

Saskatchewan Land Surveyors' Association

Newsletter

President's Message to the Membership

By G. D. Craig, SLS, P. Surv., P. Eng., President

It's a new year. The beginning of a new year is typically spent reflecting on the past year and setting plans and goals for the upcoming year. This is no different for the SLS Association.

Looking back ...

Thanks to the work of the joint SLSA/ISC Panel there has been successful resolution of many issues. Some of the issues that were resolved include; removal of a search charge when the plan number is known, changes to output materials, changes to the accounting as shown on the web, etc. It has been a worthwhile effort to be a 'part of the solution' although at times I am sure our members on the Panel felt that their concerns were being ignored or minimized. The many hours spent by the Association members on the Panel is greatly appreciated.



It appears that ISC is serious about making changes to their business practices and to that end they have done internal and external audits in the last quarter. Many Association members were contacted and interviewed about how ISC is doing. Some improvements have already been seen. If Mark MacLeod is to be believed then more changes are to come at ISC.

The Association has made several changes to our Bylaws to make ourselves consistent with the state of labour mobility in Canada. These changes were made to the requirements for Professional Examinations.

We had another successful year of education seminars. I would like to thank the Education Committee for their work in providing the

membership with varied and interesting topics.

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Council Highlights

By: *A. Carl Shiels, M. Sc., P. Eng.,
Executive Director*



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December 5, 2002 Meeting #4

The president called the meeting to order at 7:15 p.m and reported on his attendance at the annual meetings of the Manitoba and Nova Scotia land survey associations. He also indicated that CCLS dues have been frozen until at least 2004 and that there is to be a meeting of the four western presidents to discuss the future of the WCBE.

Amendment to LSPS Act

A draft copy of the briefing document for the Legislative Instruments Committee, was reviewed. The lawyer drafting the amendment had changed the wording slightly to specify that "not more than three" members of council could be non-residents as compared to the original wording of "a minority of" members of council could be non-residents. Since the act specifies that there must be at least seven members of council and there is very little likelihood that the association would ever opt for more than seven members, Council concluded that the revised wording would not change the effect.

Notary Public Designation

Council was advised that there was very little chance that Land Surveyors would be given a blanket designation similar to lawyers. They were also advised that, aside from having to pay a fee, there was very little involved in getting the designation on an individual basis. It was agreed that no further action would be taken on this matter but if the need for notarized documents became a problem the matter would be reviewed again at a later date.

Seals on Plans

Council was advised that the use of seals was a 'throwback' to a time when seals were extensively used to connote official status. While a seal may still meet the expectations of some survey customers, the ultimate responsibility for survey documents rests with the licenced member who certifies them. It was also noted that even the legal community seems to give very little weight to the use of seals and that the use of an 'embossed' seal on plans submitted digitally to ISC and customers is impossible. The administrative staff were instructed to pre-

pare a draft amendment to the Article XLIII, Section 3 of the bylaws to replace the words "shall be used on all" with the words "may be used on any". This amendment would then be presented to the next annual meeting.

Meeting with the City of Estevan

The president reported on a meeting with officials from the City of Estevan regarding their advertisement for the sale of Real Property Reports and Property Corner Locates. The meeting had gone very well with the city officials acknowledging that they had been concerned about the liability of providing these services but that they had been responding to pressure to provide the service to the city's rate payers. The president had arranged for copies of the RPR brochure to be sent to the City of Estevan to hand out to any customers who had questions and the Executive Director agreed to "field" any question or concerns that might arise from the residents of Estevan.

The Career Education Source Book

The Executive Director reported that inquiries with teachers and administrators in the Regina public school system found no one who was familiar with this publication. When the representative of the publisher was contacted again, he admitted that the publication would be going out to schools in Western Canada for the first time this year. On that basis, the Executive Director had advised the representative that the association would not be placing an ad this year but that he should contact the association again next year.

Suggestion for Survey Incentive.

Council weighed the time and effort that would probably be required to bring such a proposal to the attention of the both provincial and federal politicians and concluded that it would not likely be 'resource-effective'.

Unique Identifier on Survey Monuments

A question was raised about whether a deadline should be set for when all survey firms are to be using the unique identifier on their survey monuments and whether the unique identifier should be specified on survey plans for monuments placed as well as for those found. It was agreed that the

policy should continue to be that unique identifiers are to be used when all 'old' stocks of survey monuments have been used up. It was also concluded that the Land Surveys Regulations currently require all markings on survey monuments to be included on plans.

Meetings with Government Departments

Past President Waschuk indicated that, in discussions held recently with various government departments, there was interest in meeting once per year to review matters of mutual interest and concern. In particular, the departments of Highways and Community Planning, as well as the Utility Companies, were potential participants in such meetings but others (e.g. SERM, SUMA, SARM) could be included if the meetings prove useful. It was agreed that M. L. Waschuk would contact the various departments and utility companies to arrange a meeting sometime in late January or February, 2003.

SLSA Scholarship Recipient at U. of C.

Council was advised that Terry Beblow of Regina had been the 2002 recipient of the SLSA Scholarship at the U. of C. Unfortunately the notice of the successful candidate came too late to arrange for a plaque to be presented at the time of the award so arrangements had been made to have R. Pominville present the plaque to Mr. Beblow personally.

Surveyors' Monument

Council considered a proposal to make a financial contribution to the Louis Riel Trail Association (LRTA). The LRTA erected one of their monuments in Chamberlain depicting a old time surveyor. The associated plaque indicated that it was intended to commemorate the role that the Dominion Land Surveyors played in the development of the west and emphasized the fact that those early surveys added further irritation to the métis who were concerned about the take-over of their traditional lands. An amount of \$1,000.00 was approved for a donation to the Louis Riel Trail Association and for preparation of a plaque to indicate, at a suitable location on the monument, the contribution of the SLSA.

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Councillor's Report

Member Seals - Article XLIII

By Alan Jensen - Councillor



At our past council meeting the item "Seals on Plans" was on the agenda. The concern raised by council is that the requirement for an embossed seal on all plans of survey is not workable with respect to plans being

submitted digitally to Information Service Corporation (ISC), Plan Processing for examination and approval. The original bylaw concerning the use of an embossed seal came into affect on April 1, 1989. The need for an embossed seal appeared to be initiated by the Real Property Report Committee at the same time an effort was being made to educate the general public, lenders and solicitors of the new Real Property Report (RPR). The reason why an embossed seal is required on all plans, drawings and documents where a surveyor certifies and not just RPRs is not obvious and was probably implemented to standardize all certified documents, which does have some merit.

On January 1, 1997, when the *Saskatchewan Land Surveyor and Professional Surveyor's Act* came in force the new bylaws were also brought forward, which has remained unchanged to date with respect to member's seals

Article XLIII

Member Seals

SECTION 1

The Association shall issue an embossed seal to every licensed Saskatchewan Land Surveyor or Professional Surveyor. Carl should that not be "and" instead of "or"

SECTION 3

The seal shall be used on all plans, drawings and documents requiring certification by a Saskatchewan Land Surveyor or Professional Surveyor.

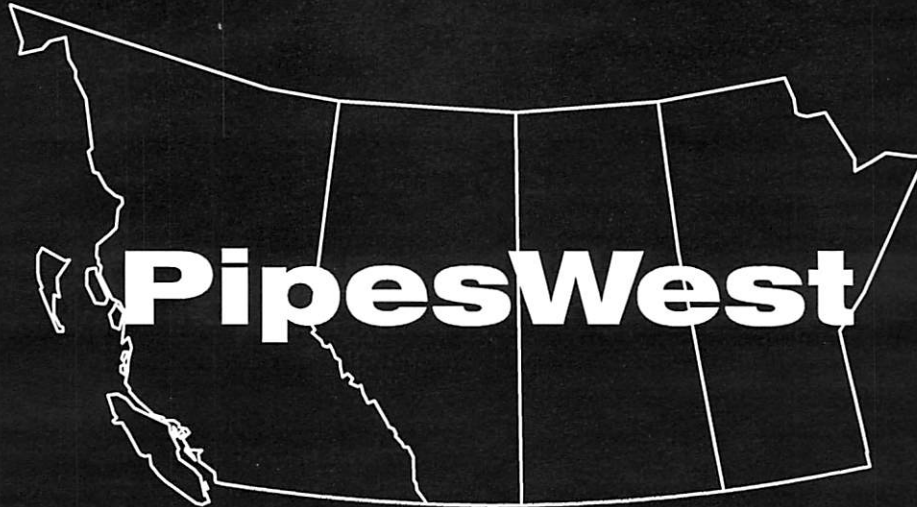
All plans of survey in this province are submitted to an approving authority for examination and approval. Is there a need to have certification under seal? What is the benefit if any? The risk of a plan being submitted and accepted from a non land surveyor is remote and having the plan approved is even more remote. Were there any issues with the pre April 1989 plans of survey that were not sealed? Plans in Alberta have the main elements of a certification and a permit number instead of a signature. In Manitoba, the surveyor signs an affidavit and requires a Notary Republic to endorse the plan also. In the situation where a surveyor prepares a document that is not reviewed externally such as a RPR or a Topographic Survey, a certification under seal is probably warranted. The work of the members of the Association of Professional Engineers & Geoscientists of Saskatchewan (APEGS) is reviewed internally only and there is no external review process. Plans prepared by Engineers have their permit number and signature only.

In some situations the general public looks for a seal on documents as it give them a comfort level and some familiarity with the Professional Engineers and Architects practices. The Saskatchewan Applied Science Technology and Technologists (SASTT) are currently looking at acquiring seals for their membership. With respect to plans of survey it is the surveyor who is ultimately responsible for the plan he certifies regardless if it is sealed or not.

What is our current state, with respect to the use of embossed seals on plans of survey submitted for examination and approval? One can assume the issues concerning the use of seals started with Moose Jaw Land Registration District (LRD), that was converted and came on line on June 25, 2001. The same issues have continued to date where we are dealing with both Transitional Plans and plans being prepared under the new regulations. A cursory review of some of the plans that were submitted in 2002 and discussing this with other surveyors the following situations have been identified:

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Riparian Boundaries Part V

WATER BOUNDARY DOCTRINES

DOCTRINES AFFECTING BOUNDARIES

By Terry W. McHenry, PLS

Reprinted from 'Treasure State Surveyor' October 2002

Erosion

The wearing or washing away of soil from banks of a watercourse or shore of a lake through the water's action is known as erosion. Here, sand, sediment and other materials are gradually dislodged, transported and redeposited elsewhere. Erosion is generally regarded as being the opposite process of accretion (i.e., the gradual deposition or build-up of material from the action of water), wherein material is being removed rather than built up or added.

Erosion can of course occur as a result of intense rainfall. Typical evidence of this is the telltale rivulets which appear, particularly in non-vegetated slopes, from the action of seasonal runoff or heavy and prolonged rains. This particular cause of erosion, however, is not the subject of this discussion.

Evidence of erosion appears as cut banks and scarping in the case of a watercourse, or benching in a littoral setting (see Part III of this series, Locative Evidence). Erosion is the process by which scarping or undercutting results.

In extensive river mechanics studies (see Ref. No. 6, herein, and Chapter 8) it has been determined that the meandering (classic curvilinear configuration) of a watercourse begins with upstream bank erosion. As material is eroded away and moved downstream, the process alternates between scouring and deposition, increasingly enunciating the curvilinear configuration. Material dislodged is moved in two fashions. The finer particles and sediment are transported downstream in a suspended state in the water itself. This is referred to as wash or suspended load. Heavier material is actually moved along the bottom from the current's force by being rolled or alternately dislodged and bounced along. This is known as bed load. Water velocity increased on the outside of a bend where channel depths and scouring are greatest. Conversely, on the inside of a bend, water velocity is

slowed, which enhances deposition of suspended load.

In the case of a lake, wave action causes differing levels and extent of scarping (creating benching) as material is moved (eroded) from the shore. The process here is one of alternating deposition (wash load) and scouring (bed load).

Comments made previously (Part IV of this series) with regard to accretive processes, and within the context of slow and imperceptible change, apply equally to erosion. Thus, a riparian boundary line may be considered "live" or ambulatory in terms of its ability to gradually move through erosional processes. As indicated, it is possible for an entire riparian ownership parcel to be consumed through

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erosion, with the result of the landowner's title being extinguished forever. Generally speaking, issues of natural vs. artificial cause already commented on with regard to accretion apply for erosion as well. Once again, the reader is cautioned that rulings on these matters can vary from state to state.

Reliction

Where waters of a watercourse or water body have gradually and imperceptibly receded, and previously submerged soil has been exposed as a result, such alteration is known as reliction. Generally, land that was once submerged and is now left dry as a result of relictive processes belongs to the riparian or littoral owner from whose shore has receded.

Reliction is a process also regarded as being opposite of accretion, wherein the result is essentially identical (i.e., land is added to the adjoining riparian or littoral parcel), but the cause is through retreat of the water rather than deposition of material. Often referred to as dereliction or emergence, the relictive process is operative regardless of whether the waters involved are navigable or non-navigable, riparian or littoral. Reliction does not apply under temporary drought conditions or seasonal fluctuations in water level. Results must be more long-term than these.

The question of whether the reliction which has occurred must be permanent and irreversible is an interesting one. Keep in mind that we are discussing "living" boundary doctrines within the context of an ambulatory setting (see Part IV, Ambulatory Nature). Boundaries are subject to move under these doctrines, reliction being just one cause. There are cases where water has receded and subsequently risen, sometimes many years later. For example, in the matter of Devils Lake, North Dakota, a class action suit (423 NW2d. 141 (1988)) was brought by a group of upland owners around Devils Lake. The North Dakota Supreme Court ruled that relictive processes are subject to reversal, thus affirming the doctrines of accretion and reliction. A method of determining if the relictive process has begun is often necessary. Under most circumstances, one can defer to the presence of various evidences for determining the MHWL (e.g., the appearance of upland vegetation) as a guide in ascertaining whether the relictive processes are underway. Remember that these are evidences of slow and imperceptible change over long contin-

ued years, and therefore applicable to the relictive process by definition. Historical records (in certain settings), photographs, and testimony can also be included in the bundle of evidence for consideration.

As with accretion, certain jurisdictions will recognize reliction as being operative under both natural and artificial settings (with certain limitations, previously discussed). Others, however, will not allow the relictive process to alter boundaries when the water's recession is man-caused (see, e.g., California). State rulings may not apply if the uplands are federal lands. Here it is extremely important to check case law within your jurisdiction for guidance.

In Nevada, I have found one case involving reliction which is particularly interesting. *State Engineer v. Cowles Brothers, Inc.*, 86 Nev. 872 (1970). In this instance, the State Engineer had denied an application to drill a well in the dry lake bed of Winnemucca Lake on the grounds that this lake was a navigable body of water (declared by statute in NRS 537.030, 1921), and that title to the bed was therefore held by State of Nevada. Respondent Cowles Bros, Inc. petitioned for review of the State Engineer's order. The district court reversed the State Engineer's ruling and affirmed the doctrine of reliction. The State Engineer appealed, and the Nevada Supreme Court reaffirmed the lower court's decision, dismissing the statutory declaration in this case as not abrogating the common-law rule and, most importantly, confirming the common-law doctrine of reliction even as against the state.

Apportionment of relict lands is probably more commonly experienced in littoral settings. Once again, no single approach to the apportioning question can be applied in all circumstances and still satisfy the equity issues, which are paramount. As with apportionment of accretions, there are some generally accepted methods driven by the confirmation and equity practicalities. For an excellent treatment (with illustrations) of these methods, the reader is referred to Ref. No. 6, herein, and Pages 221 through 224.

Boundary line agreements can and do enter into the picture, as with accreted lands. The land surveyor needs to be particularly observant of the possibilities of agreed lines, as with any boundary prob-

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The Shelburne Incident

by F. C. Hutchinson, BA, NSLS, CLS

Reprinted from "The Nova Scotia Surveyor" Fall 2002

The American Revolution resulted in the exodus from the American Colonies of both American and British subjects loyal to the Crown. These immigrants are referred to as The United Empire Loyalists. Shelburne, Nova Scotia received nearly 3,000 Loyalist settlers in April of 1783. The small community was unable to provide accommodations let alone land grants for such a huge influx. Shelburne soon swelled to a population of 10,000 and was the fourth largest community in North America.

Surveyors have always been under pressure to complete surveys for settlement throughout history and Shelburne is a good example. Many of the settlers were well equipped with material to build new homes. Others, however, were destitute and had nothing but the clothes on their back. The promise of land was not being met and the young community resembled a pressure cooker.

William Morris 2nd Surveyor General, and Benjamin Marston, Crown Surveyor, left Halifax on April 28, 1783 for Port Roseway and then on to Lunenburg to pick up a set of survey instruments. They arrived in Shelburne on May 2, 1783. Community unrest existed from the very beginning due to the number of settlers requiring property, the speed of the surveys or lack thereof and the poor quality of land.

Marston continued his surveys throughout the summer and fall of 1783. He resumed activities in the spring of 1784 and on July 26 a riot broke out between the disbanded soldiers and the Free Negroes. The pressure cooker had finally exploded. The riot continued on into the next day at which time Marston took passage to Halifax in the afternoon of July 27, 1784. Governor Parr dismissed Marston from public office as a result of the incident. Marston's abilities may have aided in the unrest of the settlers but it is likely that most surveyors of any era would have been unable to handle such a demanding task. An entry in his diary dated August 4, 1784 states... 'if I had been found, I should have been hung, from all that I have heard". *

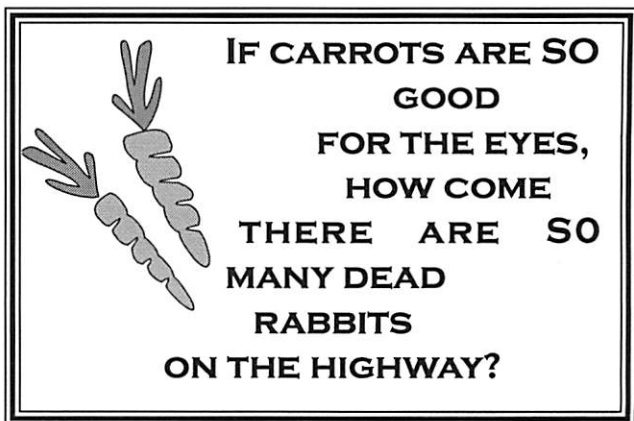
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lem. Where government lotting abuts a relicted area and no patents have been issued, the apportionment solution may well be a completion survey wherein the aliquot part liens are extended across the relicted area.

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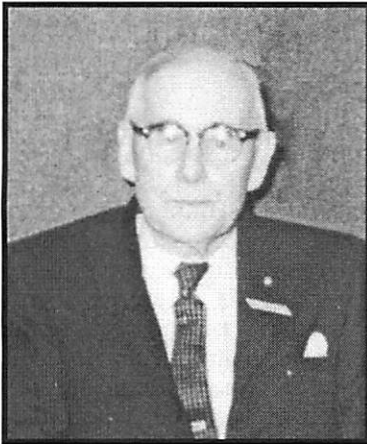
Reprinted with permission of the author, and from The Nevada Traverse, vat. 24, No. 4, 1997, through Vol. 26, No. 4, 1999. Terry W. McHenry, PLS, is the editor of The Nevada Traverse. He has worked in surveying since 1964, with experience in both private and public capacities. Currently he is the principal of Consulting Land Boundary Specialties, a consulting firm specializing in land and riparian boundary matters. He may be contacted as follows: 14 710 Rancheros Drive, Reno, Nevada 89511. (775)852-7290, or email at: editornvtraverse@aol.com *



Biography

By John H. Webb SLS (LM)

SIDNEY HARDING 1881-1979 S.L.S; P. ENG.



My first job in private practice was my association with Sidney Harding S.L.S. the day after I received my commission on June 30, 1949. I teamed up with Sidney on July 1, 1949 until February 1950. I was also with Sidney when we surveyed subdivisions and restored some of the boundaries for

the Prince Albert National Park along with two boundaries of the Montreal Lake Indian Reserve in 1949. Incidentally Mr. Murray Skelton was a chainman with us on these projects

At age 74 in 1955 Sidney was involved in opening the 18th baseline, about 70 miles north of Meadow Lake, Saskatchewan and camped along highway number 4, 30 miles from the closest settlement at Flotten Lake. Here is part of his letter to the then secretary treasurer of our association Mr. Max Viminitz SLS on March 8, 1955.

"There is quite a lot of timber on the line to be cut and we are utilizing 4 motorized saws and about a dozen men. The surveying of the line is the smallest part of the work. This is a primitive life and has not the convenience of an office in town, so that this part of my job is liable to become neglected. One consolation is that variety is the spice of life and for this reason, I shall probably enjoy the comforts of town more, through having this experience."

Born January 27th, 1881 at Greenwich, England with his early education at the Roan School in Greenwich. He evidently came to Canada in his early years and must have had prior knowledge of Engineering practices. Between 1902 and 1904 he worked as a chainman and instrumentman under

Mr. L.R. Ord, Dominion Land Surveyor, from Toronto doing location work on the Grand Trunk Pacific Railway out of Winnipeg, Manitoba. In 1906 he became a resident Engineer with the railway until 1917. While with the railway Sidney articulated under Mr. E.C. Brown SLS, MLS, ALS, DLS, from 1913 to 1917 and obtained his Saskatchewan Land Surveyors Commission number 66 in 1917.

From 1918 to 1919 he worked for the S.E. Junkins Engineering firm in Vancouver, British Columbia. His work involved Hydro-Electric power plant investigations and railroad construction in British Columbia.

During his early years he qualified as a professional Engineer through home study and not through a University.

Mr. Harding then came back to Saskatchewan and was with the "Parsons Engineering Company" in Regina on land surveys. Mr. J.L.R. Parsons, DLS, OLS, SLS, owned the firm and was the first President of the Saskatchewan Land Surveyors Association.

In 1922 Sidney moved to Punnichy, Saskatchewan where he was engaged in private practice until 1944 when he moved back to Regina, continued in private practice until his retirement in 1962 at the age of 81.

During the 1939-45 war years it was tough to get tires for your car, however the Government of the day saw fit to issue tires to those workers who required the tires for their work. A letter from our Association in 1944 to the Wartime Prices and Trade Board in Regina said in part:

His work is of such a nature as to require the use by him of an automobile, and if his present tires are in need of replacement, I recommend that he be authorized to purchase new tires.

Being honored as President of the Saskatchewan Land Surveyors Association in 1934 and in 1957 he was awarded a life member of the association.

Mr. Harding also became a life member of the Association of Professional Engineers of Saskatchewan, the Engineering Institute of Canada and The Canadian Institute of Surveying.

Upon his retirement Sidney moved to Long Beach, California to be near his two sons, Clay H. Harding and Howard Lionel Harding. His last known address, in 1974, was 3960 Thunderbird Drive, S.E. Seal Beach, California 90740 at the grand age of 93. It is noted that he was living with one of his sons in 1978 and passed away in May 1979 at age 98.

There are two interesting documents in Mr. Hardings file at our association office. The diary covering our work at Prince Albert National Park and the Montreal Lake Indian Reserve in 1949. The other paper was a synopsis of the Riel Rebellion of 1885 that Sidney delivered at our 47th annual general meeting.

Mr. Harding was a life member of the Regina Astronomical Society and the Leisure World Toastmasters club in California. When I worked with Sidney his philosophy was that of a "Technocrat", one who advocates control of industrial resources by technologists and engineers. We had many a discussion over this theory.

Mr. Hardings name is perpetuated under the survey firm of Harding, Boss and McLeod in Regina, Saskatchewan.

I can honestly say that it was Sidney who taught us what hard work was all about. ✱



1955 Primrose Lake Air Weapons Range Survey

Guard Post

By Ambi Wrozesk, ALS

Reprinted from 'ALS News' September, 2002

Equipment theft is a serious problem continually facing the survey industry. Insurance costs are escalating and countless hours are spent trying to trace, replace and claim for the stolen equipment.

During the past two years, over fifteen survey companies reported stolen equipment to the Association (thanks to Dawn Phelan for supplying this information from a database). Not only is survey equipment stolen, but the vehicle that contains the equipment is also taken. Unfortunately, not all missing equipment is reported to our Association so, in reality, there is a much larger number of thefts actually occurring. In reference to my company, we have had quads, power saws, small tools and supplies removed from our trucks. One of our vehicles disappeared from Rocky Mountain House. It was discovered in a compound in Abbotsford a day after I signed and mailed the bill of sale to the insurance company. The city police could not access Alberta Registries to determine the owner of the abandoned vehicle that had been parked in a residential area for days. None of the equipment or the two quads were ever returned.

What type of equipment are thieves looking for?

After tabulating Ms. Phelan's data, the most expensive item is the vehicle itself. After the vehicle, quads were next in line with fifteen thefts reported. Other hot items include GPS equipment, total stations, laptops, pipe locators and pin finders, radios along with hand held GPS, small equipment, supplies and accessories (such as CDs, sunglasses, and so on). Many survey vehicles have more than seventy-five pieces of equipment not taking into account supplies and personal property. This also does not include the accessories on a survey truck that is specially equipped for the oil field, with decks and running boards, and so on.

As you can see, losing this equipment is a hindrance to successfully completing the required job.

Insurance companies are facing the difficult challenge of evaluating some of the new technology that is being used in the survey industry. The small

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By Ronald E. Koons, RoSaKo Enterprises Safety Consultants, Middletown, Indiana
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One of the low points in the safety consulting business is dealing with reports of fatalities and serious injuries. Some days I feel like a mortician, sorting through the bodies of paperwork to make sense of the reports. Occasionally a particular report will get my attention and off on a quest I go.... surfing through a vast network called the Internet. I attempt to get as many of the details of a particular incident as possible. I have been known to call the OSHA inspectors who investigate fatalities and catastrophes to get their insight on what happened and how it could have been prevented. In the vast majority of cases I want to emphasize the phrase "could have been prevented". Many people who attend my seminars try to get across the point that sometimes, well, you know ... stuff just happens. I can't disagree with that totally. If you are walking down a city street and a tire falls off an airplane traveling at 25,000 feet, travels all of the way to earth and picks out your body to land on, there is probably not much you could have done to prevent the incident. (However, the person responsible for putting on the tire might have made a difference.) Wearing five hardhats, goggles, a face shield, and yes, even steel toed boots won't protect you from that tire. I used to work with a union plumber who had been in the business for years. He refused to wear steel toed workboots. He said if we made him wear them that he would quit. Upon further discussion he informed me why his stubborn streak came out on the boot issue. During his apprenticeship he observed a plumber who had a several hundred pound joint of steel pipe fall on his foot. My co-worker explained that the steel toes "just acted like a knife and cut off the mans toes". "After that time" he muttered "it will be a cold day you know where when I wear steel toed boots!" After discussing the issue a little more he added that the plumber was back to work in a few weeks and worked as a plumber for years after that. The missing toes didn't seem to slow him down. At one point I interjected "what do you suppose would have happened if the man didn't have on steel toes?" He countered that he didn't know. I contend that if you have a several hundred pound joint of pipe fall on your foot there is going to be major damage no matter what. Heck, maybe the steel toes saved him from losing the entire foot!

Sometimes we all start traveling down a particular path and come hell or high water we won't change

our direction. It takes an avalanche, a 500 pound grizzly, (or our spouse) to change our direction. In my business that 500 pound grizzly quite often takes the form of an employee injury or even fatality. That is really sad. I know that every one of you truly value human life. There is nothing that you would do to intentionally hurt another human. Yet everyday throughout this country workers are sent to do a job that they are not prepared to handle. Yes, they know what to do, and they might even know how to get the job done ... but do they really know how to do their job the safe way?

I have never had to tell a family member that their loved one won't be coming home that night because they died at work. I certainly hope that I never have to do so. As managers and owners of a business we have feelings just like anyone else. The loss of an employee, coworker, and yes friend can be devastating. It will affect everyone employed at a business for days, weeks, and even months. I remember just a few years ago getting out of my vehicle early one morning to do a seminar on fall protection for one of our customers. Several employees of the company met me at my vehicle as I was unloading some samples of fall protection equipment. Now I must tell you that normally it is very difficult to get across the importance of fall protection to construction workers in the residential field. They have done things a particular way for years and aren't about to change. I was shocked when the employees started asking me questions about what equipment they should use even before I got in the building! We actually started the seminar early due to the interest. I finally asked what prompted the great enthusiasm. (Here comes that grizzly bear.) I was informed the previous year that company had two major injuries from falls. One young man 23 years old will never again be able to walk normally due to his injuries. The other employee was going to be off work for at least a year and his return was not certain. These employees had seen the grizzly bear and were willing to make a change. The owner of the company promptly purchased enough equipment to outfit all employees with the proper fall protection equipment.

I recently did a seminar on the various aspects that safety liability can take. There is criminal, OSHA,

Continued on page 163

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Estate Planning: Pay Me Now or Pay Me Later

By Gordon Clarke, CFP, CIM, O.L.S. (Retired)
Reprinted from 'The Ontario Land Surveyor'

I like to change the oil and filter in my car about every six months or so. There are two benefits to this practice: frequent oil changes are good for my vehicle and I am regularly reminded of the importance of estate planning. I am sure you are trying to figure out that second benefit, the connection between one's estate and an oil change. Do you remember that ad for an oil filter company that states, "You can pay me now or pay me later."? The oil filter company wanted you to believe that by buying their brand of filter, you would save a lot of money on future costly engine repairs. While it is debatable whether a specific brand can make any difference to your car engine, there is no doubt that spending a little time and money now on an estate plan can potentially save many thousands of dollars and a lot of headaches in the future. Let me illustrate with a straightforward example.

Mr. A and his business partner jointly own a small company. Mr. A is married and has two teenage children attending university. Life and business are good but then the unexpected happens, Mr. A dies suddenly and his family discovers that he did not have a will or any kind of plan in place to prepare his family for this eventuality. Dying without a will (intestate) meant that the process of transferring assets to Mr. A's heirs did not go quickly and smoothly. Here are just a few of the things that could go wrong.

- Without a will to name an executor, an administrator had to be appointed by the Province triggering extra costs and time delays.
- The business was sold to Mr. A's partner at less than market value with payments to be made over time.
- The family assets had to be split according to intestacy laws, which was not the way Mr. A would have liked, leaving some close relatives with no share of the estate.
- The teenage children, who were both over 18 years of age, were eventually given sizeable liquid assets, which they did not spend wisely.
- Mrs. A received a valuable estate but it was mostly non-liquid and the funds from the sale of the business were to be received over a period of years. This left her with a cash flow problem that would not have been envisioned by her husband.

With even a minimal estate plan, Mrs. A and the children should have been able to eliminate many of these problems. For example, here are a few basic estate planning steps that Mr. A could have put in place.

- An insurance funded buy/sell agreement between Mr. A and his partner could have ensured that the full value of the business would have been received by Mrs. A at the time of Mr. A's death.
- Joint ownership could have helped to save probate taxes by rolling over assets such as equity investments and the cottage to Mrs. A.
- Trusts could have been created to bequeath other assets to the children in a controlled manner until they were prepared to handle the sudden wealth.

Continued on page 165

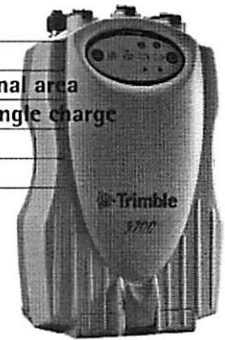
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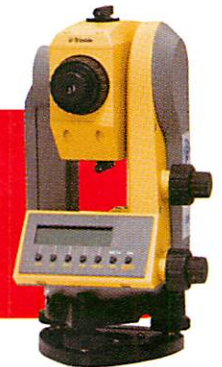
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Congratulations to the New CLS's

Reprinted From 'Comminique' July 2002

The following people have met the ACLS Board of Examiners requirements and have been offered a Canada Lands Surveyors Commission:

- Michael Kidston, BCLS, 100 Mile House, BC,
- A. James Hume, ALS, SLS, Calgary AB,
- Geoffrey Verner, NSLS, Sydney River, NS,
- Richard R. Gauthier, ALS, Slave Lake, AB,
- Adam W. Brash, Fort St. John, BC,
- David J. Elliott, Fort St. John, BC,
- Steven R. Rose, BCLS, Fort St. John, BC,
- Patrick Descarreaux, a.-g., La Sarre, QC,
- Jean-Yves Berube, a.-g., Rouyn-Noranda, QC,
- Paul Roy, a.-g., Chibougamau, QC,
- Ravi Shrivastava, P. Surv., Saskatoon, SK,
- Edwin J. Wilson, BCLS, Duncan, BC,
- Garry G. Temple, NLS, Marystown, NF, and
- Craig A. McBride, ALS, Edmonton, AB.

MORE GLEANINGS - OLD FILES - SLS WHO LIVED THE LONGEST - SID HARDING - PASSED AWAY MAY 1979. WE HAVE ALSO HEARD FROM A PAST MEMBER - TOM WATMORE HAS BEEN IN TOUCH WITH US, TOM RECEIVED SLS COMMISSION #98 IN 1949. HE LIVES IN CALGARY.

Continued from page 125

Looking forward ...

The Association is looking forward more than a few years to the 2010 SLS centennial. In keeping with that Council has set aside some seed money for the use of our centennial ad-hoc committee. Please remember that Jack Webb and Dan Babiuk are looking for stories and ideas for our centennial. I am sure they will appreciate any submissions from the membership.

Two of our sister Associations will be celebrating their 50th anniversaries. I find it quite interesting that the Maritimes have had surveying for many more years than Western Canada but that they are only now celebrating their 50th anniversaries. New Brunswick will be having their 50th AGM in the last part of January and Newfoundland will have their 50th AGM just one week before our AGM in May.

Our AGM will be held in Moose Jaw on the 29th, 30th & 31st of May. We are having a block of rooms set aside in the new rooms for the Temple Gardens Mineral Spa. We plan to have a fun and relaxing time. More details will follow.

We will be having meetings with the Crown Utilities, Community Planning and Department of Highways late in February. We will discuss issues that are of common concern to our members and these Agencies. We want these meetings to be positive and hopefully carry on with them in a regular manner in the future.

As directed by the Membership at the last AGM we are moving closer to allowing non-residents to be on council. The required changes to the Act have been brought forward to the Legislative Instruments Committee. Hopefully these changes will go before Legislature for proclamation in the spring.

Council is looking at changes to the mandatory use of embossed seals. Seals have become a bit of a problem with the advent of the new Land Titles system and the use of digital plans. We hope to have a proposal/motion ready for the upcoming AGM.

I started out this report by talking about the work that the SLSL/ISC Panel has done. Their job is not done yet and they have more than a few issues left to work on. They continue to need our support and help.

I hope everyone has a great year. Take care. ☼

Old Monument - Where Art Thou

By: John E. Freemyer, L.S.

Reprinted from 'Minnesota Surveyor' Fall, 2002

I had an occasion to use a corner marked with a stone, but instead of finding the marked stone, there was a hole in the ground where it should have been. While standing there and saying things generally not complementary about land owners, a bunch of school children passed. A youngster that recognized me as the surveyor spoke up and said that if I was looking for that stone, I could find it in Olson's cellar wall." Norris Y. Taylor, 1888

Over a hundred years later old monuments continue to elude us, but where possible they must be found and verified if we are truly meeting the test of following in the footsteps of the original surveyor. By properly preparing for a search, the chance of finding old monuments is much improved. Our modern technology can be a wonderful aid, but too much reliance on computers, total stations and GPS can actually become detrimental. In a short article written by Carlisle Madson over 30 years ago, he stated that the best tools for finding old monuments was a "pick and shovel."

Before looking for old monuments, study the facts.

Know what you are looking for. It involves knowing some history. Below are some examples.

In the original Public Land Survey, the instructions permitted deputy surveyors to set either wood posts, earth mounds or stones. The deputy's notes were to indicate what was set. Original PLS monuments were rapidly disappearing when the State Legislature enacted a law in 1875 (Chapter 33) giving the board of county commissioners the authority to "direct a competent surveyor" to "re-establish section posts or monuments" with an "iron or stone or wood post." A certified copy of the surveyor's notes was to be filed in the office of the register of deeds.

The earliest State platting law (G.L. 1858, C. 26, § 3) required a "good and sufficient stone" to be set at "the corner of a public lot" or "at the corner of some one of the in lots" and at the corner of "each out lot." The location of the monuments was to be designated on the plat. As late as 1959, platting law

(M.S. 505.02) read: "At least three iron or stone monuments shall be placed at some corners in the ground." Later that year the law was amended to read: Durable iron monuments shall be set at each angle and curve point on the outside boundary lines of the plat and at all block corners and at all intermediate points on the block lines indicating a change in direction."

Many of the monuments set by original surveyors have since been perpetuated by a variety of public and private surveyors. Researching public and private records is probably the most important part of studying the facts.

Before looking for old monuments, attempt to isolate the search areas.

After gathering facts and records relative to old monuments, probable search locations can often be computed prior to going in the field. This is an excellent use of our twenty-first century technology. With measurement data from old records, likely positions for the search area can often be tied to known corners. Field measurements with a steel tape, total station or GPS can greatly narrow the initial search area. Some degree of caution should be taken when isolating a search area, because old monuments are sometimes found where you least expect them.

When you find old monuments, what then?

An old monument can be meaningless unless they can be verified as an original monument or a perpetuation of an original set by a surveyor. In some cases they can also be meaningless if they were improperly set by a surveyor. Verification can involve researching surveyor's notes, drawings or plats, talking to nearby land owners as to their knowledge of landmarks, and comparing distances with record legal descriptions or nearby section corners.

When an original public land survey monument or its perpetuation is found, a government corner certificate should be prepared in compliance with M.S.

381.13, § 3 and filed with the County Recorder or County Surveyor.

Today's monuments will be tomorrow's old, monuments.

Will today's technology make it more difficult for the future surveyors to find our monuments? As more corner monuments are being set with electronic stakeout, descriptive field notes are being used much less frequently. Survey drawings, plats and other exhibits are needed to adequately describe monuments that were set for the benefit of those that follow us.

Is today's technology diminishing the need for most monuments? Only a few monuments are necessary to lay out large developments. No one would question that radial stakeout with total stations have rapidly improved the efficiency of survey crews. With the advent of RTK/GPS efficiency is even greater with even fewer monuments. Will continuously operated GPS base stations eventually be our only monuments?

Conclusion

Almost 150 years of Minnesota case law has given very high priority to monuments, whether monuments of public Land survey, monuments set and identified on plats or monuments called for in legal descriptions. Surveyors of the twenty-first century must adapt to new technologies while carefully embracing the importance of old monuments.

John Gummere in his 1853 "Treatise on Surveying" very adequately describes how to find old monuments.

"A little patience, and a little more trouble in finding the landmarks of the neighbouring tracts, which have a relation to the line in question, will enable (surveyors) to come to (a) correct conclusion.... It is not to be supposed that a surveyor by mere intuition, or some mysterious art, unknown to the uninitiated, can find property lines or direct his compass with unerring certainty to a contested corner. He must be governed by the best evidence that the case will admit of, and should exercise due diligence to make himself acquainted with all the facts of the case. The best evidence of boundary lines is monuments...." ❀

You

By John A. Hogan

Reprinted from "The Georgia Land Surveyor" September/October 2002

As we all know the surveying profession is one that carries many problems and headaches. One complaint often heard is that of high-pressure clients. You know the story, the phone rings and you hear "this is realtor Joe I would like to order a survey for Jane Doe to be closed by last week. I think you should be able to get this one for around \$700.00. Bankers, attorneys, realtors, developers, and many more expect us to drop all that we are doing, perform hours of work, certify legal documents, and accept the highest liability for the lowest fees possible.

Oh boy, here we are again someone dictating your schedule, your fees, all on his terms. He is expecting you to just jump in the middle of this without ever knowing the true client (land owner or purchaser), what physical limitations the property may have (woods, swamp, structures, etc.), and last but not least the legal aspects of the boundary involved (poor deed descriptions, easements, encroachments, zoning, etc.)

Of course payment for your services will be at closing.

We've all been there, we've all fallen for this trap, and for many outside of our profession this is expected of us. Bankers, attorneys, realtors, developers, and many more expect us to drop all that we are doing, perform hours of work, certify legal documents, and accept the highest liability for the lowest fees possible.

This perception carried by many is due to a lack of respect. A lack of respect from not only by those outside of our profession, but a lack of self-respect from many within our profession. We have no one to blame but ourselves. There are things we can all do to gain our self-respect and the respect of others.

SLOW DOWN. This is YOUR business. Discuss YOUR terms. Be honest about YOUR time tables.

Continued on page 155

Promoting Land Surveying as an Engineering Career

by Al Hanert, P.Eng., Advisor, Engineering Internship Program, Faculty of Engineering, University of Calgary

Is there a shortage of land surveyors in Alberta and the rest of the country, and if so, can anything be done about it?

The article "Seeding the Field" by Rob Radovanovic in the September issue of *ALS News* states "the onus is on the Association to encourage students to enter Geomatics Engineering for the purpose of becoming Alberta Land Surveyors." It states that most geomatics engineering students are attracted to satellite positioning, navigational and geospatial work, and are therefore not "turned onto" land surveying opportunities.

At the Engineering Internship Office at The University of Calgary we frequently hear similar comments. Students' opinions are sometimes based more on hearsay than on objectivity.

The goal of the Engineering Internship program is to produce "Superior Graduates through Engineering Internship". We do this by working with students to assess their interests. We meet with employers to develop appropriate jobs, and with industry associations to ensure their members are aware of our students' competencies, interests and availability.

We work with all engineering disciplines. Specifically 28 Geomatics students are registered for internship this year starting in May, 2003. This compares to 16 placements for 2002.

How does this, then, relate to the ALSA and your concern for attracting students to land surveying? We frequently see good opportunities remaining vacant, while good students go without jobs. Specifically, when we discuss employment interests with Geomatics Engineering internship candidates, the majority are fixed on "exotic" applications of geomatics such as global positioning systems, aircraft landing systems, image processing systems, etc. They either are unaware of the challenges they could find as land surveyors or have decided, in the absence of better information, that these roles are not exciting enough.

There's also the issue of where the work is. In this Geomatics students are no different than students

of many other disciplines. When we ask students about any restrictions they may have on work location, many have a clear preference for "an office in Calgary". It's only after we explain that the real work takes place in the field, that they begin to realize the benefits of being exposed to field operations, be it in the oil and gas industry, infrastructure development, or in surveying.

In the final analysis, we cannot force students into specific positions. Interns are responsible for selecting their own work roles from among the available opportunities. This then brings us to "how can interns make informed and appropriate choices?" We believe that the Alberta Land Surveyors Association and sister organizations can do a great deal to educate potential members and promote the opportunities in this field.

What are some initiatives or actions that could help convince student engineers to select land surveying as a career?

1. The opportunity to become independent.

Many students, when asked, "Where do you see yourself five to ten years after graduation?" answer "Having responsibility for major projects or running my own operation". Most surveyors are independent entrepreneurs. Students may not realize there is a potential opportunity to run their own business.

2. Rotational work assignments.

Some students, even after understanding that field work is worthwhile, hesitate to accept a position that commits them to 12 – 16 months of field work, say in northern Alberta or in northeastern BC. Small survey firms cannot independently offer a student a lot of flexibility or a pre-programmed variety of work. However, a consortium of firms could among themselves lay out a program to offer students different types of work over the 12 – 16 month work term. In other words, a rotational type of assignment.

This is what a consortium comprising Consulting Engineers of Alberta, Alberta Transportation, and

Road Builders Association of Alberta has done. Civil engineering students are scheduled for three different work terms during 16 months. They work in turn for a consulting engineering firm; Alberta Transportation; and a road building contractor. Some work is in the field, some in the office. It's a complete experience for the students, and they promote the opportunities to fellow students when they return after internship.

3. Combine "high-tech" geomatics and land survey skills opportunities.

We try to manage students' expectations by pointing out that their real role as engineers is to be problem solvers. They must acquire and be able to use the most appropriate tools for the job at hand. For geomatics related work, depending on the application, it might require high tech computer support; it might require physical cadastral surveying, or a combination of skills.

4. Promote professionalism to students.

Publicize to students that the internship experience is a credit toward their Professional Engineer's designation and ALS qualification. Provide a visible contact for students who do have an interest, someone who is available to answer questions or even meet in person if necessary.

5. Provide meaningful work

Students need to experience the full gamut of work, from the mundane but vital to exciting and challenging. They need to have the opportunity to be come involved with a variety of work, and not be relegated to only being "gofers" for more senior staff.

6. Remuneration clarification

It is our understanding that students asking for salary information are often quoted an hourly wage. It is difficult for them to translate this into a monthly equivalent that they see from other industries. At the same time, to the extent there are opportunities for extra earnings due to extended field work hours on occasion, this could be of interest to students as well.

7. *Linkage to Engineering Internship program.*

The Engineering Internship Program web page at The University of Calgary includes links to resources, and employers. We can provide a link to

the ALS website if desired.

The Engineering Internship Office is focused on assisting students locate meaningful internship employment to help them in their future career choices as part of the Faculty of Engineering's mandate to produce *Superior Graduates Through Engineering Internship*. At the same time, the program assists employers in the hiring of graduates that can help them to achieve their business objectives, by providing graduates with the technical competence, leadership abilities, business knowledge and skills, personal attributes and interpersonal skills required to achieve business strategies.

For further contacts regarding the Engineering Internship Program, you can contact:

Al Hanert, EIP Advisor, at tel 403 220 2608, fax 403 220 9057, email hanert@ucalgary.ca

Nima Dorjee, EIP Director, at tel 403 220 8821, fax 403 220 9057, email ndorjee@ucalgary.ca

Mele Rakai, Assist Professor, at tel 403 210 9594, fax 284 1980, email rakai@geomatrics.ucalgary.ca

RISK FACTOR

- (A) The Japanese eat very little fat and suffer fewer heart attacks than the British or Americans.
- (B) On the other had, the French eat a lot of fat and also suffer fewer heart attacks than the British or Americans
- (C) The Chinese drink very little red wine and suffer fewer heart attacks than the British or Americans.
- (D) The Italians drink excessive amounts of red wine and also suffer fewer heart attacks than the British or Americans.
- (E) Conclusion: Eat and drink what you like. It's speaking English that kills you.

Continued from page 128

1. Hard copy plan submissions
 - approximately 70% of the plans are still hardcopy submission
 - a good percentage of them the seal is shown shaded in or under carbon paper
2. Digital plan submissions
 - these are slowly on the increase
 - some have a digital seal or digital signature and some have both digital seal or digital signature and some have both digital
3. No seal adjacent surveyor's certification
 - the number appears to be small, but can be found on both hard copy and digital submissions

From above it is apparent that surveyors are working with the technology and trying to streamline where possible. It also raises some questions. The current bylaw refers to an embossed seal issued to all surveyors, but some surveyors have created their own digital seal. In one case a surveyor's seal layout is not the same between two of his own separate submissions and in another the surveyor's seal loosely resemble the embossed seal. This begs the question how many versions of a seal can one have and is this in contravention of the bylaw? Under *The Land Surveys Regulations*, the signature of the surveyor is required on his certification. Is a digital signature acceptable or are we crossing a bridge that has not yet been built. Lastly, certifications with no seal, or on some of the hard copy submissions the seal could be there, but has not been shaded in. This is the case with all plan submitted to the Chief Surveyors Office and SaskGeomatics when the bylaw was first put in place. Both offices were ensuring that all plans were sealed, but since none to very few of the seals were shaded in or under carbon paper, none of the now available plan images appeared to be sealed. Plan Processing was ensuring seals were shaded in or under carbon paper on transitional plans, but since all the LRDs have now been converted this no longer being done as it is not a requirement under *The Land Surveys Regulations*.

With respect to digital signature it is probably in the best interest of the office of the Controller of Surveys to determine what is acceptable. And with respect to the embossed seals provided by the association, it is in the association's best interest if

it is acceptable for a surveyor to create his own digital seal and if so could he also create his own rubber stamp seal?

Where do we do want to be a year or five years from now? We will probably be able to have a high percentage of the plans submitted digitally, but will all our support documents also be digital? The surveyors report, field notes, evidence sheets and returned examination memoranda will probably all be hard copy and will be needed to be scanned due to original signatures and line work. If these support documents need to be scanned to be submitted, then why not also the certification with the embossed seal? Another option would be to brake the submission into two pieces, the plan and all required documentation could be submitted digitally and once the acknowledgment is received the surveyor's certification, field notes, evidence sheets could be mailed or faxed.

The Land Registry staff advised that a high percentage of the submissions they receive are digital, being submitted mainly by fax. It is standard practice, regardless of the submission type, that the originals are kept by the submitter. They have addressed the embossed seal issue, that there are only two options, either the authorization has the embossed seal shaded in or if the seal is not shaded in then an additional support document is provided. The "Certificate of Lawyer" or a "Notarial Certificate" certifying the use of the embossed seal as the seal would not be visible to the Land Registry staff when they open the packet and that the original document is held by the submitter. The Certificate of Lawyer is a form created by the Land Registry and a similar form could as easily be created by Plan Processing to cover the same issue.

Is our existing bylaw workable? I think it is. If an embossed seal is what is needed for Real Property Reports and similar documents, then it should be the only seal we have and rubber stamps or digital seals should not be acceptable. Should seals be required on plans of survey that are examined and approved by an approving authority? I do not see the benefit of a seal in these situations. ☼



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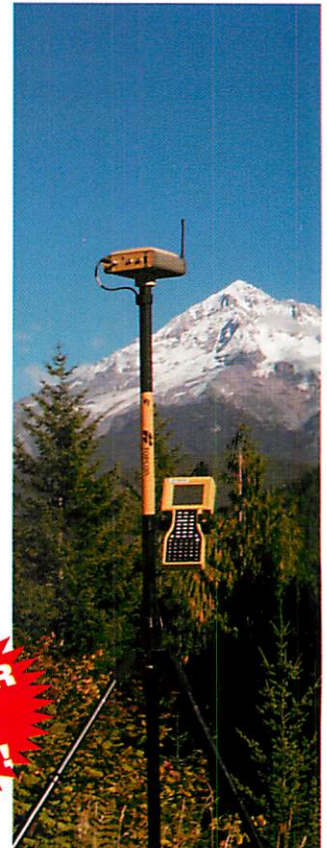
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Geomatics Sciences on Stamps and Currencies

By Stephanie Bourgon, M.SC,a.-g. and Rock Santerre, Ph.D., a.-g.,ing.

Reprinted from Geomatique (french)

In the beginning, one found on stamps and currencies the portraits of the political leaders. Since then, both in Canada and throughout the world, stamps and currencies have been issued to commemorate special events or technological innovations. This paper aims to present some examples of stamps and currencies related to geomatics sciences.

Canadian Stamps

Canada Post issued 15¢ stamps commemorating two international conferences hosted in Canada in 1972, those being the 12th Congress of the International Society for Photogrammetry and the 6th Congress of the International Cartographic Association. The International Society for Photogrammetry (ISP) founded in 1910 changed its name in 1980 to the International Society for Photogrammetry and Remote Sensing (ISPRS). ISPRS is devoted to the advancement of photogrammetry, remote sensing, geographic information systems (GIS) and their applications. The

International Cartographic Association (ICA) is to promote the discipline and profession of cartography (conception, production, dissemination and study of maps). A simplification of mountains drawn in schematic shape appears on the stamp (Figure 2).

With the successful launch in 1962 of Canada's first satellite, Allouette 1, Canada became the third country in the world to have a satellite in orbit. Moreo-



Figure 3. Canada in space



Figures 1 and 2. The 12th Congress of the International Society for Photogrammetry and the 6th Congress of the International Cartographic Association.

stamp is a visual simplification of an aerial photograph (Figure 1). Since 1958, the mission of the

ver, in the year 1970, Canada became the first country in the world to have a domestic communications satellite system using satellites in the geostationary orbit. Canada has a notable history in remote sensing too. Canada has contributed to the American LANDSAT and the French SPOT programs. In 1992, these Canadian achievements were depicted on a 42¢ stamp (Figure 3).

In 1995, Canada Post launched a 45¢ stamp related to ocean technology (Figure 4). This science studies the seas and oceans as well as the techniques of marine resource exploitation and protection. The stamp includes the vessel "Louis R. Desmarais", an electronic navigation system and a three-dimensional representation of the sea bed (hydrography). The same year, Canada Post also launched a 45¢ stamp related to information technology (Figure 5). On this stamp, the light beams on the world map represent telecommunications, the computer and the binary code illustrate com-



Figures 4 and 5. Ocean technology and

puter science and the map of the Great Lakes displayed by the computer represents the geographical information systems (GIS) and consequently, geomatics sciences.

Worldwide Stamps

The International Union of Geodesy and Geophysics (IUGG), established in 1919, is dedicated to the study of the shape, dynamics and internal structure of the Earth. In 1983, the IUGG General Assembly was held at Hamburg (West Germany). A stamp (1.20 Mark) commemorates this event (Figure 6). A satellite, a weather map, a triangulation, a seismogram and a digital elevation model are presented on the stamp.

In 1983, the 17th Congress of the International Federation of Surveyors (FIG) took place at Sofia (Bulgaria). A stamp (30 stotinki) marks this event. The image represented on the stamp symbolizes a the-



Figure 6. International Union of Geodesy and Geophysics General Assembly



Figure 7. The 17th Congress of the International Federation of Surveyors

odolite. The aim of FIG, founded in 1878 in Paris, is to ensure that the disciplines of surveying and all who practise them meet the needs of the markets and communities that they serve.

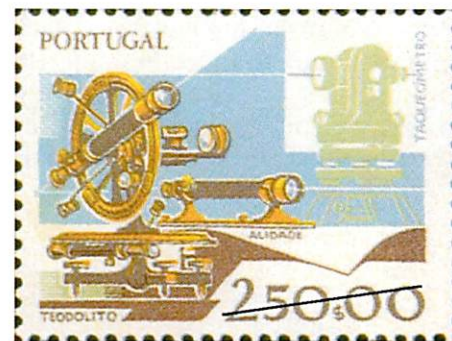


Figure 8. Old theodolite and azimuth reading device, modern theodolite

The Post of Portugal issued a stamp (250 escudos) in 1983 (Figure 8). This stamp shows the evolution of surveying instruments being used to measure horizontal and vertical angles. On the left, an old theodolite and an azimuth reading device are



Figure 9. ERS-1 (European Remote Sensing Satellite-1)

represented while on the right a modern theodolite is illustrated.

An Austrian stamp (7 schillings) represents the European Remote Sensing Satellite (ERS-1). ERS-1 (Figure 9) was launched on 17 July 1991 with the Ariane rocket. It has a sun-synchronous, near polar orbit at a mean altitude of 785 km and an inclination of 98.5 degrees. ERS-1 is an earth ob-



Figures 10 and 11. Front and back of the Germany 10 marks note

ervation satellite use for climatic, oceanic and environmental studies.

Currencies

The central bank of the Federal Republic of Germany issued a 10 marks note honouring Carl Friedrich Gauss (1777-1855). On the front, Gauss appears with the famous Gaussian curvature used in statistics and probability. The Göttingen observatory from which he was named director in 1907 is illustrated in the background. A sextant is shown on the back of the note. A sextant was the instrument used to establish one of the first geodetic networks in the world located in the area of Hamburg (Germany) and represented in the right corner. Gauss made notable contributions to astronomy and geodesy. Gauss also wrote on the theory of errors and the least squares method and invented the heliotrope.

Recently, the Bank of Canada announced in a press release a new series of bank notes reflecting Canada's culture, history and achievements. The press release mentions that the title of the new \$100 note is "Exploring and Innovating". On the back will ap-

pear historic and satellite maps of Canada. The portrait of Sir Robert Borden, prime minister of Canada from 1911 to 1920, will remain on the front. This new \$100 note will be introduced over the next two to three years.

Websites for stamps and currencies

Rock Santerre

<http://www.scg.ulaval.ca/gps-rs/under>

History/Permanent Exposition on Geomatics/ Stamps and Currencies related to Geomatics

Physics Related Stamps

<http://www.th.physik.uni-frankfurt.de/~jr/physstamps.html>

Images of Mathematicians on Postage Stamps

<http://members.tripod.com/jeff560/index.html>

A Selective History of Science on Stamps

<http://ublib.buffalo.edu/libraries/units/sel/exhibits/stamps/>

Physicists on the Money

<http://www2.physics.umd.edu/~redish/Money/>

Bank of Canada

<http://www.bankofcanada.ca/en/press/pr01-2.htm>

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Rock Santerre, Ph.D.,
a.-g., ing.

Rock Santerre is a full professor of geodesy and GPS at the Department of Geomatics Sciences at Laval University and also a researcher at the Centre for Research in Geomatics.

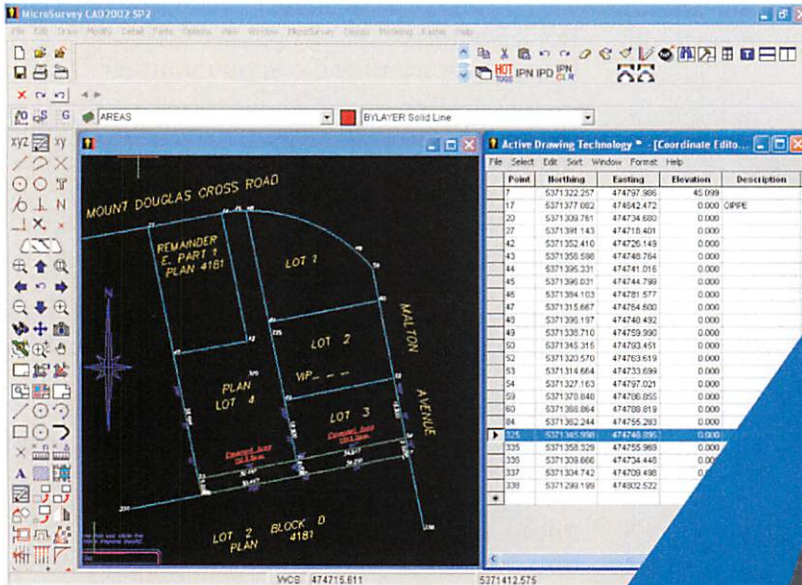
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Why Passion Pays

A new book from Gallup argues that boosting morale can raise profits 40%

By Anne Fisher

Reprinted from "The Georgia Land Surveyor" November/December 2002

Over the past decade emotional intelligence, or EQ, has been a hot business topic. Do your workers have a high EQ? Do they relate well to customers? Are they passionate about work?

No one doubts that EQ is important. The trouble is, it's such a soft topic that it's been almost impossible to quantify—until now. Using its vast polling power, Gallup has canvassed thousands of companies to better understand EQ, and its relationship to your business. Let's say, for example, that you have 100 employees. If your company is anything like the 300,000 businesses in Gallup's *CSM Government Relations Update July/August 2002* worldwide database, between 50 and 60 of your people are not doing their best work, probably because you haven't found a way to get them excited about your goals or to make them feel that their own needs and contributions are important. On top of that—again, if your company resembles those Gallup has studied—you have 15 to 20 employees who are what Gallup would call "actively disengaged." They're just showing up (or, frequently, not) and going through the motions, and they might quit at any moment. So in all, 75% to 80% of your people are achieving much less and feeling far less enthusiastic about their work than they could be. So what? Well, Gabriel Gonzalez-Molina, a Gallup senior scientist says this state of affairs is more costly than you probably realize. If 'all 100 of your employees were "fully engaged;" meaning playing at the top of their game and happy about it, your customers would be 70% more loyal, your turnover would drop by 70%, and your profits would jump 40%. *Follow This Path: How the World's greatest Organizations Drive Growth by Unleashing Human Potential* (October 2002, Warner Books, \$26.95),

which Gonzalez-Molina co-wrote with Curt Coffman, aims to show you how to get there. If you read many business books, you will instantly feel at home with the rambling consultantese of this one. Happily the ideas



are worth the effort it takes to get past the prolixity.

Gallup's newest research found that most companies operate as if employees and customers were completely rational. "Not so," says Gonzalez-Molina. "We are first and foremost emotional beings. Our highest-level goals are set by emotion, not reason." By those lights, if you want charged-up employees and customers who love you, you have to grab 'em by the heartstrings: "The challenge for organizations is, how do you create emotional incentives?" he says.

One place to start: Put these statements in front of each of your employees and ask them to agree or disagree. The more agreement you get, the more engaged-and productive-your people will be, and the more your customers will want to come back.

I know what is expected of me at work.

I have the materials and equipment I need to do my work.

I have the opportunity to do what I do best every day.

In the past week I have been praised for doing good work.

My supervisor or someone else at work seems to care about me as a person.

Someone at work encourages my development. My opinions seem to count.

My company's mission makes me feel my job is important.

I have a best friend at work.

In the past six months someone at work has talked to me about my progress.

I have had opportunities to learn and grow at work.

What's that you say? You gave this quiz to staff members and I they doubled over with derisive laughter? Friend, you have work to do. Follow *This Path* just might help you build a stronger I company, one employee at a time.

Due Upon Receipt

Getting Paid When Payment Is Due is All Part of Business. Find Out What You Need to Know About Making Sure It Happens on Time.

By Jessica Handler

Reprinted from *The Georgia Land Surveyor* November/December 2002

If Money Makes the World Go Around, then collecting payment due probably helps keep the earth on its axis. Corporate credit management and collections experts agree that training clients to pay you on time is key to maintaining positive cash flow. One collections professional joked that some managers, faced with receivables 4 or 5 years old, probably asked God in their nightly prayers to pay their invoices. No disrespect meant to the Almighty, but there are more earthbound ways to secure timely payment.

A successful collections process is like shining shoes, jokes Mike McNally, general manager of VTA, and a 30-year-old television editing and distribution company. "There's no shortcut you have to work it," says McNally, who is also the company's credit and collections manager and supervises a system in which an invoice is dated the same day a project is completed, launching the 30-day billing cycle immediately.

When he makes a collection call, he speaks to the same individual each time, keeping a record of their conversation and the action promised by the payer. McNally believes in building relationships with his clients. "The easiest people to collect from are your friends," he notes.

VTA sends clients a 10-day demand letter after 90 to 120 days of non-payment only after attempts have been made to contact the "highest [placed] person you can," at the delinquent company. Although VTA uses a collections agency, McNally calls that a last resort, in part because collections agencies routinely take as much as 25 percent of the amount they're chasing for themselves.

VTA's credit application form is "lengthy," McNally acknowledges, but he doesn't perceive it to be more rigorous than others. Perhaps because of the stringent controls at the front end, the company's bad debt expense last year was a low .2 of 1 percent, and very little of the company's business is actually turned over to a collections agency.

McNally is open to progress payments, which "show a good faith effort, and [mean that] the account is active." Clients who make regular, partial payments will ultimately pay in full, he says.

Eileen Herman, CPA and senior manager in the financial advisory and tax group of Habif, Arogeti and Wynne, wants to teach people how to pay promptly. Keeping the lines of communication open is the first lesson; she likes clients to know they can contact her before an invoice grows old and problems begin.

Invoices are due upon receipt, but, she says, "We [consider] anything over 60 days past due." After 120 days of nonpayment, she says, her company will determine whether to put a service hold on a given account. She says she never makes a collection call before doing her research. "I see when I last made a call and if [the client] has extenuating circumstances," such as a family health problem or business slowdown that would affect their ability to pay on time. "Their past history with the company is a consideration," she adds.

Herman says she spends approximately 25 percent of her time contacting clients who are late in payments. Because her company handles payroll taxes as well as monthly and quarterly tax returns for privately held companies, "We have a relationship based on trust; [we are working with] their finances, something they hold dear," Herman says. "Follow-up is probably the most important thing in collections getting people to know you and treating them with respect.

Need Help Opening the Lines of Communication About Payment?

Print payment terms clearly on invoices, no matter if they're due upon receipt or net 30 days.

Be respectful when following up, but follow up consistently.

Build relationships; call the same person every time

Keep careful records.

Be willing to accept progress payments.

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Lowering The Stakes At The South Pole

Reprinted from 'Treasure State Surveyor' October 2002

"For certain, I will never forget where I was on New Year's Day, January 1, 2000," Larry Hothem recently e-mailed Eos from Antarctica. Hothem, who heads up the U.S. Geological Survey's (USGS) geodetic team that is deployed annually to the McMurdo Station, South Pole region, that morning was piling a stake into the ice above the most recent and most accurate location of the mean South pole (the Earth's mean axis of rotation).

At midnight, a makeshift band played, and several hundred scientists, construction workers, and support staff who normally devote their time to important research efforts and keeping the station operating smoothly sipped champagne in the -26°C temperature. At 4:30 a.m. local time, the revelers already had been awake for more than 22 hours as Hothem pounded in the marker and the British Broadcasting Corporation (BBC) aired the event live.

Some people refer to the ceremony as "moving the pole." But scientists do not actually move that point, or even shift earlier markers that form a line of progression from year to year.

Because the Antarctic ice sheet budes as an immense glacier toward the Weddell Sea located 1,400 km away from the South Pole, the geographic location of the South Pole Global Positioning System (GPS) continuously operating reference station and other facilities at the South Pole changes about 10 meters per year (2-7 centimeters daily). Scientists are simply playing catch up with their latest geodetic measurements.

"At this rate the current South Pole marker will drop into the sea in about 140,000 years," Hothem and Gordon Shupe, also with USGS, note.

"There is no particular scientific significance to the annual survey to establish the position for a new marker," they add. "On the other hand, placement of the annual marker allows visitors and people working at the Pole the opportunity to stand next to where the Pole was located on January 1 of each year and to walk around the Earth's mean axis of rotation."

USGS has measured changes using GPS satellite signals since 1991. From 1975 until 1991, the agency operated a continuous Doppler satellite

measurement and positioning system. Earlier measurements were conducted using astronomical measurements.

For further information on GPS sites in Antarctica, Visit the Web site: [http://www.scarg91.org.au/geodesy/perm ob/gps/ gps.htm](http://www.scarg91.org.au/geodesy/perm%20ob/gps/gps.htm)

Reprinted from The Mississippi Surveyor, Vol. 40, No. 2, as reprinted from Volume 12, No. 1, of the Professional Land Surveyors of Wyoming Publication, Lines & Points.

Found this clipping from 1919. Interesting

of the court of King's Bench today.

POPULATIONS OF PROVINCIAL TOWNS

The following figures, just issued by the provincial bureau of public health, shows the population of the incorporated towns in the province of Saskatchewan on June 30, 1919:

Alameda, 260; Al Sask, 450; Arcola, 900; Asquith, 350; Assiniboia, 900; Balgonie, 250; Battleford, 1,111; Biggar, 1,500; Bredenbury, 300; Broadview, 1,200; Cabri, 550; Canora, 1,300; Carlyle, 360; Carnduff, 540; Caron, 250; Craik, 600; Davidson, 650; Delisle, 400; Duck Lake, 530; Estevan, 2,800; Fleming, 280; Francis, 350; Govan, 650; Gravelbourg, 1,500; Grenfell, 800; Gull Lake, 950; Hanley, 500; Herbert, 1,130; Humboldt, 1,550; Indian Head, 1,700; Kamsack, 1,650; Kerrobert, 1,900; Kindersley, 1,200; Langham, 500; Lanigan, 450; Leader, 1,900; Lemberg, 461; Lloydminster, 700; Lumsden, 600; Macklin, 450; Maple Creek, 1,400; Melfort, 1,450; Melville, 2,800; Milestone, 500; Moosomin, 1,300; Morse, 390; Mortlach, 578; Nokomis, 600; Ogema, 500; Outlook, 900; Oxbow, 715; Qu'Appelle, 762; Radisson, 600; Radville, 800; Rosetown, 850; Rosthern, 1,300; Rouleau, 750; Saltcoats, 530; Scott, 250; Shaunavon, 1,500; Sintaluta, 375; Strasbourg, 700; Sutherland, 1,000; Vonda, 475; Wadena, 900; Wapella, 550; Watson, 320; Watrous, 1,200; Whitewood, 500; Wilkie, 850; Wilsely, 1,050; Wynyard, 800; Yellow Grass, 600; Yorkton, 5,000; Zealandia, 460. Total, 66,477.

Arbitrating a Boundary

By Knud E. Hermansen, PLS, PE, PhD, Esq

Reprinted from 'The Georgia Land Surveyor' November/December 2002

While written as a single arbitration event, the events described are actually a compendium of experiences from several arbitrations engaged in by the author.

The sun was just barely above the eastern horizon as I drove up to the two surveyors parked along the road. They were leaning against their vehicles and talking to each other. They were waiting for me. Today I am an arbitrator or arbiter. I am, a judge appointed not by election or governor but by the parties themselves. My powers are derived from the agreement between the parties supplemented by statute and common sense. I embarked upon this arbitration approximately three weeks ago when I received a call from one of the attorneys. The attorneys were inexperienced with arbitration but willing to let their clients give arbitration a try. I sent the attorneys a sample arbitration agreement with an explanation on what to consider. The most important task for an attorney willing to involve their client in arbitration is to craft a solid arbitration agreement. Writing an arbitration agreement is a story by itself.

I greeted the surveyors warmly. I counted both of them as old acquaintances and friends. Both surveyors had a reputation for quality work. We were meeting at this early hour to perform the view required by the arbitration agreement. In this case, the landowners had been locked in heated litigation with all the power of a law firm to fight for them. I felt I was safe at this twilight hour. Given the poor light available at dawn, the chance of a landowner mistakenly shooting their own surveyor was too great for them to take a chance shooting at a stranger walking with their surveyor.

Prior to this day, the attorneys had decided that the early morning view should be left to the surveyors and arbiter alone. I must admit that I had eagerly anticipated watching attorneys dressed in their dresses or suits scrambling through the mud and pucker brush to look at pins, pipe, fences, walls, trees, etc. I was disappointed - there would be no wrecks at the races today. As I applied a liberal dose of bug repellent to hold off the mosquitoes and black flies that were expected to stir soon, I couldn't imagine why the attorneys would willingly forego the experience of watching the sun rise over the fields, especially if they could get paid to do so.

My combination as both a lawyer and surveyor has placed me in much demand for performing this type of service. (Though, in truth, any competent surveyor could easily fulfill the role as arbi-

Continued on page 156

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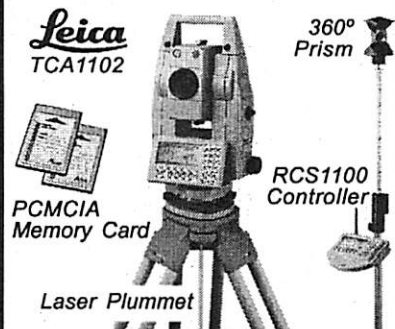
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Continued from page 141

SLOW DOWN Take time to perform some research of YOUR own. Go to the property YOURSELF.

SLOW DOWN Have the prospective client come meet with YOU at YOUR office.

SLOW DOWN Explain what YOU must do to perform a legal and reputable survey.

SLOW DOWN Set YOUR fees; not by your competitor, not what the client thinks they should be, not by what the fees were twenty years ago, not just enough to draft a plat, set YOUR fees at what YOU know YOU can honestly perform the services required at and still make a profit.

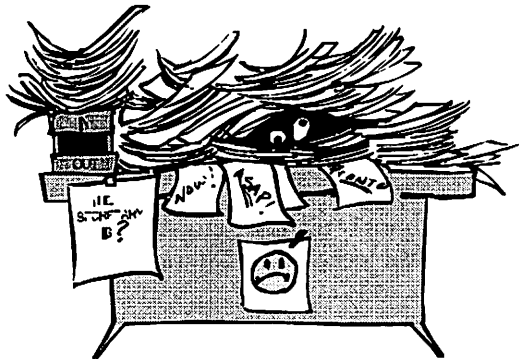
SLOW DOWN It is not your fault that closing is right around the corner this is YOUR profession this is YOUR liability.

SLOW DOWN Get it in writing. A contract should explain exactly what YOU are expected to do, what YOUR fees are, and who is responsible for paying YOU.

SLOW DOWN Stick to your guns, we all know the "other guy" is still charging fees set twenty years ago doing half the work needed to perform good work but that is their problem. Not YOURS.

SLOW DOWN If YOUR terms and YOUR schedule are not feasible to the prospective client do not be offended. Refer them to a colleague.

SLOW DOWN Always remember who YOU are and what YOU deserve. The next time YOU find yourself working sixty hours a week, the next time YOU are scheduled beyond your capabilities, the next time YOU cannot find the extra money needed remember who is to blame. ❀



If you are ever involved in an auto accident, the most important thing to do is remain calm. Given the circumstances, this can be very difficult. Taking the following steps after an accident will help put you at ease as well as minimize damage.

Get immediate help if anyone is hurt

1. Move your vehicle out of traffic if possible. Pull off the road and put on your emergency flashers to alert oncoming cars. Turn off the ignition to guard against fire.
2. Get the other driver's name, address, phone number, make of the vehicle, and license number.
3. Get the name of the other driver's insurance company and their policy number.
4. If possible, get witnesses' names, phone numbers and addresses.
5. Examine the damage done to your car as well as other vehicles involved.
6. Do not admit fault to anyone. No matter how upset or embarrassed you may be, it is important to realize that any statement of fault or promise of financial settlement for damage can be used against you later.
7. Do not discuss your car accident with anyone except your insurance agent and the police.
8. Notify local and /or state authorities as prescribed by law. We hope you never experience the trauma of an auto accident, but accidents are unpredictable and it is essential to be prepared. By becoming familiar with this list of guidelines, you will be better able to act quickly and efficiently.

Edited from the Personal Touch. R&R Insurance Services. As seen in the Wisconsin Professional Surveyor. September 1999 ❀

Things which matter most
should never
be at the mercy
of things which matter least.

Continued from page 154 'Arbitration A Boundary'

ter in boundary disputes and often do.) This case, like so many I had been involved with, had been waiting for trial for over four years. Continuances and a long court docket had caused an untold number of delays. Lengthy delays are common in civil litigation. In this case, the parties, out of patience and money, were finally willing to try some alternative to litigation. The path from death threats, to litigation, to settlement or arbitration is often simply a question of how long the clients can withstand being beaten on their heads with their own wallets. (I have never been able to determine if it is the abuse of the landowner by the process itself or the fast and steady weight loss of the wallet that is most compelling.)

On this day I believe the three of us were, for the most part, content to be doing this part of the arbitration by ourselves without landowners or attorneys present. We can speak in "surveyeze" without the blank looks from laypersons or questions from counsel.



We can freely use technical language that intermingles terms like "traverse," "rods," "scribings," "N30°W," etc. without causing confusion. A corner stone that resides some five feet from the spot where meticulous protraction of the record measurement would otherwise place the corner is easily put aside with the mention of the original surveyor's name. Experience has taught us what measurement precision can be expected from the ancient surveyor who placed the stone and whose reputation is familiar to all surveyors.

I walked around the property, sometimes joking, but more often in serious contemplation as each surveyor pointed out and described the evidence they found and what weight it should be given. Finally, with the time of the hearing fast approaching, the view and casual conversations were ended and we drove our vehicles to the lawyer's office where the hearing would be held.

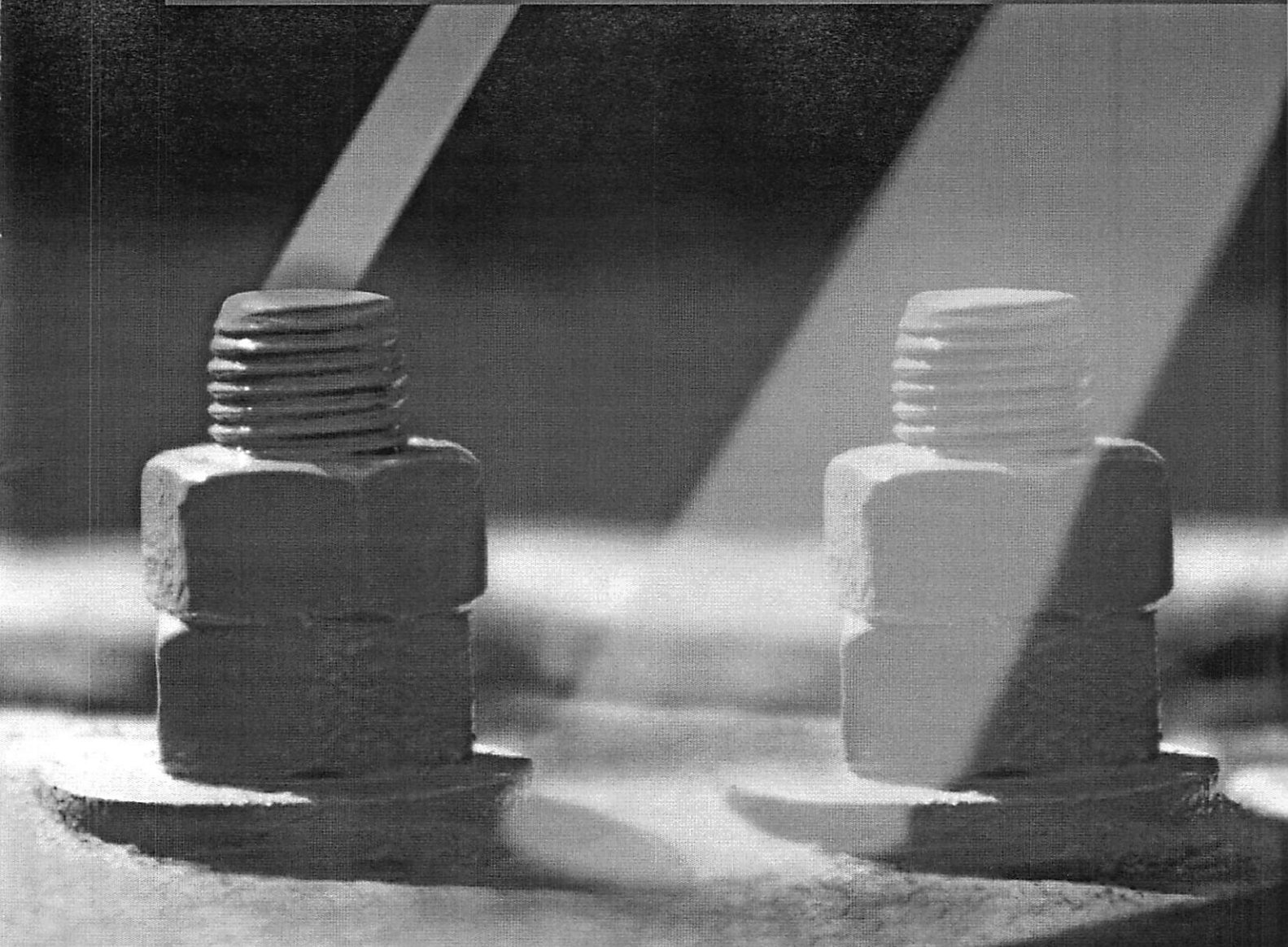
Waiting for us outside the attorney's office was one the lawyers with their client, along with a couple of witnesses. I could tell how they greeted the one surveyor and glared at the other surveyor which one of the two litigants I was seeing for the first time. Inside was the other landowner with their lawyer and witnesses. Needless to say, there wasn't a lot of hugging and kissing between the two groups.

When there is a big crowd like the one present at this arbitration hearing, I start by getting the surveyors and lawyers off by ourselves and going through the rules that aren't in the arbitration agreement. I tell them that the first witnesses I like to hear from are the surveyors. There are several reasons for this. First, the surveyors introduce the plats and other documents that the other witnesses will often use. Second, they usually provide the most compelling evidence in the most logical format. Third, they are getting paid by the hour. I can save the landowners money by getting the surveyors out of the hearing and back to other business as soon as possible. Most lawyers and surveyors aren't familiar with arbitration so I take this opportunity to point out that the rules of civil procedure and evidence don't apply. The lawyers can make all the objections they want but I'll usually let the story go on especially, as in this case, it is rumored one litigant-landowner attempted to murder the other. I know that such testimony is totally irrelevant in locating the boundary but this testimony is what the other witnesses appreciate the most. I also tell the attorneys that they are free to consult with their client's surveyor during the questioning of the other surveyor. The attorney can even let one surveyor question the other. If one surveyor questions the other, I don't get a numb question like: "Could you please explain to the arbiter why you feel the orange post marked 'W.B. 1951,' is a corner monument set by William Bigelow in 1951?"

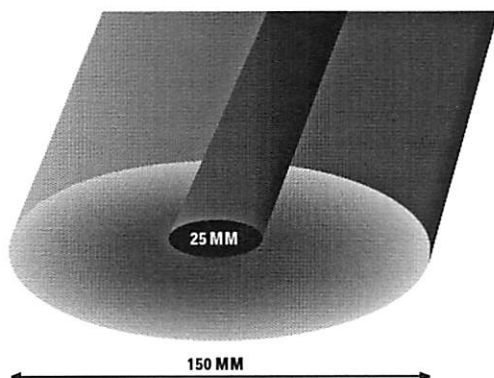
After the meeting with the attorneys and surveyors, we all file back to the reception area to pick up the litigant-landowners and witnesses before heading to the conference room where the hearing will take place. The look of relief on the receptionist as the people file out of the reception area tells me the two litigant-landowners weren't attempting to kiss and make up while we were gone. There is a heavy run on the coffee pot at this time.

Continued on page 158

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We enter the conference room. The conference room is big. Clearly this was meant to stand as a status symbol for the law firm. People living in a mobile home don't have this much room. Naturally, each side of the litigation occupies their own side of the conference room. The conference room contains more area than the litigant landowners are fighting over. After listening to University faculty describe their "love and peace" vision of life for 15 years, I'm half tempted to ask for a big group hug to settle the whole affair. According to faculty, people can be persuaded to put aside their differences and to love another. I worked for a living before teaching so I know better than to believe it. Four years in the Marines has taught me that ill-will toward another can only be settled by combat. The only difference between military training and legal training is the former emphasizes that victory is measured by the amount of blood from the opponent while the later determines the victor by the amount of money squeezed from the opponent. The strategies taught by the Marines and law school were pretty much the same. (Ambush the other side. Gain fire superiority, cut off supplies, etc.) Legal and military training did not include group hugs or sessions on how to understand the other person's feelings while denying your own.

I start the arbitration hearing by introducing myself. I can tell that some of the people present expected someone in a robe or at least a suit and tie. Of course, I'm wearing a polo shirt with a tint of mud on the front resulting from climbing under a barbed wire fence. I'm still trying to stop the bleeding on my arm where a blackberry bush ripped a gash in my skin less than an hour previously. (I usually stop bleeding quickly but the insect repellent was causing this cut to burn and bleed.) My position on wearing a suit is simple. You can have a view or a coat and tie but not both within the same hour.

I've conducted hearings where the parties agreed only the surveyors and attorneys would be present at the hearing. The only difference between that small hearing and meeting with the same people in a bar is that beer is lacking in the former while plentiful in the later. Conversation is pretty informal where the landowners are not present. There is quite a crowd at this hearing, including the landowners. As a general rule, when the landowners are present, I mirror the decorum of the courtroom. I can't guarantee they'll be happy with the outcome but I can go a long way toward making them feel they've been fairly

heard and had their day in court.

The first witness is one of the surveyors I've spent the last two hours talking to at the view. I've got to be careful to address him as "Mr." and not his first name. I try to look solemn as I put him under oath even though we both know he can lie with a straight face. Not more than an hour ago I suspect he doubled the size of the trout he caught on his last fishing trip when recounting the details of the trip to me. He begins his testimony. It's not long before both lawyers are thoroughly lost. They have to start asking questions in the guise of helping me understand what they don't. In truth, I can't hold the lawyers at fault.



You can hardly blame the attorney for asking a question when the surveyor identifies a corner as the one where I slipped on the dew laden grass and fell on my ass. Such testimony tends to limit the number of people comprehending the location of the corner to exactly three people in the room. Of course, there are some questions from legal counsel that give surveyors in the room the opportunity to look bewildered. "Could you explain to the arbiter why you didn't question the possibility of the monument being moved? Let me remind you that you previously stated that you measured 3,234.45 feet between the monuments you found while the deed clearly calls for 3,233.82 feet." Questions like that cause the surveyor to stare at the questioning attorney with a look of bewilderment. I let several of these questions and the resulting answers go before I feel compelled to explain to the attorneys that certain facts are no more cause for concern than the number of clouds that will be in the sky next week. Fortunately for me, most attorneys that are involved in arbitrations are good real estate attorneys and don't seek answers from the obvious.

We work through the testimony in a methodical manner similar to trial - direct, cross, re-direct, re-cross, and so on. At this point, the only difference between an arbitration hearing and a court hearing is that I ask questions. I enjoy retracing boundaries so I have lots of questions. Often the lawyers become lost because my questions and the answers from the surveyors are spoken in technical terms. Whispered conversations between the lawyer and surveyor on the

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other side of the room are common as the other surveyor explains to his client's attorney what I asked and what the other surveyor said in response. I suspect the attorneys are clearly surprised at this point by my interest in the testimony. No doubt in court hearings, the judge is starting to nod off at this time. This is one reason why parties specify a surveyor as an arbitrator in boundary disputes.

Finally both surveyors are done testifying. Rather than leave the room, I'm surprised to see that they remain. No doubt they are waiting for a fight to erupt when the litigant-landowners testify. Rather than one side presenting their entire case then the other side presenting their case like a trial, my arbitration hearing lets each side offer a witness in turn. Attorneys seem pleased with the flexibility as they make deals to allow elderly witnesses or those with pending appointments or jobs testify and go on about their normal business. Hearsay and extraneous evidence run on without objection. My hand movements signal attorneys that I understand the marginal benefit of the testimony but to let it continue. Justice not only requires that the hearing be fair but the landowners sense they have been fairly heard. I listen to one witness explain why the boundary should be in a certain location because her grandmother told her the boundary location when she was seven years old. I figure that must be almost forty years ago. I listen to this testimony attentively and with some amazement. In truth, I tend to forget what my wife asked me to pick up at the store an hour earlier. This person's memory must be remarkable, if true. I'm mindful that a conversation about a boundary to a seven year old some forty years ago is to be taken with some trepidation on my part.

Testimony brings in every rancorous act - dogs shot, trees cut, cuss words shouted, and so on. This is better than day-time television. Fortunately, the fight expected when the litigant-landowners testify does not occur. Apparently there is some deal between the attorneys to keep a tight reign on their client's testimony. Clearly the failure of a fight to break out disappoints some witnesses and the surveyors who stayed. Looking around the attorney's conference room at all the antiques and costly paintings, it is easy to see why at least one attorney is eager to prevent fights.

We have been at the hearing for six hours. All the testimony has been wrapped up. I now provide some closing comments. I ask the surveyors for their co-

ordinate files so I can reconcile the different basis of bearings between the respective plats. Each surveyor has typically excluded measurement information about the other surveyor's location. There is some reluctance to hand over large coordinate files but the two surveyors quickly agree on providing coordinates for three common points so I can reconcile the different basis of their bearings. The attorneys can't follow the conversations that are occurring at this point. They got lost at the mention of coordinates. The surveyors ignore the attorney's bewilderment and promise to send me the information. That done, we review the arbitration agreement to make sure we are all clear on the leeway I am allowed in my decision. In some cases I must choose between one of two monuments. In this case I can place the boundary wherever I feel a location is appropriate. The arbitration agreement in this case specifies that the parties will execute and exchange quit-claim deeds to seal the decision. I offer to prepare the descriptions for the deeds. I have seen too many descriptions and decisions prepared by attorneys and judges that are problematic. Often the description the judge prepares or adopts is worst than the description the parties were fighting over. The attorneys accept my offer with relief. I also put them on notice that my decision will require one or both parties retain surveyors to adequately mark the boundary I de-

Continued on page 164

An Irish Friendship Wish

May there always be work for
your hands to do;
May your purse always hold a coin or two;
May the sun always shine on
your windowpane;
May a rainbow be certain to follow each rain;
May the hand of a friend always be near you;
May God fill your heart with gladness
to cheer you.
Life itself can't give you joy, unless you
really will it;
Life just gives you time and space,
it's up to you to fill it.
Unknown

Subsurface Utility Engineering

Taking the Mystery out of Unknown Utilities

By Nicholas M. Zembillas, Senior Vice President, TBE Group, Inc.

Reprinted from 'The Georgia Land Surveyor' September/October 2002

Out of sight, out of mind is a fair characterization of buried utility lines. Records are often less than accurate, abandoned lines forgotten, field adjustments undocumented.

Engineers and contractors do their best, but they don't have x-ray vision. We think subsurface utility engineering (SUE) is the next best thing.

SUE is, simply put, an engineering process that accurately locates and characterizes buried utilities. And it does so, not just in two dimensions. Using a variety of geophysical prospecting technologies and non-destructive vacuum excavation. SUE also defines the depth of buried utility lines accurately placing a utility in all three dimensions.

It is, its proponents claim, a highly efficient and effective process.

Introduced in the U.S. in the mid-80s, SUE has been widely adopted by state DOT's, engineers, and contractors and widely promoted by the U.S. Federal Highway Administration.

Most construction projects starting as far back as the design phase rely on existing utility records. At most, there may be a cursory survey to identify visible utility fixtures such as manhole covers or valve boxes.

According to the Federal Highway Administration, engineers relying on this quality of information will find up to 30 percent of the utility lines are either missing or mis-marked by two feet or more.

Indeed, it is the quality of information that is at the heart of SUE. Since construction plans typically contain disclaimers about the quality of utility information, the use of defined quality levels in the SUE process allows engineers to certify that a certain level of accuracy and comprehensiveness has been provided.

The most basic level, Quality Level D, uses existing records at the earliest stage of the planning process to provide a general overview of utility congestion. Quality Level C adds a ground survey of visible utility facilities (manhole covers, for example). In the U.S., every state has a one-call statute in place and generally requires contractors to call all the utility owners before construction begins. One-call certainly helps but you are still dealing with low

quality information. When the utility representatives put a paint line on the pavement or the grass, they are allowed a fairly wide tolerance so the precise accuracy is in question. And those lines only define which way the line runs - not how deep it is. *Remember, too that One-Call response is designed to protect the utilities at the time of construction.*

Quality level B provides additional two-dimensional mapping using Sue to address problems of inadequate or missing records. The most detailed and accurate information Quality Level A, uses a complete SUE analysis to provide precise three-dimensional mapping of utility structures. A complete Sue Investigation involves four key activities. Researching the records establishes the basis for further SUE work. Geophysical prospecting techniques designate the horizontal position of underground utilities. Non-destructive vacuum excavation at critical points along the line accurately locates the utility both horizontally and vertically. Data management of survey provides computer aided design for project planning.

Is it worth it? . .

The benefits of SUE are easy to list: fewer utility relocations, reduced redesign costs, less damage to utilities, fewer contractor delay claims, less disruption of utility services, quicker project completion, less traffic disruption, and, of course significantly reduced safety risks.

All worthwhile, But quantifying those benefits against the cost of SUE investigation has proved to be a bit more complicated.

*For a more definitive analysis, the U.S. Federal Highway Administration commissioned Purdue University to conduct a study on the use of SUE in highway projects. The university reviewed 71 projects with a combined value of in excess of U.S. \$1 billion. Its conclusions: The cost of obtaining Quality A and B data was less than 0.5 percent of the total construction costs. Construction cost savings as a result of SUE were 1.9 percent - a return of \$4.62 for each dollar spent. In only 3 of the 71 projects were the USE costs higher than the savings. Qualitative savings (traffic disruptions and user delays, for example) were not included by would have added significantly to the return on investment. **

"Three Toed" Jessie Flanderson

To: The State Board of Professional Engineers and Surveyors

To Whom It May Be Concerned with:

Reprinted from 'The Georgia Land Surveyor' September/October, 2002.

Contributed by John Hogan

I'm righting this letter in direct response to ya'll turnin me down fer that test ya'll give up in Atlanta. (Go Braves!) I jest ain't understanding how you can turn down my applycation after all these years I've spent wollerin around in them bushes and fightin traffik on the paved roads. You must not have read my sperience forms cecrectly. I'll list it right tere fer ya again.

Well, bout 1984 I went to work with One Eye Jim Slanders down around the Ocmulgee river in Telfair County. You know that warning they give ya bout not lookin at the sun through the instrymnt without a solar lens well that's how ole Jim got his nickname. Anyways, ole Jim taught me a whole lot about sharpening machettes, how to tresspass without gettin caught, fillin in them little books so's the numbers turn out rihgt, and avoidin ther clients so's you can keep on workin good. You know all the basics.

Well, after ole One Eye took another bad sun shot he had to let me go. Said he couldn't find any little yeller books in brail off hand. That's when I went to work with the DOT in 87. Now these here boys wuz perfessionals sure nuff. They had big ole fancy burbans to drive, new fangled equipment with chords that went BEEP BEEP, telerphones that don't plug into anything, and jest to make sure the shots was accurete they used three men to hold the pole steady and three men to run that total stashion. They taught me how to do things like read maps and plot out all the jiffy stores in a hunderd mile radius, how to be busy even when theys nothin to do, and how important several naps throughout the day are to increse productivety. Them boys paid good and had surance coming out the wazoo. You could go to the docter anytime you wanted and ever other week it seemed we'd be off to respect the holidays. That's where I gots my learnin on how to deal with govment types.

Well, after Clinton took office in 92 that gig was up. I headed to Atlanta. (Go Braves) I took me a job with a guy whose working out of his apartment. His name was Miguel Sanchez Rafeal Cortez, I

called him Darrell for short. Now shortly after I took up with Darrell (Miguell is his real name) the whole clanged country went into a boom like it was a gold rush. We went to work fer banks, and lawerys, mortgage companese, and a whole slew of realators. Man ole Darrell had this thing figured out. He was so smart that we could survey twenty houses and two apartment buildings in a week just the two of us. We didn't need no instrument just a cloth tape, a rightin tablet, and a set of plans from the county offices. That taught me the money makin side of the buisness.

Well, right in the thick of things ole Darrell got in trouble somethin bout a plaque act and teknical standerds. He had to let me go. So's I head way down south round about Echols County in 99. I finded me a job with Richard Studebaker. Now this man comes from real money says his daddy invented a car back in the day. Now down in them swamps we did some kinda work. Cuttin bushes, fightin bees, wadin water, pullin up big ole monumants that werant where theys sposed to be, pullin chains, diggin holes, and stickin poles. Ya Boy Come On. It wuz durin this time that I gots my nickname. (Three Toed) We did so much choppin and had them macheetes so danged sharp that one day I took a big swat at a rattlesnake and pure de missed the thang. Them tenny shoes I had on was no match fer that blade, hence "three toes." Ole Studebaker was en educated man and he set me on the right path I took me some mail order classes from the prestigious Carribean School of Mathymatics and Sivil Siences. They gave me a four year degree in Civil Engineering. I was so good they jest up and gave me the thing in three months for only \$999. Wow what a bargain! Now that I got me an edercation and all this sperience I want to take ya'lls test here's what I do day in and day out.

I can measure a house by steppin, I can clap a 90 angle with one eye closed, I can carry two stake bags and a cooler full of beer all the while choppin bushes, I can look right thru that instrument and see if thangs is still strait, I can toss a plumb bob

Continued on page 163

Continued from page 127

Beef and Bun Reception - U. of C. Career Day

Council confirmed that the SLSA would again co-sponsor the Beef-on-a-Bun reception at the U. of C. Career Day in 2003. Members resident in and near Calgary would be invited to represent the association at the reception and at Career Day.

Information to Members on CD

Council learned that the administrative staff have been scanning some of the old reference books and distributing them on CD's to Land Surveyors in Training. The technology now available makes such practice very fast and inexpensive.

Convention Committee

The President reported that the program for accompanying persons was probably going to be quite informal to allow many of the visiting spouses and guests a chance to take advantage of the features associated with the Moose Jaw spa. He also indicated that he was 'leaning toward' having a dance rather than entertainment following the President's Banquet.

Education Committee

The president noted that D. A. Bouck would be retiring early in 2003 so a new member would need to be appointed to the chairmanship of that committee. There was also a consensus that greater effort should be made to attract some of the new members onto the standing committees.

Budget 2003

Council approved a balanced budget for 2003 which would not involve any changes to the annual fees.

Centennial Projects Committee

The Centennial Projects Committee was still in the early stages of planning for projects associated with the 2005 provincial Centennial and the 2010 Association Centennial. However, in order for them to plan anything meaningful and long term (e.g. a book on the history of the association, updating of the Surveyors Monument in Wascana Park etc) they would need to have a commitment of sufficient funds to develop their proposals. Council approved

the transfer of forty thousand dollars of the current surplus carry-over to a Centennial Projects Fund.

Disposition of Surplus Assets

Council approved the disposition of certain surplus equipment from the administration office. As in the past, members would be given the opportunity to bid on any of the items.

Public Relations Committee

S. I. Hayward reported that C. W. Pennell had agreed to chair the P. R. Committee starting in the new year. The Executive Director reported that he had registered for the Western Development Museum's "Virtual Museum" but, as yet, had not received any feedback from the WDM.

Next Meeting

The next meeting was scheduled to occur in conjunction with the spring education seminar in Regina.

The meeting adjourned at 9:35 p.m.

SPARE CHANGE

A bum asked a man on the street for \$5.

"Will you buy booze?" the man asks, to which the bum replies, "No."

"Will you gamble it away?" Once again the bum replies "No."

"Will you make gets at the golf course?" Once again the bum replies "No.", I don't play golf."

Then the man asks, "Will you come home with me so my wife can see what happens to a man who doesn't drink, gamble or play golf?"

Continued from page 134

equipment that has been around for years, such as hammers, axes, power saws, tripods and cutting accessories, have an established rate of depreciation. Some equipment depreciates very slowly and, with proper maintenance, the pipe locators and pin finders we use today can last for a long period of time. Any equipment that can be serviced has a slower depreciation rate. I am sure some of our tribrachs and pucks are twenty-five to thirty years old and are perhaps more durable than the ones we purchase today. Just remember that the electronic field equipment used in the field today does not depreciate at the same rate as our software in the office. The old theodolites that are perched on the shelf in the back shed were used for decades. The only thing that depreciates them is the digital display theodolite with data collector. As technology in the field of surveying continues to improve, it will become more difficult for insurance companies to evaluate the rate of depreciation of the new equipment.

What can survey companies do to protect themselves from the devastation of theft and the rising cost of insurance?

Stolen equipment notices that are circulated among survey companies can keep survey companies updated regarding missing material. Other common sense ways to protect yourself from theft include: alarms in vehicles, using the club, parking your vehicle backwards against buildings, removing electronic equipment if leaving the vehicle overnight and carefully updating inventory with serial numbers recorded.

Remember, attention to detail and commitment to caution could save time and money for all concerned. ❄

Continued from page 161

over a fence and it'll land within three inches of anything I aims at, I got a trained dawg that'll point out corners, I can move wrong monuments to where they need to be, I can drive a pin through a concrete driveway, I can saw off buildins that's over the line, I can do work fer half the price of them fancy fellers (saves the client money), and if you'll let me take your test I can cut you in on the big bucks like me and ole Darrell (short for Miguel) used to make.

Thanky much,

"Three Toed" Jessie Flanderson ❄

Continued from page 136

civil, and even moral liability. Although criminal can take you away from your family, it is the moral liability that hits hard personally. If an employee is seriously injured or killed you may have thoughts of "did I do everything to help him work safely" or "why haven't we had our safety meetings recently". That moral liability is one that can haunt you for a long time. What about the OSHA or civil liability? OSHA tends to get a bit up tight when a worker is killed. There will be an investigation, and barring the "tire from the sky" there is a good probability your business will be cited. The citations for fatalities are rapidly increasing as OSHA makes a strong attempt to get their point across. But even OSHA isn't your biggest monetary problem. That civil liability issue is what will really hit eventually. In today's litigious society you can be fairly certain that a lawsuit will be filed. I know of one recent case where the total award for an employee fatality here in Indiana was in excess of \$5 million against a business.

We owe it to our employees to provide the safest possible working environment. They deserve to come home after a days work with all of the parts of their body just as intact as they were that morning. A hard days work is fine. An unsafe days work is not. I was recently informed of another death in the surveying field. A surveyor was hit by a piece of earth moving equipment on a construction site and was killed. Just a few months ago two surveyors lost their lives while entering a manhole in Ohio. The average cost of even a minor injury has been found in nationwide studies to be in excess of \$2,600. Don't forget the time it takes to go for treatment, the employee to take someone to the med center, time for paperwork, time to follow up on paperwork, water cooler discussions about the injury, etc. Make that a fatality and the costs can go astronomical. When looking at the cost of a fatality the expenses for your safety program, a safety meeting, a few signs, safety glasses, gloves, and good solid training can be a relatively minor in-

Little Johnny

Little Johnny wasn't very good at spelling.

During an oral spelling exam,
the teacher wrote the word "new" on
the blackboard.

"Now," she asked Johnny, "what word
would we have
if we placed a "K" in the front?"

After a moment's reflection, Johnny said,
"Canoe?"

HOW CAN YOU LIVE WITHOUT KNOWING THESE THINGS?

- Coca-Cola was originally green.
- Men can read smaller print than women can; women can hear better.
- The cost of raising a medium-size dog to the age of eleven: \$6,400.

$$\begin{array}{r} 111,111,111 \\ \times 111,111,111 \\ \hline 12,345,678,987,654,321 \end{array}$$

- "I am." is the shortest complete sentence in the English language.
- The only two days of the year in which there are no professional sports games (MLB, NBA, NHL, or NFL) are the day before and the day after the Major League all-stars Game.

- Q. If you were to spell out numbers, how far would you have to go until you would find the letter "A"? A. One thousand.



- Q. What do bulletproof vests, fire escapes, windshield wipers, and laser printers all have in common? A. All invented by women.

- Q. What trivia fact about Mel Blanc (voice of Bugs Bunny) is the most ironic? A. He was allergic to carrots.

- In English pubs, ale is ordered by pints and quarts. So in old England when customers got unruly, the bartender would yell at them mind their own pints and quarts and settle down. It's where we get the phrase mind your P's and Q's.

- Many years ago in England, pub frequenters had a whistle baked into the rim or handle of their ceramic cups. When they needed a refill, they used a whistle to get some service. Wet your whistle is the phrase inspired by this practice.

- AND FINALLY - In Scotland, a new game was invented. It was entitled Gentlemen, Only Ladies Forbidden and thus the word GOLF entered into the English language.

Continued from page 159 "Arbitrating A Boundary"

scribe. They have no objection with that part of the decision even though it is unusual after a court hearing. Finally, I promise to publish my decision within two weeks after receiving the coordinates from the surveyors. Their clients will be pleased with the quick decision. They have waited over two years to get into court. Once they agreed to arbitration, a hearing date was set within three weeks and the decision followed in two weeks. Everything will be over in slightly more than a month. The judicial sleigh ride on their wallets is coming to an end.

A week later the coordinates arrive by electronic mail. My decision is reached after carefully considering the evidence and rules of construction. I have never had an easy time reaching a decision because I agonize over each piece of credible evidence. My decision is documented and sent to the attorneys. One will be pleased the other disappointed. I don't believe in splitting the difference unless the facts clearly show that to be proper. The landowners came for justice not reconciliation. I prepare an affidavit with a description of the boundary. The affidavit with supporting documentation is sent to the registry with the proper recording fees. I do this myself to make sure a record of the decision will exist for future landowners. The boundary location is fixed. No doubt the feuding will continue over some other matter.

✱

Did you know?

Scientists predict that Magnetic North, which has been in Canada for at least four centuries, is heading for Russia. The Geological Survey of Canada (GSC) has located the current position of Magnetic North to be: 81 degrees, 3 minutes North and 110 degrees, 8 minutes West or about 200 km off the northern tip of Ellef Ringes Island in the Arctic Ocean. Larry Newitt, a senior geophysicist at the GSC, has indicated through his analysis of survey data that Magnetic North is moving in a northwesterly direction at an average speed of 40 km per year. In the past it had been moving at 10 km per year. At its current direction and speed, Magnetic North will move out of Canadian waters by 2005 and reach the coast of Siberia in about 50 years.

Reference: The National Post, March 16, 2002

Continued from page 138

Mr. A's family situation is not uncommon and points out the importance of an estate plan. Every situation needs to be looked at individually and there are many other considerations beyond this simple case. Although it is a cornerstone of proper planning, an estate plan is not simply about making a will. There may also be issues surrounding probate taxes, deemed disposition, capital gains, guardians for children, creditor protection, providing for children from a previous marriage, charitable giving, disability protection, powers of attorney, trusts, etc. Simply put, an estate plan allows for the orderly distribution of your assets in an efficient and effective manner while providing for the needs of your family.

If your eyes glazed over when you read that list of issues, you might be a candidate to seek some assistance in this area. The problem with estate planning is that the exact cost of inaction will never be analyzed or fully known. If your estate pays too much in the way of taxes or if assets get tied up unnecessarily or if your business is sold at less than true value, no one is likely to go back and analyze what should have been done and put a price tag on it. Indeed, it would be impossible to assign a cost to the grief and aggravation that can result from a poor or non-existent estate plan.

Estate planning is not a topic that can be covered comprehensively in a short article so let me touch briefly upon a few areas that might be of interest. The system under which we operate is such that the government almost appears to be waiting for people to die so it can collect taxes. We do not have death taxes but the deemed disposition rules can trigger capital gains upon death. In fact the expression "Live rich. Die poor." originates from the concept of disposing of your assets before death so that the government does not have anything to tax. Reducing the amount of money you send to Ottawa is an idea that many people find very appealing. However, it has to be balanced against the potential for the application of attribution rules, the loss of control and the triggering of capital gains.

It is possible on the death of one spouse to roll over assets to the remaining spouse without immediate tax implications. It is worthwhile to note that this is an optional move and there may be situations where it may be more tax efficient to pay

taxes now rather than wait. The spousal rollover provides a tax deferral but can build up significant tax liabilities that must be paid upon the death of the second spouse but again, proper planning can help to alleviate these.

At first glance, trusts are intimidating to people as they are thought of as tools for the very rich but they do have a number of useful functions for anyone. They are a way to split income as well as directing assets to solve specific needs. Testamentary trusts can be created in a will and used to provide income for a spouse or children. The trust files a separate tax return so it has the potential to reduce the overall tax bill as well as help your beneficiaries manage their money, which can be a very important consideration for young people or a spouse who has never been involved in the family finances.

It is incorrect to think that estate planning is just about preparing for death. It begins with building an estate and protecting it until you pass it on to your heirs (while disinheriting the C.C.R.A.) and includes planning for a serious disability or health problem. While you are still alive, critical illness and disability insurance provide protection for your earning power and should you become incapable of managing your own affairs, powers of attorney allow others to make decisions on your behalf. This applies to both financial matters and issues regarding personal care.

As you can see, an estate plan is not a cookie cutter formula that can be applied to everyone. Unique circumstances necessitate that an individual assessment be done and the proper tools and/or professional advisors be utilized as required. Those who do not take the time to prepare a plan ("pay me now") may never know the total cost of their inaction, but their families and others likely will ("pay me later").

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THE BLURRED LINE OF GEODESY

(Finding a common ground between GIS and Surveying)

By Greg Pendleton

Reprinted with permission from The Florida Land Surveyors Council as printed in 'The Empire State Surveyor' - November 2002

In our last GPS/GIS integration article, we were shopping for a new GPS data collection device. (A Buyers guide for Savvy GPS Consumers, Geoworld, January 2002, page 24). But now that we have it, can we use it? ...There is a fifth dimension beyond that which is known to man. It is a dimension as vast as space and timeless as infinity. It is the middle ground between light and shadow, between science and superstition, and it lies between the pit of man's fears and the summit of his knowledge. Look up ahead... there's the signpost, but don't locate it using GPS; you've just entered the Survey Zone.

These are truly amazing times where we can model our world, analyze its nature, and affect change on both the local and global level with the help of intelligent geographic data. With the advent of GIS and tools such as aerial photogrammetry, light detection and ranging (LIDAR), remote sensing and satellite positioning, we now have the ability to populate our world model with speed and efficiency unthinkable decades ago. However, the same wonderful advents in technology that make it possible for GIS technicians to become the caretakers of their own data collection and maintenance, have also resulted in the encroachment on a venue that was once the sole domain of the Land Surveyor. Where surveyors like myself were once the masters of mapping and geomatic sciences, we, like so many professions, have been trounced upon by the relentless advances of machinery and the micro-processor.

Similar misfortune in the GIS community has seen the debate for what defines surveying extend beyond the philosophical arena, smack dab into our legislature and even the judiciary. It may be a matter of ill will and bitterness for a heritage stolen and business lost; but it may be a valid case of technology moving too fast for society to handle. Whatever your side and regardless who is right or wrong, it is in the best interest of all parties to settle these issues so that we can move on with the work at hand.

One case recently brought to my attention involved a County Planning Department that was informed

by states attorney that by collecting positions and attribution on fire hydrants, they were in fact practicing Surveying without a license. Though at the time of this article, this case has not yet been elevated to the courts, such a successful ruling would mean that asset, infrastructure and facilities management would have to be conducted under the responsible charge of a licensed Surveyor - even for municipalities and utilities.

However, GPS collectors are not the only groups currently at risk. Several states have enacted or have pending legislation that would also make photogrammetry and its sub disciplines a licensed surveying function. Such legislation would no doubt eventually extend to the use of software used to rectify and extract data from existing photography and remote sensing, not to mention what might become of digitizing and softcopy in the future. Finding the Common Ground.

The controversy over the rightful domain of Surveying has become one of misunderstanding, political lobbying and legislative ignorance; or has it? Fortunately as cooler heads prevailed, a recent document known as the "GIS/LIS addendum to the Report of the Task Force on the NCEES Model Law for Surveying" has brought together professionals from the American Congress on Surveying and Mapping, American Society of Civil Engineers, American Society for Photogrammetry and Remote Sensing, Management Association for Private Photogrammetric Surveyors, National Society of Professional Surveyors, National State Geographic Information Council and Urban Regional Information Systems Association; drawing a new line in the sand and hoping to build a fence.

The main objective of the task force was to "recommend modifications to the Model Law that would remove potential ambiguities and clearly identify those activities requiring the services of a registered professional while continuing to safeguard the public health, safety and welfare." The document is composed of a philosophy, recommendations and summary section that culminated into

the appendices containing a revised "Definition of Practice" and "Inclusions and Exclusions."

One major concern of the task force was that the language used in "Definition of Surveying" could be "interpreted to over-reach the legitimate professional jurisdiction of the practice of surveying with regard to the creation and maintenance of maps and databases in Geographic Information Systems".

The second major concern of the task force was the referencing "tools of collection". It is the opinion of the task force that regulations "should apply, not based simply upon the tool or technique used but rather based upon the service, product, or advice delivered." A major reason for this debate was the fact that tools of collection were specifically referenced for GIS/LIS, without any reference being made to other licensed professionals or the layperson. The obvious concern here being that this specificity focused on the GIS community while ignoring the likes of other professions such as engineers, architects, realtors, contractors, etc., not to mention the "self styled surveyor" consumer grade (5-10 meter) user.

Although we still have a way to go in rectifying the situation, GIS and surveying professionals need to be aware of current regulations and how we can affect them. As always, the ASCM provides an invaluable portal to all mapping professionals at www.ascm.net, including the aforementioned GIS/LIS addendum, journals, articles, links, etc. Additionally, it is always a good idea to be knowledgeable about your own current state regulations. A great resource for state rules and statutes is the land surveyor's reference page at www.isrp.com.

For what it's worth, here's my two cents of Sage advice:

1. Try to adhere to the Mapping standards of the USGS. <http://mapping.usgs.gov/standards>.
2. Most importantly, good metadata can provide valuable information as to the source and accuracy of the data. Ethics: Be honest with yourself, your customer, your profession and your work.

Greg Pendleton is a licensed surveyor and a Product Manager with the GIS/GPS business group of the GIS and Mapping Division of Leica Geosystems. #

WHAT ARE THE MOST FREQUENT TIME-WASTERS?

IN TODAY'S HECTIC SOCIETY, THERE NEVER SEEMS TO BE ENOUGH TIME TO ACCOMPLISH ALL YOU WANT TO DO. BUT BY SUCCESSFULLY MANAGING YOUR TIME, YOU'LL BE ABLE TO GET MORE DONE AND MEET DEADLINES. ONE WAY TO DO THIS IS TO ELIMINATE ACTIVITIES THAT WASTE TIME.

TIME AND MOTION STUDIES CONDUCTED BY SEVERAL LARGE COMPANIES HAVE PRODUCED THE FOLLOWING LIST OF THE MOST FREQUENTLY FOUND TIME-WASTERS.

- 1. OVEREXTENDED LUNCH AND COFFEE BREAKS.**
- 2. EXTENDED UNPRODUCTIVE TELEPHONE CONVERSATIONS.**
- 3. DOING A TASK YOURSELF THAT COULD HAVE BEEN DELEGATED.**
- 4. LOST TIME DUE TO WAITING FOR OTHERS AS A RESULT OF POOR SCHEDULING.**
- 5. ALLOWING LONG DISCUSSIONS OF INCONSEQUENTIAL OR PERSONAL MATTERS.**
- 6. PERMITTING THE LATE AFTERNOON DRAG TO SLOW THINGS DOWN. SAVE NEW AND INTERESTING ASSIGNMENTS FOR THE END OF THE DAY.**
- 7. SPENDING TOO MUCH TIME ON A PROBLEM OR PROJECT, WHEN ASKING ADVICE WOULD PROVIDE A MORE RAPID OR BETTER SOLUTION.**

IF YOU FIND ONE OR MORE OF THESE DISTRACTIONS CUTTING INTO YOUR TIME, MAKE A CONSCIOUS EFFORT TO ELIMINATE IT. CONSIDER TIME A VALUABLE COMMODITY.

E-Mail Etiquette

By Robert Allen, BCLS, CLS Sechelt, BC
Reprinted from 'The Links' September, 2002

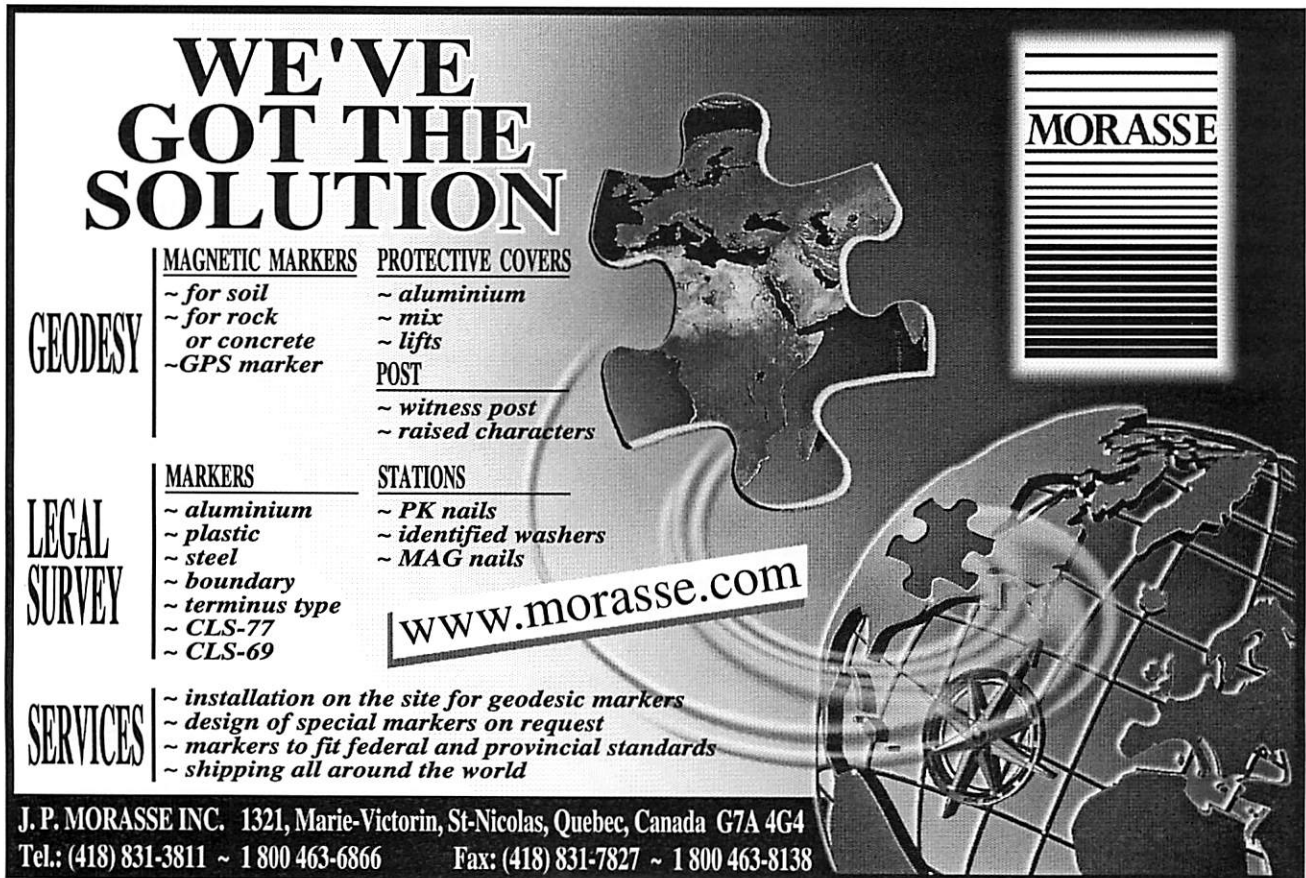
A friend of mine put together some notes on e-mail etiquette a few years ago. He recently updated it and the following is the result:

In this age of the Internet, forwarding cute messages and warnings about viruses etc. has become commonplace. Have you ever considered that some people do not wish to have their internet address available to others? Many times I've had to scroll down through miles of headers and others names and e-mail addresses before I've come to the "message".

If you absolutely MUST forward that 10th generation message from a friend, please take some time and trim the miles of headers showing everyone else who's received it over the last few months!! It sure would be nice to get rid of all the ">" that begin each line.

You can send messages or forward messages and provide the recipients with anonymity by using the "Blind Carbon Copy" (Bcc) feature. This allows you to send to any number of people without disclosing the recipient list. In other words, if you send a message via Bcc to Bob, Bill and Mary, all three will receive the message, but none of them will know that the other two received the same message.

When I send out my "jokes" I NEVER forward names or email addresses. Using Bcc will not only prevent your e-mail from opening with a long list of recipients, but by protecting the e-mail address of all the people you send to, you're also helping to cut down on spam and reduce unnecessary Internet traffic. If your mail should get posted on a public forum or forwarded to a junk e-mailer with the list intact, you've



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just handed over perhaps dozens of prime addresses that are then very likely to be targeted for spam.

So its as easy as the following:

(1) In the To part of the address, put in your own e-mail address.

(2) Instead of using Cc, use Bcc for all the recipients you wish to send the message to.

When the recipients get your message, it shows your e-mail name in the To and From sections, and no-one else is identified.

Another way to cut down extra traffic is by eliminating the "Return Receipt", a feature that sends you a reply message when your e-mail has been opened. Please, save this option for times when you really must know that your e-mail has reached its destination. Otherwise, assume it made it safely, and only check up on the delivery if you don't get a response when one is expected.

Many of you have been victims of e-mail hoaxes and pranks lately. This is known as "chain e-mail" and it is sent to several persons with a request that each recipient send out multiple copies of the letter so that its circulation increases exponentially. If you know what to look for they can be easy to spot. There will first be a "hook", something to catch your interest such as "Make Money Fast", "Virus Alert", or "People Are Dying". There is usually a threat of some sort; something bad will happen to you if you break the chain or you are responsible for letting all your friends know about a (usually fake) computer virus that's going around. Sometimes it will play on your sympathy, perhaps by telling you that a sick child has requested that the chain letter be sent. Then there will be a request that you send the mail on to several other people.

Hints: If a "Virus Warning" says to forward it to everyone you know, it's a HOAX. No responsible person is going to tell you to do that! If a "Virus Warning" says you will get a virus just by reading the message, it's a HOAX. You can't get a virus by simply reading e-mail. You CAN get a virus by opening up and executing an e-mail attachment, so if you receive an executable attachment you didn't request, just erase it. Graphics attachments (.gif, .jpg, etc. files) are safe. If a "Virus Warning" says Microsoft or the FCC issued the warning but doesn't give a link to them so you can get more information or verify it, it's a HOAX. Besides, Microsoft and the FCC don't issue virus warnings.

If you get a message that seems like it should be shared with LOTS of people, DON'T SEND IT unless you know the message is true. Many people simply forward the message thinking it could be true and the result is the perpetuation of a hoax which in the end only clogs up the e-mail networks.

ALWAYS CHECK WITH SOMEONE KNOWLEDGEABLE THAT YOU CAN TRUST before forwarding any message.

Perhaps the simplest way to check for authenticity is to make use of any of the following Internet sites where the latest information about Computer Viruses and Hoax E-mail Warnings is available. This is the best way to tell a hoax or a prank.

- (1) <http://vmvths.com/hoax.cfm> (The Truth About Virus Myths & Hoaxes)
- (2) <http://www.datafellows.com/news/hoax.htm> (Virus Hoax Warnings)
- (3) <http://www.datafellows.com/virus-info/> (Virus Information)
- (4) <http://www.aymantec.com/avcenter/vinfodb.html> (Virus Information)
- (5) <http://urbanlegends.about.com/mbodv.htm> (Urban Legends & Folklore)

Please do not forward "our" email addresses to all sorts of people we do not know. *



Focus

By: *Tim Connor, CSP*

Reprinted from "The Georgia Land Surveyor" September/October 2002

You tend to bring into your life that which is consistent with your focus. You can either focus on what is not working, or what is; what you don't have, or you do; what you want, or what you don't; what you believe in, or don't. There is a great line (can't remember where I heard it, just know I am not taking credit for it) that says, "be careful what you ask for, you might just get it." One of my favorite quotes is by Arthur Ashe. He said, "True greatness is starting where you are, using what you have and doing what you can."

Most winners in life are grateful for their blessings and focus on what they want, have and can do. By the same token, most losers focus on what is missing and where they are not and on what they can't do.

Let me give you an example:

Salesperson A complains constantly that: prices are too high, brochures are not up to date, they don't have laptops or cellular phones, their territory is too small, there are too few good prospects, there is inadequate internal support staff, it's raining. You get the picture - if they are doing poorly; they can find a reason why. (Other than themselves.)

Winners, on the other hand, learn to work with what they have. They improvise, innovate, adjust and compromise - whatever it takes to get the job done with the tools they have.

Let's look at one more example:

Manager A focuses on policies that are outdated, procedures that are no longer pertinent and yesterday's issues or problems. Manager B understands a simple management truth: it is easier to apologize than it is to ask permission. He focuses on getting the job done, while Manager A is focusing on the process.

I am not suggesting that some of these policies might not need to be changed, however. The key here is to do what you can within the framework of what is available to you and get on with it. Whining

about what is missing or what you can't do keeps you stuck in the past. You have three options in any situation or circumstance: change it, accept it or leave it.

A key ingredient in all leaders, winners, effective people and productive and/or successful organizations is focus. What is your focus today? Is it on what you can - or cannot do? Have - or don't *

One day a gentleman walked into one of Ben Franklin's book stores.

As one of the clerks went to assist him, the gentleman asked the clerk the price of the book he wished to purchase. The young clerk looked at the price posted on the book and said, "That book is one dollar, sir,"

The gentleman began to haggle with the clerk over the price.

The clerk assured him that the correct price for the book was one dollar and no lower. As the man realized that his efforts to haggle with the clerk were going nowhere, he insisted on speaking with Ben Franklin directly. Franklin stopped his work, walked out to the storefront and the gentleman asked, "What is the price of this book?"

Franklin answered, "One dollar and a quarter."



The gentleman was confused and replied, "Your clerk just said it was a dollar."

Franklin looked at the book again and answered, "Yes, it was a dollar. But now you're wasting my time."

Looking Ahead... 2003

January

			1 New Year's Day	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23-25 ANBLS AGM Fredricton, NB		
26	27	28	29	30	31	

February

						1
2 Groundhog Day	3	4-8 CLSBC AGM Kelowna, BC				
9	10	11	12	13	14 Valentine's Day	15
16	17	18	19	20-22 AOLS AGM Niagra Falls, Ont		
23	24	25	26	27	28	

March

						1
2	3	4	5	6	7	8
9	10	11	12-14 ACLS AGM Saskatoon, SK			15
16	17 St. Patrick's	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24-26 ALSA AGM Calgary, AB		
27	28	29	30			

April

May

4	5	6	7	8	9	10
11 Mother's Day	12	13	14	15	16	17
18	19 Victoria Day	20	21	22	23	24
25	26	27	28	29-31 SLSA AGM Moose Jaw, SK		

8	9	10	11	12	13	14
15 Father's Day	16	17	18	19	20	21
22	23	24	25	26	27-28 Deadline for Newsletter Submissions	
29	30					

June

Keep One Step Ahead

1971—First
Total Station

1994—First RTK
GPS System

1990—First
Robotic Total Station

1994—
First RTK
GPS System

1953—
First EDM

1971—First
Total Station

1990—First
Robotic Total Station

And Accelerate your Capabilities

The Twentieth Century saw revolutions in measurement technology that changed the life of the surveyor forever. The advent of the EDM in 1953 signaled the end of centuries of baseline measurement by painstaking direct methods. The first total station combined the EDM with digital theodolites to drastically improve the life of the surveyor in the field. The first Robotic total stations and Real Time Kinematic GPS systems freed the surveyor from behind the instrument and put them in control at the point of measurement itself. The new Trimble team of the Twenty First Century incorporates all the pioneers who bought you these technologies first—and that spirit of innovation lives on today in the first total station with on-board color graphical Windows CE capabilities.

The new ACU puts color graphics and unprecedented speed on board the 5600 Servo, Autolock™ and Robotic Total Stations. The color graphics and fingertip control on-board or on-the-pole enable your crews to see and manage their surveys as they progress. Spot errors and omissions as they occur to avoid costly site revisits and reduce risks. The robotic configuration provides lightweight, cable-free operation, and all configurations are exceptionally easy to use. As always we're working to keep you one step ahead from concept to completion.

Contact your Trimble dealer to find out how you can keep one step ahead and accelerate your capabilities.

WWW.TRIMBLE.COM

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ADVANCED SURVEYING FEATURES

- Graphical, color Windows CE operating system.
- Accelerate your position with fast on-board speed.
- Powerful Trimble Survey Controller™ software.
- Go to www.trimble.com/pole for more information.



 **Trimble.**