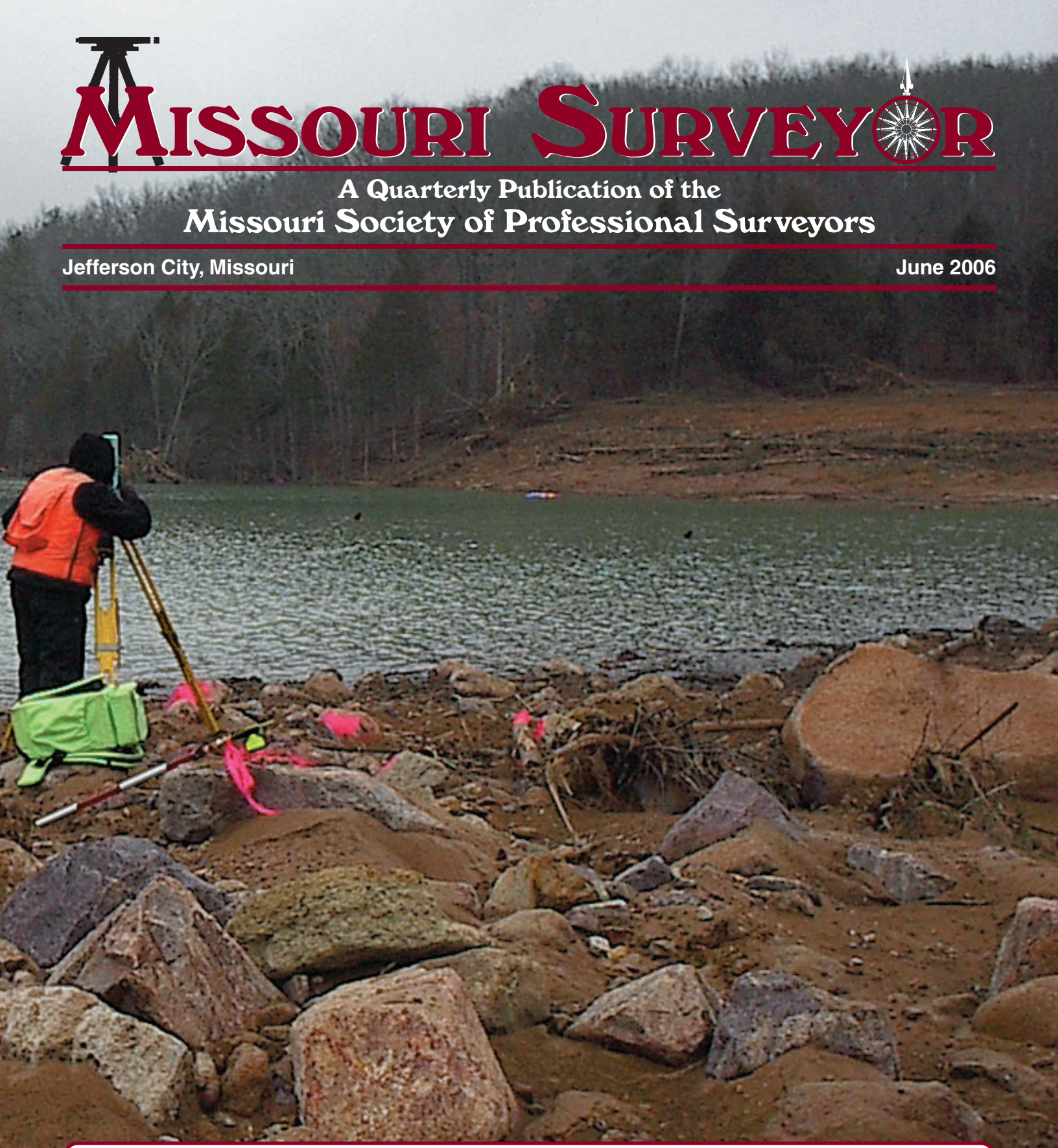
Missouri Surveyor

A Quarterly Publication of the
Missouri Society of Professional Surveyors

Jefferson City, Missouri June 2006



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Cover photo by Michael Cape

MISSOURI SURVEYOR

CALENDAR OF EVENTS

2006-2009

July 14-15, 2006
Board Meeting and Minimum Standards Workshop

September 28-30, 2006
49th Annual Meeting and Convention
St. Charles Convention Center
Embassy Suites Hotel
St. Charles, MO

December 2, 2006
Board Meeting
Jefferson City, MO

March 7-13, 2007
ACSM Joint Conference
American's Center
St. Louis, Missouri
Headquarters Hotel:
Millennium Hotel St. Louis

May 8-10, 2008
Spring Workshop
Lodge of Four Seasons
Lake Ozark, MO

May 7-9, 2009
Spring Workshop
Lodge of Four Seasons
Lake Ozark, MO

John Alan Holleck, Editor

Notes from the Editor's Desk

by John Alan Holleck

It is mid-May and the weather is remarkably confused, very little in the way of April showers and then a cold spell in May. Well, of course, we are in Missouri after all and our mid-America location is at the nexus of several national weather patterns. In Kansas City our weather motto is "If you don't like the weather, wait a few hours and it will change". Why am I ranting about the weather anyway, this is a quarterly journal for surveyors about surveying subjects so on with this issue.

As usual, this issue of the *Missouri Surveyor* opens with comments from your President, Steve Borgmann and, of course, your intrepid editor. This is followed by Patrick Lee's nineteenth article entitled "May, June & July" on the Lewis and Clark expedition—they are on their return leg. The next article is by Knud Hermansen entitled "Contract Clause – Supplemental Fee Clause". He offers some language, which should be beneficial to all of our business practices. Gary Kent, who will be speaking at the annual convention in St. Louis, offers some thoughts on the often neglected "The Surveyor's Report". I found the use of a surveyor's report quite handy for detailing the methodology used and the conclusions drawn for not only boundary surveys but construction layouts, as well. "The 'Trust Me' Syndrome" by C. E. "Chuck" Witten takes a look at what the work produced says about our ability and ethics. Letters to the Editor dominate the mid-section of the June issue. Earl Graham offers a very thoughtful and well reasoned appraisal of low-ball bidding versus qualification based selection. He has some very sound ideas that you should all read. Interestingly, the second letter is from Dick Elgin and concerns the same subject.

The second half of this issue opens with a couple of humorous articles. "Oops" discusses an e-mail *faux pas,* which we are susceptible to in rash moments. The second short piece "Creative Thinking" by Bob Daniels of Nova Scotia, relates the story of a "topo" survey of a mud flat in which seagulls play an important role. Andrew C. Kellie, a professor at Murray State University, begins a three-part discussion of the Clarke family who settled the Jackson Purchase (the western tip of Kentucky). Reprinted from the *Treasure State Surveyor* is an article concerning a recent U. S. Supreme Court ruling, which expands the definition of "Eminent Domain". "The Pennsylvania Method" by Wilhelm Schmidt discusses the usual computation of the area of a trapezoid and what they do in Pennsylvania. Next in line is an interesting advertisement I found while researching Henry David Thoreau and Walden. Thoreau, of course, practiced as a surveyor in New England and used some of the money to finance his two-year stay at Walden Pond.

The final article for June is "Professionalism: Morals, Ethics, Good Manners?" by Gerry Curtis, a Texas Professional Surveyor. His thoughts relate to "How much is enough?" in the service of our clients. As the subtitle suggests, he assesses the argument morally, ethically and what is just good manners. Thanks to those who took the time to write letters and if you wish to express your opinion please, feel free to e-mail me at editor@missourisurveyor.org. Have a good summer!

THE MISSOURI SURVEYOR

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President's Message

by Steven A. Borgmann

The Board of Director's have approved the formation of the Certified Survey Technician Program Committee (CSTP). Bob Myers has agreed to be the Chairman of this committee. This program is sponsored by the National Society of Professional Surveyors (NSPS) and is being used in several other states to help advance the careers of many surveyors. The committee will be calling on the MSPS Chapters to introduce the program to surveyors and their employers. I encourage all Chapters to take advantage of this program. It will be helpful in fellow surveyor education and in the development of surveying techniques.

I would like to thank the Legislation Committee for their hard work this session. This year the committee spent many hours on the phone and making extra trips visiting with our Senators and Representatives to discuss our concerns. The results, for good or bad, are all Bills involving the surveyors either died in committee or were defeated.

The overall evaluation from the Spring Workshop indicates that it was educational and rewarding. One comment stated was, "It got Dave Morton riled-up". I'm sure we all took something from this workshop and can apply it to our daily professional life. The Workshop was a great reminder of how important research and corner investigation can be to our surveys.

Many of you are concerned about the new minimum standards requirements needed for renewing your license next year. To meet the minimum requirements the 17th Annual Minimum Standards Workshop will be held on July 15th. In addition, we have added a session at the 2006 Annual Conference. This should give you plenty of opportunity to meet this requirement. I look forward to seeing you in July.

MSPS
49th Annual Conference

St. Charles Convention Center and Embassy Suites Hotel
1051 Veterans Memorial Parkway, St. Charles, MO

September 28-30, 2006

Special Room Rate for single or double occupancy is $119.00, which includes a full cooked-to-order breakfast each morning and two hours of beverages nightly in the garden atrium. Each suite features a two-room suite with oversized bedrooms and private living rooms with high speed internet access, two dual line phones, voicemail, data ports, two remote control TVs with in-suite movies, wet bar, microwave, refrigerator, coffeemaker, hair dryer, iron with ironing board and safe. To make reservations, call 1-800-EMBASSY or 636-946-5544 before August 26, 2006.

Cover: by Michael Cape, a surveying technician with the Land Survey Program and furnished to MSPS by Mike Flowers. Robert Ross PLS, Land Survey Program, surveys the "high water marks" after the failure of the Taum Sauk Reservoir Dam located above Johnson Shut-Ins State Park. The Land Survey Program determined horizontal and vertical control and over 1,000 high water elevations. This picture was taken in the State Park near the Black River. The lake (now gone) was created from the erosion and scouring near the foot of the hillside below the reservoir.

May, June & July, 1806

From north of Walla Walla, Washington to Eastern Montana

Written & Edited by Patrick Lee

This is the 19th in a series of articles about the Lewis & Clark Expedition. The first 10 articles covered all the preparations for the journey. The second 10 the journey itself, in three-month segments. The final article discusses the accomplishments and legacy of the Corps of Discovery.

May, 1806

May 1 *(Lewis) ....three young men arrived from the Wallahwollah village bringing with them a steel trap...*[we] *negligently left behind; this is an act of integrity rarely witnessed among indians...*

May 3 *(Clark) ... we devided the last of our dried meat at dinner when it was consumed as well as the ballance of our dogs nearly we made but a scant supper, and had not anything for tomorrow;*

May 5

(Clark) while at dinner an indian fellow very impertinently threw a half starved puppy nearly into the plate of Capt. Lewis by way of derision for our eating dogs...

May 7 *(Clark) The Indians inform us that the snow is yet so deep on the mountains that we shall not be able to pass them* [for weeks] *...unwelcom intiligence to men confined to a diet of horsebeef and roots, and who are anxious as we are to return to the fat plains of the Missouri...*

May 10 *(Clark) ...*[we] *proposed to exchange some of our oald horses for young ones to eate. they said they would not exchange horses, but would furnish us with such as we wished, and produced 2...Those people have shewn much greater acts of hospitallity than we have witnessed from any nation or tribe since we have passed the rocky Mountains.*

May 13 *(Lewis) ...I observed a tippet* [an ornamental garment, often made of animal skin] *woarn by* [Chief] *Hohastillpilp, which was formed of human scalps and ornamented with the thumbs and fingers of several men he had slain in battle.*

May 14 *(Ordway) we eat Several of our Stud horses as they have been troublesome to us.*

(About 50 miles east, southeast of Lewiston, ID, where they'd remain until June 10, waiting for the snow to melt enough to cross the Bitterroot Mountains.)

May 16

(Lewis) Sahcargarmeah geathered a quantity of...fennel...not unlike anise seed, and they dispel the wind [flatulence] *which the roots called Cows and quamash* [cous and camas] *are apt to create particularly the latter.*

May 17 *(Lewis) It rained the greater part of last night...we lay in water all the latter part of the night...I am pleased at finding the river rise so rapidly, it is now doubt attributeable to the meting snows of the mountains; that icy barrier which separates me from my friends and Country, from all that makes life esteemable. patience, patience.*

May 22

(Gass) These Indians are the most active horsemen I ever saw: they will gallop their horses over precipices, that I should not think of riding over at all.

May 23

(Lewis) ... our skill as phisicans and the virture of our medecines have been spread it seems to a great distance. I sincerely wish it was in our power to give releif to these poor afflected wretches.

May 27

(Lewis) ... the Chopunnish appear to be very attentive and kind to their aged people and treat their women with more rispect than the nations of the Missouri.

May 29

(Lewis) The Indian chief is still rapidly recovering, and for the first time during the last 12 months had strength enough to wash his face. [This chief had been almost completely paralyzed for three years. The Captains treated him by alternately sweating him in a small lodge and then placing him in cold water. They had previously cured one of the Corps' members, Bratton, of immobilizing back pain by the same method.] *...This operation, though violent, seems highly efficacious; for our own man, on whom the experiment was first made, is recovering his strength very fast...*

June 2

(Clark) having exhorsted all our merchandise we were obliged to have recourse to every Subterfuge [in trading for supplies]*...to meet that wretched portion of our journey, the Rocky Mountains, where hunger and Cold in their most*

(continued on page 5)

May, June & July, 1806 (continued)

rigorous form assail the waried traveller...

June 8

(Lewis) several foot races were run this evening between the indians and our men...when the racing was over the men...played prison base, by way of exercise which we wish the men to take previously to entering the mountain; in short those who are not hunters have had so little to do that they are getting reather lazy and slouthfull...one of the indians informed us that we could not pass the mountain until...the first of July...this information is disagreeable...

June 10 *(Lewis) at 11 A. M. we set out with the party each man being well mounted...we therefore feel ourselves perfectly equiped for the mountains...*(Since May 14, the party has been at what they called Camp Chopunnish, near Kamiah, ID, about 60 miles SE of Moscow, ID, 110 miles SW of Missoula, MT. Today they moved about five miles NE, near Weippe, ID.)

June 12 *(Clark) ...the quawmash is now in blume...it resembles a lake of fine clear water, so complete is this deseption that on first Sight I could have sworn it was water.*

June 13 *(Lewis) ...We made a digest of the Indian Nations West of the Rocky mountains...by our estimate 69,000 souls.*

June 15 *(Clark) Some hard Showers of rain detained us as we took our final departue ...proceeded with much dificuelty owing to the Situation of the road which was very sliprey, and it was with great dificulty that the loaded horses Could assend the hills and Mountains...frequently sliped down both assending and decending those steep hills.*

June 17 *(Lewis) we found ourselves invelloped in snow from 12 to 15 feet deep even on the south sides of the hills...here was winter in all its rigors...we could not hope for any food for our horses...we conceived it madness...to proceed without a guide...the party were a good deel dejected...this is the first time since we have been on this long tour that we have ever been compelled to retreat...*

June 19 *(Lewis) The hunters renewed the chase at a very early hour, but they brought only a single fish at noon ...Our stock of salt is wholly exhausted...*

June 21 *(Clark) we all felt some mortification in being thus compelled to retrace our Steps through this tedious and difficuelt part of our rout*

June 25 *(Lewis) last evening the indians entertained us with seting the fir trees on fire. they have a great number of dry lims near their bodies which when set on fire creates a very suddon and immence blaze from bottom to top of those tall trees. they are a beautiful object in this situation at night...reminded me of a display of fireworks...their object in seting those trees on fire was to bring fair weather for our journey.*

June 27 *(Lewis) ...without the assistance of our* [Indian] *guides I doubt much whether...we could find our way...these fellows are most admireable pilots*

June 29 *(Clark) we bid adew to the Snow....both the Men and the indians amused themselves with the use of the bath* [the hot springs, near Lolo, MT]*...the indians remaining in the hot bath as long as they could bear it run and plunge themselves into the creek...as cold as ice can make it...return again the worm bath repeeting the transision several times but always ending with the worm bath*

June 30 *(Clark) ...Descended the mountain to Travellers rest leaveing those tremendious mountanes behind us – in passing of which we have experienced Cold and hunger of which I shall ever remember.*

July 1

(Lewis) Capt. Clark & my self consurted the following plan viz. [The plan was to divide the party. Lewis would lead some men north to explore Maria's River. Other men would be dispatched in two separate groups to the Missouri. Clark would lead a company down the Yellowstone. Sgt. Pryor would drive the horses overland. All would rendezvous at the confluence of the Missouri and Yellowstone Rivers. From July 3 to August 12, Lewis & Clark are writing from separate locations.]

July 2 *(Lewis) Goodrich and Mcneal are both very unwell with the pox which they contracted last winter with the Chinnook women...*[I plan on] *taking them to the falls of the Missouri where during an interval of rest they can use the murcury freely.*

> *...last evening the indians entertained us with setting the fir trees on fire.*

July 3 *(Lewis) ...we saddled our horses and set out I took leave of my worthy friend and companion Capt. Clark and the party that accompanied him. I could not avoid feeling much concern on this occasion ...*

(Clark) I took My leave of Capt. Lewis and the Indians and at 8 A M Set out with men interpreter Shabono & his wife & child...with 50 horses.

July 4

(Clark) This being the day of the decleration of Independence...I had every disposition to Selebrate this day and therefore halted early and partook of a Sumptious Dinner of a fat Saddle of Venison and Mush of Cows [cous, an edible root]

July 7

(Lewis) passing the dividing ridge between the waters of the Columbia and Missouri Rivers...Drewyer killed two beaver and shot a third which bit his knee very badly and escaped.

(Clark) we arrived at a Boiling Spring (near Jackson, MT, about 80 miles SW of Butte, MT) *...too hot for a man to endure his hand in it for 3 seconds.* [The men experiment cooking meat in the hot water.]

(continued on page 6)

May, June & July, 1806 (continued)

July 8
(Clark) [Upon reaching their cached supplies from the previous August] *...most of the Party with me being Chewers of Tobacco became So impatient to be chewing it that they Scercely gave themselves time to take Their Saddles off their horses before they were off to the deposit.*
July 10 *(Clark) I had all the Canoes put into the water...& proceeded Down Jefferson's river* [on his way to the Yellowstone River, or in French, the Rochejaune]
July 11 *(Lewis) it is now the season at which buffalo begin to coppolate and the bulls keep a tremendious roaring which we could hear for many miles...such numbers of them that there is one continual roar.*
July 13 *(Lewis) ..had the cash* [cache] *opened found my bearskins entirly destroyed by the water...all my specimens of plants also lost. the Chart of the Missouri fortunately escaped. (Clark) The indian woman...has been of great Service to me as a pilot through this country...*
July 14 *(Lewis) ...the wolves are in great numbers howling arround us...in view at the distance of two or three hundred yards.* (At the Upper Portage Camp, Great Falls, MT)
July 15 *(Lewis) ...the musquetoes continue to infest us in such a manner that we can scarcely exist...I am confined by them to my bier* [mosquito netting] *at least 3/4ths of my time. my dog even howls with the torture...so numerous that we frequently get them in our thr*[o]*ats as we breath.*
July 17 *(Lewis) the Minnetaries of Fort de prarie and the blackfoot indians rove through this quarter of the country...a vicious lawless and reather abandoned set of wretches...I have no doubt they would steel our horses...most probably attempt to rob us of our arms and baggage...I am determined to take every possible precaution to avoid them...*(About 25 miles N-NE of Great Falls, MT, on the Teton R.)
July 18 *(Clark) Gibson...fell on a Snag and sent it nearly* [two] *inches into the Muskeler part of his thy. he informs me this Snag was about 1 inch in diamuter burnt at the end...a very bad wound and pains him exceedingly. I dressed the wound.*
July 19 *(Clark) I rose early and dressed Gibsons wound. He Slept but very little last night and complains of great pain...I had the Strongest and jentlesst Horse Saddled and placed Sins & blankets in Such a manner that when he was put on the horse he felt himself in as easy a position as when lying.* (On the Yellowstone R., about 25 miles SW of Billings, MT)
July 21 *(Lewis) ...I determined to pursue...the waters of Maria's river...which I fear will not be as far north as I wished or expected.* [Lewis was leading a party of four to find the source of Maria's River. He hoped this river flowed in straight from the north, which would require moving the US-Canadian border further north. He was mistaken.]
July 22 *(Lewis) there being no wood we were compelled to make our fire with the buffaloe dung which I found answered the purpose very well.*
July 23 *(Clark) Indian Signs is Conclusive with me that they have taken the 24 horses which we lost on the night of the 20th...I gave Sergt. Pryor his instructions* [to] *...take the remaining horses to the Mandans* [where they are to be used as currency for diplomatic purposes.]
July 25 *(Clark) at 4 P M arrived at a remarkable rock Situated in an extensive bottom...This rock which I shall Call Pompy's Tower is 200 feet high and 400 paces in secumphrance...I marked my name and the day of the month & year* [Clark's inscription is still visible.]
July 27 *(Lewis)* [Early in the morning, eight Indians attempted to steal the guns and horses of Lewis' party, and two of the natives were killed. The others fled. This was the only fatal encounter with the Indians. Desperate to get away, Lewis' party covered 100 miles in 20 hours, with 3 1/2 hours rest.]
July 28 *(Lewis) I was so soar from my ride yesterday that I could scarcely stand, and the men complained of being in a similar situation...our own lives as well as those of our friends* [awaiting them on the Missouri River] *depended on our exertions at this moment ...*[20 miles further] *had the unspeakable satisfaction to see our canoes coming down* [the Missouri]*...we now reimbarked on board the white peroge and five small canoes and decended the river about 15 ms.* (About 60 miles NE of Great Falls, MT)
July 30 *(Clark) ...arived at the Commencement of shoals...Compeled to let the Canoes down by hand...This is by far the wost place which I have Seen on this river* (On the Yellowstone, near the eastern boundaries of Prairie County on the north side and Custer County on the south)
July 31 *(Lewis) The buffalo are scarce, but we procured 15 elk, 14 deer, 2 bighorns, and a beaver...The river is still rising, and more muddy than we have ever seen it. Late this night we took shelter from the rain in some old Indian lodges*

> *. . . there being no wood we were compelled to make our fire with the buffaloe dung which I found answered the purpose very well.*

Source material for this article:
While the verbatim accounts could also be found in the original public domain journals of Lewis, Clark and their men, these were excerpted from:

The Lewis and Clark Journals, An American Epic of Discovery by Gary Moulton, ©2003 by the Board of Regents of the University of Nebraska.
The History of the Lewis and Clark Expedition, Volume 3, Edited by Elliott Coues, ©1893, Dover Publications, Inc.
The Journals of Lewis and Clark, edited by Bernard DeVoto, ©1953 & 1981, Houghton Mifflin Company

Scholarship Committee

by Darrell D. Pratte, Chair; John A. Stevens, Member; Donald R. Martin, Member

This year's recipient of the Robert V. Pirrie Memorial Scholarship is Tyler Ross Dill, a student at Buffalo High School in Buffalo, Missouri.

Tyler was born in 1988 to Jack and Theresa Dill. Jack is a Professional Land Surveyor and his Mother, Theresa, is a Registered Nurse. Tyler has received the A+ scholarship, which pays his first two years tuition at a Junior College.

During his years in high school Tyler has served as a representative of his class on the student council. He has also spent some of his free time helping his Dad perform land surveys.

After high school Mr. Dill plans to attend Ozark Technical School and Missouri State University working toward a degree that will help in his pursuit to become a Professional Land Surveyor.

MO Colleges/Universities Where Land Surveying Coursework is Available

The following list will be updated quarterly as new information becomes avialable.

Longview Community College - Lee's Summit, Missouri
Contact: Ken Eichman
Longview Community College
Science and Technology Bldg.
500 Longview Road
Lee's Summit, Missouri 64081
816-672-2283

Florissant Community College - St. Louis, Missouri
Contact: Ashok Agrawal
Florissant Community College
3400 Pershall Road
St. Louis, Missouri 63135
314-595-4535

Missouri State University - Springfield, Missouri
Contact: Thomas G. Plymate
Southwest Missouri State University
901 So. National
Springfield, Missouri 65804-0089
417-836-5800

Mineral Area College - Flat River, Missouri
Contact: Jim Hrouda
Mineral Area College
P.O. Box 1000
Park Hills, Missouri 63601
573-431-4593, ext. 309

St. Louis Community College at Florissant Valley
Contact: Norman R. Brown
St. Louis Community College at Florissant Valley
3400 Pershall Road
St. Louis, Missouri 63135-1499
314-595-4306

Three Rivers Communitiy College - Poplar Bluff, Missouri
Contact: Larry Kimbrow, Associate Dean
Ron Rains, Faculty
Three Rivers Community College
2080 Three Rivers Blvd.
Poplar Bluff, Missouri 63901
573-840-9689 or -9683
877-TRY-TRCC (toll free)

University of Missouri-Rolla - Rolla, Missouri
Contact: Distance & Continuing Education
University of Missouri-Rolla
conted@umr.edu
103 ME Annex
Rolla, Missouri 65409-1560
573-341-4132

University of Missouri-Rolla - Rolla, Missouri
Contact: Surveying Courses in Civil Engineering
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civil@umr.edu
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Rolla, Missouri 65409-0030
573-341-4461

University of Missouri-Columbia, Missouri
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University of Missouri-Columbia
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Missouri Southern State College - Joplin, Missouri
Contact: Dr. Tia Strait
School of Technology
3950 E. Newman Rd.
Joplin, MO 64801-1595
1-800-606-MSSC or 1-417-782-MSSC

One of the Most Exciting things to Emerge in Surveying in Recent Years is that of Virtual Reference Stations

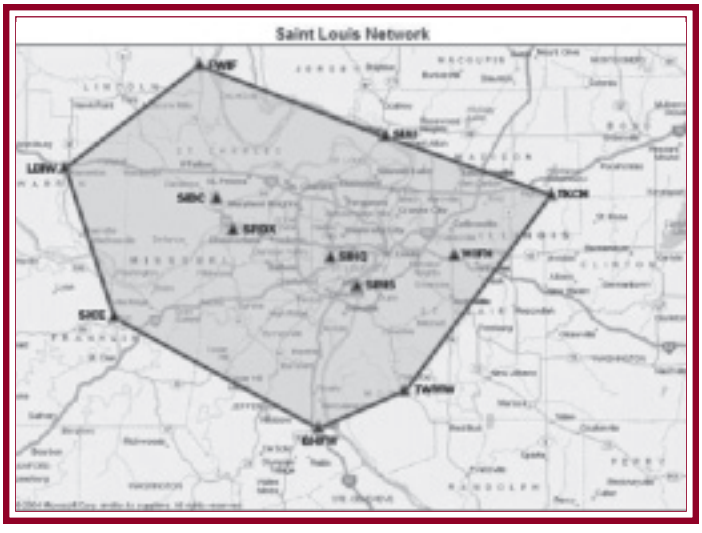
One of the most exciting things to emerge in surveying in recent years is that of Virtual Reference Stations (VRS) for Real Time Kinematic (RTK) GPS surveys.

Trimble's VRS system uses the RTK solutions from the Trimble RTKnet software and provides high-accuracy, real-time kinematic GPS positioning for wider areas. The fixed VRS network is available at any time without setting up a base station and provides common control wherever you are in the network.

The VRS system is made up of the latest in GPS hardware, modeling and networking software, plus communications interfacing. Once set up, RTK roving receivers in the field have access to real-time network modeled corrections. In the field, you also have the reassurance of the built-in integrity monitoring system that warns if there are any problems with the data.

Seiler Instrument Company is pleased to announce the establishment of the Midwest RTK Networks.

The Saint Louis RTK Network is comprised of 12 Continuously Operating Reference Stations (CORS) covering approximately 5000 square miles in the 10 Missouri and Illinois counties comprising the Saint Louis metropolitan area.



The cutting edge technology utilized by the Midwest RTK network (www.mwrtk.net) potentially benefits every surveyor, contractor, GIS provider and other GPS users in the coverage area. It enables users to produce survey quality GPS work without many of the problems that have existed in the past and to produce that work at a much more rapid rate.

The Midwest RTK network is available 24 hours a day, seven days a week. Users of the network simply dial in to the network using a data ready, Internet capable cell phone to receive their position quickly and reliably. Our main control station, SIHQ, is a National Geodetic Survey Cooperative CORS, so there is no need to research data records or search for monuments to get reliable State Plane Coordinates. All that is necessary is to go to the site you are surveying, dial in to our network and go to work.

Using the MWRTK network eliminates the need to own and operate your own GPS base station receiver and radio modem. Using the network also eliminates the risk of theft of your base station and the labor cost incurred in setting up the base each time you use it, as well as the possibility of needing personnel to guard the base station.

By using modern GPS receivers, data collectors and cell phones that have Bluetooth wireless communication built in to them, it is possible to have a completely cable free rover operation. Extra tripods, cables and external radios are not needed, making set-up and operation very easy.

Utilizing a cell phone connection between the rover and the network eliminates many of the problems of radio communication for RTK surveys, including loss of signal, lack of range, and other users on the same channel. It is easy for all of your surveys to be on the same coordinate system, and production is greatly increased.

How the Virtual Reference Station works.

GPS observation data from our CORS stations is transmitted back to our central server that performs quality and integrity checks on the data, computes ephemeris and atmospheric errors and models these errors so that their effect reduce the systematic errors for RTK surveying.

To use these corrections and the VRS, the rover first gives its approximate position to the central server using the cell phone connection. The server receives these positions and responds by sending correction data back to the rover. When the rover gets this data, it computes a high quality differential position and sends this position back to the control center. The network server will now calculate new corrections so that they appear to be coming from a station right beside the rover and sends them back to the rover on the cell phone data link. The high quality differential correction is usually

(continued on page 11)

One of the Most Exciting things to Emerge in Surveying in Recent Years is that of Virtual Reference Stations (continued)

within 1 meter, which is close enough to ensure that the ephemeris and atmospheric corrections which have be calculated for the entire VRS network are applied correctly to the rover.

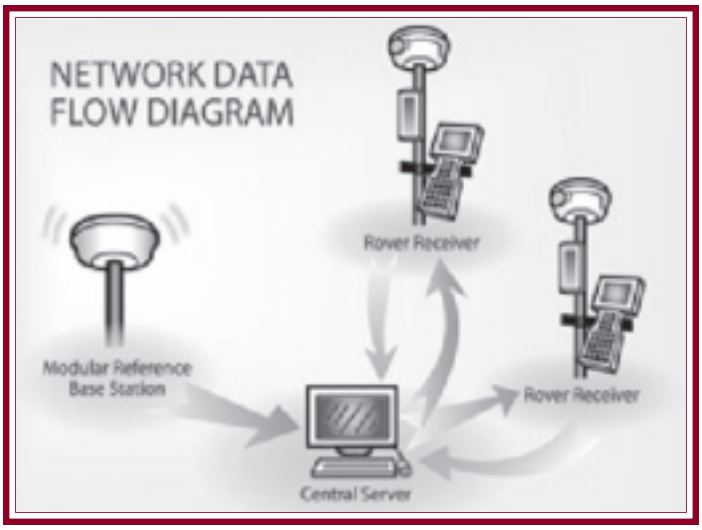


Diagram copyright eGPS Solutions, Inc.

The use of networked reference stations rather than a single base allows the modeling of systematic errors that could contribute to reducing errors and increasing accuracy. It also enables the user to increase the distance from the base to the rover by using a cell phone rather than a radio that has an approximate 3 mile range. It also increases the reliability of the system and reduces the RTK initialization time.

Benefits of using the Midwest RTK network include increased productivity; arrive on any site within the network and within minutes begin surveying at centimeter accuracy by yourself. No need to set up your own base and radio, high quality control is available throughout the network with a common coordinate base. The VRS can also be used as a base to calibrate to any local coordinate system that you may wish to use, with the advantage that your base will not be destroyed or damaged. By eliminating using your own local base receiver and radio, you reduce capital equipment costs and you may be able to use your base as an additional rover. All a single person survey crew needs to survey with the VRS is a cell phone and a rover. High quality, consistent, accurate corrections are available anywhere in the network, regardless of distance to individual reference stations.

Data from our CORS stations for post processed GPS surveys is free.

For more information please visit our website www.mwrtk.com.

Ask Questions Before Responding

Are you overreacting to a co-worker's statements — or did the person really mean to attack? Find out without putting the other person on the defensive by asking questions rather than by making statements. *Here are some examples:*

- "Did you intend that as a personal attack?" Your co-worker will either back down or back up the comment with more detail.
- "What was your reason for telling me that?" You'll learn if the person is merely gossiping or trying to inflame a situation.
- "Do you have a suggestion for a better way to handle that?" When a co-worker is being critical without being constructive, focus on solutions rather than shortcomings.
- "Your tone sounds angry. Am I reading you correctly?" Don't offer a heated response that will needlessly escalate the situation. Give your co-worker a chance to rephrase the comment in a more constructive way.

Adapted from *Everyone's Challenge: Improving Your People Skills*, Cal Sutliff, Cal Sutliff Associates, http://calsutliff.com

Contract Clause – Supplemental Fee Clause

by Knud E. Hermansen

All surveyors in private practice have been in the situation where the client has sought services beyond the scope of the contract. For example, a survey crew will go to a construction site and be delayed several hours after they should have completed the contractual services because the client requested extra services ("While you're here . . ."). All too often when the surveyor attempts to bill for the extra services the client objects that the extra charge was never agreed upon.

It is neither good for practice nor good for the promotion of the business to refuse a client's request to perform extra services or delay performing additional services until a new or modified contract can be executed. Therefore, prudence requires the surveyor to include in the eventual contact what will more than likely be an eventuality after its execution.

To prepare for client requests beyond the scope of contractual services, the surveyor should include a supplemental fee clause in the contract. The supplemental fee clause is included in a contract to provide a basis for the fee charged for additional work performed outside the scope of the contract. The supplemental fee clause also provides notice to the client that they can and should expect to be charged for additional work outside the scope of the contract that they have requested the surveyor to perform.

> Supplemental Fee: for any and all additional work outside the scope of the contract that is requested by the Client or the Client's agent or representative, the Surveyor shall be paid $ _____ per hour plus costs.

The supplemental fee clause is often predicated on an hourly rate or cost plus basis. These two formulations of a supplement fee are the most flexible and easy to apply to unknown or unexpected situations.

The supplemental fee should be reasonable; yet, it should be set higher than the fee that would be negotiated directly for the same services. A higher (but still reasonable) supplemental fee provides some leeway for the surveyor to compromise and still profit should the surveyor wish to compromise their fee for promotional purposes. A supplemental fee clause also helps coerce the client to plan ahead and negotiate additional services with the surveyor in order to save money. Perhaps most importantly, a higher supplemental fee compensates the surveyor for the aggravation brought about the disruption of surveying services scheduled for other clients.

Often a notice provision is included with the supplemental fee clause. The client may have some concern about unanticipated additional work and associated supplemental fees, especially when the surveyor may be dealing with the client's agent or representative rather than directly with the client.

> Supplemental Fee: for any and all additional work outside the scope of the contract that is requested by the client or the Client's agent, or representative, the Surveyor shall be paid $ ____ per hour plus costs. Provided; however, the Surveyor shall attempt to contact the client or leave a voice mail message using the client's cell phone (# ____) if the additional services are being requested by the client's agent or representative.

A clear declarative act should be required in the contract where the client is concerned that they may be charged a supplemental fee when they could believe the work is covered within the scope of the contract.

> Supplemental Fee: for any and all additional work outside the scope of the contract that is requested by the Client or the Client's agent, or representative, the Surveyor shall be paid $ ____ per hour plus costs. Provided; however, before commencing the additional services, written (handwritten, typed, or printed) confirmation of the services shall be prepared and initialed by the Client or Client's agent, or representative before commencing the additional work. Otherwise, all services performed on behalf of the client will be presumed to fall within the scope of the contract.

The scope of work service section of the contact is related to the supplemental fee clause. A clearly defined scope of work does not allow confusion as to what is or is not additional work that is subject to a supplemental fee.

Despite including the supplemental fee clause, some clients will not be pleased to pay additional money. (Some clients are not pleased to pay the contracted amount.) Accordingly, it is always wise to clearly document the additional services and put the client on notice that the services about to be performed are additional services and subject to the supplemental fee.

Knud is a professional land surveyor, professional engineer, and attorney at law licensed in several states. He teaches in the surveying program at the University of Maine and operates a consulting firm specializing in professional liability, boundary disputes, land development, and title issues.

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The Surveyor's Report

by Gary Kent, LS

As noted by Alexander and Hermansen, the use of a "Surveyor's Report" is an excellent tool to convey relevant information about a survey to a variety of audiences. West Virginia and Indiana also recognize this fact; their respective state survey standards require such a document be prepared and provided to the client.

The essence of the concept of a surveyor's report is that seldom will the plat of survey alone convey all of the information that played a part in the resolution of a boundary. Depending on the exact content and manner in which the information in the report is presented, clients, attorneys, and title companies may all be interested in reading it so they can understand the results of the survey and the issues that affect the boundary lines.

West Virginia requires that the report include information on the weight given to conflicting evidence, encroachments, overlaps and gaps. Indiana requires the same, in addition to the inclusion of measurement-related uncertainties.

What purpose is served by documenting and providing such information? When Indiana first adopted its administrative rule in 1988 requiring surveyor reports, one surveyor was heard to say, "I know that my surveys are not perfect, but I can't tell my client that!" Portraying or implying to one's client that a survey has no error is a rather precarious position to take. Talk about setting yourself up for lawsuit! If our surveys are not perfect, do we really want our clients — or anyone else — to believe they are?

Nearly every boundary survey involves some set of facts or evidence that potentially compromise the surveyor's ability to develop an "exact answer. It is logical and appropriate that the client and others who may rely on the survey (lender, title company, and possibly others) have the benefit of the same information that the surveyor had, as well as the logic and principles that the surveyor applied to the problem.

So, what are the types of evidence and facts that inhibit the surveyor's ability to develop that perfect boundary — the one that has no error?

Most obvious is one that surveyors deal with every day: the fact that there is no such thing as a perfect measurement. Most states outline an acceptable tolerance or closure in survey measurements. This information is very appropriate to include in a surveyor's report. Even better, we can use the report to provide the client with a bit of education in that regard. "Boilerplate" language could be easily developed to explain in plain words a bit of measurement theory. Think of the possibilities! All of a sudden you are not "just a surveyor" to the client, but an expert in mathematics, statistics, and physics.

Other facts and evidence that contribute to imperfect boundary resolutions include record documents that are erroneous, incomplete, ambiguous and conflicting. Even when or if the sources of such problems are identified, there may still be that current deed description that the client took title to — one that the surveyor did not create (hopefully) and likewise cannot make go away.

There are problematic reference monuments that descriptions tie to, and that surveys must be based on — monuments that are uncertain, ambiguous or indeterminate — like the description that began at the intersection of two right-of-way lines, neither of which ever existed; or the purported section corner monument that had been used extensively by numerous surveyors for years that has recently been found to be 17 feet in error.

What about potential encroachments or possible unwritten rights? Rather than settle for vague information on a plat of survey, a client should be able to read a detailed explanation of the conditions.

Most of this sort of information simply cannot be clearly depicted on a plat of survey. The surveyor should outline and explain these issues in a surveyor's report, so the interested parties have the benefit of the surveyor's extensive and detailed work and resulting opinion.

There are many surveyors who are hesitant or even hostile towards the idea of providing such information in a report. Some believe it is proprietary information that should, for a variety of reasons, not be given out. Some believe it increases their liability. Some think it will take too much time and cost too much.

These are not valid arguments. Providing information so other surveyor's can readily understand the evidence and procedures used in a boundary resolution will encourage those that come after to follow in your footsteps rather than wonder what you did. Outlining and explaining the imperfect set of facts and evidence that had to be dealt with will help the reader appreciate the limits of the surveyor's work and the qualifications to his or her opinions.

On a simple, straightforward survey, the preparation of a report need not be a laborious, expensive, or complicated exercise. If the surveyor formed an opinion based on solid

(continued on page 16)

The Surveyor's Report (continued)

boundary law principles and appropriate evidence, it should not be difficult to distill that information down to a complete concise account.

In the case of a larger or particularly difficult survey, the development of the final boundary may have been complicated as a variety of evidence was weighed and weighted, and as applicable boundary law principles applied to that evidence. The resulting report may, therefore, be relatively lengthy. But even in that case — and perhaps *especially* in that case — simply going through the thought process of preparing the report will give the surveyor confidence in and confirmation of the boundary resolution that was developed.

Explaining to clients, attorneys and title companies that the results of a boundary survey are not perfect, and that, in some cases, there may be issues that prevent a singular, definitive solution, is simply good business, and truthful. And what a valuable opportunity to explain what surveyors really do — that the measuring is actually the easy part! Here's a sample preamble to help you get started:

Surveyor's Report

"The following observations and opinions are submitted regarding the various uncertainties in the locations of the lines and corners established in this survey due to uncertainties in reference monumentation; in record descriptions and plats; in lines of occupation; and as introduced by random errors in measurement. There may be unwritten rights associated with these uncertainties. This survey was based on...".

Reprinted from *Hoosier Surveyor*, Fall 2005.

Gary Kent is Director of Surveying at The Schneider Corporation in Indianapolis, Indiana. He is past-president of ACSM and chairs the ALTA Committee. He is on the Indiana Board of Registration and lectures locally and nationally.

Something to Smile About . . .

- How Do Crazy People Go Through The Forest?
  They Take The Psycho Path.
- How Do You Get Holy Water?
  You Boil The Hell Out Of It.
- What Do Fish Say When They Hit a Concrete Wall?
  Dam!
- What Do Eskimos Get From Sitting On The Ice too Long?
  Polaroids.
- What Do You Call a Boomerang That Doesn't work?
  A Stick.
- What Do You Call Cheese That Isn't Yours?
  Nacho Cheese.
- What Do You Call Santa's Helpers?
  Subordinate Clauses.
- What Do You Call Four Bullfighters In Quicksand?
  Quattro Sinko.
- What Do You Get When You Cross a Snowman With a Vampire?
  Frostbite.
- What Lies At The bottom Of The Ocean And Twitches?
  A Nervous Wreck.
- Where Do You Find a Dog With No Legs?
  Right Where You Left Him.
- Why Do Gorillas Have Big Nostrils?
  Because They Have Big Fingers.
- Why Don't Blind People Like To Sky Dive?
  Because It Scares The Dog.
- What Kind Of Coffee Was Served On The Titanic?
  Sanka.

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The "Trust Me" Syndrome

by C.E. "Chuck" Whitten, PLS

As I browse through recorded maps and plats during the normal course of research, I am sometimes disappointed at the image our profession projects. After almost 40 years of "practicing" (maybe in a subconscious quest to finally "get it right"), I have had the opportunity to draft a few maps of my own and to see and work with a myriad of others. Most are good and some are bad (including several of mine, no doubt). The one thing, though, that I have come to value and appreciate in any map is its ability to impart the "message" of one's work in a clear, concise, and tidy manner.

For some surveyors, that ability seems to come naturally. Too often, though, the logic or purpose of the survey is not clear. In Washington, a "narrative" is not presently required on surveys, although in many states, it is. About 15 years ago, I started adding "narratives" to my Washington surveys because I felt that they made the map more "user-friendly". Many times, stating the purpose and/or background of the survey facilitates understanding why and how it was done. The narrative is also a good place to discuss any other peculiarities that may otherwise go unnoticed.

Invariably, one must add notes here and there to justify certain boundary decisions. What annoys me are records of survey and especially subdivision plats by surveyors who don't bother to document the boundaries shown. It seems that the need for justification either "never occurred to them", "they don't care", they are "too busy (or lazy) to take the time", or any number of other "excuses". It usually comes back to haunt the "offending surveyor" years later when litigation commences. That is a poor time to try to remember how you determined the bearing and/or location for the lines that are now under scrutiny (and equally hard to justify to the opposing counsel as well as your own).

Some maps, however, are amazingly simple. They show four lines around a rectangular tract with irons set at the corners and not much else (maybe a tie to a section corner). I think those surveyors should at least add a big, red "TRUST ME" stamp across the property depicted as being "located and monumented". That would remove the uncertainty that others may have.

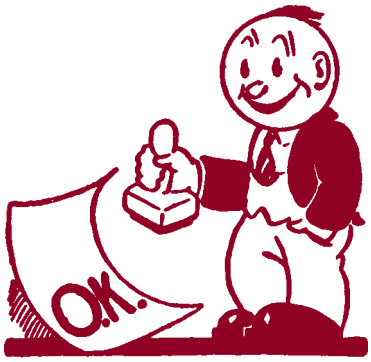
Although brevity is many times a virtue, in these cases, it would be like saying either, "I was too busy to elaborate on what controls the boundaries shown" or "I'm the only one that needs to know that information" or "I'm not really sure how I came up with this" or "it's none of your business", but trust me", what I have shown is "correct". At the other extreme are those maps that look terribly official (to the layman) because they are filled with important looking notes, dimensions, or meaningless lines and data that have no connection to the real issues. Add a few certificates and "presto", it too becomes part of our legacy.

When reviewing maps by the younger surveyors in our office, I try to stress the idea that you need to justify (or document) each boundary line depicted (or else add a "TRUST ME" stamp!). Whatever determines the position and/or direction of a controlling line should be shown. In the eyes of the end-user (be it another surveyor, attorney, or title company), it is sometimes not so important that your judgment was right or wrong. It would just be nice to know what your judgment actually was!

I'm sure my younger charges are tired of hearing me ask where the "TRUST ME" stamp is, but at least they are starting to think about it regularly. If you are an artist, you are usually not held responsible for the interpretation others make of your work (that is probably why artists are not licensed and can get by with "poetic license" instead). Unfortunately, this is not the case with maps and plats that become memorialized in the public records. Not only do your clients and third parties (including the public) hold you responsible for the accuracy and content of those products, they also form opinions about the author of the work based on how well it is or isn't presented.

Surveyors can avoid the need for a "TRUST ME" stamp on their maps by simply viewing them from the perspective of an end-user. We could all benefit from regularly recalling the words of the Scottish bard, Robert Burns, who, in about 1790, wrote a poem entitled "To a Louse, On Seeing One On A Lady's Bonnet, At Church", that contained the immortal line: "O, wad some Power the giftie gie us, to see oursels as others see us!".

Reprinted by *Evergreen Surveyor*, the official publication of the Land Surveyors Association of Washington, Vol. 24, No. 2, Summer 2005.



Letters to Editor

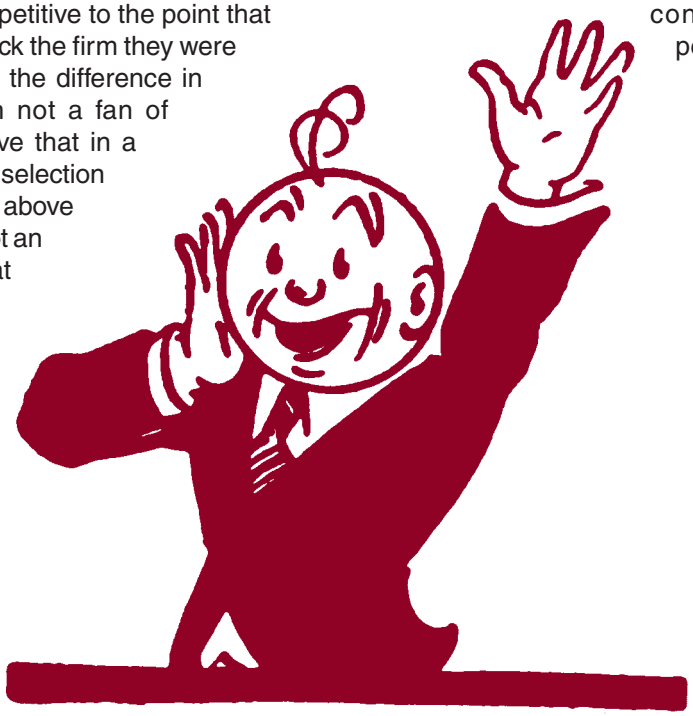
THE MISSOURI SURVEYOR
8510 East 59th Street
Kansas City, MO 64129

Attn. John Holleck, Editor

April 27, 2006.

Dear John,

I have become painfully aware of an occurrence that I hope is not developing into a trend. A number of our clients require proposals from two different firms for the engineering and surveying on their projects and for years now the pricing has been very competitive, competitive to the point that the client was able to in reality pick the firm they were most comfortable with because the difference in cost was not significant. I am not a fan of competitive bidding and I believe that in a perfect world qualification based selection is the best solution, but under the above described circumstance it was not an issue. When was the last time that any of us woke up in a perfect world? On at least three occasions in the last two months I have been undercut on projects by about two thirds, yes over 60%, for surveying services. I don't know if I would be writing this letter except for the clients have actually called and apologized for not being able to pass up such a bargain.



I am sure by now there are several of you reading this that are thinking that "Old Earl" is just crying about losing a few bids. If that is the case let me ask you if it is acceptable to you that the words Professional Services and Bargain ever be used in the same sentence. Now I am not aware of any great drop in the demand for Surveying Services. I have not seen any drop in the amount of advertising for qualified surveying staff, and I certainly have not seen any drop in the amount of pay and benefits required to hire a qualified surveying staff member if you are fortunate enough to find a prospect. Demand for our services in most markets is at an all time high. The cost of doing business, with wages, gas prices and new equipment costs, is also at all time high. Then why should prices be falling.

I have been working with the same group of clients for over 25 years, the names change periodically but the mind set never does. For one of them to call me and apologize for taking advantage of one of my competitor's error in judgment speaks volumes to me. The fact that this is happened three times from different clients is very disturbing. The amount of money left on the table for these three instances alone is close to 6 figures. The truth is that a 10% cut would have bought these projects, so why give away thousands.

I know that any discussion further than this could be considered price fixing and could get us in the same fix as our neighbors to the south, but I have to ask how realtors and architects were able to have the conversation that lead to their percentage based rate structure. I have to ask when was the last time you chose your Doctor or Attorney because he was the cheapest, and when was the last time you found one that was 60% cheaper. Even our clients seem to know what our work is worth better that we do.

Apparently it is illegal for a conversation concerning fees to take place under certain circumstances, but we as a profession have to find a way for this dialog to take place. I thought that for the last 15 years we were making marked progress in this area but now I am not sure. All of us have to realize that even though technology has given us the ability to be extremely more efficient and productive than in the past that does not make the product worth any less.

Am I crying? The truth is that I plan to survive and hopefully prosper, but too many of our friends probably will not. Why should a Professional spend there life just barley making a living, and why would they want to?

Earl E. Graham, PLS
Director of Surveying
J.R. Grimes Consulting Engineers, Inc.
Saint Louis, Mo.

Letters to Editor (continued)

ELGIN SURVEYING & ENGINEERING, INC.

Richard L. Elgin, PhD, PE, PLS
Robert L. Thompson, PLS
Hugh A. Parsons, PLS

Bryan L. Parker, PE, PLS
Diane E. Crouch, PE
Linda K. Logan, PE

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May 26, 2006

John Holleck, Editor
Missouri Surveyor
MSPS
PO Box 1342
Jefferson City, MO 65102

Dear Editor,

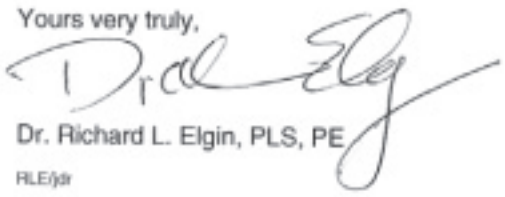
Here's an experience of which I believe the MSPS membership should be aware: A few weeks ago my firm received, from an architect, an invitation to bid surveying services on a public school project. The bid invitation was sent on behalf of the school district. The "invitation" was a pure bid, and said so. There was no mention of submitting any qualifications information. (The scope was poorly defined as well.) Recognizing this as being in conflict with State statutes regarding political subdivisions acquiring professional surveying services (see RSMo 8.285-8.291), I asked the MSPS Board to send a letter to the School District (with a copy to the architect), gently advising the District that bidding these services was contrary to the District's interest and state law.

I believe sending such a letter to political subdivisions in circumstances like this and extolling the virtues of "Qualifications Based-Selection" (QBS), is best done by MSPS. Our MSPS Board acted quickly and positively and sent a letter to the School District pointing out the provisions of the statute and recommended QBS approach (as outlined in the statute). I am happy to report and thanks to the MSPS Board action, the District changed its selection procedure to include acquiring qualifications information from the surveyors considered.

We surveyors and the MSPS Board and our joint committee with Missouri architects and engineers (The Design Alliance) should be knowledgeable about the provisions of RSMo 8.285-8.291 and be watchful for solicitations not in compliance. I also believe letters to political bodies should come from MSPS for two reasons: 1.) They probably have the greatest impact on the recipient. 2.) I am a bit reluctant to "stab" a potential client with the statute. It looks a little cynical.

My thanks to the MSPS Board for its action in this matter.

Yours very truly,



Dr. Richard L. Elgin, PLS, PE

RLE/jdr

"Oops!" Did I Send That in My E-mail?

by Sherry Budziak and Anne Allodi

Have you ever quickly written then sent an e-mail to someone, only to think "Oops, I didn't mean to send that!"? Most likely the answer is, "Yes, more times that I care to remember!"

The speed and broadcasting ability of electronic communication make it fundamentally different from paper-based communications. The ability to quickly write and send has enabled e-mail to become more of a conversation vehicle than traditional paper-based communication. On paper, you must make everything completely clear because your reader may not have a chance to respond and ask for clarification. With e-mail documents, your recipient can interact and ask questions. Therefore, e-mail tends to resemble conversation and can be sloppier than paper communications.

Many of us have stories about e-mail mistakes. One association professional recalled a senior executive who sent an e-mail attachment with detailed opinions about personnel. While they were able to immediately retract the message, this could have caused much harm to the senior executive, the staff and the organization. This may have been prevented by reviewing the attachment prior to sending the e-mail. What are other colleagues saying about e-mail?

Brad Claxton, CAE, past chairman of the Forum and former CEO of the American Academy of Dermatology says, "Do not use computer shorthand. An example is my grandson who signed off his communication with 'cya'. This was shorthand for 'see you'. However, for older folk, military personnel and bureaucrats, 'cya' has a very different connotation: cover your a__".

Remember the old communication adage . . . *know your audience*. While it might be popular to use abbreviations like LOL, BRB, and BTW, many people do not understand these abbreviations and your workplace correspondence should be more formal. E-mails, whether business or personal, are an extension of you and your organization. Make them reflect your personal standards, e.g. complete sentences, proper grammar and capitalization, and, of course, correct spelling.

Ten Tips for Effective E-mail Communications

1. Check e-mail addresses carefully: Hastily sending an e-mail, especially when your e-mail program automatically fills in the address, can lead to embarrassment or inappropriately sending it to a member instead of a staff person.
2. If you are sending targeted e-mails to segments of the membership, always double check the lists to be sure the correct message is going to the correct audience. Steve Stahr, CAE, public relations director at the Million Dollar Round Table, provided the following example, "I received an e-mail thanking me for attending a meeting I did not attend. When I replied that I did not attend the meeting. I received an apology and an explanation. The organization had planned to send two e-mails: one to meeting attendees thanking them and one to folks who did not attend encouraging them to visit the Web site to see what they missed (as a way of promoting future attendance). Unfortunately, the messages and lists got switched."
3. E-mail in the workplace is a formal means of communication — as is any written document. Use business standards, topics and professional verbiage.
4. Write concisely. If you have more than a few lines to communicate, call, request a conference or meeting. You need to be face-to-face. Also keep in mind that these days many recipients are reading off of a mobile device.
5. Do not send multiple e-mails regarding an issue. If there have been two, or a maximum of three e-mails, regarding an issue and it is still not clarified, pick up the phone.
6. Read the complete string of e-mails before responding. (The answers to your questions may already be in there.) On the flip-side, don't expect the recipient of your e-mail to read an e-mail trail. Provide a synopsis of the situation or, at minimum, highlight the area they should review.
7. Use the blind carbon copy (Bcc) field for addressing when the list of recipients is lengthy. By using this field, the names and addresses of all recipients won't appear in the received e-mail. With a lengthy recipient list, the reader might not scroll through it to get to the message. Also, sometimes it is best not to identify the recipients to each other.
8. Linda Campbell, CAE, president of Linda Campbell, LTD, says one of her first lessons in association management was: "When in doubt, don't. Nowhere is that more valid than in responding to e-mails, particularly those which have raised your blood pressure."
9. When writing or responding to an e-mail, always assume that your e-mail may be forwarded to others. Always keep it professional.
10. Limit the bells and whistles and the editorial comments. Victoria Ceh, executive director of the International Society of Hair Restoration Surgery, says, "A fancy background, colorful border or huge purple font distracts from the message and looks juvenile. My first impression is that the person just discovered how to change their settings and was having fun choosing their style. I have also seen interesting closings. One physician I work with has an automatic signature in his business and personal e-mails that includes the closing, "I Serve, Because He Lives". I believe he had a life-changing event that brought him close to God, but I question if this is a proper representation of his company."

Is Web Content Really That Different? Yes!

Another form of electronic communication, and equally important in fostering a positive perception to others, is Web writing and should also be a focus for your organization.

(continued on page 23)

"Oops!" Did I Send That in My E-mail? (continued)

With a printed document, the user is focused on the entire set of information. Many studies show that users do not *read* on the Web; instead they scan the pages, trying to pick out a few sentences or even parts of sentences to get the information they want.

On the Web, split each document into multiple hyperlinked pages since users are not willing to read long pages. Additionally, users can enter a site at any page and move between pages as they choose, so make every page independent and explain its topic without assumptions about the previously viewed pages.

Effective Writing for the Web

- Font. Use Arial or Verdana, 10 or 12 point. These are the most readable fonts on the Web.
- Three-Click Rule. Anything your constituent wants should be no more than three clicks away. Make sure the user does not get frustrated navigating your Web site.
- Use conventional guidelines for good writing. This includes carefully organizing the information, using words and categories that make sense to the audience, using topic sentences, limiting each paragraph to one main idea and providing the right amount of information.
- Credibility is important. Exactly who the publisher of a particular Web site is — and who the sources of information in the site are — may be unclear to users. Users may have linked directly into the middle of your site. Make sure they know they are on *your* organization's Web site at all times so they'll know the content comes from a credible source.
- Scannable Text. While scanning text, users normally read only the first sentence of each paragraph to save time. To enhance scanning, use headings, large type, bold text, highlighted text, bulleted lists, graphics, captions, topic sentences and tables of contents. Put the important information at the top of the page so the user does not have to scroll through a lot of text to find it.
- Clear, Concise Text. Users read about 25 percent more slowly on screen than on paper. It is important that the content is concise and easy-to-read. It is also important that the user can easily print the information. Consistent with users' desire to get information quickly is their preference for short text. Try to fit the content onto one screen and use simple sentence structures.

Sherry Budziak may be reached at (847) 275-1840 or sherry@orgsrc.com.
Anne Allodi may be reached at (847) 330-0230 or allodi@sbcglobal.net.

Creative Thinking

by Bob Daniels, NSLS, CLS

From time to time most surveyors have been reviewing field notes prepared by the field crews and have been less than happy with the neatness, completeness or accuracy of the data. As a result, they may mutter to themselves "what were those guys thinking" or for that matter were they thinking at all.

I have always been of the opinion that anyone who can use the latest electronic survey equipment efficiently, carry out a survey in the field with minimum instruction and work in the most adverse conditions and weather must be intelligent, resourceful and thinking all the time. This was demonstrated to me recently by one of our survey crews.

Our company was carrying out a large topographic and hydrographic survey over an environmentally sensitive area. Part of the site was covered by water and there were areas of mud flats along the water's edge. Our staff was instructed not to venture onto the mud flats for both safety and environmental reasons.

With all of the topographic data gathered, with the exception of the area of the mud flats, our crew gave some thought to how they would get the remaining data. They decided that they would try and get measurements with the reflector-less total station. However, the mud was too dark and the angle too flat to get reliable measurements. As they were peering through the total station, a seagull wandered into the field of view and stopped to enjoy the afternoon sun.

Somewhat frustrated with not being able to get a measurement to the mud, they decided to take a close-up look at the seagull. To their amazement they were staring at a brilliant white, almost flat surface — the seagull's breast. A press of the distance button resulted in a precise measurement. What luck, the mud flats were dotted with seagulls, numerous walking targets wandering aimlessly back and forth over the inaccessible area.

For the rest of the afternoon they scanned the mud flats taking measurements to various seagulls. To ensure adequate coverage, they would walk around the perimeter of the mud flats causing the seagulls to scurry from one area to another. Using a target height of 0.5 feet as the average height of the seagull above the ground, the survey was completed.

Very clever if you ask me.

Mr. Daniels is a Nova Scotia Land Surveyor and a Canada Lands Surveyor. He is employed in private practice and monitors the link "Ask a Surveyor" at www.sdmm.ns.ca

Surveyors Materials
(pu pg 24 last issue)

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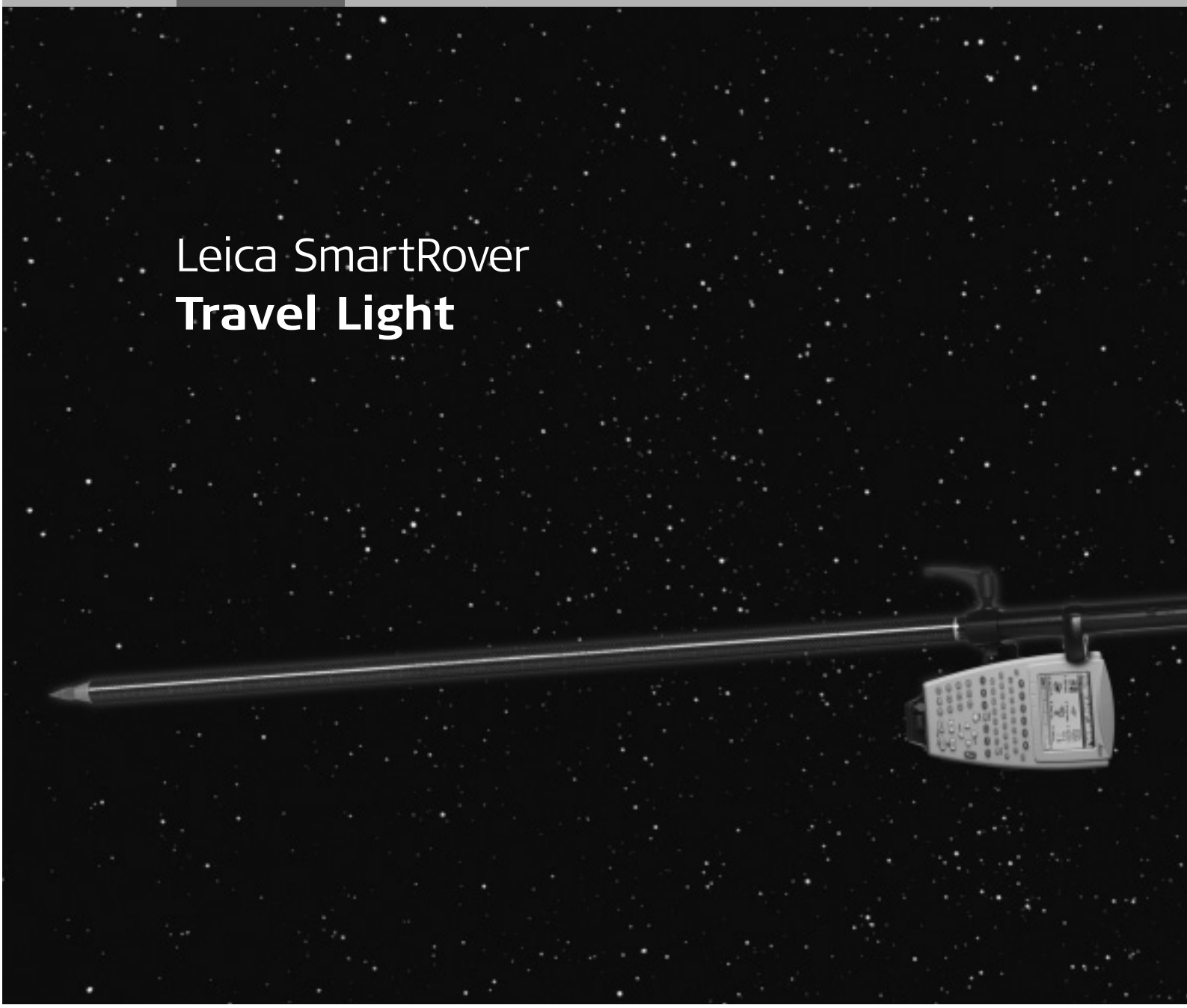

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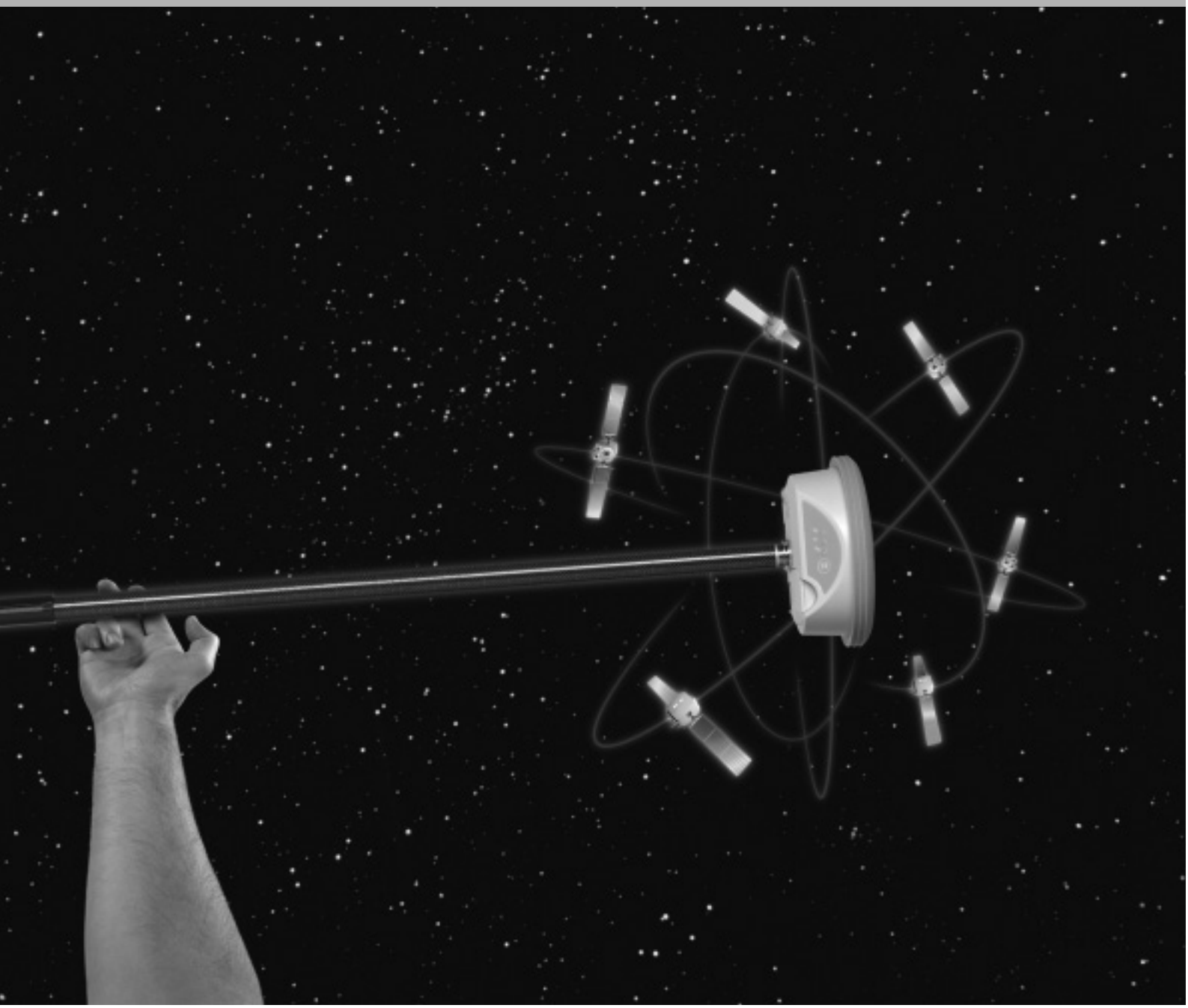

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The Clarks of Kentucky — An Historical Tale in Three Parts

by Andrew C. Kellie, PLS and Kenneth C. Carstens, PhD

I was leafing through the deed books in Carlisle County not too long ago when the name of a remote grantor — William Clark — caught my eye. Anyone who has visited the Jackson Purchase knows that the Clark family is well represented, geographically speaking. Not only does the Clark name appear as a grantor in many deeds to land in McCracken and Ballard counties, but there is a Clark's Line Road in both counties, and the Clark's River flows into the Tennessee just to the east of Paducah. And were that not enough, a very large and prominent land grant to a Clark is located on the Mississippi River in Carlisle County. Obviously, the Clarks had something to do with the early land system of the Jackson Purchase.

There were actually a number of Clarks involved. William Clark of Carlisle County, however, is not the same as the William Clark who appears as grantor in numerous deeds in McCracken County. *That* William Clark was not only a surveyor but was the second partner in a survey that still includes his name, which is to say, the Lewis and Clark Expedition. Clark's surveys and maps for the expedition are well known, but such surveying work was done a long way from McCracken County, Kentucky (Thorp, 1998). William owed his appointment to the Corps of Discovery to yet another surveyor and Kentucky resident, his brother George Rogers Clark.

> *That William Clark was not only a surveyor but was the second partner in a survey that still includes his name, which is to say, the Lewis and Clark Expedition.*

George Rogers Clark was well connected, politically, and prior to the American Revolution had been a deputy county surveyor in Virginia (Hughes, 1979). In fact, it appears that he might have been appointed deputy county surveyor without knowledge of the surveyor for whom he was a deputy. This irregularity in George's credentials naturally raised questions about the validity of the survey he did for the Ohio Company. The survey was not a matter of half measures; rather, it involved some 800,000 acres. As if survey problems weren't enough, there also was a question of title because the land lay to the west of the Proclamation Line (proclaimed by another George — George III to be exact) and was thus closed to white settlement. Naturally, George Roger's actions raised a bit of dust (Hughes, 1979). When one considers that the Ohio Company investors (and Clark's clients) included such personages as Thomas Lee, President of the Council, and Augustine and Laurence Washington, brothers of another Washington surnamed George, it's apparent that George Rogers Clark was about as politically connected as one could get in the Old Dominion.

With the advent of the American Revolution, Virginia elected to drop the dominion status (old or otherwise), and George Rogers Clark was appointed an officer in the Virginia Line. With a canny eye for the value of real estate, George Rogers established his headquarters at the Falls of the Ohio where he once again became involved in the question of title to land. Perhaps it was his background as a surveyor, but whatever the reason, Clark realized that if the United States were to claim ownership of the Old Northwest, then it would be necessary to demonstrate some evidence of ownership.

Constructive evidence of ownership, as all surveyors know, involves acts that are "open, notorious, and under a claim of right". The action of Virginia troops at Vincennes and Kaskaskia during George Rogers Clark's Illinois campaign demonstrated intent to occupy against the British; however, there was still a question of Spanish and Native American claims. At that time (1780), the west bank of the Mississippi River was claimed by Spain, and Spain might have harbored some pretensions to the east bank as well. To establish against all comers Virginia's claim to the east bank of the Mississippi, George Rogers Clark was directed to fortify the confluence of the Ohio and Mississippi as evidence of Virginia's claim to the east bank of the Mississippi (Carstens, 2005). Clark complied by constructing a fort — Fort Jefferson — on the north bank of Mayfield Creek and on the east bank of the Mississippi and just south of the confluence of the Ohio and Mississippi.

As is the case with just about all occupation prior to survey, there was a boundary problem. Virginia claimed to the Mississippi under the Second Carolina Charter of 1665. This set the southern boundary of Virginia in 36 degrees 30 minutes North latitude. However, no one at that time knew whether the deed call for 36 degrees 30 minutes North put the confluence of the Ohio and Mississippi in Virginia or in North Carolina. The boundary between Virginia and North Carolina, however, was even then under survey by Daniel

(continued on page 29)

The Clarks of Kentucky — An Historical Tale in Three Parts (continued)

Smith and Thomas Walker. Governor Thomas Jefferson directed Walker and Smith to verify the location of the North Carolina-Virginia (Tennessee-Kentucky) line at the Mississippi (Sames, 1992). These two surveyors made observations for latitude on the east bank south of Fort Jefferson and found themselves to be north of the 36 degree 30 minutes North charter line. They projected their position to the south and marked the Virginia-North Carolina boundary. Fort Jefferson was in Virginia. However, not everyone acknowledged this claim. In particular, the claim was disputed by the British, the Choctaw, and the Chickasaw. Those parties disdained an action in trespass and simply launched an attack on the fort.

By late 1781, Clark had withdrawn his forces from Fort Jefferson and abandoned the position; the British ceded their interest in western Virginia at the peace talks that followed the American Revolution. The Chickasaw, however, had no intention of abandonment or cession and claimed the area west of the Tennessee River and east of the Mississippi, in part, as a result of the attack on Fort Jeff. This claim was recognized by the United States. Notwithstanding Clark's actions, the area west of the Tennessee River would remain in Chickasaw ownership until purchased on behalf of the United States by Isaac Shelby, of Kentucky, and Andrew Jackson, of Tennessee, in 1818. (By some perverse logic, since Isaac Shelby acted for *Kentucky*, that portion of Kentucky located west of the Tennessee River is naturally termed as the *Jackson* Purchase.

At any rate, during the real estate transactions noted above, George Rogers Clark had run into some difficulties — in short, his credit was badly overextended. Clark had pledged his own responsibility for supplies required by his troops during the American Revolution. Being somewhat desirous of retrieving his credit rating, George Rogers Clark applied to the commonwealth for reimbursement. The Commonwealth demurred; it was somewhat strapped for cash and proposed instead a settlement of the debt by payment in land. This settlement Clark was obliged to accept. Along with the land grant, apparently, was an appointment for George Rogers Clark to act as surveyor for military grants to Virginia war veterans. He established himself at the Falls, living for part of that time at Locust Grove, the home of his sister Lucy and her husband William Croghan.

Following purchase of Chickasaw claims to land west of the Tennessee River, George Rogers Clark received land grants in the Purchase. That these grants were extant prior to the rectangular survey is indicated by their inclusion on the Munsell map of 1818 and on Henderson's rectangular survey

(continued on page 30)

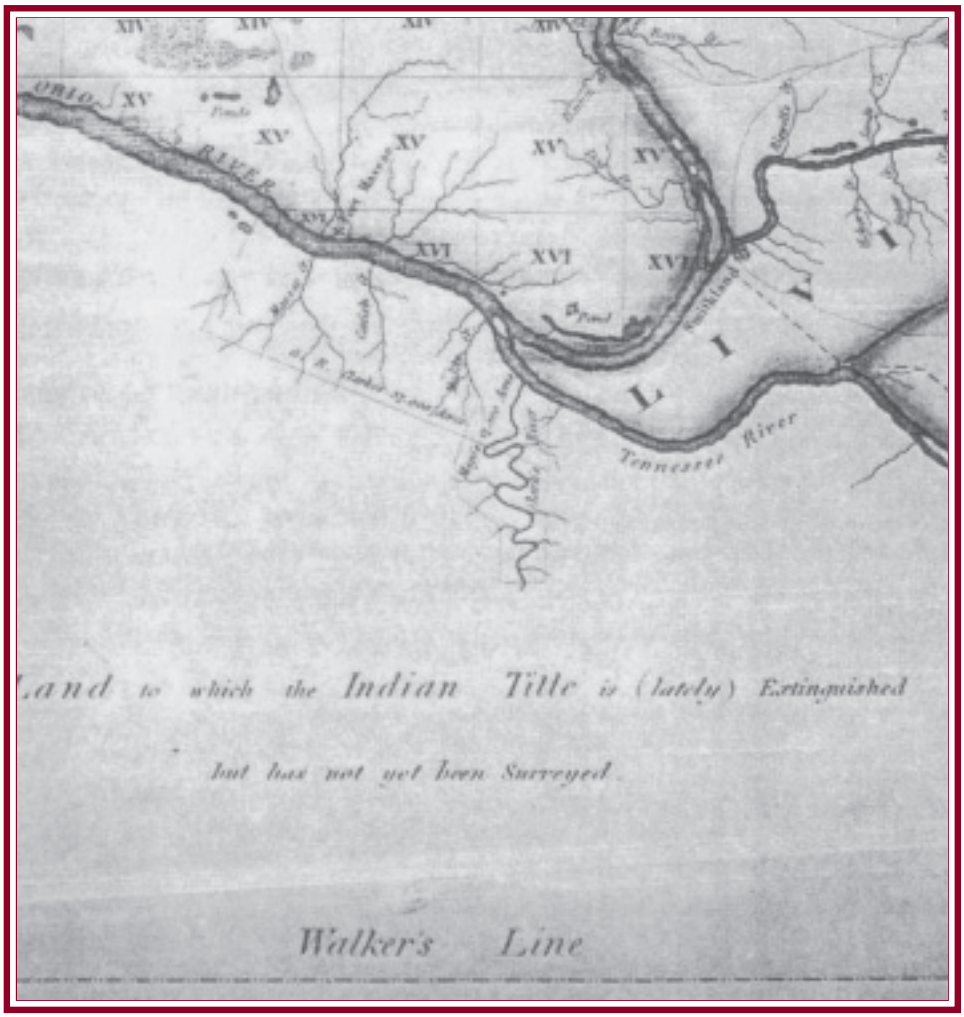

Figure 1. Portion of Munsell map (1818) showing 37,000 acres grant to G.R. Clark at confluence of Tennessee and Ohio Rivers. Grant includes present City of Paducah. (Munsell, 1818)

The Clarks of Kentucky — An Historical Tale in Three Parts (continued)

plat of the Purchase (Munsell, 1818; Henderson, 1822). A portion of Munsell's map is reproduced in Figure 1 and shows a 37,000 acre grant to "G.R. Clark". An additional grant to Clark, which is shown on the Henderson survey, adjoins the 37,000 acre grant to the west. Parts of the lines of these grants are visible on the ground today. Clark's Line Road in McCracken County marks the south line of one of these grants; Clark's Line Road in Ballard County is thought to mark the west line of a second grant. When the City of Paducah was platted, the street system of the city was oriented parallel and perpendicular to the south line of Clark's grant.

In addition, a number of other Virginia Military Grants break the regular pattern of townships, sections, and ranges in the Jackson Purchase. Interestingly, one of these is a grant to Robert Todd, which is described as including Fort Jefferson (West of the Tennessee River Military Surveys, No 30, Book 1, Page 28, May 5, 1821).

With the completion of the Louisiana Purchase, then-President Thomas Jefferson hit about for a surveyor to include in the expedition. The offer was extended to George Rogers Clark. George felt himself too old for the position and nominated his younger brother, William, which explains how William Clark got to be part of the Lewis and Clark Expedition. However, it does little to explain how William wound up in the real estate business in Paducah, Kentucky. The reason goes back to those debts incurred by Brother George. It seems that George's debtors were less than impressed with the liquidity of the George Rogers Clark Real Estate Trust. Action — legal action, that is — was brought, and George's holdings were auctioned to satisfy his debts. The bidders included friends of the Clark family; it appears that transfer to William Clark was used as a means of keeping the land in the Clark family but sheltering it from George's debtors.

Having accounted for two of the Clarks it remains only to dispose of (gasp!) the third. This gentleman — William Clark of Carlisle County with whom this reverie all started — obtained a Virginia Military Grant to land on the Mississippi River by virtue of his service in the Revolutionary War. Clark of Carlisle was a son of Benjamin Clark, and a cousin of George Rogers Clark. During his aforementioned service in the revolution, William served as personal secretary to George Rogers Clark during the campaign in the Illinois Country. The survey for William Clark adjoins the Todd survey on the south, thus placing Clark of Carlisle's grant just south of Fort Jefferson. Examination of the survey shows that the parcel contains 666 2/3 acres of the 2,666 2/3 acres authorized under Military Warrant 2681 (West of Tennessee River Military Survey No. 72, Book 1, Page 70).

I guess one of the benefits of practicing surveying is that one gets to practice history at the same time!

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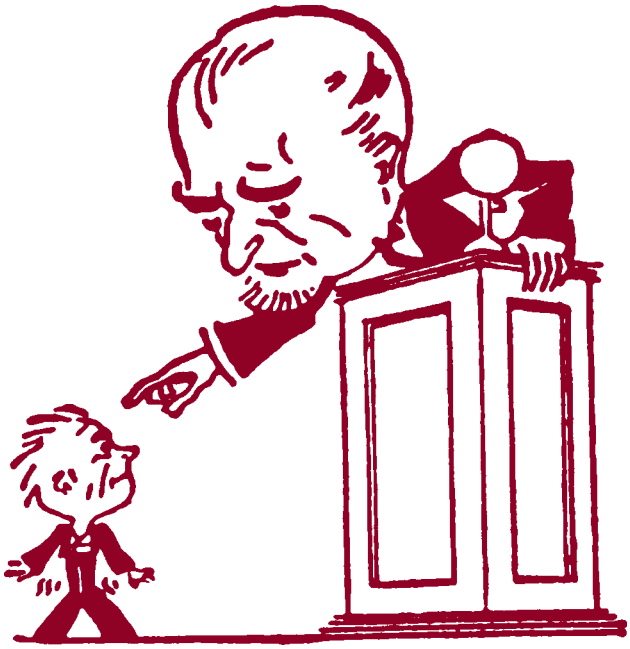
West of Tennessee River Military Survey, No. 72, Book 1, Page 70, May 3, 1821. Kentucky Land Office, Kentucky Secretary of State, Frankfort, KY.

The Interior Angle (Kentucky) Summer/Fall 2005

U.S. Supreme Court Expands Eminent Domain

The following is taken from the syllabus of the case, which was prepared by the Court's Reporter of Decisions. It does not include the opinions of the Justices, but only a synopsis of the decision.

Syllabus KELO ET AL. v. CITY OF NEW LONDON ET AL.
CERTIORARI TO THE SUPREME COURT OF
CONNECTICUT No. 04 108.
Argued February 22, 2005
Decided June 23, 2005



After approving an integrated development plan designed to revitalize its ailing economy, respondent city, through its development agent, purchased most of the property earmarked for the project from willing sellers, but initiated condemnation proceedings when petitioners, the owners of the rest of the property refused to sell. Petitioners brought this state-court action claiming, inter alia, that the taking of their properties would violate the "public use" restriction in the Fifth Amendment's Takings Clause. The trial court granted a permanent restraining order prohibiting the taking of the some of the properties, but denying relief as to others. The Connecticut Supreme Court affirmed in part and reversed in part, upholding all of the proposed takings. Held: The city's proposed disposition of petitioners' property qualifies as a "public use" within the meaning of the Takings Clause. Though the city could not take petitioners' land simply to confer a private benefit on a particular private party, the takings at issue here would be executed pursuant to a carefully considered development plan, which was not adopted to benefit a particular class of identifiable individuals. Moreover, while the city is not planning to open the condemned land — at least not in its entirety — to use by the general public. This Court long ago rejected any literal requirements that condemned property be put into use for the public. Rather, it has embraced the broader and more natural interpretation of public use as "public purpose". Without exception, the Court has defined that concept broadly, reflecting its longstanding policy of deference to legislative judgments as to what public needs justify the use of the takings power. The city's determination that the area at issue was sufficiently distressed to justify a program of economic rejuvenation is entitled to deference. The city has carefully formulated a development plan that it believes will provide appreciable benefits to the community, including, but not limited to, new jobs and increased tax revenue. As with other exercises in urban planning and development, the city is trying to coordinate a variety of commercial, residential, and recreational land uses, with the hope that they will form a whole greater than the sum of its parts. To effectuate this plan, the city has invoked a state statute that specifically authorized the use of eminent domain to promote economic development. Given the plan's comprehensive character, the thorough deliberation that preceded its adoption, and the limited scope of this court's review in such cases, it is appropriate here to resolve the challenges of the individual owners, not on a piecemeal basis, but rather in light of the entire plan. Because that plan unquestionably serves a public purpose, the takings challenged here satisfy the fifth Amendment. Petitioners' proposal that the Court adopt a new brightline rule that economic development does not qualify as a public use is supported by neither precedent nor logic. Promoting economic development is a traditional and long accepted governmental function, and there is no principled way of distinguishing it from the other public purposes the Court has recognized. Also rejected is petitioners' argument that for takings of this kind the Court should require a "reasonable certainty" that the expected public benefits will actually accrue. Such a rule would represent an even greater departure from the Court's precedent. The disadvantages of a heightened form of review are especially pronounced in this type of case, where orderly implementation of a comprehensive plan requires all interested parties' legal rights to be established before new construction can commence. The Court declines to second-guess the wisdom of the means the city has selected to effectuate its plan. Justice Stevens delivered the opinion of the Court, in which Justice Kennedy, Souter, Ginsburg, and Breyer joined. Justice Kennedy also filed a concurring opinion. Justice O'Connor filed a dissenting opinion, in which Justices Rehnquist, Scalia and Thomas joined. Justice Thomas also filed a dissenting opinion.

The Pennsylvania Method

by Wilhelm A. Schmidt, PLS — Article taken from "Backsights" Magazine published by Surveyors Historial Society

The measure of land is its area. But area itself is not measured. It is calculated.

The calculation of the area of a piece of land is easy enough when it has a regular shape. A regularly shaped piece of land, of course, has *many* practical advantages. Towns, cities, counties and large portions of this country are laid out in a grid, not merely for aesthetic reasons or for ease of laying them out, but because a grid allows for an eminently efficient use of the land. But for surveyors and assessors, the advantage of the regular shape, especially of small lots, is that it makes area calculations a matter of simple multiplication.

Unfortunately, parcels of land are seldom regular in shape. Often, especially in colonial days, they were occupied long before they were surveyed. Inhabitation followed the terrain, an invariable feature of which is its irregularity. The resulting pieces of ground usually had straight lines between corners, but indeterminate shapes.

Calculating the area of such a form has been known since Euclid. The trick is to break up the irregular shape into manageable components, and then perform the appropriate multiplications and sums. By colonial times, the mathematics involved were greatly facilitated by the invention of logarithms and trigonometric function tables. Given these, and reasonably accurate field measurements, any colonial surveyor could calculate its area with a pencil — "more or less".

But it was an arduous task — and still was, more than forty years ago, when I landed my first surveying summer job. By then, rotary and electrified calculators helped, but the many steps it took still had to be performed one by one. The steps became programmed with the invention of computers, and require a mere push of a key or click of the mouse to solve an area. Oh, for the good old days! At least, we knew how it was done.

The colonial surveyors were using a standardized method called "DMD", the abbreviation for double mean distance or double meridian distance.

Once transits were used, the first step in the DMD method was to balance the angles. They could be interior or exterior. The field check was to add up the number of sides to the figure, either less by two (interior) or more by two (exterior), times 180 degrees. That sum could be compared to the sum of the angles turned for an initial check. The angles were not always adjusted for balance, but if they were, the error was most likely distributed proportionately among all the angles.

The second step was to calculate the latitudes and longitudes. This required looking up the cosines and sines for the directions of the property lines with respect to north and south. (This is the rationale for quadrants in the first place.) These functions were generally carried to eight places after the decimal point, and then multiplied by the lengths of the lines. The results were arranged in columns: N, S, E, and W. North and East were positive, and South and West were negative.

The third step was to balance these columns. Theoretically, the sum of the latitudes and the sums of the departures must equal zero, for the figure to close. Since figures are inherently imprecise, they never really equally zero, and were mildly suspect when they did. From the difference in the starting and ending latitudes and departures, the direction and length of the closing line were calculated. The error of closure was most easily eliminated by placing it in the line(s) whose direction most nearly mimicked the closing line. The error could also be distributed in other ways. The most methodical way was to distribute the error proportionately, the correction in each line being determined by the closing line multiplied by the ratio of a line length to the total perimeter length. However the error was reapportioned, the latitudes and departures would then be recalculated.

The next step was to calculate a series of areas, one corresponding to each of the parcel lines. A longitudinal line was drawn, at least hypothetically, through the westerly-most corner of the parcel plant, and latitudinal lines drawn from the corners to that line. The result was a series of areas, the first and last of which were triangular and the rest trapezoidal in shape. At this point, the procedure was to add the two departures of each area and multiply the sum by the longitudinal divergence of the line. The result was not an absolute number for each area, but a number with a positive or negative sign, derived from the signs ascribed in step two.

The last step was to add all these areas and divide the sum by two. By simply adding the two sides of each trapezoidal area, a rectangular area double the size of the trapezoid was calculated, thus requiring the division by two.

Whew! There you have it. But it takes so long. Isn't there a simpler way?

There is, although not much simpler. It is called the Pennsylvania method, attributed to David Rittenhouse (1732-1796). Since the area of a trapezoid is obtained by multiplying the average of the two parallel sides by its height — he must have reasoned – why not divide each sum of the sides by two? And why not add the sum of the longitudes and the sum of the departures (not forgetting their signs) and multiply these sums? The answer is the same, and the method acquired a regional name.

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PRELIMINARY SCHEDULE

THURSDAY (9/28)

8 am - 5 pm **ALTA/ACSM Land Title Surveys** — Speaker: Gary Kent
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7-9 pm Exhibitor Set up

FRIDAY (9/29)

8:30 am Business Meeting

10 am Exhibit Hall Viewing

11 am Business Meeting continued

1 pm **Running a Successful Surveying Business** — Speaker: Gary Kent
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Or

Geomapping for Data Visualization — Speaker: Joseph Loon

SATURDAY (9/30)

8 am **State Plane Coordinates "For Dummies**" — Speaker: Don Clinkenbeard
Stop fearing state plane coordinates. Stop faking your way through the process. Stop blindly trusting some "expert" or some "software" to do your state plane coordinates for you. Learn the practical skills and methods to use state plane coordinates simply, confidently, and to financial advantage at a project level. This course will minimize geodetic theory in favor of straight talk intended for working surveyors, technicians and managers.

Or

Situational Ethics for Land Surveyors — Speaker: David Ingram
Ethical considerations of business and professional practice have always been of concern to surveyors, but in recent years surveyors have seen an increasing emphasis on the need to understand and put into practice positive ethical attitudes. Attempts are made to impose ethics on surveyors from several directions including legal, professional and moral. An understanding of the implications of each is important. The purpose of this seminar is to promote positive attitudes about ethics for surveyors, stimulate discussion and personal thought about ethics, and develop an understanding of ethical requirements placed on surveyors.

1 pm **Missouri Minimum Standards for Property Boundary Surveys** — Speaker: Mike Flowers
The Missouri Minimum Standards are dually promulgated by the State Surveyor and the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Landscape Architects. The were last revised and modified in 2003 and were effective in their current form on October 30, 2003. This presentation is an overview of the requirements for all property boundary surveys made in Missouri and utilized by the public, state surveyor's office and the APEPLS&LA board as the guideline for adequate survey performance.

Or

Early Surveying Techniques and the Evolution of Surveying Equipment — Speaker: David Ingram
A presentation to examine early surveying techniques and the evolution of aids to surveyors including calculating devices, distance measurement equipment, and directional devices. The presentation will consist of a number of powerpoint slides depicting the above items with comments by the presenter. Questions or additional comments from the audience will be encouraged.

3:30 pm **Tree Identification** — Speaker: Rob Emmett, Missouri Dept. of Conservation

Or

Early Surveying (continued) — Speaker: David Ingram

Professionalism: Morals, Ethics, Good Manners?

by Gerry Curtis, RPLS #1640

A recent chance encounter during a brief courthouse research trip raised a question in my mind related to our obligations as professionals and how far is far enough in providing services to our clients and the public at large.

This particular situation began with a question by a longtime county clerk's employee concerning "what was this material called that you have to provide for a plat to be filed." This employee had a roll of "mylar" plats in her arms at the time and just couldn't come up with the popular trade name for the plastic film product. When I responded, she asked me if an owner didn't have to submit the "mylars" to the County Commissioners Court for approval of a plat not in any municipal agency's corporate limits. I responded that was the case, but submittal was handled through our county's public works department rather than directly to the Court's clerks. I also asked who needed direction and what they had with them. She took me to a young mother with a two-year-old in a stroller and a single folded blueline print in hand that her surveyor had provided; in fact, the surveyor had handed her 20 folded blueline prints, but had given her no specific instructions for processing except, apparently, that she had to get the plat recorded.

After looking at the plat and seeing the surveyor was someone I knew and respected, I thought I would follow up for him and get this lady to the right place. I led her to the Public Works Department and introduced her to the person who handled placing plats on the Court agenda. He told her she needed three "mylar" copies of the plat with original signatures, copies of the separate street dedication instrument that our county requires and a tax certificate, along with notice from the Health Department that the land was suitable for a septic system. I walked out with the lady and went on to my car, and felt good that I had been able to help someone with my 40+ years of experience, but essentially forgot the incident.

Within about a week after the incident I received in the mail a very nicely worded card of appreciation from the young mother. This little gesture refreshed the incident in my mind, and made me start wondering about how many times a day a surveyor or someone from his large or small office staff, passes up the opportunity to "complete" a project such as the one described, by not fully apprising the client of the routine to complete the process of platting, or by handling the process for the client. For the professional, carrying the "mylars" to the county official can just be a part of a research trip, or one of several plats to be taken, something that we do all the time. For the individual, this may be the only time in their life they will have to make a trip to the county courthouse, or for some in metropolitan areas, a rare trip to the county seat. Are we serving our clients, the public, or the profession by stopping short of going just one more step? I received no money for my time, no promise of a new job, nor did I expect either. The appreciation of this young woman was pay enough for my small investment of time, and the thank you card was pure bonus!

Then, the question comes to mind, "Were my actions in the situation just the result of my particular personality, or parental training that stuck from my growing up days, or some assembled viewpoint of professional duty learned from a variety of teachers and mentors? I like to think the answer is that the action was a product of all three, but beyond my personal actions, were the actions of the other surveyor derelict, negligent, or just somewhat incomplete? From my personal background, no one in my immediate family was in a professional occupation for me to use as a practice example. However, my dad (who passed away just before his 93rd birthday in August, 2004), spent 37 years plus as an employee/manager of an old style SERVICE station, with the intended emphasis on service. He always gave more service than he had to and encouraged his employees to do the same. He was certainly in his element in a small town market, being on a first name basis with a large percentage of his customers and knowing their kids and grandkids, and treating most travelers in that same personal way. His constant attention and readiness to give directions, to talk about the weather, or ask about the customer's family without neglecting other waiting customers was a big part of his business personality, and most definitely a "step or two above" others in his field. Perhaps some of my philosophy of service comes from him.

Should all clients of surveyor offices expect the kind of service some may consider to be over-the-top? Obviously, some who are in the real estate development business don't want these things done for them — they have more than adequate time and staff to, as soon as the surveyor's platting or boundary survey services complete, they rush survey maps or plats to the governmental agency for review, or to the title company or escrow agent for title examination. We all know that some of those are overly zealous in their performance expectations and downright rude in their directions to persons acting in the professional capacity that they need to complete their project.

But then there are others who don't speak our business language — don't they deserve to be assisted to a point of completion? How far should a professional go? A definition from Webster doesn't directly address the level of service part of professionalism, but perhaps the very first definition for professional in my *Webster's New World Dictionary* speaks to this — "... of, engaged in, or worthy of the high standards of, a profession" (my emphasis on high standards).

I remember very well, during my college career, fellow students whose projects displayed a "step beyond" or "extra mile" of preparation, rather than the "get-by" preparation of the majority. Those students who had those higher standards or expectation of self were better prepared in most cases and likely got better grades because of it. But who's to grade us as professionals? Is some heavenly appointee, perhaps the chief of parties, keeping his field book current on our professional activities? Probably not, but more likely, our peers and our clients grade us at least partly by their perception of our professional conduct.

Analogies are difficult to find for a situation like this, but perhaps this one is apt. You visit your physician for your annual physical examination, he (or she) requests blood tests, and

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Professionalism (continued)

then personally calls with the results of the tests. Many physicians' offices will have a staff person make the call, but in this case, the doctor does that. Do you not feel better served than you may have been by another practitioner? Do you not sense some extra measure of professional care exhibited by that physician?

It's quite likely that you have discerned my feelings about our duties as professionals; that we should go at least one step beyond the ordinary, to follow up on services, even after payment is received. And don't we owe that attitude to ourselves and our fellow professionals? Don't we all want to be equated in our abilities and our services to those of professionals in other fields? Or do we want to be judged by the perception of the lowest esteem among our peers? Any time we describe ourselves as "just a surveyor" or "I'm only the surveyor" when we offer our opinions on professional matters, we belittle ourselves in the eyes and minds of those who are listening. That is not to say professionals should project an attitude of arrogance, but rather we should be proud of our education and achievements. We should speak confidently in matters in which we have learned opinions, and never fail to go that "one step beyond".

Here's to a more professional profession!

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