Saskatchewan Land Surveyors' Association

Newsletter

President's Message to the Membership

By B. G. Clark, SLS, P. Surv., President

This is the last issue of our newsletter before the Annual Meeting, which means this is my final chance to have my picture on the front page. I am not sure where the time went, but all of a sudden it is April and time to dust off the golf clubs. If you would have asked me back in mid-January, I would have complained that the winter was dragging along slowly, the weather was getting me down, and that spring seemed so far away. But after trips to New Brunswick, British Columbia and Ontario, plus a number of Association related meetings and functions, February and March were gone in the blink of an eye. It seems that 80% of the President's duties are accomplished in the first three months of the calendar year, but that works out well considering that our usual workloads are slower during the winter months.

I attended the annual meeting of the Association of New Brunswick Land Surveyors in Fredericton from January 22nd to 24th. We experienced no relief from the frigid Regina winter on this trip, as they were just going through the tail end of a record breaking cold snap. Now I have a greater appreciation for Saskatchewan's "dry cold". Weather aside, the meeting was very enlightening. We were given a tour of the UNB Dept. of Geodesy and Geomatics Engineering, a program that is very in tune with the needs of the land surveying profession. I took part in a discussion period with the students where we

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

The ***Saskatchewan Land Surveyors' Association Newsletter*** is published by the Saskatchewan Land Surveyors' Association for circulation to its members.

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The opinions of the contributing writers may not be consistent with those of the Council of the Saskatchewan Land Surveyors' Association. Articles may be reprinted with appropriate credit given to the authors, unless it is under copyright.

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2003/2004 - Meeting #6 - FEB. 4, 2004

The president called the meeting to order at 9:00 a.m. and reported on his attendance at the annual meeting of the ANBLS in Fredericton. One of the highlights was a tour of the Geomatics Engineering faculty at UNB with a students' forum at which visiting delegates passed along information and responded to questions. One of the students was from North Battleford, Sask. A scholarship auction was held at one of the social functions and raised approximately $2,400 toward scholarships for students at UNB and COGS.

Topics discussed at the business meeting included:

- Wood theft is a problem wherein surveyors are asked to help establish the extent of logging on neighbouring property.

- A new strategic plan with a Power Point presentation by Norm Cote (SLS retired).

- Concern over the accessibility of survey records with the possibility of requiring old records to be turned over to the association upon the death or retirement of a NBLS.

Two new commissions were awarded. Gerry Roberts was elected president.

From the president's forum it was learned that the APEILS has now signed the Mutual Recognition Agreement.

Strategic Plan
Council approved additions and changes to the Strategic Plan as proposed by the Executive Committee. It was agreed that it would be presented to the members for discussion at the AGM in May.

Meeting with Government Departments
The second annual meeting with Government Agencies and Crown Corporations was set for the afternoon of March 17. Members were to be invited for suggestions for discussion topics.

WCBELS
Council considered the following recommendations from the December 4, 2003 meeting in Calgary:

- That full exemption not be granted to a technical institute through the exemption process;

- That a technical institute may receive exemptions in no more than one less than the total number of exams set by the WCBELS;

- That in order to obtain full accreditation the Institute will be required to make application for accreditation to the CCLS;

- That the WCBELS be given the authority to recover the costs of the exemption process from the institutes that request exemptions;

- That the by-laws of the WCBELS be amended to allow exemption as identified above;

- That the By-laws of the WCBELS be amended to allow a graduate from a university or college that is fully accredited by CCLS to receive a WCBELS certificate of completion, by providing proof of graduation;

- And that these recommendations needed to be ratified by signature of the four western provincial associations prior to the WCBELS meeting April 19, 2004.

Council concluded that there was nothing about the recommendations that was inconsistent with the discussions that had been held with the SLSA representatives to the WCBE prior to the December 4 meeting and therefore approved the recommendations.

Resolution Regarding Increased Fees for the 2004 Annual Meeting
Council provided further input to the resolution that was to go forward to the Annual Meeting requesting an increase in annual fees. There was considerable discussion about the cost of high quality education seminars in 2004 and in the future, and about the pressures that would be expected for increases in general operating costs, president's travel, public relations activities, scholarships etc.

It was agreed that the Executive Director would prepare further background on the historical level of fees paid and some of the budgetary pressures that are likely to be experienced in the future. Based on that information, Council would then make a final decision about the amount of the fee increase that would be proposed.

Meeting with GRAA
The president reported on a meeting that he and the past-president attended on December 8 to discuss recent amendments to the Rural Municipalities Act. The representatives from GRAA were quick to acknowledge that the amendments had not received adequate consideration before being put forward and another amendment had been prepared for the current session of the legislature to resolve the concerns that had been raised.

2004 Membership Report
The numbers of licensed members and retired members for 2004 remained the same as for 2003. However, the number of land surveyors in training decreased from six to four.

Status of Amendments to LSPS Act
Council was advised that the amendment to the Land Surveyors and Professional Surveyors Act had been to Cabinet in preparation for submission to the Legislature. A question had apparently arisen about whether this would mark a serious change from the legislation applicable to other professions and to other land survey associations in Canada. A poll of the other provincial survey associations, by SLSA administration, confirmed that no other survey association has any form of restriction on non-resident members serving on their executive boards or councils. That information had been relayed to cabinet through Ed Desnoyers and was expected to go a long way to allaying Cabinet's concerns.

Planning and Development Act – Proposed Amendments
Proposed amendments to the Planning and Development Act, related to well-site surveys, had been distributed to the membership for comment. In the absence of any input from the membership, and based on their own evaluation, the Executive Committee had responded in support for the proposed changes.

Limitations Act and Joint and Several Liabililty
Proposals for changes to the Limitations Act and to the Joint and Several Liability provisions of the Contributory Negligence Act had been distributed

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Councillor's Corner

By Howard A. Larson, SLS, P. Surv, Councillor

As a member of the Education Committee, I feel an update on the activities of the committee would be of interest to the membership. Doug Bouck has retired as chairman and Max Putnam has agreed to be his replacement. We appreciate very much the many hours that Doug put into this position. Happily, he has agreed to remain active on the committee.

Max has had several committee meetings and the committee has brought forward some suggested amendments to the Mandatory Continuing Education Program.

First, there will probably be two association-sponsored education sessions per year with two days of seminars tentatively planned for mid-January and one more day in conjunction with the Annual General Meeting.

Second, the committee has proposed, and Council has approved, an increase in the point values for non-association-sponsored professional development seminars or courses from one PDC per day to five. This will include safety seminars, courses in surveying and office software, technical writing, public speaking and business management. The increase will help offset the slight reduction in the number of association sponsored seminars, but it will potentially allow members to attain thirty points without attending any association sponsored seminars. The committee intends to review this change and may consider increasing the number of points required at some time in the future.

The committee has also been considering ways to clarify point requirements. For example, the "thirty percent" requirement for Part A points could be changed to "ten points". Consideration was also given to creating a Part C category but that would add to the complexity of the points system and necessitate an amendment to the bylaws. On the other hand, inclusion of seminar topics unrelated to surveying in the Part A category may decrease the professionalism of the program. These issues will be open for discussion at the Annual General Meeting.

The Saskatchewan Land Surveyors' Association is a leader by instituting a Continuing Education Program that is simple to use and maintain, has tremendous backing by the members and meets the requirements of professional organizations. But like all good things, there is always an opportunity to improve on its design. The committee has recommended changes and Council has approved them, but additional comments are always welcomed from the membership.

I am convinced that the Continuing Education Program has been very good, not only for the educational element and the fellowship of the members, but also for the image of the Association itself.

(See Revised List of PDC Values on Page 35)

Backup ... Again!!

By Dick Mak, BCLS Retired. Mak Technical Services, Surrey, BC

Reprinted from ***"The Link"*** *- Volume 27, No 1, March 2004*

In my previous articles to the Link, I had discussed the importance of doing regular backups. This time I'll touch on various methods of doing backups.

The first method in this discussion is one that everyone is familiar with. It involves the floppy drive. Just about every computer comes with a floppy drive. A few years ago, it would be safe to say that every computer came with a floppy drive. Not so any more. Most of the current laptops are not equipped with a floppy drive. Floppy disks used in these drives hold 1.44 MB of memory. That would be good for documents or small files.

The second method is the CD writer. A CDR is a single write disk that can hold about 600 MB of data. The data written cannot be erased. The price is very cheap. A spindle of 50 CDR disks costs about $25 to $35. A CD-RW disk can be written, erased and written again. The data files can be dragged and dropped ... just like using a floppy disk. The price is higher at about $2 with a jewel case for the 10x rewrite speed.

The third method is the DVD writer. A DVD +/-r disk can take up to 4.7 GB of data. The DVD drive costs somewhere between $200 to $400 depending on the speed and make. A DVD +r disk is about $3 to $4 including the DVD case.

The fourth method is the removable USB hard drive holder. A standard hard drive of say 40 GB can be installed in this external hard drive case. The case is connected to the computer via USB cable. With the new computers equipped with USB 2.0 standard, a huge amount of data can be backed up to the external hard drive at high speed. The external case with the hard drive in it can be disconnected and moved off site for safe storage. The whole unit can be connected to other computers such as the one at home for data transfer.

The hard drive external case is about $100 for the USB 2.0 connection, a little more for a firewire connection. A 40 GB hard drive (7200 rpm) is about $120 to $145.

There are other methods of backup such as sending data off to remote storage through the internet, jazz drives, zip and tape drives.

Let me repeat again for emphasis. You will wish you had performed backups diligently when your computer crashes. The hard drive will crash. The only question is 'When?'

Executive Director's Note:

From personal experience, I agree that there is no more helpless feeling than firing up a computer only to find "the black screen of death" and the messages that indicate a hard drive has crashed. That is soon followed by that sick feeling in your stomach when you realize that you are not sure when you last did a backup or how complete it was.

At the SLSA office, data backups to CD are carried out whenever a significant amount of new data has been added. However an offsite backup of the entire images of both the data drive and the program drive is carried out about once a month using an external 120 GB Maxtor drive ($260 plus taxes at Costco) and a program called Drive Image 7.0 ($70 US) from PowerQuest (recently bought out by Symantec).

The advantage of Drive Image 7.0 is that you can restore the entire image (even a bootable drive) to a new hard-drive. The recovery/installation CD runs a bare-bones version of Windows XP, formats the new drive, and restores the image from the backup drive. The program also allows you to read and copy individual files from the image just as you would from the original hard drive. At some point in the future, they expect to add update and addition capability to the files already on the image.

The 120 GB Maxtor provides sufficient space to back up the entire image of several, partially filled drives with typical capacities of around 40 GB. As the author suggests, USB 2.0 allows very rapid trasfer rates so I can copy our two drive images, with a total of about 25 GB, in well under two hours - a tiny fraction of the time required just to re-install and configure all the software used here in the office, not to mention any lost data!

Book Review by Rob Tupper, BCLS, Vernon, B.C.

Reprinted from "The Link" - Volume 27, Number 1, March 2004

The Measure of All Things: The Seven-Year Odyssey and Hidden Error That Transformed the World

By Ken Alder, The Free Press, 422 pages, ($42.00)

I often get books as gifts at Christmas or birthdays. It is rare, however, that I am given a book as a gift with a note that it should be considered required reading material for land surveyors. This was the case for my most recent gift, *The Measure of All Things.*

The book is an historical account of the development of the metric system, and more particularly, the metre as the fundamental unit of length. In the late 1700's, the metre was to be defined as one millionth of the distance from the North Pole to the Equator along the meridian that runs through Paris, and a control survey was required to define the length of that meridian. Intertwined in the story about this survey are subplots of the political upheaval of revolutionary France, the notion of standard measure, the coming of age of the science of Geodesy, and most importantly, a human and scientific understanding of error.

The primary characters in the book are Jean-Baptist-Joseph Delambre and Pierre-Francois-Andre Mechain, two prominent French astronomers and geodesists. While *The Measure is* not specifically about the French Revolution, the fact that the development of the metric system was happening in France at the time of the revolution is prominent throughout the book. The trials of conducting a control survey from Dunkirk to Barcelona at the time of the revolution provide for humorous stories that any land surveyor would appreciate.

Author Ken Alder, a historian from Harvard University, also sets the stage for the need for the metric system in the first place: as a standard measure "for all people, for all time". One of the biggest impediments to international commerce was the lack of a unified system of weights and measures. The idea of deriving the length of a metre as being a fraction of the length of a meridian of the earth is that it is taken from the earth: it belonged to no one country, no one person. Within France alone, at the time of the revolution, it was estimated that there were 250,000 different units of weights and measures.

Alder's account of the development of the science of Geodesy is necessary for developing the story of the metre. Alder is able to track the relationship of Delambre and Mechain with the most prominent mathematicians of the day, the likes of Laplace, Legendre, and Gauss. These men were at the forefront of working with the data from the meridian survey and in deriving the eccentricity of the earth, understanding the effect of the earth's gravity field on geodetic measurements, and on finalizing the length of the metre. Alder's description of the necessity of understanding such geodetic concepts as the deflection of the vertical, the gravity field, and the verticality of a survey instrument's graduated circles in any final value of the metre is detailed, yet uses simple language, suitable for a general audience.

The error noted in *The Measure's* subtitle is brought out in the middle of the book. Why it changed the world is left until the end, and requires the reader to have at least an open understanding of the nature of measurements. What is described, is the difference between random and systematic errors. However, what is also described, is human intervention into the measurement process, by suppressing observations that do not conform to an expected value, even though there is no basis to do so. Also of interest to surveyors is a description of the development of the method of least squares in solving geodetic problems, and it's further advancement of the field of statistics as a whole.

Ken Alder's book provides a wonderful account of the development of our system of measurement. It is his description of the treatment of errors in geodetic observations and calculations that I think would be of most interest to surveyors.

"Criminalizing" Occupational Health & Safety

By Marc Denhez, Lawyer

From "The Ontario Land Surveyor" - Volume 47, No. 1, Winter 2004 (Courtesy of the Canadian Home Builders' Association)

On October 27th, 2003, Parliament passed Bill C-45, *An Act to amend the Criminal Code (Criminal Liability of Organizations)*. It imposes a duty on "every one who undertakes, or has the authority, to direct how another person does work or performs a task ... to take reasonable steps to prevent bodily harm to that person, or any other person, arising from that work or task."

At first glance, this appears merely to reiterate what is already in miscellaneous legislation for occupational health and safety ("OHS"). In many parts of Canada, people can already be jailed for violating OHS laws; so what's new about Bill C-45? The answer is: four distinctive features.

- **A broader range of people and organizations can be prosecuted**;
- They can be prosecuted for injuring a **broader range of victims**;
- OHS laws in various provinces have different standards; but Bill C-45 establishes its own collection of standards **which are sometimes higher** than those of individual provinces, at least in some key respects; and
- Offenders can face potentially **higher penalties**, plus the (new) stigma of a criminal record.

Who can Be Prosecuted?

A. The Kinds of Organizations:
When referring to employers, OHS laws usually contemplate companies or individuals. Bill C-45, however, goes further: it imposes the same obligations on all "organizations", including "a public body, body corporate, society, company, firm, partnership, trade union or municipality", and adds unincorporated associations.

B. The Kinds of Individuals:
Every OHS law is binding on employers; and some provinces - but not all - itemize the duties of supervisors. Bill C-45, on the other hand, extends to "everyone who undertakes, or has the authority, to direct how another person does work or performs a task;" this includes not only employers and supervisors, but also foremen and "lead hands." Additionally, Bill C-45 can apply to a "director, partner, employee, member, agent or contractor" of the organization. This can include the organization's chief executive officer or its chief financial officer.

Whose Injuries Are Covered?

OHS laws usually address obligations toward *workers,* but Bill C-45 goes further. The obligation is not only "to prevent bodily harm to that person (the worker, but also to) ... any other person, arising from that work or task." In other words, it extends not only to members of the public at or near the workplace (as in Nova Scotia), but also anyone else affected by something "arising from that work or task." This extends to bystanders and, arguably, might even apply to trespassers in certain circumstances.

What Are the Standards?

In the words of Norman Keith and Yvonne O'Reilly writing in *Worksite News,* "If a representative commits the new offence, and they were acting within the scope of their authority, then the organization is guilty of an offence. If two or more representatives engage in conduct that together would amount to an offence, the organization is guilty of an offence. Further, if the senior officers of an organization, individually or collectively, depart markedly from the standard of care that, in the circumstances, could reasonably be expected to prevent a representative of the organization from being a party to the offence, then the organization is guilty of an offence. In summary, Bill C-45 substantially lowers the threshold for organizations to be charged and convicted of criminal negligence."

Penalties

OHS laws usually provide for stiff fines (in some provinces, up to $1 million), and some laws even specify jail terms of up to two years. Bill C-45 raises the stakes. ☞

Gunter's Legacy

By Douglas W. Critchfield, PS

Reprinted From "The Link" - Vol. 27, Number1, March 2004
(Originally from "The Maryland Surveyor, May 1998)

With an endless capacity for invention, mankind has historically (and sometimes hysterically) pursued newer and better and faster ways of doing things. Today, if I buy a calculator I wonder if it will become obsolete before I completely learn how to use it, even perhaps before I get it home and remove its plastic wrapper!

Yet, in spite of 20th Century improvements like high-speed personal computers and programmable pocket calculators, the 17th Century still rivals our own modern time for having produced innovations which simplified the process of mathematical computation. John Napier's logarithms, for example, reduced the operations of multiplication and division to the simpler operations of addition and subtraction. Logarithms in turn enabled William Oughtred to invent the slide rule - an idea which he described in 1632. Blaise Pascal in 1642 invented and built a calculating machine capable of adding 6-digit numbers, and Leibniz (1671) invented a machine that multiplied numbers. This machine was too slow and cumbersome to be practical, but it was one of the forerunners which led to the calculating machine, and eventually to the modern computer.

One very popular and practical 17th Century invention was Napier's Bones. These "bones", described by Napier in 1617, were rectangular strips of wood or ivory, each inscribed with multiples of the ten digits. Laid side by side in specific order, Napier's Bones greatly simplified the multiplication of large numbers.

The English mathematician Edmund Gunter (1581 - 1626) left his mark by making some innovative contributions of his own. He is credited with the idea of a 22-yard survey chain divided into 100 links, an invention which simplified the calculation of acreage. Although his fame among surveyors is due to his invention of Gunter's chain, we must also give Mr. Gunter recognition for the invention of a precursor of the modern slide rule.

In 1620, twelve years prior to Oughtred's slide rule publication, Edmund Gunter had constructed a logarithmic scale upon which he could perform multiplication and division with the aid of a pair of dividers.

The slide rule is now considered obsolete and Gunter's chains, thankfully, we no longer drag through the field. But, over a span of three centuries these two simple inventions evolved into essential tools for American surveyors and engineers. They withstood the test of time, and they served us well.

Today, the usefulness of these 17th Century gadgets has been supplanted by the pocket calculator, but the contributions of the 17th Century mathematicians remain very much with us.

Take a close look at your calculator and you will see traces of this prolific and innovative period in the history of mathematics. The symbols for multiplication and division, the exponential index notation, and the terms "cosine" and "logarithm" were all introduced by the 17th Century mathematicians. The term "cosine" is, in fact, another of Edmund Gunter's many contributions.

Reference:
- An Introduction to the History of Mathematics, by Howard Eves

Continued from page 8 - "Criminalizing Occupational Health and Safety"

As a general rule, almost all of the offences in the Criminal Code are categorized as being either relatively modest (called "summary" offences) or more serious (called "indictable" offences).

- $ The maximum fines for summary offences are being increased from $25,000 to $100,000.
- $ Fines for indictable offences do not have a specified maximum.
- $ The jail provisions are relatively flexible; in the case of on-site death, the maximum penalty for an individual convicted of criminal negligence could be life imprisonment.

In addition, convicted offenders (in both the "summary" and "indictable" categories) will now have a criminal record.

Marc Denhez *is an Ottawa lawyer working in governance issues, who has taught in the Urban Planning schools of four universities. He can be reached by email at mdenhez@bellnet.ca*

Continued from page 1 - "President's Message"

passed on information about our various associations and answered questions on entry requirements and job opportunities.

Two weeks later, Kathy and I were struggling to get to Richmond for the annual meeting of the Corporation of British Columbia Land Surveyors. Our flight out of Regina was cancelled due to a blizzard, but we managed to make it a day later, thanks to our daughter Amie whom I got out of bed at 5:30AM to drive us to the airport after discovering that the taxis were running an hour behind because the snow plows had not been out yet. After several episodes of shovelling and pushing, we finally made it to the airport and arrived in Vancouver to a sunny +14°C which felt like a tropical paradise in comparison. The meeting was very interesting and informative. Their association has instituted a Practice Advisory Program which adds about $200,000 to their operating expenses, and is funded by fees charged for "check lists" which must be submitted with survey plans.

We arrived home from Richmond on Sunday, Feb. 15th, did our laundry, shovelled the driveway, and departed for Toronto on Tuesday, Feb. 17th for the Association of Ontario Land Surveyors annual meeting. They have an interesting organisation with close to 200 members in their expanded profession category who hold Certificates of Registration but are not licensed land surveyors.

I find it interesting that at each meeting I attend, there is at least one item being dealt with that we in Saskatchewan are also concerned about. Whether it be attracting students into our profession, practice review, or expanded membership, I have gained experience and information that I hope to pass on to strengthen our Association.

Back home now, we are busy preparing for our annual meeting in Regina from May13th to 15th. Our Education Committee is trying something a little different this year with a seminar session being held the day before the AGM, instead of our usual March seminar. We held a meeting on March 17th with representatives from various government agencies and crown corporations. This is the 2nd such meeting and not only gives us the opportunity to discuss land survey related issues, but also allows the agencies a chance to interact with each other. It is a successful and useful exercise, and I am sure it will become an annual event.

Good luck to the candidates challenging the professional examinations in April. It is great to see a potential increase in our membership with four writing this year. However the near future appears to reveal a very small number of articled students coming through the system.

Kathy and I will be off to Jasper in late April for the Alberta Land Surveyors' Association annual meeting and our last trip of my presidency. We hope to see you all in Regina for the AGM.

Traffic Counts on the SLSA Website

The SLSA Internet server is powered by the Red Hat version of the Linux operating system. Included with the package is a program called "Webalizer" which magically created a folder in the

directory with the website files and began to keep statistics on traffic to our web site. Here are some of the statistics for March, 2004.

Total Hits = 19,281

Total Visits = 1,326

Total Bytes Served = 1.045 Gb

Origin of Request	Number of Hits / Bytes Served (Kb)
Canada	7,286/217.8
US Commercial	1,859/64.6
Argentina	48/1.2
Australia	67/0.93
US Military	7/0.93
US Government	2/0.66

The Porcupine Surveyors

or The Public Has The Right To Know

By Kim H. Leavitt P.L.S. NSPS Governor

Reprinted from The Gem State Surveyor, Volume XXVI, Issue 3, Fall 2003

Recently, I was approached by a man who wanted me to give him coordinates on the corners to his aliquot-part section land property. He wanted to find his property corners with his handheld GPS unit. When I inquired about his intent he suddenly became evasive. I explained to him that the corners he was searching for had never been placed by the original surveyor, except for the section and one quarter corners. His response astonished me. He told me he was going to find or place his corners himself. He didn't listen to the rest of the discussion about not placing property corners without the benefit of a license.

This experience has forced me to evaluate the public's knowledge about surveying and the misunderstanding of about today's technology. This man was under the impression he could place his corners using scaled distances from a quad, overlaid with his property corners. He would then establish latitude and longitude on these points and simply walk to his corner location using his trusty super deluxe, all weather, all truth, all accurate, $99 GPS handheld unit, hereafter known as just the "unit".

My theory of using this method to survey could be explained in the following analogy. If you have eight property corners gather eight cows together. Load them on a helicopter (you may need to make more than one trip) then fly over your property on a true north bearing, drop a cow for each corner. If you want to be more accurate you might try dropping porcupines, these will stick better and are smaller, thus increasing your accuracy or should we say positional tolerance. I'm sure you all have your own analogy, probably more explicit than mine.

The point being, if this fellow is a cross section of the public, we as surveyors have some major problems. Maybe, we should do nothing, knowing there will be years of work to straighten out these porcupine surveys. My fear is that "doing nothing" will leave the door open for many "unit users", to continue thinking that they have a right to encroach into our profession.

In our Rules of Professional Responsibility, Rule 005. "Responsibility to the Public", we read in part, that our primary obligation is to "safeguard the life, health, property and welfare of the public". If we are to safeguard the property and welfare of the public, how can we let "unit users" off the hook? Maybe we should legislate a warning label for all low accuracy GPS units. It could read as follows: WARNING: This device should not be used by anyone pretending to be a Professional Land Surveyor.

I wonder if Cabalas or Sportsman's Warehouse would display this warning, or even better, put a sticker on every unit they sell. This would insure that only sportsman trying to find their way home would be using the unit.

There has to be a way we can educate the public about the importance of Land Surveying. Those who care have joined State and National organizations to assure their voice can be heard on issues that affect our profession. Those who don't will allow a dwindling profession to continue to slide down a slippery slope.

The public has the right to know about our profession, its governing rules and regulations. How is it that so little is known about surveying from the public's perspective? I'm sure I can do a better job of letting the public know what surveying is about. What is our Society doing and is it our responsibility? What are the Board of Professional Engineers and Professional Land Surveyors doing and is it their responsibility? What is ACSM or NSPS doing and is it their responsibility? If we as surveyors don't know if anything is being done to educate the public, I'll guarantee the public doesn't know.

"Unit users", staking their portion of paradise, are all after the same thing, to save money. No matter how we see it, if someone can figure out a way to save dough, one will. If we let "unit users" continue to invade our profession there won't be a profession.

We need to get serious about saving a wonderful profession. Jointly, we need ideas that may go beyond the current boundaries we have set. How can we educate the public? After all, they have the right to know.

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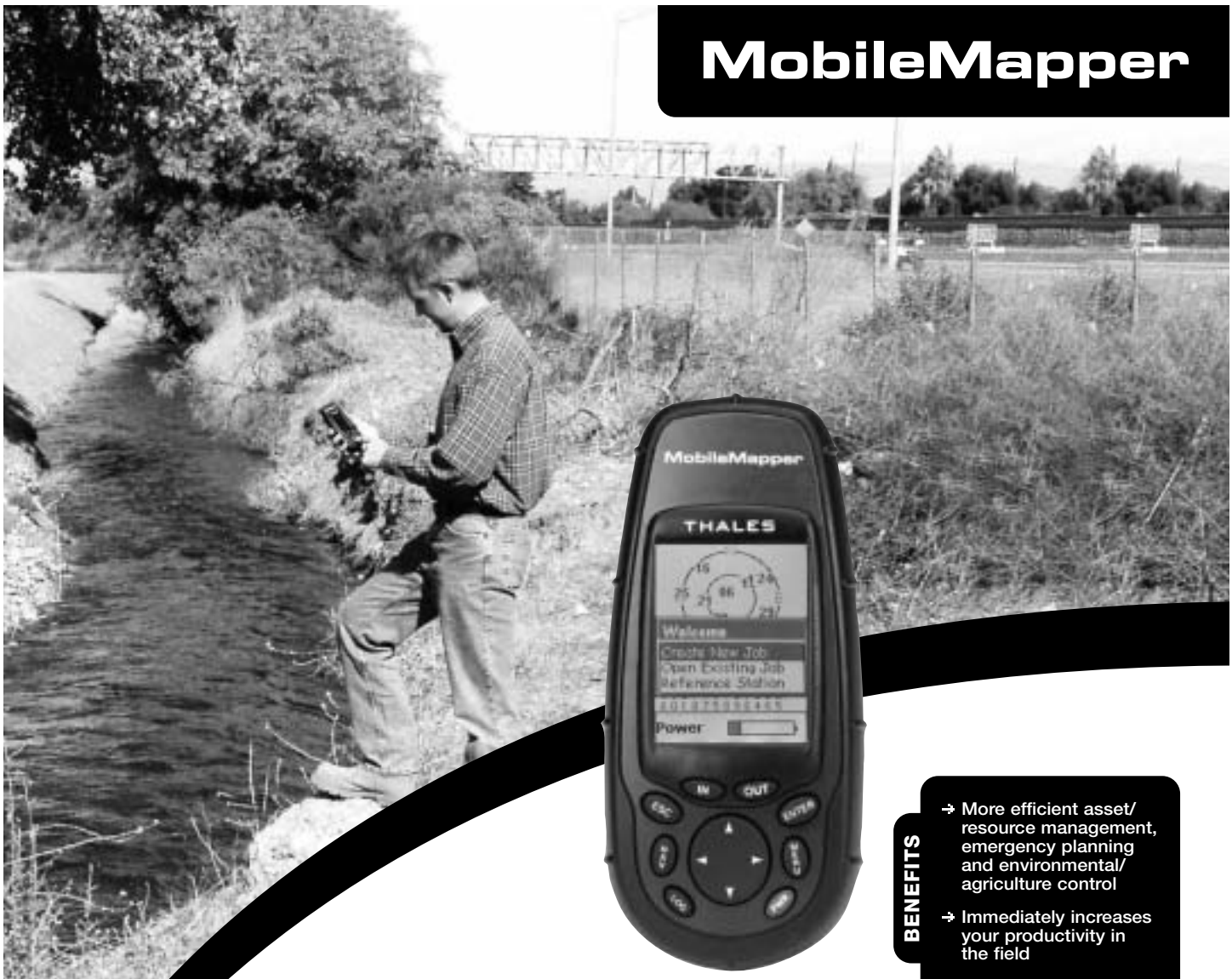

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THALES NAVIGATION

Nominating Committee Report

Peter Unger, SLS, P. Surv. for Vice-President

I was born in Saskatoon and raised in Melfort Saskatchewan. After high school, I moved back to Saskatoon to take a variety of subjects at the U of S. Biology, Engineering and Geology were the areas I studied before moving into the work force. I spent two summers running my own business building residential fences, then joined the City of Saskatoon as a rodman in the Water and Sewer Department.

I met Louise while at University and we were married in 1980. We have three adult children, one studying at the U of S and two in the workforce. All three kids (and Louise too) have put in some time holding a prism pole or one end of a chain for their Dad.

In 1981, I was hired by Tri-City Surveys Ltd. in Saskatoon to work on a mineral lease boundary survey at Waterbury Lake. A month later, early in January 1982, I articled to Wes Jamieson. I worked on a lot of Northern projects as well as roads, parcels, pipelines and topographic surveys. I received my commission (no. 274) in June of 1987. My time was spent more and more in the office as the company got into the Cadastral mapping area and in 1990 I became the partner in charge of Trigon Mapping Resources.

I created my own company, Digital Planimetrics Inc., in 1997 and have been working at building it into a successful organization too. We were recently successful in winning a two year contract with SaskPower to put hundreds of thousands of wooden power poles and all the information about those poles onto the internet. While most of our focus is on the mapping and internet arena, we still keep our hand in the Survey business, running a dual frequency base station, surveying parcels and pipeline easements and even completing the transform process for clients.

My connection with the Association includes two years spent on council and participation on various convention committees. I would be honoured to follow in the footsteps of the many people who have volunteered their time and energy to make this Association the success it is today. I hope that the perspective I bring to the Association will be a valuable contribution in keeping the Association moving forward in the fast paced world we live in today.

Nominating Committee Report - Continued on page 41

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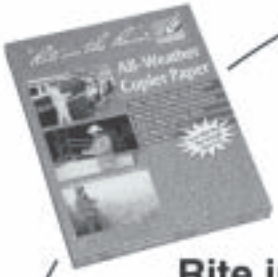

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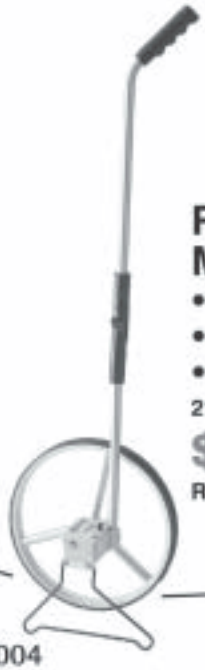

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ALS NEWS - Editor's Notes

By Brian Munday, Executive Directory, ALSA
Reprinted from "ALS News" - December 2003 - Vol. 32-4

We receive a ton of information at the Association office. Ok, maybe it doesn't really weigh a ton but I am sure if we printed out every e-mail message and stacked them up with every letter, newsletter and magazine we receive, it would probably be close to a ton.

Every now and then, as I read through this mountain of material, I will see several stories or articles within a short space of time that seem to hit on the same subject.

I read an article called, "Blasphemy Then, Reality Now" by Dr. Noel Hershfield of the *Alberta's Doctors Digest.* Dr. Hershfield's article was a comment on Ivan Illich's diatribe on modern medicine, "Medical Nemesis: The Expropriation of Health." Dr. Hershfield stated that many of Illich's ideas were considered blasphemy at the time by most physician commentators, but that today, they are coming true. Illich apparently advocated that anyone was at liberty to take any drug or treatment of his or her own choosing. Illich also suggested that anyone should be able to seek out any healer desired whether it be a homeopath, doctor or witch doctor.

I have not read Ivan Illich's work so I cannot comment on Dr. Hershfield's interpretation of Illich's work. However, the main point, as I read it, was that the general public is taking more and more responsibility for their own health care. Instead of blindly accepting how one doctor has diagnosed me, I might get a second opinion or start asking some specific questions. I might choose to visit a health food store for vitamin supplements or I might consider a visit to an acupuncturist rather than dealing with traditional treatments.

The second story that came to my attention was from the *Gem State Surveyor,* the magazine of the Idaho Society of Professional Surveyors. In the article, Kim Leavitt writes about

> *"... a man who wanted me to give him coordinates on the corners to his aliquot-part section land property. He wanted to find his property corner with his hand-held GPS unit. When I inquired about his intent, he suddenly became evasive. I explained to him that the corner he was searching has never been placed by the original surveyor, except from the section and one quarter corners. His response astonished me. He told me that he was going to find or place his corners himself. He didn't listen to the rest of the discussion about not placing corners without the benefit of a license."*

Mr. Leavitt goes on to discuss the importance of the profession educating the public about the public's knowledge of surveying and the misunderstanding about today's technology. All of us probably have stories about clients who thought they could be a surveyor because they had a hand-held GPS unit or a tape measure to measure from the corner of their house to a fence post. They did not see any reason why they could not do it themselves.

Then, finally, I received an email from Scott Partridge. They say things always happen in threes. Scott directed me to the website for www.ussurveyor.com. On this website, they announce that you can order a "survey your own property" video or DVD for only $19.99 plus shipping and handling. The advertisement goes on to state that you can save hundreds of dollars. It's supposed to be the first edition of a series that shows the easy method of locating iron pins or metal monuments on and around your lot. "This

> The second thing ... that we need to do as an Association is to educate the public about what an Alberta Land Surveyor does and prepare for the future as more landowners feel they can be their own surveyor.

is an easy and understandable guide to the mystery or how `land surveyors do it.'" When I last looked at the website, the video was "coming soon." I don't know if this video will really be advocating that landowners should dig up their iron posts to locate their own property corners or whether the video will, in the end, encourage that landowners hire a professional land surveyor to accurately locate their property corners.

So what do all of these things have in common? The public is expecting to be able to do more and more things on their own without the benefit of trained people. It really wasn't that long ago that gas stations moved from full service to self-service. Now-a-days, most of us would rather pump the gas ourselves.

How many of us go into the bank anymore? More and more of us are using ATM machines to withdraw money and pay bills. The do-it-yourself business is growing rapidly with more and more Home Depot and Rona stores popping up all over.

What is the reason behind this phenomenon? I once spoke to the University of Calgary geomatics engineering students about this and gave them my theory. I told them that I thought people like to feel in control of situations. If we want a job done right, we are going to do it ourselves. This means depositing the cheque for the right amount, renovating the bathroom just the way you want it, or even preparing your own will with one of those do-it-yourself will kits.

As a society, we get angry and frustrated when a clerk at the retail store says you can't return an item without the receipt. We get angry when the government tells us we should have filled in this form and not that one. We get angry; we've lost control over the situation. So when the opportunity to do it yourself arises, we take it.

What can the Alberta Land Surveyors' Association do about this growing trend? First, when we receive a phone call from someone about something an Alberta Land Surveyor has done or allegedly done, I try to ensure that the caller knows that I am listening and care about the situation. I then often ask them what they think should be done under the circumstances. It's amazing how giving these callers a sense of control can defuse a situation. Not always, but quite frequently. The public calls the Association office when they feel they have lost control of their situation. It may be that they have lost control over a piece of land that they thought was theirs. It may be control over the ability to stop an Alberta Land Surveyor from coming onto their property.

The second thing I think that we need to do as an Association is to educate the public about what an Alberta Land Surveyor does and prepare for the future as more landowners feel they can be their own surveyor. The Association's Public Relations Committee is embarking on a new five year public relations plan. I have no doubt that the plan will try to deal with these issues and giving landowners some sense of control.

The broader issue of technology and the future of the Association will be addressed by Council. It is a difficult and big issue to try and get a hold of, but we will have no choice to do so.

Canada-Wide DGPS Service Now Available

http://www.cdgps.com

October 29, 2003. The Canada-wide DGPS Service (CDGPS), following successful alpha and beta testing, was opened for business on October 14, 2003. Run by a federal, provincial, and territorial government consortium, the CDGPS is a new satellite-based, real-time differential GPS service designed to provide reliable GPS corrections. The new nation-wide DGPS service was developed for the Canadian market and provides unmatched accuracy and coverage for positioning applications across the country. The service is being offered as a free utility with no recurring sub-scription charges. For more information on features, coverage or other areas, visit their website or contact Amin Kassam, CDGPS Program Manager at (250) 387-8438 or fax (250) 356-7831.

Guard Post

by Bill Halma, ALS

Reprinted from "ALS News" - December 2003 Vol. 32-4

In my twenty-five years as a commissioned land surveyor, I have not been prolific as a writer of articles for the benefit of our Association. This will be my first try.

The subject of this treatise will be the use and abuse of marker posts in the monumentation of our survey fabric.

I first became a part of our small surveyor's world in the mid-sixties as a chainman. At that time, I seem to recall that pits were still being dug on road surveys. But wait, change was waiting in the wings in the form of modernity. Yes, a six foot metal monstrosity with an attachable plaque was created. The finished product reminded me somewhat of the individual grave markings for fallen German soldiers.

The plaque was rectangular with an embossed writing on a black background saying:

I looked, but could not find the standard penalty clause which was prevalent on our early survey pins.

At any rate, the new marker posts were to take the place of the four pits on road surveys. They could also be used in lieu of bearing trees in the northern wastelands where some oil and gas activity was occurring. Some of my time was spent north of Edmonton in said wastelands. I had the honour to transport these marker posts to their final resting place by means of shank's mare.

Please picture this - a three man crew going to work. The party chief has shouldered a tripod with attached Wild T-16 transit. He also has his field book and a Curta calculator. On his belt, a ten or sixteen ounce plumb bob and in his left hand, an axe. Number one chainman has the power saw, a gallon jug for gas and a pint of oil. On his back, a packsack with the following: a 200 foot steel tape, some flagged nails, an axe file, some power saw tools and the lunches for the crew. Oh! Let us not forget the plumb bob and the clinometer on his belt.

Number two chainman brings up the rear with the needed day's supply of iron posts and a number of marker posts. In his pocket, he has a cloth bag containing the plaques for the marker posts, the necessary bolts and a wrench. On his belt, he also carries a plumb bob and a sheathed axe. There they go marching to work.

As you may gather from the foregoing, I am not a fan of marker posts. Not because of the difficulties in carrying this extra burden in the past. Not because of skinned knuckles when trying to attach the plaques with four bolts that just never seemed to line up with the four holes pre-drilled in the marker posts. Not because it takes an awful lot of swings with a sledge to get the sucker into the frozen ground to the prescribed depth. My point is that the placing of these marker posts took on a life of its own, resulting in the following statements that can be found in the manual of standard practice.

> *"Where practical, iron posts should be referenced by a marker post placed 0.3 metres distance therefrom and the direction noted on the plan."*

Sounds reasonable, does it not? The word practical is used and specific distance and direction is indicated. Then, why have I spent countless hours trying to locate the pin referenced by a marker post? My assumption is that the pin should be 0.3 metres from the MP. There is no note on the plan showing direction. My locator does not give a clear indication where the pin is due to the presence of old wire on the corner fence post. Eventually, I end

up digging the marker post out and pulling same to locate the pin. A lot of wasted effort which has defeated the original purpose of the marker post. My idea of practicality would have been to reference the placing of the iron post to the existing fence corner and stating this in a note on the plan. In this particular case, the pin was found 0.5 metres from the marker post. This is another oddity that, as professionals, we can't measure 30 cm correctly.

> *"Marker posts should not be placed where they may constitute a hazard to the public or interfere in the normal use of land. In general marker posts should not be placed in developed urban areas."*

There are sections of highway in southern Alberta that parallel the Canadian Pacific Railway. On these common boundaries, there are dozens of pins referenced by marker posts. They looked nice and spiffy, six to seven years ago, when first placed. Today, they look like pretzels leaning in every direction possible, waiting to impale something or somebody. I shudder to think what would happen to some young person slaloming the highway ditch on a snowmobile after a good snowfall and being pierced by one of our marker posts. The resulting lawsuit would make a mistake in the staking of a basement look like chicken feed to an insurance claim.

This, fellow practitioners, is the nub of what I wish to say in this article. I have talked to a few surveyors about my concern and was surprised when I heard one of them reply, "but Bill, you can't just remove marker posts. They are part of the monument." I beg to differ, because, in my view, the pragmatism of safety overrides the legality of our regulations. Sometimes, we become prisoners of our own regulations. Reasonable and thoughtful action to prevent injury is a responsibility of us all. This does not necessarily mean that we have to mount a campaign tomorrow to pull every marker post that I referred to earlier. It does mean that all practitioners should be instructive to their field crews to ensure that the use of marker posts does not constitute a hazard.

Lastly, I am sure that the farmer that cuts the many acres of highway property would thank us profusely if he did not have to contend with our marker posts. Also, please make sure the pins themselves are placed at ground level or slightly below for the same reason.

ENCROACHMENT

Appellate court upholds order that land owner pay adjoining owner $80,000 for 1.5 - 0.5 foot encroachment of house built in 1917.

Reprinted from ***"ALS News"*** *- December 2003 - Vol. 32-4*
(originally from ***"The Lawyers Weekly"*** *- October 24, 2003)*

Plaintiffs and defendants owned adjoining lots. The basement and building of defendants' house encroached on plaintiffs for 1.5 feet for 32.6 feet and six inches for a further eight feet. The roof eaves also encroached onto plaintiffs' lot by about four feet for a distance of 37.5 feet. The encroachment occurred when defendants' house was built around 1917. When defendants purchased the property in March 2000, the former owners had a survey prepared which identified the encroachment. They notified plaintiffs, and defendants bought the property with knowledge of the encroachment problems. Plaintiffs commenced proceedings claiming removal of the encroachment or an order declaring an easement in defendants' favour on payment by them of just compensation. Plaintiffs admitted the encroachment and pleaded entitlement to maintain it upon payment of reasonable compensation. Compensation at trial was fixed at $80,000. Defendants appealed claiming the amount was excessive and plaintiffs cross-appealed claiming that the sum assessed did not reflect the special value of the encroachment to defendants.

HELD: appeals dismissed. The learned trial judge considered the benefit of the encroachment to defendants in determining compensation, but he considered the diminution of plaintiffs' property value to be a more reliable basis. Evidence indicated that defendants had purchased the property at a discounted price because of the encroachment, and that the encroachment negatively affected the market value of plaintiffs' property and deterred potential purchasers. The learned trial judge set the amount of compensation at $80,000 after considering all relevant factors and the court is not prepared to say he erred in doing so. It also appears that the trial judge considered the various issues raised in the cross-appeal and gave reasons for not accepting plaintiffs' submissions. Again, the court is unable to say he erred in doing so.

Sidiropoulos v. Sullivan, [2003] B.C.J. No. 2196, B.C.C.A., Finch J.A. (Hall and Smith JJ.A. concurring), Sept 15103. Full Text Order No. 2324-014 (4pp.)

ABOUT GROWING OLDER

First, eventually you will reach a point when you stop lying about your age and start bragging about it.

Second, the older we get, the fewer things seem worth waiting in line for.

Third, some people try to turn back their odometers. Not me, I want people to know "why" I look this way. I've travelled a long way and some of the roads weren't paved.

Fourth, when you are dissatisfied and would like to go back to youth, think of Algebra.

Fifth, you know you are getting old when everything either dries up or leaks.

Sixth, I don't know how I got over the hill without getting to the top.

Seventh, one of the many things no one tells you about aging is that it is such a nice change from being young.

Eighth, one must wait until evening to see how splendid the day has been.

Ninth, being young is beautiful, but being old is comfortable.

Tenth, long ago when men cursed and beat the ground with sticks, it was called witchcraft. Today it's called golf.

And finally, if you don't learn to laugh at trouble, you won't have anything to laugh at when you are old.

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LESSONS ON LIABILITY

What you need to know about purchasing an Errors & Omissions insurance policy.

By Finola Bianco

Reprinted from "The Empire State Surveyor" (originally from "Point of Beginning"

Land surveyors are in a great position today than ever before to not only afford professional liability (Errors and Omissions) insurance, but to obtain more comprehensive protection through specifically designed programs that address the needs of the land surveyor. With the many choices available, it is more important for the land surveyor to understand the methods of choosing an insurance carrier, an insurance policy and an insurance broker to represent them.

Financial rating services can track an insurance company's financial health, which is important to know since it reflects the insurer ability to pay claims. Insurance carriers can be either "admitted" or "non-admitted." An **admitted carrier is licensed** in the state your business is headquartered and is backed by the insolvency fund for that state. The insolvency fund is monies collected to aid policyholders in the case of an insurer's inability to pay claims. A non-admitted carrier is not licensed or governed by the insurance commissioner of your state and cannot seek relief from the state's insolvency fund. Non-admitted insurers charge a tax in addition to the policy premium.

It is important to understand each insurer's experience in underwriting and servicing design professional's Errors and Omissions coverage. An underwriter who specializes in land surveying firms will offer a better product and a better price than those serving general business. Likewise, a claims department that specializes in design firms or land surveying firms provides more efficient, cost effective claims handling, which saves money in underwriting, claims expense and payout — all of which is passed on to the customer.

Insurance brokers, too, should have track records in handling professional liability coverage for design professionals. Ask for a list of references. Find out what types of additional services the broker and insurance company provide, such as pre-claim assistance and contract review.

Professional liability pays for damages you are legally liable to pay as a result of negligent acts, errors or omissions in the performance of your professional services. General liability coverage is designed to protect against bodily injury and property damage to a third party. Conversely, bodily injury and property damage is not necessary to trigger coverage under the professional liability policy. For example, an error may cause a shopping mall to be built at the wrong angle resulting in five less parking spaces for one of the retail stores. There is no bodily injury or property damage, but the business income loss to the retail store will be addressed by the professional liability policy. To avoid confusion, it is most beneficial to purchase professional liability and general liability coverage from the same insurance carrier. This eliminates any disputes over coverage when a questionable claim is submitted. The Fireman's Fund Insurance Company offers one of the few programs that incorporate professional and general liability coverage.

> PROFESSIONAL LIABILITY PAYS FOR DAMAGES YOU ARE LEGALLY LIABLE TO PAY AS A RESULT OF NEGLIGENT ACTS, ERRORS OR OMISSIONS IN THE PERFORMANCE OF YOUR PROFESSIONAL SERVICES

Professional liability is unique in that most policies are written on a claims made coverage form. Simply, this means that the policy must be in force when the claim is made. The land surveyor that

Continued on page 25

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Fifty Years Ago -

Interprovincial Boundaries

By Harold E. Jones

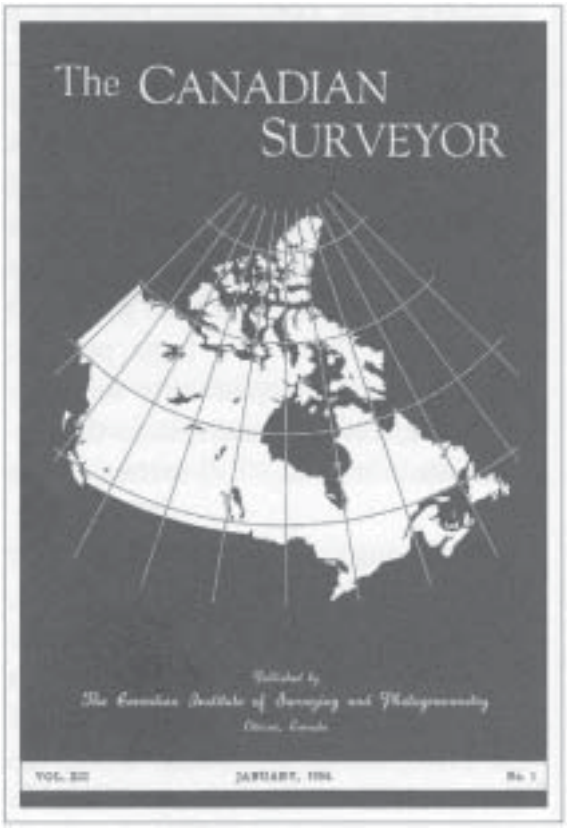
This is an excerpt from "Geomatica" - Volume 57, No. 4, 2003 in which the author looks at past issues of "The Canadian Surveyor.

The January 1954 issue contained four invited papers on four interprovincial boundaries.

The Nova Scotia-New Brunswick boundary (the ten-mile land part) was originally surveyed in 1858 by Alexander Monroe using a surveyor's chain (66 ft.) and magnetic compass. Most of the remainder of the boundary, about eight miles, was defined as the centre line of the Missaquash River and not surveyed. By 1939 it was considered necessary to re-establish the land boundary. J. R, March, Assistant Director of Surveys for Nova Scotia, wrote about the 1939 resurvey. By diligent search, evidence of most of the Hackmatac posts from the original survey was found and the original boundary accurately re-established and marked with creosoted hardwood posts.

The New Brunswick-Quebec boundary (the 100-mile on land part) was originally surveyed by officers of the Corps of Royal Engineers in 1853 and 1854 when it was between the then provinces of New Brunswick and Canada. The easternmost remainder of the boundary, about 50 miles, is defined by the Restigouche and Patapedia Rivers. Subsequently a few short sections were resurveyed in 1909, 1911 and 1913. By 1939 it was considered necessary to re-establish the boundary and a Boundary Commission was established consisting of Georges Cote, Surveyor General of Quebec, and J. H. Ramsay, Chief Forester of New Brunswick. Georges Cote's invited paper, (in French and English versions) in which he remarked that he would have preferred to write about the Quebec-Labrador or Quebec-NWT boundaries, outlined the history and resurveying and clearing of the boundary line. It was re-monumented with iron posts and rock posts at rock outcrops.

The Manitoba-Ontario boundary (about 609 miles) was undefined at the time of confederation, 1867, and was variously considered to be somewhere between Port Arthur and west of Lake of the Woods. When the boundary of Manitoba was extended eastward to the east boundary of the Territory of Keewatin in 1881, this became the west boundary of Ontario. It extended north from the northeastern most point of Lake of the Woods which had been monumented in 1872 by the International Boundary Commission in accord with the "Convention of London, 20 October 1818." The first 59 miles, to the Winnipeg River, was surveyed in 1897 and retraced in 1932 to more accurate standards and marked with concrete monuments and rock posts. In 1912 the territories of Manitoba and Ontario were extended northerly. The meridional boundary between them was extended a further 180 miles north from the Winnipeg River, thence about 88 miles northeasterly by a right line to the east end of Island Lake, thence about 282 miles northeasterly by a right line to the intersection of the shore of Hudson Bay with the 89th meridian. The first 180 miles, along the meridian, was surveyed in 1921 and 1922 and the line marked with concrete monoliths. To survey the next two sections it was necessary to run trial lines to be corrected when closures on the terminal points were determined. To compute the azimuths, C. H. Ney, DLS, OLS of the Geodetic Survey of Canada made



astronomical observations to provide astronomical coordinates to terminal monuments. The trial line of the first section was run in 1929 by J. W. Pierce with a phenomenal closure of only 5.1 feet. The trial line was accepted legislatively as the true boundary and in 1930 its temporary monuments replaced with concrete monoliths. Mr Pierce ran the first half of the trial line of the final section to Hudson Bay in the winter of 1936-37. There was a temporary halt in operations and then the war curtailed further activities till 1947. Mr E. Gauer, DLS, MLS, who had been first assistant on the 1936-37 survey, ran the second half of the trial line completing it with a small closure of only 15.8 feet on 6 April 1948. Again the trial line was accepted legislatively as the true boundary. Permanent concrete monoliths were placed along the line in 1950. The paper describing the above was written by E. Gauer, Assistant Director of Surveys, Manitoba (who had run the last section) and F. W. Beatty, Surveyor General and Boundary Commissioner for Ontario.

The Manitoba-Saskatchewan boundary (about 760 miles) is remarkable in that, for most of its length, about 492 miles, in consequence of its definition as "the centre of the road allowance between the 29th and 30th ranges west of the Principal Meridian of the DLS system of subdivision," it is impractical to establish monuments on that land boundary where the land is settled and roads established in the road allowance. Furthermore it is incongruous that the DLS subdivision monuments, the *de facto* defining monuments of the Manitoba boundary, being on the west side of the road allowance, are entirely in Saskatchewan territory. The paper by H. E. Beresford, Boundary Commissioner for Manitoba, reported that only seven of the first 68 townships north of the U.S. boundary (408 miles) were not yet surveyed. The rest had been surveyed between 1880 and 1920. A few short sections had been resurveyed in 1946 and 1947, and six monuments had been established in 1936 on the actual boundary line at Flin Flon, where mining operations and the settlement straddled the boundary. Above township 82, where the road allowance between the 29th and 30th ranges meets the Second Meridian of the DLS system, at longitude 102°, the boundary is defined as the Second Meridian north to its intersection with the 60th parallel of latitude. This part of the Meridian, about 278 miles, was unsurveyed. The definition accommodates monumentation of the actual boundary of this part when it is surveyed.

Continued from page 22 - "Lessons on Liability"

purchases a policy for the period of time it takes to complete a specific job and then allows it to cancel is not purchasing adequate coverage. Most professional liability lawsuits are filed two to three years after a job is complete; thus, a policy should be in force for at least three years after a job is complete.

The claims made professional liability policy is further restricted by the retroactive date. The retroactive date is the first date the coverage was written on a continuous, uninterrupted basis. For example, if you purchased a policy from ABC Insurance Company on April 2, 1998, and continued to carry professional liability claims made coverage (whether coverage was provided through ABC Company or another insurer) without a lapse, the retroactive date should remain April 2, 1998. jobs performed prior to the retroactive date will not be covered. Many insurers offer Full Prior Acts coverage after three years of continued coverage. Full Prior Acts takes away the retroactive date provision of the policy, covering all work regardless of when it was performed. Since most lawsuits are filed within three years of the job completion, it follows that the insurer has a limited exposure to claims after three years of writing the policy. An insurer specializing in design professionals and land surveyors is more likely to offer the most favorable treatment of the retroactive date. The retroactive date on the insurance policy impacts the premiums paid. If there is a mistake on the retroactive date, correcting that mistake will result in a premium change, too.

In Court

Defense costs including attorney fees, bail bonds and other court costs are typically covered under a professional liability policy, though coverage is different. If you purchase a policy in which defense costs are included within the limit, you are subject to a decreasing limit of liability available to pay claims. The limit of liability will be decreased by the amount paid by the insurance company to defend a claim on your behalf. This can be unsettling when the land surveyor is sued for full policy limits. For example a $1,000,000 limit policy may have a $1,000,000 claim pending against it. On average it takes three years to finalize a lawsuit. An insurance company may pay *$200,000* in

Continued on page 34

The Business Angle ... Managing Receivables

By Daniel E. Beardslee, LS

Reprinted, with permission, from "Professional Surveyor Magazine" August 2002 Volume 22, Number 8*

My father has always said that company is like fish - after three days it begins to stink, I would say that accounts receivable are a little like that - after three months they get pretty malodorous.

Probably without exception, every one of us in private practice has had a few bad accounts. Those that are over 60 days old, in general, should be considered a problem. For some reason, we in the land surveying profession have learned that we work, then send a bill, and then hope we get paid. Is there any reason why it shouldn't be the other way around? Why shouldn't we get paid and then work? Someone has to not trust someone, and given that we surveyors are a pretty trustworthy lot, it seems more reasonable that clients should pay and then hope we do the work.

Or how about getting paid at least a part of the fee before we work? Would that be a reasonable compromise? If we extend trust, shouldn't clients be expected to extend a similar level of trust?

There is a certain kind of elegance in getting paid all or at least part of the fee up front. First, it serves as an automated screening device for deadbeats. If someone has no intention of paying your fee once work is done, he sure isn't going to pay any fees up front. So, he goes down the road to Mr. Lowballer or Mr. Hopetoget paid. He doesn't bother you, he causes agony for your competitors (who have the same chance as you of making him go away), and you can concentrate on your clients that do pay.

Time really is money. Thinking analytically, it's to calculate the effect of what would happen if a number of accounts went uncollected for long periods of time. Let's say, for instance, that your company grosses a million dollars for the year. Let's also say you could improve your average accounts receivable collection period by one month, and your opportunity cost is 7% per annum. (Your opportunity cost is the lost opportunity of investing that money somewhere.) So $1 million x .07 divided by 12 = $5,833. That's equal to about three computers, or a new plotter, or a nice bonus.

There really is no good reason not to collect at least part of your fee up front. Many land surveyors have been doing so for years, and if you ask them (ask me, if you want), you'll find that almost universally there has been no complaint from clients. It's just a matter of changing the way business is done. Change by its very nature is threatening, but don't let that stop you from making sensible changes. You'll probably be pleasantly surprised. A few surveyors I know even collect the entire fee up front, particularly with new clients. Those prospects that would complain never get a chance - they take their problems to another surveyor, which is often in your best interest.

Many surveyors work for large corporations and government agencies, where collecting up front is not really an option. The idea is to get paid, and if you choose to work for these types of clients, you're not likely to get stiffed, but you should factor into your fees the cost of carrying the receivable - the opportunity cost.

What about a firm that has not traditionally collected up front? It's probably not a good idea to hit your existing client base over the head with a requirement for fees up front, but what you can do is introduce your new clients to the requirement over time, and eventually the majority of your client base will probably turn over, until you have a whole new client base with the expectation that fees are indeed collected before work starts.

Credit Card Perks

One positive way to control your receivables and make early collection very feasible involves the use of credit cards. Many credit cards today have some

perks attached. For instance, my Alaska Airlines card offers one Frequent Flyer mile for every dollar spent. As long as I pay the credit card off every month, these miles are absolutely free. I would guess that many of your clients would be very happy to charge their survey fees on their credit cards and take advantage of the perks. A surveyor friend of mine, who recently opened his business, says that some 60% of the payments he receives are made with credit cards. Clients are actually eager to do business that way. There is a small fee involved, but it's indeed small compared to the risk of bad debts and long uncollected accounts, and easily factored into the price for the survey. You can take the retainer this way, and even proceed in the same way that mail order and on-line merchants do - charge the credit card when the item is shipped. You can take the retainer by credit card and charge the remainder to the card when you deliver the survey. You should of course include those payment provisions in your contract.

One other thing you should be doing is billing when the job is complete, rather than waiting for the end of the billing cycle. Many firms bill only once a month and that is a lost opportunity to take advantage of the time value of money.

I saw a recent poll of land surveying firms which suggested that more than 60% of land surveying firms never collect any portion of the fee up front. Only a very tiny percentage collected a portion of the fee up front all the time, and an even smaller fraction collected the entire fee up front at any time.

If you want your business to produce an excellent cash flow, collect all or at least a part of the fee up front. Give your clients the opportunity to trust you. It makes for a better business relationship.

Daniel Beardslee has been an employee, a partner and an owner of private land surveying firms for more than 27 years. He is also a Contributing Writer for the Professional Surveyor.

***Professional Surveyor Magazine** is published monthly. Subscription details and archived articles can be found at their website:

www.profsurv.com

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for comment by the Department of Justice. The SLSA had also received an invitation from APEGS to join them and a group of other professional associations in discussing the proposed amendments with representatives of the Department of Justice and some politicians. That meeting was scheduled for Thursday evening. The President, Past-president and Executive Director were expecting to attend the meeting. It was agreed that a response to the proposed legislative changes would be prepared, and circulated to council for comment, after the APEGS meeting.

I. W. Tweddell Memorial Award
Kevin Sturgeon of Saskatoon was the recipient of the Ian Tweddell Memorial Award at the University of Saskatchewan. M. G. Radoux agreed to attend the awards ceremony on February 11 to present the award.

Council questioned whether it is still appropriate to provide a scholarship to Civil Engineering students at the U. of S. when such students are unlikely to ever enter the land survey profession and there are students at other colleges and universities that may be more suitable recipients. It was agreed that this issue should be raised for comment at the next Annual General Meeting.

New Land Surveyor in Training Agreement
Council approved a Land Surveyor in Training Agreement between J. O. Thistle and A. James Hume, SLS, both of Calgary.

Review and Filing of Oilwell Survey Plans
Council considered a suggestion that well site plans be included in the on-line data base at ISC. The plans would not be subject to examination but would be available, for a fee, in the same manner as other registered plans. For this system to be established, there would need to be some level of cooperation by Sask Industry and Resources (SIR) and perhaps a change in the SLSA bylaws requiring the plans to be filed with ISC. On a related matter, council considered whether there was any interest in obtaining a sample of well site plans from SIR to assess the level of compliance with the standards currently set down in legislation and the bylaws. If there was, assistance for such a project might be available from staff at ISC.

It was agreed that both of these ideas had merit but that the matter would require consideration by members involved with oil-site surveys before further action would be taken. It was also agreed that these suggestions should be referred to the Practice Committee for follow up with the recommendation that the Practice Committee be expanded to include a sub-committee of members specifically active with the oil industry.

2004 Annual General Meeting
A committee had been formed and the guest speaker for the Luncheon would be a representative of the Wascana Lake Revitalization Project.

Education Committee
An audit had been carried out by the Education Committee on January 28. Of the ten persons whose names were selected at random, one had not filed his report for medical reasons and was exempted by the committee, two had received their commissions within the past two CEP's and were exempt, and the remaining seven had submitted reports that indicated they had met or exceeded the minimum requirements for Professional Development Credits.

The Education Committee submitted a draft of a revised list of PDC point values which included two new types of activities; Personal Development and non-association sponsored Professional Development. Definitions for each of these activities were provided. Council supported the concepts being considered and asked the committee to develop them further.

Auditor's Report
The auditor's report had been delayed due to illness but a final report was expected within the next week and would be distributed to all members of Council as soon as it was received.

Disposition of Obsolete Publications
Council approved the writing-off of a number of publications included in inventory that were completely obsolete and for which there would be no real possibility of sale.

Practice committee
Council approved the 2004 Suggested Schedule

of Fees for Professional Services submitted by the Practice Committee. The schedule included a number of new items that are now required by the Land Surveys Act. It also included an increase of approximately 4% over the schedule proposed for 2003 (not published). Council also asked that the schedule be posted in the public area of the SLSA web site.

Council also alerted the Practice Committee to the fact that it would be expected to take over on-going liaison with ISC whenever the SLSA/ISC LAND Implementation Panel felt that they had completed their mandate.

Public Relations Committee
Council discussed some of the projects the committee could be working on including:

- a semi-annual press release similar to those issued by ALSA;
- review of the levels and allocation of scholarships currently awarded by the SLSA;
- redevelopment of the RPR brochure; and
- identification of a potential presenter at the fall survey camp at the U. of C.

SLSA/ISC Panel on LAND Implementation
The panel was still active with most of their recent efforts focused on the questions of fees and Section 151 plans. However, Council anticipated that the time would soon come when the committee's activity would diminish to the point of ongoing liaison.

CCLS Report
SLSA representative G. D. Craig reported that issues dealt with during the recent meeting included:

- Letters of support for the OAGQ joining the CCLS had been received from all other provincial associations. The decision of the OAGQ was therefore ratified by the CCLS.
- The OAGQ's inclusion in the Association would have some small effect on fees with smaller associations seeing a slightly higher per-member cost and larger associations seeing a slightly lower per-member cost. The overall operating budget of the CCLS would remain about the same or perhaps increase slightly.
- In recognition of the OAGQ's return to the CCLS, it was agreed that the 2004 meeting would be held in conjunction with the OAGQ's annual meeting in May.
- A national forum had been proposed whereby representatives of each of the provincial associations and the ACLS would meet in Winnipeg to consider the "Harmonization of Standards and Processes for Entry to the Surveying Profession". A background document had been prepared and distributed to all land survey associations. Each was being asked to appoint one representative who would be able to speak on behalf of the association and who would have a good background in the current entrance requirements of their board of examiners (eg. WCBELS) and of their association. The meeting has been scheduled for March 7 & 8. To confirm their intentions, the council or executive board of each association was being asked to pass a suitable resolution in support of the initiative. G. D. Craig emphasized that this was not another attempt to create a National Board but was intended to address some of the concerns expressed by the AMLS, common concerns about declining membership, and the requirements of the Mutual Recognition Agreement. He also indicated that the cost of attendance at the meeting would be borne by the CCLS. Council passed a resolution supporting the idea of the Forum and appointed D. L. Gurnsey as SLSA representative.
- Each association is being asked to name a representative to work on a task force formed to study the potential for development and delivery of distance learning opportunities. A questionnaire has been circulated to each association which is to be answered as soon as a representative has been appointed. Council appointed D. A. Bouck as the SLSA representative.

The president acknowledged a motion to adjourn at 1:15 p.m.

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2003/2004 - Meeting #7 – March 19, 2004

The president called the meeting to order at 9:50 a.m. and reported on his attendance at the AGM's of BC and Ontario.

Highlights from the BC meeting included:

- A Practice Advisory program was established about one year ago which is funded through a user-pay arrangement. Members are required to down-load a checklist of items that is then attached to the cover page of all plans they submit. There is a charge for each down-load that is applied to the member's account.

- The new president of CBCLS is Dave Bassett.

- There was a presentation on the BCIT program. A four member panel from CBCLS is preparing a report to CCLS as part of the accreditation process. BCIT will be keeping their existing two year technology program but adding the four year Degree in Geomatics Technology.

- They are working on an expanded profession that would include Technicians and Technologists with a potential career path that would help them make the transition to becoming BCLS's.

- A government task force is looking into problems of accessing records following the closure of some of the Land Titles Offices.

- Both BC and Alberta have established foundations to deal with charitable donations and scholarships. It is a special account that is used for such things as University scholarships and technical school bursaries.

- A motion to adopt a mandatory continuing education program was defeated. Continuing education is one item on the checklist of items that is submitted with plans.

- 2005 will be their 100th anniversary.

- Two new commissions were issued.

Highlights from the Ontario meeting included:

- There are approximately 200 members who are OLIP's and who pay an annual fee of $125

- A motion was passed to provide training to technical staff.

- A motion was passed that required a one-time surcharge to fund a display for use at high school career days and trade shows.

- Their meeting included a number of seminars with members charged $30 each to attend.

- There was a 'break-out' session on the second day. One group, for example, considered ways to attract students into the profession. Much of that discussion centered around posters that could be distributed to high schools in Ontario.

- The new AOLS president is Tom Bunker.

Meeting with Government Agencies

The meeting with government agencies, held on Wednesday March 17, had been as successful as the previous year with more agencies present including ISC, DHT, SIR, and Sask Ag and Food. Some of the issues discussed included:

- The status of a common "First Call" system for the crown utility companies. SaskTel will be joining by the end of March but Sask Power will not be joining in the foreseeable future because of concerns about liability.

- Discussions about proclamation of Section 151 of the Land Surveys Act and how it will impact upon the crown utilities.

- ISC discussed some of their early plans for amending the requirements for Type I and Type II plans.

Resolution Regarding Fees for AGM

Council was presented with historical revenue and expense trends and future expense projections. It was noted that, before future expenses could be estimated, the amounts for council stipends and scholarships, as specified in the bylaws, needed to be re-visited. If those values were adjusted to take into account inflation which has taken place

since they were oritinally set, scholarships would need to be increased by 147% and the amounts for council stipends would need to be increased by 21.5%. While considering the level of scholarships, Council also consider whether the Ian Tweddell Memorial Scholarship would be better utilized if it were re-assigned to students enrolled in Geomatics programs at, for example, the new program at BCIT and the existing program at UNB.

Council also concluded that the level of fees for P. Surv.'s should be revisited. For example, the fee differential between SLS only and combined SLS/P. Surv. tends to discriminate against residents since the majority of SLS only members are non-residents – a concern that has been expressed by some members in the recent past. The level of fees for P. Surv's, currently set at $600, is probably a significant barrier to admitting new members into that category, particularly when the benefits of membership is limited. A reduction in the fee to something similar to that of students and retired members might help to reduce that barrier.

After accounting for inflation, the cost per member for administrative portion of annual expenditures has actually decreased by more that 25% since 1994 and annual fees have decreased by more than 20%. On the other hand, during that same time period, the suggested fee for the survey of a single parcel (which was taken as representative of the fees being charged by members) has increased by nearly 30%. On that basis, an increase in fees would seem reasonable. Projecting forward, the administrative cost savings that have been achieved over the past ten years are not likely to continue. Instead, the cost of rent, the administration agreement, telephone, presidential travel etc are expected in increase at a rate that is at least as great as the rate of inflation. Both the P. R. Committee and the Education Committee budgets were increased significantly in the 2004 budget and are likely to continue increasing at a rate that as at least equal to inflation. All of these factors combined indicate that a fee increase of at least 10% would be appropriate for 2005 with another 10% increase likely to be required by 2010.

Council agreed that resolutions would be placed before the membership at the next annual meeting which would amend the bylaws as follows:

a) increase the degree stream scholarships from $500 to $1250 and the diploma stream scholarships from $250 to $625;

b) reassign the annual Ian Tweddell Memorial Scholarship to students from Saskatchewan who are enrolled in any degree program in Canada that would make them eligible for admission to the SLSA as a land surveyor in training with the criteria for awarding the scholarship to be established by Council after seeking comments from the membership;

c) increase the stipends paid to members of council from $40 to $50 where no travel is involved, from $105 to $125 when travel not exceeding 275 km is involved, and from $155 to $185 when travel exceeding 275 km is involved;

d) reduce the annual fee for persons registered in the category of P. Surv. from $600 to $100;

e) increase the annual fees for SLS's by 20% from $1,100 to $1,320; and

f) eliminate the differential in fees paid by members registered as both SLS and P. Surv. (i.e. There would be a 10% increase in the combined SLS/P. Surv. fee from $1200 to $1320).

Limitation Act and Joint and Several Liability
The president, past-president and executive director attended the discussion forum hosted by APEGS to review the proposals circulated by the Dept. of Justice. While the discussion was informative, it became clear that there was little chance for altering the direction being considered by Justice. The one area that was still 'up in the air' was whether the ultimate limitation period should be ten years or fifteen. Following the meeting, a letter had been submitted to Justice, on behalf of the SLSA, strongly encouraging Justice to adopt a ten year ultimate limitation period. The letter also presented arguments in support of a full review of the Joint and Several Liability provisions of the Contributory Negligence Act.

National Forum on Harmonization of Standards and Processes for Entry to the Surveying Profession
Council deferred discussion of this issue until a full report was available and there had been an opportunity for the SLSA representatives to the WCBE to provide comments.

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In Memoriam

Dr. John Hall Archer B.A., M.A., B.L.S., Ph.D., O.C., S.O.M.

July 11, 1914 April 5, 2004 Passed away peacefully on Monday, April 5, 2004, at the age of 89. He was predeceased by a brother, Charles Hinckley Archer. John is survived by his wife of 64 years, Alice; two children, son, John (Paula), and daughter, Mary (Tony) Walsh; and four grandchildren, Kathryn (Samuele) Ramadori, Elizabeth Archer, Sarah Walsh and Nicholas Walsh; sisters, Kathleen Fafard, Lilian (Ralph) Ferch, Helen Huff, Faith (Bud) Stanley, and Doreen Proctor; brothers, Sam (Elsie) and Richard (Carol); as well as numerous nieces and nephews.

Dr. Archer was born south of Broadview, Saskatchewan, in 1914, and began his career as a rural schoolteacher (1933 1940). He joined the Royal Canadian Artillery in 1940, served with distinction, and obtained final rank as Captain (1945) and was made Honorary Colonel (1973). After the war, Dr. Archer earned a B.A. (1947) and an M.A. (1948) from the University of Saskatchewan. In 1949, he earned a Bachelor of Library Science Degree from McGill University, after which he joined Saskatchewan's Provincial Library Staff (1951 1962). He returned to McGill University as Director of Libraries, a post he held until 1967 when he moved to Queens University as Archivist and Associate Professor of History. He earned his Ph.D. in History while at Queens University. Dr. Archer returned to Saskatchewan in 1970 as Principal of the Regina Campus of the University of Saskatchewan, and in 1974, was appointed the first President of the University of Regina. Dr. Archer was granted a Doctor of Laws (1981), the Order of Canada (1981), and the Saskatchewan Order of Merit (1987). Dr. Archer was a prolific author, respected scholar, and popular public speaker specializing in the area of Western Canadian History. He leaves a rich legacy of scholarship and citizenship. Dr. Archer served on a multitude of Royal Commissions, advisory councils, special projects, boards of directors, and support groups for governments, research organizations, voluntary organizations, the Anglican Church, and community groups across the province. In addition to editing countless volumes for other people, Dr. Archer wrote a large number of books, chapters of books, papers, articles, reports, and scripts.

Dr. Archer was appointed the seventh Honourary Member of the Saskatchewan Land Surveyors' Association on July 21, 1988 and frequently attended annual meetings until limited by declining health.

A FUNERAL SERVICE was held at St. Luke's Anglican Church, 3233 Argyle Rd. on Saturday, April 10, 2004, at 11:30 a.m. with Rev. William Lourens officiating. Family and friends may sign a book of condolences at www.obituariestoday.com. In lieu of flowers, contributions may be made to the Dr. John Archer Scholarship at the University of Regina, c/o University Relations, 3737 Wascana Parkway, Regina, SK S4S 0A2.

GEODETIC
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Attention: GPS Users

The Geomatics for Northern Development Program and the Canadian Geodetic Service are pleased to announce the availability of a new on-line service for GPS users. PPP is an on-line application for GPS data post-processing accessible at:

http://www.geod.nrcan.gc.ca/index_e/products_e/services_e/ppp_e.html

PPP allows GPS users worldwide to submit observation data from a single GPS receiver over the Internet and recover accurate positions. GPS-PPP can yield position estimates with precision comparable to differential GPS (DGPS) without the requirement to access and process data collected simultaneously at a reference station. PPP can process GPS observations collected from single or dual-frequency GPS receivers operating under various user dynamics. Compared to uncorrected point positioning using broadcast GPS orbits, results can be improved by a factor of 2 to 100, depending on user equipment, dynamics and duration of the observing session.

Removing the need to acquire base-station data can result in reduced cost and increased efficiency for GPS positioning. The key to by-passing the differential approach is the use of precise GPS orbit and clock products, which are typically 100 times better than those contained in the GPS broadcast navigation message. Precise orbit and clock products are made possible through international collaboration among various agencies, including NRCan, who participate in the International GPS Service. The IGS also coordinates the operation of GPS tracking stations distributed globally and facilitates access to GPS data and products stored on a central public archive.

PPP provides improved positions in the NAD83 reference frame of the Canadian Spatial Reference System (CSRS) as well as in the International Terrestrial Frame (ITRF). NAD83 (CSRS) is the standard reference frame for positioning in Canada. Connecting to standard national and international reference frames is an important practice that greatly facilitates the integration of geo-referenced data sets and ensures their long-term spatial compatibility at the highest level of precision, enabling the study of Earth processes from local to global scales.

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Professional Conduct Committee
Council appointed R. P. Pattison to the Professional Conduct Committee

Status of Amendment to LSPS Act
All indications are that the amendment to the LSPS Act allowing non-resident members to serve on council would be considered by the legislature at the spring session but not likely in time for the 2004 AGM.

Amendment to Rural Municipalities Act
Department of Highways staff have indicated that the amendment to the Rural Municipalities Act that would resolve the problem of reversion, is not likely to be put through the spring session of the Legislature. Instead, it will probably be held off until a complete re-write and consolidation of the Municipalities and Cities Acts and regulations takes place sometime in the next year or two.

Sask Law Reform Commission - Title Insurance
A notice had been received from the AMLS indicating that the law reform commissions of Manitoba, Saskatchewan and Alberta were cooperating in the review of Title Insurance. When contacted, representatives from the Department of Justice indicated they were aware of the agreement and expected the review to begin within the next few months. Assurance was given that the SLSA was on the list of stake holders who would be contacted for input prior to putting forward recommendations for broader public discussion and consideration.

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Convention Committee - 2004
Registration packages have been printed and distributed and most plans have now been finalized.

Convention Committee - 2005
Following recommendations of the Centennial Projects Committee, history and homecoming were expected to be themes for the meeting with the Bessborough Hotel in Saskatoon being the likely venue.

Education Committee
Council approved a revised listing of PDC values and definitions prepared by the Education Committee

Public Relations Committee
Council reviewed a progress report which included a recommendation for increasing the levels of the various scholarships awarded by the Association and updates on plans to redevelop the RPR brochure, develop a flowchart for steps to becoming an SLS and a poll of the membership to see if there is support for preparing a presentation on GIS to the U. of C. fall survey camp.

Centennial Projects Committee
Committee Chairman J. H. Webb provided an update on activities of the Committee. T. R. Crump has been compiling historical information on Directors of Surveys and the Dept. of Highways; D. Babiuk on the Department of Natural Resources, M. J. Seis on the Land Titles Offices, Surveys Branch; R. J. Eichel on the future of the association; and M. L. Waschuck has been working with the Western Development Museum on the idea of an 1920's style survey office at the WDM in North Battleford.

J. H. Webb continues to research and obtain biographical information on past members but has been disappointed by the lack of input from current members. The 2005 AGM may provide a forum for gathering more of that information.

The idea of a survey history poster, similar to that prepared in Manitoba, is also being considered. The largest project, and the greatest cost, will be the publication of a book on the history of the SLSA which is to be available by 2010.

The president acknowledged a motion to adjourn at 3:10 p.m.

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defense costs over that period, which would be deducted from the limit of liability. This decreases the limit available to pay claims and further defense costs to *$800,000.* Remember, the insurance company's obligation to you ceases once the limit of liability is exhausted either by defense costs or payouts to third parties.

The insurance company in the example above would only be responsible to defend you up to the *$800,000* limit remaining.

Alternatively, defense outside the limit can be more favorable. Some companies may offer defense cost coverage outside the limit up to a certain dollar amount. In other words, the defense costs would carry a separate limit, which would not impact the amount available to pay a claim. Another option (the most favorable treatment) would be defense costs outside the limit of liability. Using the previous example, the $1,000,000 policy with $1,000,000 claim and *$200,000* in defense costs accrued, the limit of liability would remain at $1,000,000 to pay a claim to a third party. Regardless of what is paid by the insurer for defense costs, a defense outside the limit provision will not impact the limit of liability available to pay a claim. The Fireman's Fund program offers this option in its coverage.

Deductibles
Deductibles can apply to defense costs (attorney fees and other court costs). In this case, you will be asked to pay the deductible towards the first dollars of defense in a claim. Some insurance companies will reimburse a portion of your deductible if the claim is settled finding no negligence on your part and when no payment is made to the claimant.

Another option is First Dollar Defense, in which the insurance company pays the first dollars of defense (you would not pay your deductible towards defense costs). If a payment is not made to a third party as a result of a claim against you, then you would not be asked to contribute your deductible at all. This is the most beneficial treatment of the deductible.

PDC Values Approved by SLSA Council For 2004 - 2005 CEP

Part A
[FORMAL EDUCATION OPPORTUNITIES]

(i) Successful completion of any course sponsored or presented by a recognized post secondary education facility.
1 P.D.C. per 8 hrs of class

(ii) Attendance at Association sponsored or recognized seminars or presentations.
1 P.D.C. for every ¼ day segment or 5 P.D.C.'s per day

(iii) Attendance at seminars or presentations sponsored or recognized by any other Land Survey Association.
1 P.D.C. for every ¼ day segment or 5 P.D.C.'s per day

(iv) Teaching or presenting any of the above.
Add 5 P.D.C. to those stated for the activity

(v) Successful completion of examinations for membership in any other provincial Land Survey Association or the Association of Canada Lands Surveyors.
10 P.D.C.'s per exam

(vi) Attendance and successful completion of activities contributing to the member's Professional Development.[1]
1 P.D.C for every ¼ day or portion thereof or 5 P.D.C.'s per day

Part B
[ASSOCIATION INVOLVEMENT and PERSONAL DEVELOPMENT]

(vii) Writing and publishing papers, articles or books relating to surveying.
5 P.D.C.'s per document

(viii) Serving as a member of Council for the Association.
5 P.D.C.'s per year

(ix) Serving as an active member of a Committee of the Association.
5 P.D.C.'s per year

(x) Attendance at the Annual General Meeting or a Special General Meeting of the Association.
5 P.D.C.'s per meeting

(xi) Attendance at Association Regional Meetings.
2 P.D.C.'s per meeting

(xii) Attendance at the Annual General Meeting or a Special General Meeting of any other Land Survey Association.
5 P.D.C.'s per meeting

(xiii) Serving as a member of Council or as an active member of a Committee of any other Land Survey Association.
5 P.D.C.'s per year

(xiv) Participation in activities contributing to the member's Personal Development[2] .
1 P.D.C per activity per year

[1] *'Professional Development' refers to courses, seminars, conferences, workshops or any structured training activity directly contributing to enhancing the member's ability to carry on the profession of land surveying or professional surveying. These activities may include but are not limited to topics such as: Business, Accounting, Administration, Management, Technical Writing, Public Speaking, Software Applications, Programming, Safety, Advanced Surveying or Geomatics Applications.*

[2] *'Personal Development' refers to activities that may not require technical or professional expertise but do contribute to development at a personal level and/or enhance the member's status in the community or overall status of the survey profession within the community. These activities may include but are not limited to: committee or executive positions with church or service groups, coaching sports, fund raising, personal interest courses, part-time military participation.*

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OUR NEWEST TEAM MEMBER: DANIEL RUDE, NORTHERN ALBERTA AND SASKATCHEWAN SALES REPRESENTATIVE

We are pleased to announce our newest team member - Daniel Rude. Daniel will be responsible for sales and support of Leica GPS and Professional Grade Total Stations to Northern Alberta and Saskatchewan. After graduating from the University of Lethbridge with a teaching degree, Daniel spent two years teaching high school math in Vancouver. Dan then moved to Edmonton, completing the Geomatics Engineering Technology program at N.A.I.T. After leaving N.A.I.T. he worked as party chief for an Edmonton surveying firm prior to joining Spatial. **DAN LOOKS FORWARD TO YOUR CALLS AT 780-485-1776.**

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Survey Grade GPS
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Rollie and the Porcupine

By William R. (Bill) Brookes
Reprinted from "Geomatica" Vol. 57 No. 4. 2003

Bill MacLellan's "Blackout" tale in last issue's Survey Humour column brought to mind another story about those who toil in the middle of the night to measure angles with the aid of signal lights. A former colleague, Grant Fraser, related this yarn to me some years ago.

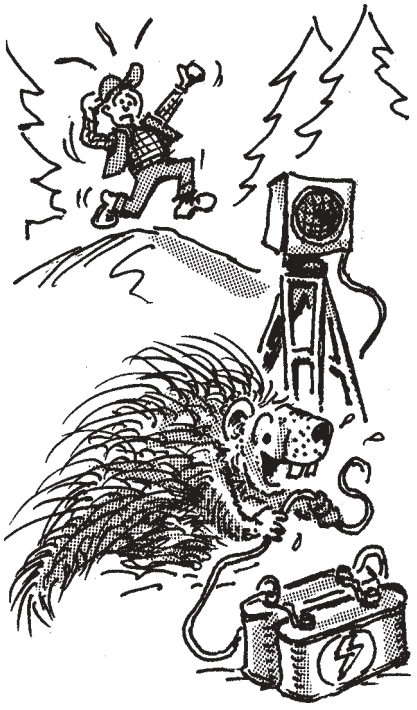
As I recall, Grant was in charge of a party conducting triangulation operations north of Lake Superior in the early 1950's. The network extended across Lake Nipigon and one of the stations was located atop Paupuskeese Mountain, which is located on Shakespeare Island in the southern end of the lake. (The geographical names alone would make a story colourful.)

In measuring the angles of a first-order triangulation system the observations were generally taken at night on lights placed on the surrounding stations. Occasionally the observations were made in the daytime, in which case heliotropes were used to reflect the sun's rays to distant stations and provide the necessary points on which to observe. Light-keepers were commonly employed to set and tend these lights and heliotropes. The electric signal lamps powered by dry-cell batteries were, in certain situations, connected to key-wound automatic timers, which allowed the lamps to be turned on and off at preset times, and could be left to function unattended for up to forty days.

In those days, field people did not have cell phones, and radio transceivers were not all that portable and were a luxury not usually found on most field parties. Light-keepers and surveyors had to be able to communicate in Morse code using the signal lights and heliotropes. (The duties of the light-keeper are detailed thoroughly in a 15-page "Instructions to Lightkeepers" pamphlet published by the Geodetic Survey of Canada in 1956.)

Now during Grant Fraser's survey, the station named PAUP on Shakespeare Island in Lake Nipigon was initially the site of an automatic clock-controlled signal light. Access to the island was by boat and involved a hike of some distance to the station, so it was deemed satisfactory to use an unattended timing device to eliminate repeated trips to and from the island site.

Things went well for a while until one night the signal lamp on the island failed to come on at the scheduled time. The next day, Grant sent two of his crew to the island to investigate the problem, one chap named Rollie and another whose name escapes me now. As chief of party, you are responsible for the safety and well-being of those in your charge, so sending two lightkeepers to such a remote site was the prudent thing to do.



Not knowing what to expect, they carried with them extra signal equipment and camping gear, preparing to stay out on the island if necessary. Unfortunately Rollie and his buddy were late in departing for their station by boat. Darkness fell and lights came on from various adjacent shore stations as the observers prepared for another night of angle turning. But no signal from the island could be seen. Grant waited patiently, albeit with some growing concern.

I can understand Grant's uneasiness. When you are a party chief your crew is an extended family over which you cannot help but worry and fret. I remember on one project realizing that many of the nineteen student assistants in my charge were younger than my own four sons, ...and I was handing them responsibilities that I might hesitate to give my own kids. That was scary!

Finally, after what seemed like a long time there came a series of short and long flashes of light from the island. The boys were signalling. Grant got out a pencil and paper and started to jot down the coded communication. Transcribing the string of dots and dashes to the paper took a bit of time, and then a knot tightened in Grant's stomach as the individual letters gradually took the form of a message: "...R-O-L-L-I-E... K-I-L-L-E-D.. ."

What? No! Grant's mind reeled. Rollie killed! No, it couldn't be! What happened? Was it a drowning accident or had he fallen over a cliff in the dark? There are many ways to die on a field survey and Grant went through the mental inventory of accidents in a split second, just as more dots and dashes followed and more of the message slowly unveiled itself: "...T-H-E...P-O-R-C-U-P-I-N-E.."

Relief swept over Grant as he realized that it was a porcupine, and not Rollie, that was the victim of whatever had occurred on the island.

Betcha Didn't Know This!

Submitted by Ken Kyler, BCLS, Victoria, BC

In the heyday of sailing ships, all war ships and many freighters carried iron cannons. Those cannons fired round iron cannon balls. It was necessary to keep a good supply near the cannon, but they had to find a way to prevent them from rolling about the deck. The best storage method devised was a square based pyramid with one ball on top, resting on four resting on nine which rested on sixteen. Thus, a supply of 30 cannon balls could be stacked in a small area right next to the cannon. There was only one problem ... how to prevent the bottom layer from sliding or rolling from under the others.

The solution was a metal plate called a "Monkey" with 16 round indentations. But, if this plate was made of iron, the iron balls quickly would rust to it. The solution to the rusting problem was to make "Brass Monkeys." Few landlubbers realize that brass contracts much more and much faster than iron when chilled. Consequently, when the temperature dropped too far, the brass indentations would shrink so much that the iron cannon balls would come right off the monkey. Thus, it was quite literally, "Cold enough to freeze the balls off a brass monkey". (And all this time, you thought that was an improper expression, didn't you?)

"Why should someone do business with you ... rather than someone else?" *... because you communicate effectively.*

by Sam Geist

***As seen in The Ontario Land Surveyor, Spring 2000 where it was reprinted with permission from Words* of Mouth**

We communicate constantly - even when we're not communicating. Today's technology forces us to communicate by proxy. That can be good or bad, depending on its result. Voicemail (a.k.a. *"voice jail" by those entrapped)* provides a perfect example. While its function is to save time and make us more productive, it also represents us. It quite blatantly reveals who we are, how conscientious, how well organized. It transmits the clarity of our thoughts, the honesty of our intentions, the dedication of our actions. We reveal ourselves in how user friendly our mail system is, how current our message and how quickly we take finger to keypad to respond. Since voicemail is certain to remain one of our preeminent communicating forces, let it speak to our advantage. Make it a benefit of doing business with us rather than a curse.

Our web site speaks about us to all those wandering in cyberspace. It relates who we are, what we do *(and don't do)* and how well. It is in effect our electronic front window offering passers-by a glimpse of our business environment, our capabilities, our innovative ideas, or our neglected "under construction" appearance and abandoned digital debris. Since Internet communication is burgeoning, let's ensure our presence speaks well of us rather than embarrasses us.

And of course, that long-standing communication device - the telephone - forms a perception of our organization in just six seconds. What impression do we give when we speak on the phone?

Customer Service Management Corp. studied how staff talk to customers on the phone. After placing 5,000 calls, their investigation revealed that 80% of companies called didn't even identify themselves properly. The same percentage did not ask the customer's name or phone number, made little effort to determine what the caller wanted and offered no follow-up suggestions. Not encouraging when our customers' decisions are often determined and certainly always influenced by the people at the other end when effective, accurate communication is so integral to the well-being of our livelihood.

Today more than ever before, if we recognize that "we are" what we communicate, our communication strategies can afford us a competitive advantage - a corporate advantage - a personal differentiating factor - the big reason someone *should do business with us ... rather than someone else.*

Sam Geist is the author of Why Should Someone do Business with You Rather Than Someone Else?. As a businessman, Geist built a 15-store chain of sporting goods stores and then founded a successful marketing company. As North America's most popular marketing speaker, he shows audiences how to reengineer for growth, focus profitably on core businesses, achieve zero customer defections, and realize profitable growth by differentiating their organizations in a crowded marketplace.

Mandatory Continuing Education Adopted For Professional Land Surveyors in New York

Effective January 1, 2004 all licensed professional engineers and land surveyors renewing registration of a license in the state of New York will be required to satisfy mandatory continuing education requirements, according to an article appearing in the January 2004 issue of "The Empire State Surveyor" the newsletter of the New York State Association of Professional Land Surveyors. Under the new requirements, land surveyors will be required to complete 24 contact hours of continuing education in each three year registration period. New members are exempt from this requirement for their first three year period.

Mandatory continuing education has been implemented or is being considered by a number of states and provinces in recent years. A motion to adopt mandatory continuing education was rejected in favour of a checklist requirement at the February annual general meeting of the CBCLS (see Council Highlights - page 30).

Nominating Committee Report

Continued from page 14

C. Wade Pennell for Councillor

Personal
Born June 26th, 1974 in Kamsack, SK
Married Loriane in 1996
Two children, Kiandra (5) and Jake (1)

Education
Graduated from Kamsack Comprehensive Institute 1992
Graduated from University of Calgary, Geomatics Engineering, 1997

Work
Starting working with Can-Am in 1996 as a summer student. After graduating from University, Loriane and I moved to Swift Current to work with Can-Am. Articled to Ed Twarowski in 1997, and recieved commission #283 in 2002. Currently Vice President of Can-Am Geomatics Sask. Corp.

Dale Rosnes for Councillor

Professional Affiliations
Articled to Chris Everett in 1990, and James Condon in 1993, obtained SLSA commission # 277 July 02, 1996. Currently serving as a Public Relation committee member. Auditor of financial statements 1997.

Work History
Currently in private practice with Midwest Surveys Ltd. as Project Manager.
8 years of public service with Information Services Corporation.
18 years of private practice with several survey firms.

Educational Background
Elementary School in Ottawa, Ontario, and Moose Jaw, Saskatchewan.
1978 - Diploma in Survey Engineering at Saskatchewan Technical Institute.
1992 - B. Sc. in Survey Engineering at University of Calgary.

Personal
Born July 28, 1956 in Medicine Hat, Alberta.
Enjoys hunting for deer, and continuing with Tai Chi classes.
Resides in Maple Creek with Halia Sushko and two Airedale Terrier dogs.

Community Involvement
Lifetime member of Canadian Hard of Hearing Association, and former President of the Regina Branch. Former board member with Saskatchewan Deaf and Hard of Hearing Services. Five year member of City of Regina Education Subcommittee, a subcommittee of the Advisory Committee on Access.

'Missing' Surveyors

The Centennial Projects Committee would like your help in locating the following former members of the Saskatchewan Land Surveyors' Association. The committee would like to invite them to the "Home Coming" being planned for the 2005 Annual General Meeting and/or obtain current biographical information for the 2010 book on the history of the SLSA and its members. Please pass along any information you have to the SLSA office.

Comm. #/Year	Name	Comm. #/Year	Name
092/1948	Daniels, Ray Perci Levi	158/1959	Cherwonick, Steven
110/1952	Manning, Thomas Joseph	161/1960	Andres, John Wesley
130/1955	Sikal, John Derick	176/1963	Mitchell, James Winston
135/1955	Klassen, John	179/1965	Beerling, Donald Brien
147/1958	Bright, Walter E.	190/1967	Swerp, Frederick Edward
151/1959	Meneley, Daniel Allison	200/1968	Goltz, John Francis
154/1959	McDonald, Robert Gordon	211/1972	Iwaschuk, William J.
155/1959	Neumann, Hans F. H.	237/1981	Karsan, Akbarali
157/1959	Alter, Horst E.	240/1982	Konrad, Derrick Paul

Looking Ahead...

2004

April

			1	2	3	
4	5	6	7	8	9 Good Friday	10
11 Easter Sunday	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

ALSA Annual Meeting Jasper, AB

May

						1
2	3	4	5	6	7	8
9 Mother's Day	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

SLSA Annual Meeting Regina, SK

FIG XXVII Working Week and General Assembly, Athens, Greece

June

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20 Father's Day	21	22	23	24	25 Deadline for Newsletter Submissions	26
27	28	29	30			

July

				1 Canada Day	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

August

1	2 Saskatchewan Day	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

September

			1	2	3	4
5	6 Labour Day	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24 Deadline for Newsletter Submissions	25
26	27	28	29	30		

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