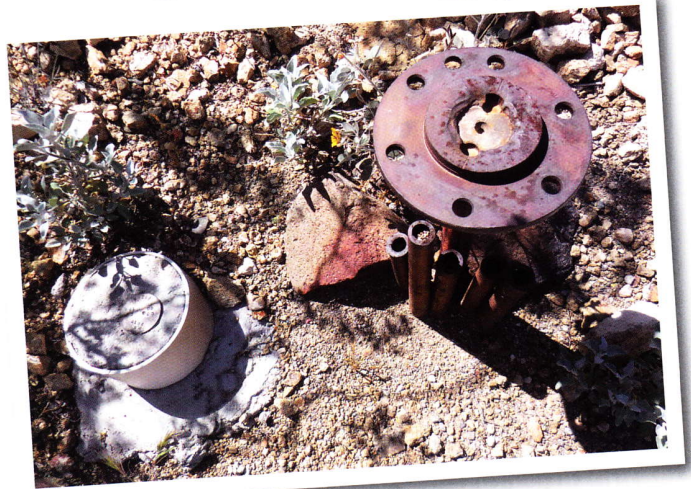
The Phantom 4 can fly for 28 minutes and cover up to 3.1mi (5km) of range, with complete control and a live 720p HD view of everything the camera sees. It

comes equipped with a shoot sharp, clean video in up to 4K at 30fps and Full HD 1080 at 120fps for slow motion. A range of video color profiles are available to help you get the look you want easily, from bright vibrant colors to professional flat profiles including D-Log and Cine-D that are ready for video post-production. Photographers can shoot images in 12 mega pixel Adobe DNG RAW.

Below Grade - Safe Surveying Tips

1. Never use the 200-foot steel tape as a bungee chord.
2. Inexperience rodmen/instrument men should not be furnished with plumb bob without specific instructions for their use.
3. At all costs, do not admit to the party chief that you left the chain or anything back at the last job site.
4. Always dismantle the level rod before putting it back in the truck.
5. Never actually perform topographic surveys. Sub-contract them out to your competitors.
6. Never trust the instrument man when he promises not to reinstall the manhole cover before you've finished taking the pipe size measurements.
7. Never trust the party chief when he says, "I'll be back to pick you up later."
8. Take your vacation when rumors begin to circulate around the office that a major contract will soon be signed to perform intensive percolation tests at a large industrial site.
9. Be patient with the rodman/instrument man
10. Set a fair amount of bogus grade stakes and lathe when performing construction staking.

Postcards



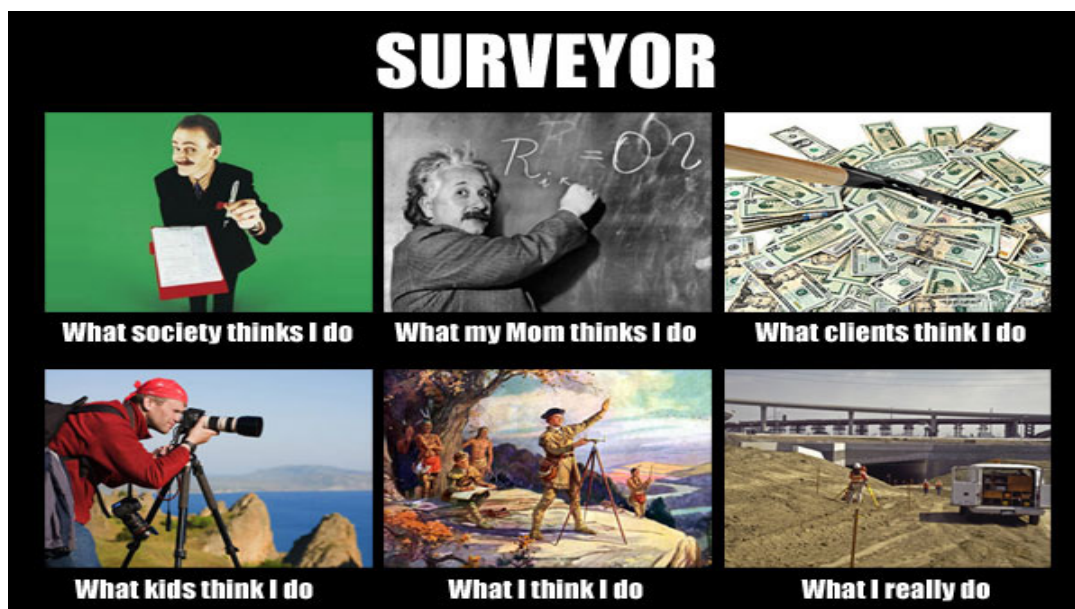
I found these multiple survey monuments along Route 66 at Oatman, AZ in early April, 2015. No research was conducted, just found this location by accident while looking for a historical monument in the area. I've never seen an axle used as a boundary monument (but have read they were used or have seen references in grant deeds). There are five pipes below the axle - no tags. And a few feet away is another monument (mineral survey?) with a brass disk with "2000" marked in the concrete base.

Submitted by Charles Beal, PLS



You Might be a Surveyor If...

- You have a "tail" on your survey truck, made of flagging.
- You have a pile of pk's on a shelf beside the washing machine, where the wife put them.
- You have RPLS.COM for a home page.
- You have occasional ideas for a RPLS.COM post, while reading deeds, or discussing a survey with a client.
- You have paint overspray, on at least one corner of your survey truck.
- You have some sort of pile of mangled survey markers somewhere in your yard.
- You know how to tie flagging around most parts of your anatomy, to stop blood from leaking.
- You have partial rolls of flagging in all your vehicles.
- You have difficulty giving directions to others... and you therefore have to stop and translate like this: (What you are actually thinking) Well, go to the S1/4 of S 33, and drive west to the W c-1/16, and as you top the hill, look to your right..., (But what you say is: Go THAT way to the 90° turn in the road, then drive 1/2 mile to the hilltop, and watch on your right...
- You remember somebody's deed, and know where all their property lines are, but cannot think of their name, to save your life.



Together Towards Tomorrow

Wednesday, February 22, 2017		
12:00-1:00	Registration	
1:00-1:30	Welcome – Opening Ceremonies	
1:30-3:00	The Law of Easements Jeff Lucas	Drones Bryan Baker
3:00-3:30	Break	
3:30-5:00	The Law of Easements (continued session) Jeff Lucas	Drones (continued session) Bryan Baker

Thursday, February 23, 2017		
7:00-8:00	Late Registration – Hot Breakfast	
8:00-10:00	Boundary and Boundary Law – Deeds, Conveyances and Boundaries Jeff Lucas	Discrepancies in the Official Record (2 CFedS Credits) Ron Scherler
10:00-10:30	Break	
10:30-12:00	Boundary and Boundary Law – Deeds, Conveyances and Boundaries (continued session) Jeff Lucas	Discrepancies in the Official Record (2 CFedS Credits) (continued session) Ron Scherler
12:00-1:30	Lunch – Vendor's/Officer Announcements/Surveyor of the Year Award	
1:30-3:00	Boundary and Boundary Law – Deeds, Conveyances and Boundaries (continued session) Jeff Lucas	Discrepancies in the Official Record (2 CFedS Credits) (continued session) Ron Scherler
3:00-3:30	Break	
3:30-5:00	Boundary and Boundary Law – Deeds, Conveyances and Boundaries (continued session) Jeff Lucas	Discrepancies in the Official Record (2 CFedS Credits) (continued session) Ron Scherler

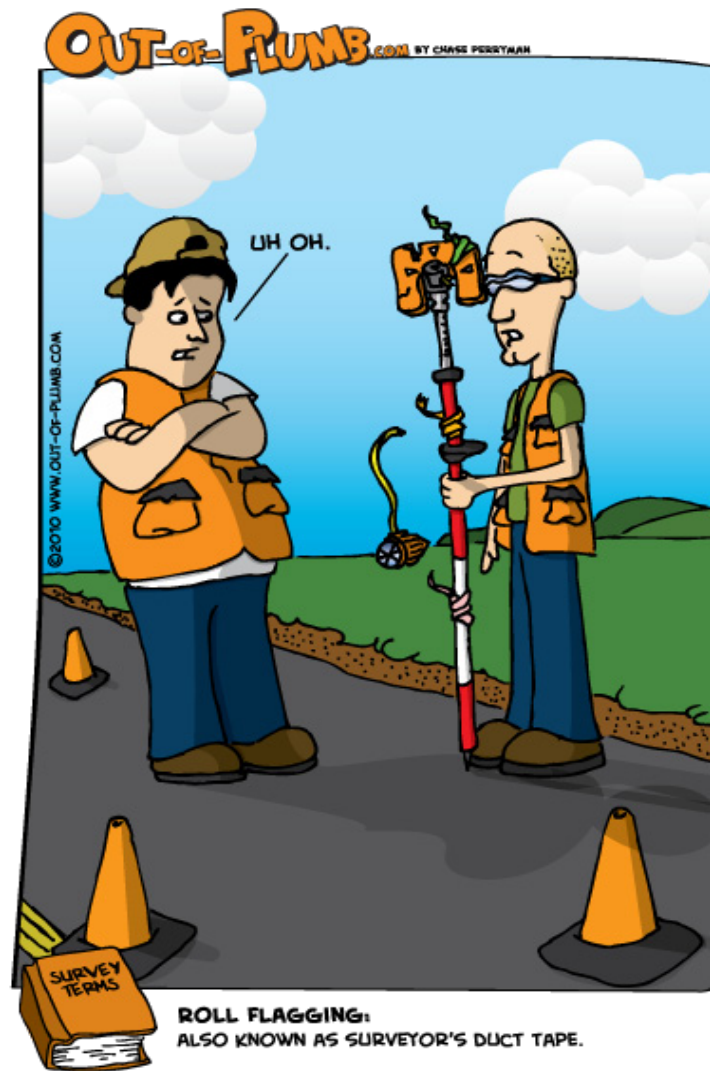
Together Towards Tomorrow

Friday, February 24, 2017				
7:00-8:00	Late Registration – Hot Breakfast			
8:00-8:40	Professional Ethics Dan Perry	Using AutoCAD Civil 3D for Coordinate Transformations Tyler Jenkins	The What and Why of Boundary Acquiescence Mark Gregersen	The Art and Accuracy of Writing Legal Descriptions Steve Keisel
8:40-8:50	Move to next Breakout Session			
8:50-9:30	Professional Ethics (repeat session) Dan Perry	Using AutoCAD Civil 3D for Coordinate Transformations (repeat session) Tyler Jenkins	The What and Why of Boundary Acquiescence (repeat session) Mark Gregersen	The Art and Accuracy of Writing Legal Descriptions (repeat session) Steve Keisel
9:30-10:00	Break			
10:00-10:40	Professional Ethics (repeat session) Dan Perry	Surveying in Israel Mike Nadeau	FEMA Rick Rosenberg	NGS Update Bill Stone
10:40-10:50	Move to next Breakout Session			
10:50-11:30	Professional Ethics (repeat session) Dan Perry	Surveying in Israel (repeat session) Mike Nadeau	FEMA (repeat session) Rick Rosenberg	NGS Update (repeat session) Bill Stone
11:30-1:00	Lunch – Vendor's/UCLS Business/Lifetime Achievement Award			
1:00-1:40	Separate Into Committees: Membership, Public Relations, Legislative, Education, Publication, Workshop & Convention, Standards & Ethics, Testing, Historical, Construction Surveying			
1:40-1:50	Move to next Breakout Session			
1:50-2:30	Professional Liability Von Hill Dan Bradshaw	Acquiescence Law and Boundary Surveying in Utah Leon R. Day	County Surveyor's Devron Andersen	Protecting our Profession: The Case for a Certified Legal Description James J. Coutts
2:30-3:00	Break			
3:00-3:40	Professional Liability (repeat session) Von Hill Dan Bradshaw	Acquiescence Law and Boundary Surveying in Utah (repeat session) Leon R. Day	County Surveyor's (repeat session) Devron Andersen	DOPL and You; Licensure, Ethics, and Education for Surveyors Scott Bishop
3:40-3:50	Move to Ballroom A-D			
3:50-5:00	Closing Remarks – Auction – Raffle			

Saturday, February 25, 2017	
8:00-12:00	Tri-State Monument Field Trip – Ribbon Cutting Ceremony
This portion of the Convention is not required, but will be for those that would like to see the new monument that was placed at the Tri-State corner of Arizona, Nevada, and Utah	

Engineers' Conversion Table

1. Ratio of an igloo's circumference to its diameter = Eskimo Pi
2. 2000 pounds of Chinese soup = Won ton
3. 1 millionth of a mouthwash = 1 microscope
4. Time between slipping on a peel and smacking the pavement = 1 bananosecond
5. Weight an evangelist carries with God = 1 billigram
6. Time it takes to sail 220 yards at 1 nautical mile per hour = knotfurlong
7. 16.5 feet in the Twilight Zone = 1 Rod Serling
8. Half of a large intestine = 1 semicolon
9. 1,000,000 aches = 1 megahurtz
10. Basic unit of laryngitis = 1 hoarsepower
11. Shortest distance between two jokes = A straight line
12. 453.6 graham crackers = 1 pound cake
13. 1 million-million microphones = 1 megaphone
14. 2 million bicycles = 2 megacycles
15. 365.25 days = 1 unicycle
16. 2000 mockingbirds = 2 kilomockingbirds
17. 52 cards = 1 decacards
18. 1 kilogram of falling figs = 1 FigNewton
19. 1000 mililiters of wet socks = 1 literhosen
20. 1 millionth of a fish = 1 microfiche
21. 1 trillion pins = 1 terrapin
22. 10 rations = 1 decoration
23. 100 rations = 1 C-ration
24. 2 monograms = 1 diagram
25. 4 nickels = 2 paradigms
26. 2.4 statute miles of intravenous surgical tubing at Yale University Hospital = 1 IV League



Paraprosdokian Sentences

A "paraprosdokian" is a figure of speech in which the latter part of a sentence or phrase is surprising or unexpected in a way that causes the reader or listener to reframe or reinterpret the first part. It is frequently used for humorous or dramatic effect.

- Do not argue with an idiot. He will drag you down to his level and beat you with experience.
- I want to die peacefully in my sleep, like my grandfather. Not screaming and yelling like the passengers in his car.
- The last thing I want to do is hurt you. But it's still on the list.
- Light travels faster than sound. This is why some people appear bright until you hear them speak.
- If I agreed with you, we'd both be wrong.
- We never really grow up; we only learn how to act in public.
- War does not determine who is right--only who is left.
- Knowledge is knowing a tomato is a fruit; Wisdom is not putting it in a fruit salad.
- The early bird might get the worm, but the second mouse gets the cheese.
- Evening news is where they begin with "Good evening," and then proceed to tell you why it isn't.
- To steal ideas from one person is plagiarism. To steal from many is research.
- A bus station is where a bus stops. A train station is where a train stops. My desk is a work station.
- How is it one careless match can start a forest fire, but it takes a whole box to start a campfire?
- Dolphins are so smart that within a few weeks of captivity, they can train people to stand on the very edge of the pool and throw them fish.
- I thought I wanted a career; turns out I just wanted pay checks.
- A bank is a place that will lend you money if you can prove that you don't need it.