

SIDE SHOTS

Volume 51, Issue 3



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SIDE SHOTS

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*Side Shots is the official publication of the Professional Land Surveyors of Colorado, Inc.
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July 1 and October 1. All material received after the current deadline will appear
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Hello PLSC,

If you are a young surveyor, 30s and below, you ought to connect with the NSPS Young Surveyors Network (YSN). There is a Colorado chapter of the YSN sponsored by the PLSC. I encourage you to plug into a group of your peers to swap stories, find out about opportunities and discover how you are not alone as you pursue this challenging career choice. For more information, contact James Combs at plsc@plsc.net.



I am sure most of you have noticed that the PLSC is sending a monthly newsletter. This is an intermediate form of communication, somewhere between e-blasts and *Side Shots*. If you have any idea or shorter content you would like to see in the newsletter, please send it to Becky Roland at plsc@plsc.net.

As the Rocky Mountain Surveyor's Summit (RMSS) committee puts together plans for a new hybrid web-based/in-person format, if you have any great ideas or would like to get involved in the planning process, please reach out Kayce Keane at plsc@plsc.net.

Steve Parish and the RMSS are putting their heads together for new CFedS training modules. The subject matter should be focused on PLSS surveying, but specifically around where most surveyors have questions or gaps in their PLSS education. Have any ideas, or a new approach for the topic, contact me at plsc@plsc.net.

GIS in the Rockies is 100% web-based this year. All the presenters are providing 20 minute pre-recorded videos. The land surveying track this year is centered around surveyed data sets delivered in GIS. If you have a flagship GIS (got it surveyed!) project that you would like to showcase at GIS in the Rockies, reach out to Adam Young at plsc@plsc.net

One of the most important reasons the PLSC exists is to represent our profession in state legislative issues. Our legislative committee consists of a handful of seasoned professional land surveyors who do a great job, and if you would like to get involved in shaping the future of our great profession, please reach out to Ralph Pettit or Scott Thompson at plsc@plsc.net.

Our membership committee is always looking for the best way to add value to being a voting member of the PLSC. Please provide any value added ways that the PLSC can improve the benefits of membership. Our goal is that every Colorado surveyor will see the value of membership and want to join. If you have seen how other states are doing it better than we are, please send ideas to Eric Carson at plsc@plsc.net.

Sincerely,
Steven Parker, PLS CFM CFedS
PLSC President president@plsc.net

FROM THE EDITOR



When I wrote this column three months ago, the statewide shutdown order was underway, office workers were adjusting to Zoom meetings and working from home, and the trajectory of Covid cases was showing signs of leveling off. Construction, and most types of surveying, continued on in Colorado as essential

businesses, sparing us the misery of the retail and restaurant sectors. PPP forgivable loans cushioned the blow for some. I expressed hope that things would be looking up by the time of the next issue. Now, instead of being brought down, viral cases are increasing, especially in nearby states like Arizona and Texas. We get more than enough news on this topic from cable and other media. However, Side Shots is still here, and will continue to deliver the usual news and information on surveying topics, as always.

There is a reminder that February 24th is the start of the 2021 Rocky Mountain Surveyors Summit, for now still an in-person event at the Denver West Marriott in Golden. Watch for email alerts in the coming months for the latest news of this important event.

Tom Sylvester has written an article on the Three Mile Method, with an example of this shown on the cover, for areas surveyed by "special instructions" per the BLM. Gaby Neunzert wrote an excellent story on the world of binary numbers. The PLSC lobbyists contributed an article on legislative news, "Under the Gold Dome." There is an update, including the always interesting state reports, from the Western Federation of Professional Surveyors, provided by Todd Beers, from their June meeting, followed by subcommittee reports on ALTA standards and UAS. And the NSPS provided a story about the value of continuing your professional memberships, especially in difficult times.

There are minutes from the June 30, 2020 PLSC Board of Directors, and the news from the chapters.

And in case you haven't heard it enough already, be careful, be safe, be compassionate. We will all endure.

Chris J. Power
Editor

A masterful documentation and historical perspective of each initial surveying point for federal public lands in the United States. Published in 9x12 format, Initial Points of the Rectangular Survey System features a 4-color section with more than 130 photos depicting monuments and landmarks.

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Published by the Colorado Professional Land Surveyors Educational Foundation, Inc., a non-profit foundation, Initial Points of the Rectangular Survey System is undertaken in the spirit of, and dedication to, Mr. White's remarkable contributions to his field. Net proceeds from its sale will be returned to the Professional Land Surveyors of Colorado Inc. Scholarship Fund.

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CO-956
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June 26, 2020

Mr. Chris Power, Editor
Side Shots
3825 Iris Ave.
Boulder, Colorado 80301

Dear Mr. Power:

This letter informs you of official BLM cadastral surveys in Colorado that have been accepted from December 3, 2019, through May 12, 2020, officially filed, and are now available in the Public Room, Bureau of Land Management, Colorado State Office, 2850 Youngfield Street, Lakewood, Colorado 80215. The surveys will also be available at <https://glorerecords.blm.gov>.

The accepted surveys are listed below by township, range, meridian, group number, type, approval date and number of plats.

<u>Township</u>	<u>Range</u>	<u>Meridian</u>	<u>Group No.</u>	<u>Type</u>	<u>Approved</u>	<u>Plats</u>
T. 30 S.	R. 69 W.	Sixth	1692	Plat Only	12/03/19	2
T. 7 S.	R. 91 W.	Sixth	1500	Plat Only	12/19/19	1
T. 11 S.	R. 72 W.	Sixth	1500	Plat Only	12/26/19	1
T. 51 N.	R. 9 E.	NMPM	1680	Plat Only	01/27/20	2
T. 41 N.	R. 1 E.	NMPM	1500	Plat Only	02/10/20	1
T. 31 S.	R. 69 W.	Sixth	1500	Plat Only	02/13/20	1
T. 36 N.	R. 12 W.	NMPM	1695	Plat & Notes	03/27/20	1
T. 15 S.	R. 77 W.	Sixth	1680	Plat Only	04/08/20	3
T. 40 N.	R. 13 W.	NMPM	1721	Plat Only	04/28/20	1
T. 16 S.	R. 67 W.	Sixth	1630	Plat Only	04/23/20	3
T. 6 S.	R. 99 W.	Sixth	1704	Plat & Notes	05/12/20	1

As other surveys are completed, I will advise you of their acceptance. You may circulate this letter among the membership of the Professional Land Surveyors of Colorado.

Sincerely yours,

Randy Bloom
Chief Cadastral Surveyor for Colorado

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PROFESSIONAL LAND SURVEYORS OF COLORADO

2021 Rocky Mountain Surveyors Summit



When: February 24– 26

Where: Denver Marriott West

The Rocky Mountain Surveyors Summit is currently being planned as an in-person conference with our Featured Speaker and CFedS.

Additional education is planned to be available via online webinar.

Look for a full schedule of speakers and topics this Fall through *Side Shots* and the PLSC website.



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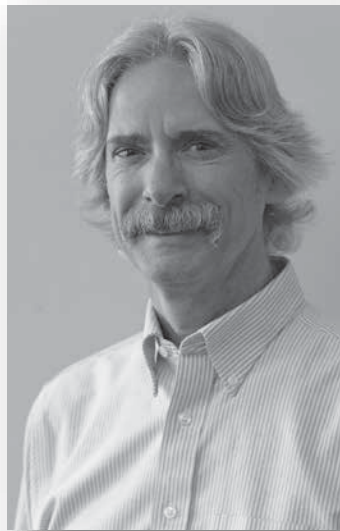
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Direct questions to:

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Kayce Keane, RMSS Chairman - kayce@blcsurveyors.com

OUR FEATURED SPEAKER:



Gary Kent is in his 38th year with Schneider Geomatics in Indianapolis - having transitioned to part-time status this year - and, also provides training, consulting and expert witness services as manager of Meridian Land Consulting, LLC. He has served on the Indiana State Board of Registration for Professional Surveyors since 2004 and is a past-president of both the American Congress on Surveying and Mapping and the Indiana Society of Professional Land Surveyors. Gary has presented programs on boundary law, easements and rights of way, surveying standards and practice, and leadership in all 50 states and is frequently sought as an expert witness in cases related to boundaries, easements and survey standards.

FEATURED PRESENTATIONS:

The Art of Retracement

Surveyors Judicial Role

Land Surveying and Geomatics Degree Program at Western Colorado
Community College, a subdivision of Colorado Mesa University
Grand Junction, Colorado

Three Mile Method

By Thomas W. Sylvester, P. E. and P. L. S.

In our programs for Land Surveying and Geomatics, I keep emphasizing to our students that in our profession, we deal with two equal but disparate sides of the same coin. One is the expert measurer and math side, and the other is the boundary law side where mathematical solutions are some of the least reliable forms of evidence on determining where to replace a lost corner.

When dealing with the Public Land Surveying Systems (our rectangular subdivision of land as surveyed by the GLO and BLM), we are typically directed to the BLM Manuals of Surveying Instructions for guidance on replacing a lost corner and setting subdivision aliquot corners not set by the GLO/BLM. The manual to use for replacing the lost corner is the one used by the GLO/BLM surveyors when establishing the corner. The subdivision of the section, if never subdivided by the GLO/BLM would use the latest manual for the procedure. The reality is that in Colorado, the procedures used, or the math involved in determining these corner locations is the same whether the survey was done in the 1880s or the 2020s. The current manual is the BLM Manual of Surveying Instructions 2009.

Brown's Boundary Control and legal Principles Seventh Edition, by Walter G. Robillard & Donald A. Wilson, Chapter 6 – Creation and Retracement of GLO Boundaries, and Chapter 10 – Retracing and “Resurveying” Sectionalized Land offer guidance on how to subdivide sections into their aliquot parts.

Principle 3 (of Chapter 6 states): ***Special instructions or manuals instructed the original surveyors on how to survey the land; courts interpret the laws and how patented parcels of land shall be resurveyed or retraced.***

Colorado law states that when retracing parcels of land surveyed in accordance with the Public Land Survey System, the BLM Manual shall be used as a guide. This principle and the law confirm the need to use the instructions of the BLM Manuals of Surveying Instructions as the guide. Most of you already know the normal method of subdividing a normal section into its aliquot quarter quarters, i.e.:

1. Run a line from the controlling outer 1/4 corners to its opposite 1/4 corner, i.e. the W 1/4 corner to the E 1/4 corner and the S 1/4 corner to the N 1/4 corner. The C

1/4 corner is placed at the intersection of these two lines. (Intersection method).

2. Place the 1/16 corners on the outer boundary of the section and on the 1/4 section lines run through the middle of the section at the mid-point between their controlling corner, i.e. midway between the SE corner and E 1/4 corner; midway between the E 1/4 corner and the C 1/4 corner, etc. (Midpoint method).

3. Place the 1/16 corners for the interior of each quarter section by running a line between the respective 1/16 corner along the outside of said quarter section lines to its opposite 1/16 corner both in the East – West direction and the North – South direction. The respective interior 1/16 corner is established at the intersection of these two lines. (Intersection method again).

This is the method described in the BLM Manuals of Surveying Instructions and as outlined in *Brown's Boundary Control and legal Principles Seventh Edition*.

However, the Principle 3 stated above also refers to “Special Instructions”. When a survey was done by special instructions, we must follow the procedure established by those special instructions when replacing lost corners.

If you ever survey in the Grand Valley near Grand Junction, Colorado, note that the Ute Meridian was surveyed for the most part by special instructions. These were to place monuments at the corners of all 40-acre parcels (1/4 1/4s) with 1/16 corners. They were instructed to deviate from the typical subdivision of sections as described in the Manual.

The special instructions had them place 1/16 corners on the outer boundary of the sections as they were running them. They then ran three extra miles west to east between the 1/16 corners on the west section line to the 1/16 corners on the east section line starting one tier up from the south section line. In a similar fashion to running the north section line of standard sections, they would place the intervening temporary 1/16 corners noting their falling from the 1/16 corner on the east boundary (east-west difference and north-south difference). They would then adjust the temporary 1/16 corners to their permanent position upon their return along the line. They then repeated the process between the W 1/4 corner to the E 1/4 corner placing the

intervening 1/16 corners (including the C1/4 corner) and adjusting on their return. Finally, they would repeat the process on the line one tier south of the north section line establishing the intervening 1/16 corners. Hence it gets the name the “Three Mile Method” because of these extra three miles run and returned. This saved considerable time in running the lines to create 1/16 corners as opposed to the standard method.

If all sections were perfect, all the interior monuments would be in the same place regardless of method. However, very few are perfect and hence you get some differences, sometimes significant differences. When a 1/16 corner is lost, instead of determining its location as the standard method dictates, you need to replace it via the “Three Mile Method”. As an example, if the NE 1/16 corner in the middle of the NE 1/4 is missing, the standard method would have you connect between the found 1/16 corner on the east side of the north line and the east side of the E-W center of section line, and then again between the 1/16 corner on the north side of the east line and the north side of the north-south center of section and place the lost corner at the intersection. The Three Mile Method dictates that it is set between the found 1/16 corners east and west of the lost corner at proportionate distances. The ones to the north and south have no effect on the location. Obviously per proportioning methods, you must use the nearest found corner on either side of the missing corner sometimes requiring one to go an extra 1/4 to 1/2 mile to a found or calculated 1/16 corner to use.

Likewise, if the C 1/4 corner is missing, it is replaced by

the proportionate distance between the CE 1/16 corner to the east and the CW 1/16 to the west of the lost C 1/4 corner (or if the respective CE 1/16 and CW 1/16 corners were also lost, the E 1/4 and W 1/4 would be used). The monuments to the north and south, again, have nothing to do with this C 1/4 corner originally set by the Three Mile Method.

Please see the sketches below as follows:

Section Subdivision Ideal (Figure 1)

Three Mile Method Section Subdivision Ideal (Figure 2)

These show the standard method of subdividing an ideal section and the Three Mile method of subdividing an ideal section. When you pull the GLO plats, you will find the Three Mile Method plat appears quite like the referenced Three Mile Method sketch.

However, most sections are not ideal and there can be significant differences of establishing the interior C 1/4 and interior 1/16 corners between the two methods. I’ve included two additional sketches with the problem of setting the C 1/4 corner and NE 1/16 corner from found monuments on two identical misshaped sections. These sketches are:

Section Subdivision from Found Monuments (Figure 3)

Three Mile Subdivision from Found Monuments (Figure 4)

These last sketches assume the record of each type of section were originally platted by the GLO as a

Figure 1

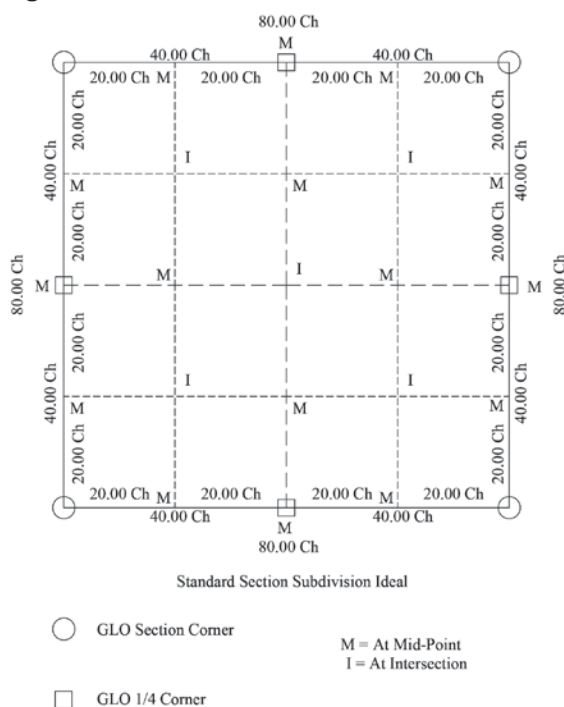


Figure 2

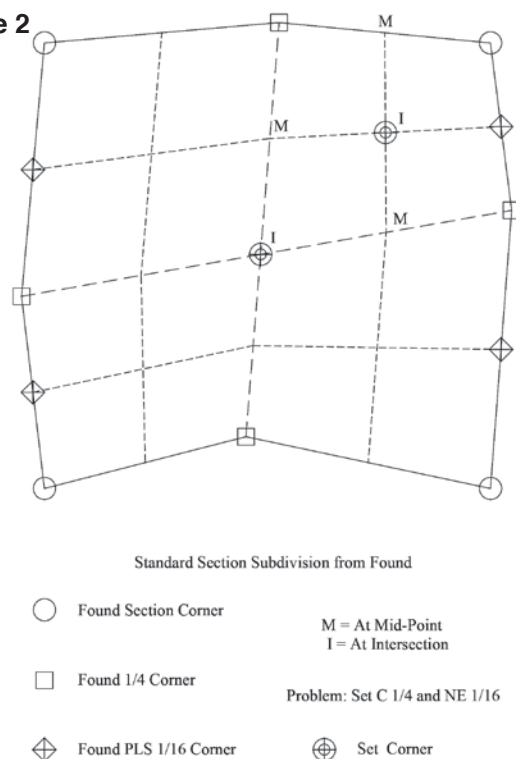


Figure 3

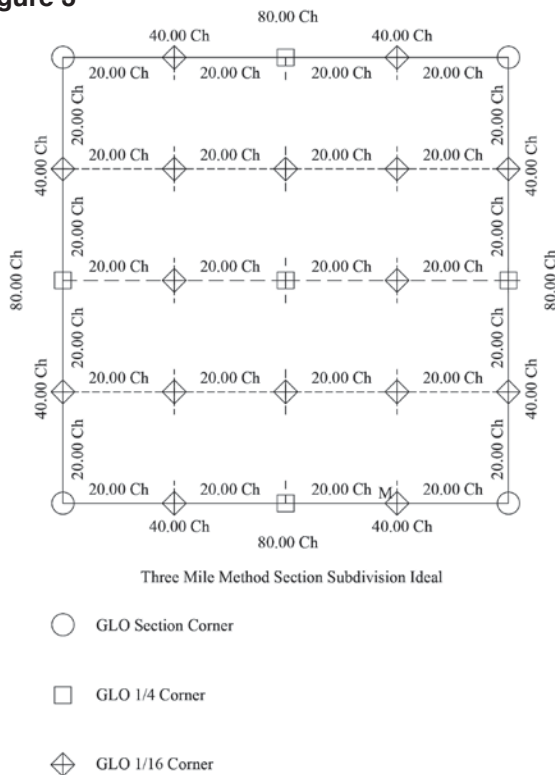
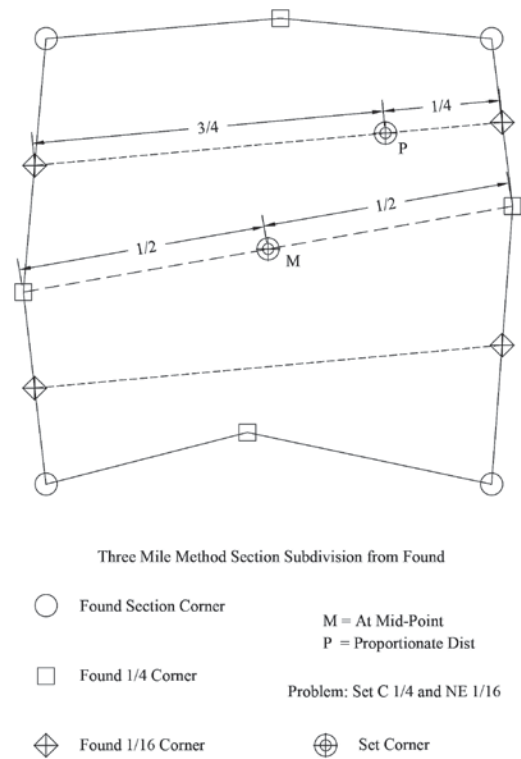


Figure 4



regular section with all lines run in either a north – south direction or an east – west direction and monuments placed at 40 chains and 80 chains for the standard section and at 20 chains, 40 chains, 60, chains, and 80 chains for the Three Mile Method as the record dimensions. However, my sketches show exaggerated found position so that you can readily see the differences between the two methods. In these particular cases the C 1/4 looks like it might be in the same position, but it is significantly different. The NE 1/16 corner done by the Three Mile Method shows a markedly different position for the NE 1/16 corner done by the standard method. In the standard method, both corners needing set are dependent on found monuments in the east-west direction and again in the north-south direction. In the Three Mile Method, monuments to the north and south of the target C 1/4 corner and target NE 1/16 corner have absolutely nothing to do with the targeted locations.

Why is this important? In Colorado and throughout the rest of the country, some areas were surveyed by special instructions. It is our job to research the record to determine how the original survey was done. Many surveyors outside the Mesa County area make mistakes on placing or replacing the C 1/4 and 1/16 corners when they come to the Grand Valley to survey. There are other isolated areas throughout the state that also used the Three Mile Method. We've run into some in the Nucla/Naturita area in Montrose County. I understand that in the Durango area and southwestern Colorado,

there are several townships and/or sections also done by special instructions utilizing the Three Mile Method. I became aware of a surveyor in the southwestern part of the state being monitored per AES Board rules who replaced the C 1/4 corner by the Three Mile Method and was told by his monitor that he had done it incorrectly. It took much discussing and numerous sources of references before the surveyor was able to convince his monitor that the Three Mile Method was the proper method to use. This points out to me that even reputable licensed surveyors in Colorado don't always check the record and plats to see how sections were originally surveyed or are ignorant of the different types of surveys done in Colorado and don't check the record.

If you ever go into a new area to survey, minimally check the GLO/BLM records for plats and field notes to see what they did and act accordingly. It would even be a good idea to check with the County Surveyor of that county for any particular nuances or issues of surveys in that area that could cause some problems. It could well prevent you from unfortunate mistakes on your survey.



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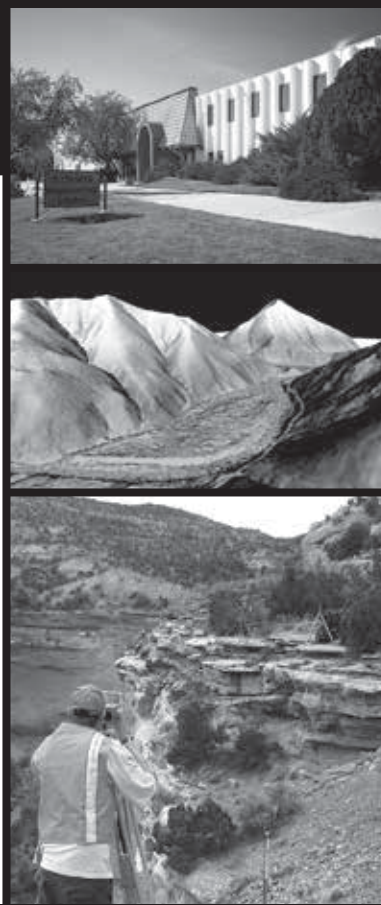
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The World of Zeros and Ones

By Gaby Neunzert, PLS

This presentation is a follow-up to the background of numbers, where it was stated that binaries represent the largest volume of numbers in our digital society. They were first “invented” by the German mathematician Gottfried Leibnitz (1646-1716), who elaborated on some basic Chinese thoughts. The concept then lay dormant until incorporated into a MIT doctoral thesis by Claude Shannon (1916-2001) in 1938. Fundamentally, in order to allow for data manipulations, the principle of binary numbers is used to reduce our world consisting of numbers, text and pictures, etc. into a sequence of zeros or ones, with a base of 2. Binary code is characterized as a sequence of discrete, either “on” or “off” steps, compared to an analog code which has a gradual change of signal strength and is subject to interference. It must be noted that working with binary data is a very complex and sophisticated topic and this writeup can be considered as an introduction only.

There are many numerical bases possible, for example: Base 10, common usage; base 60, time and angles; etc. However, since the current digital devices rely on transistors with only an on-off logic state, a 2-step mathematics, i.e. binary base 2 is needed. Simplified: Before any data or programming can be processed, it must first be entered, passed through a series of programs, ultimately reduced to binary code and then again reversed through the same steps back again to a humanly understandable output.

Few users will ever have to program a computer in binary, yet some of the terminology has entered the daily vernacular with some “unusual” numbers. First however, it is considered helpful to look at the illustration which shows the correlation between the binary mode and the modern common Arabic-Hindu numbers. Both, our daily

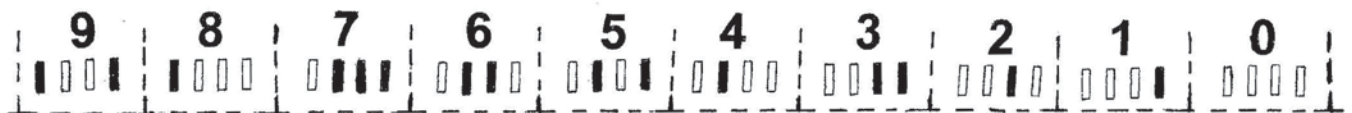
numbers with a base 10 (see appendix), and the binary system with a base 2, have the same dual characteristics of a numerical value and a magnitude based on its location in the string. (See below.)

The suggestion for the illustration came from the rectangular “chads” punched out of IBM computer cards. The “Key” only lists the position of the first four bits (4 wide binary) in order; to be followed by other 4 bit wide increments to its left, for the binary positional equivalent of 16, 32, 64 and 128, etc. The number bar above shows the activated binary locations from zero to nine. Binaries, as exponents of 2^x , where x = an integer starting at zero, result in common numbers of: 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, etc. Thus, by combining with addition, going to the left and starting from zero, binary numbers can represent any number needed. For emphasis only, $3=1+2$, or $7=1+2+4$. Note: the zero = all blank.

Ultimately, in order to be processed by the CPU (central processing unit), both data and programming instructions must be converted to binary. Without dwelling on the specifics, the 4 basic binary arithmetic functions are: addition, subtraction, multiplication and division, which allow for all calculations and manipulations specified by a “high” level program.

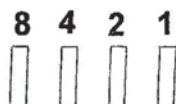
Converting data to binary takes but a very small portion of memory. Instructions, consisting mostly of many programming levels and a very larger number of subroutines, take up the bulk of memory space and CPU time.

An illustration of a user need/money item is the operating system, which as the manager of every running computer’s activities it is an absolutely necessary item. Historically, it started as an 8 bit, i.e. 8 binaries, equal



GMN'20

Binary Key



to 128 characters, wide set of instructions. As the complexity of the instructions increased, the width went to 16 bits, then to 32 bits and it is now 64 bits. Ultimately the core of Microsoft rests with a successful operating system. And there certainly could be many more examples.

The list undoubtedly is endless, but below is a very short list of some of the “strange number” binary applications:

32 or 64 bit operating system

1024x768 dpi computer screen

4K, 8K, 16K screen resolution

16 digit data size for ACAD

8 or 16 digit data size for hand calculators

Digital TV and internet, arriving at the user in a nearly endless stream

Biography:

Sakk, Eric. 2018, Understanding Binary Numbers; Amazon, e-books

Wikipedia, various topics relating to binary and decimal numbers

After reflecting on our society’s dependence on numbers and the conceptual similarities, it was considered necessary to add the paragraph on the Hindu-Arabic numbers system.

“Our” Hindu - Arabic number (an addendum)

Over time, many societies developed very sophisticated systems of writing and number characters and many different variations are still in use today. While developing their own languages, the Indo-European groups switched to a left to right, horizontal presentation for their writing. Numbers however, maintained their original right to left pattern to this day. Undoubtedly most modern users are completely unaware of the apparent contradiction and accept it as “natural”.

Probably, with an evolution based on necessity, the Hindu-Arabic decimal numbering system used today represents a very high degree of sophistication. It allows for values to be represented, from minus to plus infinity as well as fractions, with only 10 characters and their location in the string. Possibly as a legacy from the past and centered at the decimal point, the numbers run right to left from low to high and for decimal fractions to the right. Both, writing from left to right and representing numbers from right to left, is learned behavior. Values are represented in a double fashion, once by the numerical value (represented by the numbers 0 to 9) and then by its location in the string. For example: for the number “2905”, the number 5 “automatically” means 5 units, being located at the right end of the string and next to the decimal point. Unlike the 2 which means 2000 units and by its location of 4 places to the left of the decimal point. The same principles apply to decimal fraction, for example the fraction “0.006” means 6 units and with its location of 3 places to the right of the decimal point, the fraction is 1/1000. Especially useful is the “zero”, which acts like all the other numbers, i.e. as a value = nothing and as a place keeper.

Rule of the Month

Board Rule 1.6(K)(2) Required Monumentation- *Formerly Board Rule 6.11(b)*

By Earl Henderson, PLS

One of the reasons I put off upgrading my drafting software is because the software companies aren't adding any new features anymore that are helping me do my work. In fact, it takes so long to get used to the new application layout that I lose productivity for quite some time. The "upgrade" to the program hasn't changed how to draw a line, polyline or text. And they haven't invented a new kind of line. But they sure can re-arrange the commands enough so that I can't find the ones that I use 100's of times while drafting each plat. They're experts at hiding them just enough so that when I want to use it in the new program it takes 15-20 minutes just to find it. And they call that an upgrade? Why can't they keep the same layout and add the new features in a single pull-down menu off to the side so you can tell if they've actually added anything to the software? I suspect it's because they haven't really upgraded the software, they've just re-arranged it and changed the colors a little so it looks new and they can charge you again...and again...and again. And, of course we have to pay or our CAD program won't be compatible with those of the engineers or architects we work with. It gets embarrassing to ask that architect to "save it back to version 1998" after a while, doesn't it? There's also that hidden, Mission Impossible self-destruct command implanted in your current software somewhere that, coincidentally gets it to start acting up and fatally erroring right about the time the new version comes out. And if you don't upgrade within a certain time, your whole computer will start to smoke and you'll have to walk away doing your best Ethan Hunt impression.

Well I'm sure you're starting to wonder what this rant has to do with the Board Rules I've used in the title. It turns out that DORA has now joined the software upgrade movement. That's right, they've changed the numbering system of the Board Rules. Thank goodness (harsher words were omitted here) they didn't re-arrange them too. They are still in the same order. I don't know what the powers that be in that department were thinking, but I have to ask, was this really necessary? After spending all these years looking them up, referencing them, looking them up again, referencing them again, (repeat 100's of times), I'd finally memorized the numbers of at least 4 of them and started to understand the numbering system. And now the numbering system is completely different and makes no sense to me. And what happens to all those court cases and expert reports that reference the old numbering system? How is anyone going to read

those cases and know what new Board Rule is being referenced? And when can we expect the next upgrade?

As it turns out, old Board Rule 6.11(b) is now Board Rule 1.6(K)(2). The 1.6 replaces the 6. K is the 11th letter of the alphabet (I had to use my fingers too). And the 2nd letter of the alphabet is b (no fingers needed on that one). Oh yeah, now I can see why this was so necessary. The numbers and letters needed to be reversed. Of course.

But let's get down to brass tacks. Board Rule 1.6(K)(2) states in part, "the Board interprets the words "any" and "boundary" to be singular and thus not requiring all corners of the boundary of a parcel to be set. The surveyor may set only the corners marking the line, or lines, of the boundary requested by the client...". Most of us are probably aware that this option is available to us. And it makes sense that a property owner that has 800 acres of land and wants to build a fence along the north 500' of one of his property lines because his neighbor's goats keep eating his sugar beets, shouldn't have to get a survey of his entire 800 acres just to build that fence. But here's the thing. In the absence of finding original monuments at each end of the 500' line, and possibly even if original monuments are found at each end of that 500' line, it is still the responsibility of the PLS to make sure that the line is monumented correctly by expanding the search for evidence beyond the limits of the line in question. For instance, if one or both endpoints of the subject line are intended to lie on a crossing line (at a "T"), or at a corner to another line, how can you possibly be certain that your determined location does in fact lie on that crossing line without determining the location of that crossing line? It is just not possible to claim that you are monumenting a point on a line without first determining the location of the line. Or, if your subject line is between lots in a subdivision, again for fence building purposes let's say, wouldn't it be valuable to know where the lot lines are on either side of your subject line to assure yourself that your determination of the subject line location is correct? If you simply turn a 90 off the front line and monument a point at the record distance, you haven't determined the location of the back line and can't be certain that your monument is on the back line.

The point here is that we don't survey either property or lines in a vacuum. It is incumbent upon us to not wear blinders or focus solely on our subject property or subject

line. It is our responsibility, and I believe the Standard of Practice according to CRS 12-25-208(1)(b), even when we've found what we feel to be definitive evidence of a property corner, to expand our search for evidence beyond the limits of our subject property or line to insure, not only that we're correct in our determinations, but that we're not adversely affecting one of the neighbors because we haven't expanded that search. Part of being a Professional is being thorough.

One of my favorite Lucasisms is, "There was never a problem until the surveyor showed up." 9 times out of 9, the problem the surveyor caused could have been avoided if they'd expanded their search for evidence, or in other words, had been more thorough. It's the short cuts that get you in trouble every time. And believe me, we've all learned that one from our past experiences.

That thoroughness includes both supporting evidence of our decisions but also the conflicting evidence. The corroborating evidence we use and which must be shown on our plats according to CRS 38-51-106(1)(c), is as important as the conflicting boundary evidence we must show according to CRS 38-51-106(1)(k). So, if your plat consists of a square or a single line without showing anything beyond those limits, you haven't met the Standards of Practice.

In the interest of being thorough, let's not forget that if we make a determination about a property line, we are obligated to monument that line. CRS 38-51-104 states

that, "the corners...when established on the ground by a land survey, be marked by reasonably permanent markers solidly embedded in the ground." Board Rule 1.6(K)(2) allows us to limit our survey to a single property line, but it does not allow us to forego the monumentation of the property lines we determine. So be careful about what you show and how you show it on your plat. Showing supportive and conflicting evidence is vital to support your determinations. But if on your plat, and/or to your client, you are making determinations that additional lines are in fact property lines, then you must monument those as well. It is incumbent upon you to know the difference and to communicate that difference to your client. You can, at your client's request, limit your survey to the determination of a single property line. But if your client requests that you also determine the locations of other property lines but, "I just don't want to pay to have those others monumented." Then it's time to be a Professional and educate them on your legal responsibilities.

I'm smelling smoke. Are you? Next time, our mission, if we decide to accept it, is to figure out the CRS numbering changes.

PS-Please don't blame the AES Board members or staff for the Board Rule and Statute numbering changes. It wasn't their decision. That took someone.....(fill in the blank).

Be safe out there.

Under The Gold Dome

A Review Of The 2020 Colorado Legislature

By Steve Balcerovich and Kathleen Oatis, Lobbyist Team for the PLSC

General Overview:

The 2020 Colorado General Assembly began on January 7, 2020 with Democrats in control of the House, Senate, and Governor's office. In the first few months of the year more than 500 bills were introduced and the budget picture was robust, as Colorado's economy was growing strong with less than three percent unemployment.

Then on Saturday, March 13, the Legislature and all the optimism of the session came to an abrupt halt. The Governor had called a state of emergency due to the COVID-19 pandemic, and the Legislature went into an unprecedented recess with an intent to reconvene at a later date.

After an unsuccessful lawsuit by the Republican Party, followed by delays and disputes between the parties over such issues of remote voting and the mandated use of masks, the Legislature reconvened the Tuesday after Memorial Day, May 26. According to the constitution, the Legislature must conduct two pieces of business every session; passing a balanced budget and a school finance act. Neither was going to be easy this year as the pandemic grounded our high flying economy. The May revenue forecast predicted the state will face a \$3.3 billion dollar deficit for fiscal year 2020/2021.

Besides the budget, HB20-1360, and the school finance act, HB20-1414, about sixty other pieces of new legislation were introduced in the compressed, three-week long, second half of session. Before reconvening, the Speaker of the House had promised that all the legislation to be addressed were to be "fast, free, and friendly". In retrospect, this statement was far from the truth. Although about one half of them were related to reducing our state's budget, others were new mandates to businesses and local governments.

To compound the already chaotic situation was the community's response to the death of George Floyd. After the incident in Minneapolis, there were several nights of violent protests and vandalism at the Capitol that forced the session to be delayed once again; this time for three days. As a direct result of the incident, SB20-216, concerning law enforcement accountability, was passed and now signed into law.

Besides the budget, school finance, and police reform, the Legislature passed major legislation including mandatory sick leave for employees, tax reform with the proceeds to help fund schools, state wide reinsurance, immunization for children, and whistle blower protection for employees.

The Legislature had sine die on Monday, June 15. Absent a special session, which could be called by Governor Polis sometime later this year, the 2021 Legislature is set to begin on Wednesday, January 13, 2021

Land Surveyor Issues:

Working with the PLSC legislative chair and committee members, our focus was on HB20-1318 (electronic recording of plats), HB20-1326 (professional portability program), and SB20-157 (vacation of a roadway by local governments).

The discussions around electronic recording of plats started last December with phone conversations with county clerks. HB20-1318 was introduced in March, and as introduced, PLSC opposed the legislation. Working with the sponsor, we were able to secure an amendment that addressed various issues that brought us to a neutral position in the committee of reference.

When the Legislature reconvened on May 26 after a two-month recess due to the COVID-19 pandemic, the clerks moved forward with the bill, because they believe it will promote more electronic submission of plats versus in person office filings.

On June 3, the bill passed Senate Third and final reading and was signed by the Governor on June, 22.

During the legislative recess, there had been considerable discussion on how to improve HB20-1318. At the PLSC legislative committee's request, we have reached out to the Clerks' association to notify our intent to pursue further legislation on electronic recording as well as monument record keeping in 2021. We expect those talks to begin after the November elections. In addition, we have reached out to title companies to invite them to be part of the discussion.

The other legislation that we have worked on on PLSC's behalf is HB20-1326, the creation of a professional portability program. As introduced, PLSC had serious concerns with the legislation, as it did not require out of state surveyors (who relocate to Colorado) to undertake a Colorado specific written exam. Working with the Department of Regulatory Agencies (DORA) and the bill sponsor, Representative Shannon Bird, we were able to amend the bill to our satisfaction as to require a Colorado specific exam for surveyors relocating to our state. HB20-1326 was signed by Governor Polis on June 20.

Finally, we paid close attention to SB20-157, which would have allowed a city or county to sell a vacated roadway for fair market value. Although PLSC did not initially oppose this legislation, we had concerns that the property was not being returned to the original property owner. If the legislation had gained momentum, PLSC

was poised to activate its opposition. Fortunately, the legislation was defeated in its first Committee.

Conclusion:

This session was like no other in the history of Colorado, with a two plus month recess, 710 bills being addressed in only 84 days, and rioting at the Capitol complex. Despite the chaos, PLSC had a successful year this session and looks forward to 2021.

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Western Federation of Professional Surveyors

Highlights from the 13 Western States

The Western Federation of Professional Surveyors (WFPS) held a virtual Board of Directors meeting on June 27, 2020.

HIGHLIGHTS FROM THE 13 WESTERN STATES

ALASKA (ASPLS) Steve Buchanan – Current membership is 185. The University of Alaska Anchorage Geomatics program is stable with 3 full-time faculty members and several adjunct instructors. The program was in jeopardy of being cut due to the Governor's veto of \$130 million from the university's operating budget. The Geomatics Advisory Board (GAB) mobilized and started a fundraising campaign to save the program and has raised over \$150,000. The GAB is an independent group of geospatial professionals from private and government entities formed to help guide the UAA Geomatics program. A list of donors is on the University of Alaska website at <https://uaa.alaska.edu/academics/college-of-engineering/departments/geomatics/support-geo.cshml>.

ARIZONA (APLS) Mike Fondren – Current membership is 371. The 2020 conference with California and Nevada has been rescheduled to August 21-25 in Las Vegas. APLS has developed Right of Entry door hangers and a best practice guide which is available to members. APLS successfully raised funds to purchase software to purchase an annual lease of Low Distortion projects (LDP) Design Software to prepare for 2022 Datum. The software will allow APLS to design SPCS zones that are optimized for Arizona Communities. Senate Bill 1274 passed which change the composition of the Board of Technical Registration (BTR). Originally, the bill did not guarantee any licensed representation on the BTR. APLS lobbied for an amendment which was accepted. Each profession will have one representative on the BTR however, public members will now comprise the majority of the Board. To assist members, APLS compiled COVID-19 resources and launched a page on the APLS website.

CALIFORNIA (CLSA) Ray Mathe & Warren Smith – Current membership is 1337. The 2020 Conference with Arizona and California has been rescheduled to August 21-25 in Las Vegas. A proposal was adopted and sent to the Policy and Procedures and Professional Practices Committees to determine how best to establish and

achieve adherence to generally accepted land surveying practices.

COLORADO (PLSC) Roger Nelson & Todd Beers – Current membership is 351. The state licensure board has proposed that review of initial applications be performed by NCEES instead of the Colorado Board. The action will go into effect in 2020. PLSC is assisting NSPS directors to create legislation related to railroad abandonment of property in order to have the existing infrastructure surveyed prior to destruction. PLSC sent a letter to the Governor requesting to not be included in the staying at home order for the State of Colorado. The surveying profession was not identified as non-essential and surveyors in the State were able to continue operations.

HAWAII (HLSA) Cliff Yim – Current membership is 81. HLSA sent a letter to the Governor regarding the importance of land surveyors to continue working during the pandemic. The Governor's office confirmed that Surveyors were indeed critical and essential workers and could continue to work. HLSA has been working on a Bill to amended Land Court Deregistration Legislation since 2017. While our Bill was moving smoothly through the State House and Senate for the 2020 session, the ongoing situation with COVID-19 has effectively ended any legislative action pertaining to our bill until further noticed. The HLSA Board is expecting to take up this issue again in the 2021 legislative session.

IDAHO (ISPLS) - Jeremy Fielding was recently appointed as the new WFPS Director from Idaho. ISPLS recently launched a new website at www.idahopls.org. Working on standard of practice document which have not been updated in several years.

MONTANA (MARLS) Dick Smith & Russ Kluesner – Working to add specific PLSS experience for licensing either by experience or education. FS applications are taking longer than expected to be approved by MT BPELS. MARLS is working with BPELS to explore possibility of bypassing BPELS approval and allow only NCEES approval. Some counties departments of revenue have been refusing to recognize newly created parcels as tracts of record for property tax assessment for various reasons after the tracts and deeds have been filed. MARLS is determining what can be done to rectify this issue. Dick Smith was awarded the Fellow Member

award at the MARLS Conference. Outreach committee has been working with the Montana Universities and Colleges offering Surveying curriculum to better expose their students to Land Surveying. MARLS 2022 Datum committee has been working on draft language for our Legislators to subscribe to the most current datum supported by NGS, trying to avoid having to address this every time the datum is updated.

NEVADA (NALS) Nancy Almanzan & Trent Keenan – Current membership is 277. NALS membership has increased 40% over the last four years. The APLS-CLSA-NALS Conference has been rescheduled to August 21-25 at the Luxor Hotel in Las Vegas. NALS continues to support the four-year land surveying degree at Great Basin College (GBC). A review of the GBC program has recently been completed. NALS participated on the review committee and also on the hiring committee for the second professor. Trent Keenan is the new Editor of the Nevada Traverse magazine. The magazine has been revamped with all new graphics and continues to be printed four times a year. The magazine is archived on the NALS website.

NEW MEXICO (NMPS) Allen Grace – NMPS is reviewing potential legislation efforts in preparation for the 2021 Legislative Sessions. Support for 2022 Datum is accepted with special use zones requested for low distortions areas. The conference was cancelled due to COVID-19 pandemic.

UTAH (UCLS) Mike Nadeau – Current membership is 399. The UCLS conference was held February 21-23 in St. George. The UCLS sent out a survey regarding the Economic impact of COVID-19. Those results have not been published yet. UCLS is reviewing the membership fees and policies regarding sustaining members, corporate members, and student members

WASHINGTON (LSAW) Ben Petersen & Chris Jepson – Current membership is 841. The Board of Registration is working on a proposed guide to address issues associated with signatures and other electronic documents. LSAW introduced and successfully passed legislation to address the 2022 datum. The Boundary Line Adjustment Model Ordinance continues to be reviewed and discussed. Monument Preservation legislation will be introduced next session. LSAW launched a webpage with COVID-19 resources. LSAW letters to the Governor requesting exemption from the shelter in place orders and requesting land surveying be deemed essential went unanswered. Land Surveyors continued to work on essential infrastructure projects. The LSAW Board of Directors is meeting virtually until such time as gatherings are allowed again. LSAW held a successful conference in February with over 600 in attendance.

WYOMING (PLSW) Mark Corbridge – Current membership is 198. PLSW is currently soliciting comments on draft legislation addressing the 2022 Datum. The Fall Technical Session is planned for November and will feature speaker Chuck Karayan. PLSW is working with the Board of Registration and GeoInquiry to provide outreach to K-12 schools. Work is progressing towards a RTN in Wyoming.

WESTFED SERVES AS A REGIONAL VOICE

WFPS sent a letter to NALS (Nevada) for support of mandatory continuing education requirement. WFPS serves as a regional voice for the 13 western states. If your state association is dealing with an issue and would like a position letter from WFPS, please contact admin@wfps.org

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.

**Donations can be made mailed to WFPS:
526 South E Street, Santa Rosa, CA 95404.**

<https://www.nspis.us.com/donations/donate.asp?id=18191>

About WFPS

The Western Federation of Professional Surveyors (WFPS) was formed in 1979. The Board of Directors includes two delegates from each of the 13 western states. WFPS serves as a regional voice for Land Surveyors and meets quarterly to discuss practice issues affecting western state surveyors.

For more information about WFPS and the state associations, visit WFPS.org

WFPS Executive Office

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NSPS Sub-committee on the ALTA/NSPS Land Title Survey Standards

April 2020 Annual Report

This sub-committee – which comprises approximately 300 ad hoc members; surveyors who have indicated an interest in being involved in the process – has, over three or four meetings, reviewed and commented on approximately 12 pages of suggestions for consideration to be included in the 2021 revision to the ALTA/NSPS Standards.

Likewise, the formal committee with ultimate responsibility for developing the Standards – the Joint ALTA/NSPS Committee – has met three or four times to review and comment on the same list.

As a result of that work, a partial draft of the 2021 Standards has been developed (some work remains to be done on the measurement standard in Section 3.E.) for the review by the joint committee. If this draft has not been distributed to NSPS sub-committee participants by April 17th, it will be very shortly.

A final draft will be approved by the Joint Committee in August and presented for consideration by the NSPS and ALTA Boards, in September and October respectively, with the goal of an effective date of February 23, 2021.

No action is requested at this time. A final draft will be presented to the NSPS Board for consideration at the fall meetings in Tulsa.

Respectfully submitted,
Gary Kent, Chair
April 15, 2020

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NSPS UAS COMMITTEE

March 30, 2020 • Conference Call 4:00-5:00 PM Eastern

NSPS Spring Committee Meeting

Meeting style was town hall. Trish hosted the call and Lisa helped to facilitate participation and monitor the chat text.

Roll call 15 Committee Members attended the conference call

The goal of this meeting is to:

- Review the directive of the Board and develop items and issues list
- Determine and Re-establish sub-committees and chairs
- Schedules
- Direction moving forward

SUBCOMMITTEE PROGRESS REPORTS

Legislation (Craig Amey) Legislative update

FAA proposed Rules:

One area of concern is a proposed requirement for a transponder for all UAS. This would allow compliance with the rule requiring air traffic control communication for all airlines. For survey firms with fleets of existing UAS this is prohibitively expensive. Many UAS will not be able to be retrofitted and these will need to be replaced should this rule go into effect. The only exception to the transponder requirement were for UAS flights in designated park and recreational areas under 400 feet. Public hearings indicated that this rule is intended to be implemented, however no time frame was given.

Unmanned Aircraft System Traffic Management (UTM) is the goal of the FAA requirements. It refers to the integration of UAS into the national airspace. Comprehensive UTM will be necessary for beyond visual line-of-sight operations. (For more info: https://www.faa.gov/uas/research_development/traffic_management/)

JB Byrd: the FAA bill will most likely be introduced in 2022

In the meantime, NSPS should proactively create a short “wish list” of UAS proposals to support Surveyors’ use of the technology. JB can seek a legislator to act as a champion to draft legislative input in support of NSPS interests.

As an aside, one way to get legislation passed is to attach “template legislation” pieces of the NSPS UAS

“Wish List” as tag-ons to non-controversial bills that will pass through the legislative process. This can be a bifurcated approach, as this is connected as well to Department of Interior regulations.

The NSPS Government Affairs committee needs to be consulted whenever the UAS committee plans to address federal legislators. They can address strategic opportunities and identify conflicts.

Craig: These issues include BLOS, access to airspace, and ‘growing the market’. Much of what is needed for the FAA to basically “leave us alone”. LAANC, now an APP from KITTYHAWK, facilitates integration of UAS into the national airspace and is a good example of a ‘user friendly’ method to keeping UAS flying to support business use. LAANC allows almost immediate programmatic authorization to fly in controlled airspace. (Short explanatory video: <https://kittyhawk.io/feature/laanc/>)

Liaison (Brent) - AUVSI liaison (Association for Unmanned Vehicle Systems International)

History: Initially Brent Birth approached AUVSI to investigate the possibilities of membership of partnership with NSPS. AUVSI could potentially augment NSPS’ voice in the area of survey use of UAS and has a substantial industry presence. With the assistance of JB Byrd, who was aware of compatibility issues between the two organizations, a Memorandum of Understanding was proposed. Mutual interests were identified, responsibilities outlined, and the MOU was signed by leadership of both NSPS and AUVSI in 2018. NSPS holds a membership in AUVSI and has limited access to their UAS state legislative database. There were mutual promotional opportunities assumed as well.

Status: Brent: The strategic alliance has not really been activated to its full extent. The limits and current status of the MOU will need to be re-assessed. Access to the AUVSI state legislative Unmanned Vehicle database (<http://cqrcengage.com/auvsi/statelegmap>) was envisioned as a way to proactively address proposed legislation that affect commercial UAS use by surveyors.

This is a good opportunity to re-examine the MOU and brainstorm possible opportunities to leverage the relationship with AUVSI.

Per Curt, Tim can explore having AUVSI leadership on the “Surveyor Says” podcast. A possible discussion of

UAS commercial use and survey UAS use issues or the UAVSI platform.

JB: Interested in beginning an inquiry to refresh the status of the alliance with UAVSI.

NSPS UAS Opinion Questionnaire 2019

Jim Craddock summarized and categorized approx. 500 responses from a questionnaire sent to the general NSPS membership early last year. The intent of the questionnaire was to assess how our membership is using UAS, how they plan to use UAS, and how they envision the NSPS UAS Committee can best help them.

The first section was yes/no questions, the second half was text responses.

Response Highlights: Many professional surveyors are engaged with UAS for business. They hire UAS Pilots to procure imagery for projects, or plan to get into UAS or have the technical capability themselves or their own firms.

There were many responses that spanned the spectrum as to how NSPS UAS Committee could assist. These included

- interested in guidance, if not education, in land survey uses for UAS.
- a certification program for UAS survey work was warranted.
- Believed NSPS should advocate and monitor legislation, many on both the federal level and on the state level
- NSPS should provide resources for members as far as educational guidance

The UAS committee had discussed certification at length in the past and decided that NSPS should probably not be the vehicle for certification (such as NSPS hydrographic surveying certification.) ASPRS has robust certification program for various photogrammetric and remote sensing mapping technologies and past discussion with UAVSI board members, though instructive, led the committee to that conclusion. <https://www.asprs.org/Certification>

There was discussion this meeting and perhaps the topic will be revisited.

Noted:

- New surveyors will have much more training and familiarity with remote data collection techniques upon graduation from college or technical programs.
- UNC is an example of a college that has aerial imagery processing courses that can be used as evidence of competence.
- Various NSPS affiliated State societies (including Pennsylvania and Virginia) have had in-depth workshops for their members on various aspects of UAS skill-based learning, from pilot courses to aerial

imagery and lidar mapping workshops. There are many quality online survey educational on UAS skills as well

Questionnaire Sub-Committee

Jim Craddock
Jim Hollandsworth
Jeff McDougal
Chris Pappas
Marcus Schmidt

Insurance for commercial UAS

It was suggested that Lisa Eichmann be invited to participate in a podcast to discuss the topic of insurance needs for survey firms using UAS.

Best Practices

(this topic was not discussed)

2020 Meeting Schedule

Dates to be determined

4-5 PM (Eastern) was agreed on as a good time for conference calls.

Thank you to Joanne Williamson for compiling this report

Respectfully,
Brent
Brent L. Birth, P.L.S. (PA)

NSPS Conference Line: 1-800-511-7985\330-7760

Tentative upcoming NSPS Conferences

Fall 2020 - NSPS Fall Business Meetings - September 24-26 Marriott Tulsa Hotel Southern Hills, Tulsa, OK PAC Golf Outing - If held will be on Wednesday, September 23

Spring 2021 - NSPS Spring Business Meetings and Day on the Hill - April 20-24, 2021 Hilton Arlington, Arlington, VA

Fall 2021 - NSPS Fall Business Meetings - September 22-25, 2021 The Hyatt Lodge, Oak Brook, IL PAC Golf Outing - If held will be on Wednesday, September 22

Spring 2022 - NSPS Spring Business Meetings and Day on the Hill - March 29 - April 2, 2022 Hilton Arlington, Arlington, VA

Board of Directors Meeting Minutes

June 9, 2020 • 4:30PM

1. Call to Order: Parker

Name	Position	Chapter	Attending?
Steve Parker	President	Southern	x
Don Hulsey	Vice President	Southern	
Shaun Lee	Secretary/Treasurer	Central	x
Becky Roland	Executive Director	n/a	x
Heather Lassner	Director	Northern/TrigStar	x
Eric Carson	Director	Central	
Brian Dennis	Director	Southern	
Mike Greer	Director	Central	x
Leif Joy	Director	NW ¼	x
Eric White	Director	Southern	x
Tom Sylvester	Director	Western	x
Scott Thompson	Director	Western	
Todd Beers	Ex-Officio	Central, NSPS Rep.	
Parker Newby	Non-Voting	Southwest	
Roger Nelson	Non-Voting	WFPS Delegate	

Guests:

John Hunter	Geo-Coordinator	
Peggy Streicher	GIS in the Rockies	
Ralph Pettit	Legislative Chair	
Todd Johnston		x
Brian Bowker		x
Robert Boehm		x

2. Determination of Quorum (6 voting): Lee

3. Any changes to the Agenda? Parker

- a. Tom Sylvester would like to add CMU Foundation payment to next agenda

4. Approve May Minutes: Parker

MOTION: To approve the May 2020 Minutes as presented. (Lassner/Sylvester)

Approved unanimously

5. Financial Items: Parker/Lee/Roland

a. Budget Approval

- i. Removed \$600 per Chapter for RMSS Reimbursement due to in-person meeting expenses that were not incurred due to COVID-19 restrictions.

MOTION: To approve the 2020 Budget as amended. (Sylvester/Boehm)

Approved unanimously

- ii. Becky Roland will process the approved budgeted Summit Chapter budget requests.

b. Investment Update from Key Bank (Savings, Earnings, Performance)

- i. Checking \$158,000 and Savings \$62,000
- ii. Still waiting to hear from Key Bank on Investment account access

c. NSPS Foundation – awaiting revised MOU

d. Vectors Inc. sponsored Colorado Surveyors Foundation

- i. To assist Colorado surveyors in need – medical issues, etc.
- ii. Asking for Board Members from each PLSC Chapter to serve on this Foundation
- iii. Chuck Hutchins will send a letter to PLSC for review/discussion

6. Approval of PLSC Operations Manual

MOTION: To approve the PLSC Operations Manual. (Lee/White)

Approved unanimously

- a. Becky Roland will post the Manual on the PLSC Google Drive and provide updates for Board approval annually.

7. GIS in the Rockies: Streicher

- a. Moving forward with a virtual meeting for 2020.
- b. Looking for at least one more volunteer from PLSC and presenters.

8. Colorado Coordinator Activities: Hunter

- a. No report

9. WCCC Update/Scholarship Committee: Sylvester

- a. Tom asked Chapters to consider joint Scholarship with PLSC to provide additional funding for students.
- b. Budget cuts and class cuts are anticipated for Fall Semester.
- c. Need to review the MOU for the Endowment regarding funding of classes with low attendance.

10. Summit Update: Lee

- a. Chapter Agreement was revised and sent to the Front Range Chapters, which includes the request for two Planning Committee members from each Chapter.
- b. Currently considering a hybrid model of conference with limited in-person presentations, live broadcast and recordings.
- c. Whova has released their new platform and may be a tool for delivering content.
- d. Gary Kent is the main speaker.

11. NSPS Update Beers/Parker

12. NSPS YSN: Parker

- a. James Combs will be hosting an online networking event – scheduled for July 9 at 7PM.
- b. Make sure Tom Sylvester has the information to share with students and graduates.

13. QBS Update: White

- a. Feedback on QBS Programs are that reviewers are not always qualified to review proposals and evaluate survey firms. Eric is going to look

- into this further and report back at next meeting.
PLSC can assist with Survey Monkey.
- 14. Colorado Railroad Museum Project: Beers
 - a. Don Hulsey is going to assist on moving this project forward.
- 15. Reports
 - a. Executive Director: Roland
 - i. E-newsletter will be sent tomorrow. Please send any information to Becky. Goal is to send one every other week.
 - b. Lobbyist/Legislative Committee: Thompson/Pettit
 - i. Becky will include the Legislative Report in the e-news.
 - iii. AES Board is updating their rules, and PLSC needs to make sure requests are being considered. The next meeting is Friday and Tom Sylvester will reach out to Ralph Pettit to be sure PLSC is represented.
 - iii. Electronic recording bill needs PLSC input. Tom Sylvester offered to coordinate with Scott Thompson on this issue.
 - c. Membership Committee: Carson
 - i. No report
 - d. Outreach Committee: Dennis
 - i. No report
 - e. Education Committee: Hulsey
 - i. CFedS credit given to all attendees at Summit
 - f. Trig Star Committee: Lassner
 - i. Reached out to NSPS about refund/next year's program.
 - g. CST Committee: Blair
 - i. Steve just had two Level 2's pass the exam.
 - ii. More information is available on the NSPS website and includes forms for getting approved as a proctor.
 - h. *Side Shots* Report: Roland
 - i. Next deadline is June 30
 - i. WSPS Delegates' Report: Beers/Nelson
 - i. No report
 - j. Colorado County Surveyors: Joy
 - i. Leif Joy will send out a call to join the Committee.
 - ii. Same concern as Legislative Committee on the electronic recording bill. Leif will reach out to Scott/Tom/Ralph on more information.

- iii. Becky will work with Leif to update the webpage on PLSC.
- iv. Leif will also process the payment for PLSC.

16. Chapter Reports

- a. Southern: Parker
 - i. No activities scheduled at this time.
- b. Central: Boehm
 - i. No meetings since last month.
 - ii. Robert is following up on Railroad Museum project.
 - iii. Finishing budget and set up of checking account.
 - iv. Updated CCPS pages on PLSC website. Need to set up contact page for all Chapters. Becky will follow up on that and hosting larger files on Google for public access. Need to confirm navigation allows for tertiary parent of the page.
 - v. Becky will ask the programmers to make the web header smaller.
 - vi. New logo vote is out. Becky will confirm when the email was sent, as Robert and Shaun did not receive the email.
- c. Northern: Lassner
 - i. No meeting this last month.
 - ii. Heather will be sending out an email for Call for Nominations.
- d. NW ¼: Whelen
 - i. Willy is now Chapter President and plans to attend more PLSC meetings.
- e. Western: Bowker
 - i. Next meeting July 8 – BBQ if possible.
 - ii. Sent out an email to lapsed/non-members that they will be dropped from communications unless they join.
- f. Southwestern: Johnston
 - i. Officers Meeting in July to try to build momentum.
- 17. Next Meeting Date and Location
 - a. Next BOD Meeting: July 14 4:30PM
 - b. BOD business work group: June 13 8AM
- 18. Adjourn (Lee/Sylvester)

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Association Membership And The Surveyor

By the National Society of Professional Surveyors

The Merriam-Webster dictionary defines membership as follows:

1: the state or status of being a member

2: the body of members // an organization with a large *membership*

Membership is implied to be individuals who have something in common and therefore wish to belong to a group or organization that promotes that commonality. This is not a new concept, as various memberships have existed for centuries. The groups can be formal or informal, business or social, public or private, but the common interest is key to them all. For instance, membership was a status symbol if you and/or your family belonged to a country club, hunting club or equestrian club. Groups have gathered socially in automobile and motorcycle clubs for the past century. Civic clubs, including Kiwanis, Lions Club, and the Jaycees, were created to provide organized assistance to municipalities and neighborhoods. Museums are well known for their membership programs and those donations help keep the institutions thriving. Other membership organizations were established to help people with various causes, including civil liberties, Second Amendment rights, and retiree programs and discounts. All serve a good and dedicated purpose; however, the most important one that will most likely provide the most benefit is the professional membership.

MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS

Membership in a professional society, especially in times like these, is also important on many levels. For the surveying profession, it provides advocacy and representation for not just the licensed practitioner, but anyone who works in surveying. Some of the benefits of being a member of state and national surveying associations include:

REGULATION & ADVOCACY

Part of the association's role for professional oversight is regulatory advocacy. Professional licensing has come under fire in recent years as deregulation groups seek to

eliminate licensing they see as a barrier to entry rather than to protect the integrity of the interests. State and national associations are working together to defend our profession against these efforts and maintain the regulatory requirements of the surveyor.

Another area of advocacy is political representation at both the federal and state levels. From UAV uses to fighting back against infringing uses of radio signals used by GNSS satellites, the associations work together to represent the surveying profession's best interest in potentially damaging policies and lack of funding for essential surveying and mapping activities.

PROFESSIONAL STANDARDS

Besides advocating for licensing, the associations provide input and guidance for professional standards for technical documents and services. From working with the title examiners group to establish a national land title survey standard to specific guidelines for deliverables, our association groups work together to raise the standard of the profession. They also advocate for a higher ethical standard for all practitioners in surveying so to be seen in a respectable light.

Various certification programs are available through the national and state associations, including:

- Certified Survey Technician
- Certified Hydrographic Surveyor
- Certified Floodplain Surveyor

These certifications allow Surveyors to promote their skill set further as one who is specifically trained for a particular task.

EDUCATION

The surveying associations provide continuing education (whether statutorily required or not) for all levels and tasks of surveyors, from introductory field and office to advanced technology and legal curriculum. Many also provide material refreshers for those preparing for their licensing exams. Many of these educational opportunities are held during annual conferences and

seminars specifically targeted for surveyors, whether members or not.

Labor shortages are happening in most professions and surveying is no different. Our organizations provide educational outreach for future surveyors through various conduits, including elementary and high school programs and college career days through engineering and mapping-related curriculums. We also promote scholarship opportunities for two- and four-year degree college programs through a variety of channels.

TECHNOLOGY

Along with formal surveying education topics and discussions, another substantial portion of an association's conference or seminar is an exhibitor's hall showcasing the latest and greatest in surveying technology. It is also a place for vendors to present new data services to augment existing surveying tasks.

Technology providers often utilize these associations for advertising and marketing so members are exposed to new equipment, software, and processes more directly than simply advertising in trade magazines.

AND MUCH MORE!

Many of these organizations offer member discount programs for insurance, travel, products, and more. They can provide these discounted options simply because of the buying power of more users, so the savings are passed on directly to the Surveyor.

Associations also often offer career centers for connecting people and open positions. Many also offer resume services to help the job seeker capture their best qualities for inclusion on a job application.

THE INTANGIBLES

While the aforementioned are the main examples of the benefits of membership in your state and national surveying association, for many it is simply the opportunity to connect with fellow professionals and technicians. Whether it be for job openings, questions regarding a specific survey or simply engaging another professional in peer review, your membership in these groups helps to pave the way to completing these tasks and more.

TAKING CARE OF TODAY AND PLANNING FOR TOMORROW

Although we are living in unprecedented times, maintaining your memberships, both state and national, may become a question of necessity. For most, prioritizing expenses has become more scrutinized and membership is easily seen as non-essential cost. These memberships are an investment in your profession and career, so consider that return when your next renewal form comes in the mail. The money spent now on professional memberships can go a long way in keeping your profession and career acknowledged as an essential service for years to come.

CCPS

I wouldn't have thought three months ago that I would still be working remotely in July, but here we are. My guess is that I won't be returning to the office until sometime next year. I hope everyone is staying safe, well and sane. I'm good on the first two at least. We continue to hold our board and chapter meetings virtually to play it safe. In the last meeting the board decided against trying to plan a summer BBQ and instead we're putting together a golf tournament at the Applewood Golf Course, which should offer a great chance to get out of the house and see some friends. More details will follow as the event planning progresses.

Our Treasurer, Daniel Davis, did a great job of getting our bank account moved to a new bank which should make things easier for future boards. We received a scholarship application from Dan Garbee and based on his impressive resume and motivation the board voted to award him a \$3,000 scholarship. On the legislative front we were informed that there may be an amendment to Colorado Revised Statutes Title 9, Article 1.5 regarding utility locating requirements for excavation and discussed how the PLSC might be involved in those discussion going forward. One of the things on our to do list for this summer is to amend our bylaws to allow online voting in the election this fall. We're also in the process of migrating content from our website to a new home in the PLSC website. If you haven't checked it out yet, please do. You can find our pages under the "About Us > Chapters" section. Comments and suggestions for improvements are welcomed. One feature we are working on standing up is a place where we can put resources that are valuable to you, so if you have suggestions for what kind of things you would find valuable or have content you would like to share with the membership, please pass them along. Example content could be survey reference material in Google Earth (MKL/KMZ) format, Excel spreadsheet tools, feature code libraries, scanned maps or documents not available from other sources, research links, how-to guides, tips n tricks, custom scripts, workflows, study material, etc. The options are only constrained by what you would find useful. Thanks to all of you that voted on our new chapter logo options. There was a great turnout and this time there was a clear favorite. We shared the results at the last chapter meeting, but if you weren't able to make the last meeting be on the lookout for an update in your old-school mailbox.

Robert Boehm, PLS
President, CCPS

NC - PLSC

The Northern Chapter ended our season with a special guest from the City of Loveland, Kerri Burchett. Kerri is the Principal Planner with the City and gave a very informative lecture on the reasoning behind decisions made in the Planning Department. The class included setbacks, rights of way, easements, and much more. Her lecture was a great opportunity for surveyors to ask questions regarding the ordinances we commonly deal with when conducting our surveys.

Our great team of directors has been approached by the City of Loveland to verify benchmark data. The directors stepped up and gave input on the conversion from NGVD 29 to NAVD 88 and whether it was necessary to make this conversion with NATRF 2022 coming to us in the future. Our conclusions were to make observations on known benchmarks to convert to NAVD 88 datum for a smoother conversion to the NATRF 2022 when it comes about (briefly summarized).

Our Chapter has taken our normal hiatus for the summer and will regroup in September. This fall we will be electing board members for expiring positions within our chapter.

I hope everyone is doing well and staying healthy out there!

Tony Fendick, PLS
President, NC-PLSC

NW 1/4 PLSC

The NW1/4 last met on March 15, at the onset of the COVID 19 pandemic in this country. The meeting was held via Zoom and focused on reviewing the seminar conducted by Jeff Lucas at the Rocky Mountain Summit. All of this seems ages ago based on what we have all experienced these past few months. It does seem lately time has proceeded to a more normal pace, although with some new normals for sure.

The impact of COVID 19 on the Northwestern part of the State have been varied. Some companies and towns almost immediately laid off employees as sales tax revenues took a substantial dive with the closing of the ski areas, and the lodging and restaurant closings. Real estate dropped almost like the stock market did from mid-March to early May. And currently, it is as busy as it has ever been for the past several weeks. Naturally, there are all kinds of theories for why this is happening, but surveyors are busy with Improvement Surveys, Land Surveys, topographic surveys and Improvement

CHAPTER NEWS

Location Certificates in this area.

The infrastructure past of our businesses is very much a mixed bag. Some towns and counties have pulled back on bigger capital expenditures, as well as CDOT. The infrastructure bill currently sitting in Congress getting passed in some form would help immensely longer term. It seems nowadays we are content to hand out money in a hurry, but more reluctant to put people to work. Although COVID 19 is a formidable foe inside, in the setting of many civil jobs, with proper social distancing, we can conduct our business.

Sincerely,
Brian T. Kelly, PLS
Vice President, NW1/4

SC-PLSC

Down here in the Republican section of the State of Colorado, our March thru July meetings were canceled due to the "social distancing" requirements and the many closed restaurants that provided our meeting rooms

that we use on a monthly basis. We have missed out on many planned outings and events due to the COVID-19 chaos. We had planned a firearm shooting competition event, summer golf tournament and many other exciting guest speakers. It seemed like time was frozen for a few months as far as chapter meetings. The workloads of all our Southern Chapter surveyors are surprisingly still very strong. The plan is to start monthly meetings back up in August. On a side note, our Southern Chapter Vice President, and Compass Surveying & Mapping owner Mark Johannes has landed the Boundary Survey for the COG railroad in Manitou Springs. Mark spent several hours with Peggy at the Miramont Castle's "Sawyer Garston Collection" combing through old survey documents to use in compiling the boundary geometry. Thanks again Peggy for keeping the collection of historical survey documents archived. Everyone is always welcome to join and participate in our monthly meetings. Feel free to login to our website calendar at www.scpls.net.

Don R. Hulsey, PLS
President, SC-PLSC

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CHAPTER NEWS

SWC – PLSC

The SouthWest Chapter (SWC) has not had a meeting since January 21, 2020. Because of the pandemic our April meeting was canceled and the July meeting will be pushed back. Officers will meet in July to plan a course of action to get the momentum going. As of the date of this column, our normal meeting location, The Durango Community Recreation Center, has not opened their facilities to gatherings. While I am anxious for Chapter members to meet in person, we will follow State and local rules for social distancing. This may result in using technology to meet virtually.

When we do meet again, we will have several old and new business issues to address: Dave Seiler, PLS our current Treasurer, will be vacating the position. We will be accepting nominations for Chapter Treasurer and will hold an election. Dave will continue to participate as a Chapter member, but his experience and enthusiasm as an officer will be missed. If anyone is interested in being Treasurer and has any questions, please contact me.

We are looking for someone with an artistic and creative eye to take the lead in updating/designing the SWC webpage located on PLSC.net. If you are interested, please contact me.

As always, we are open to suggestions for speakers and events. One activity that was proposed was members bringing in their antique or unique survey instruments/tools for an old school show and tell. That would be a fun meeting!

Everyone stay safe and healthy!

Todd C. Johnston, PLS
President - SW Chapter PLSC

WCLS

I was hopeful that I would get to see my fellow surveyors this month in a more relaxed setting. I was looking forward to it. Flipping flame kissed burgers and rolling hotdogs for a perfect grilled pattern. I was optimistic. After consulting with the other officers and catching up on the latest news, it was best to hold another phone meeting instead. For the health of our members, and in keeping with recommendations, this was the best course of action. I hope that you are all staying healthy and safe.

I would like to remind everyone about land surveying courses at Western Colorado Community College. If you are thinking about furthering your education or know of anyone who may be interested, please pass on the information. Distance learning is available.

Brian K. Bowker, P.L.S.
President, WCLS

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