SLSA Corner Post

Summer 2008
Volume XXIX - Number 2

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Professionalism & Self Regulation
+
Highlights from the 2008 AGM

Quarterly Newsletter of the Saskatchewan Land Surveyors' Association

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In this Issue

In This Issue

Regular Features

Cover Story

2007-2008 was a banner year for new Saskatchewan Land Surveyors. The 2008 AGM saw five new commissions presented. A sixth (commission #296) was awarded to Regan Rayner of North Battleford, SK but he was unable to attend the meeting.

In the cover photo for this edition, the five newly commissioned members are 'bracketed' by Life Members Jim Condon - commission #181 (on the left) and Jack Webb - commission #96 (on the right).

From left to right, the new Saskatchewan Land Surveyors are:

- Daniel Cook — Commission #298
- Ryan Maloney — Commission #295
- Travis Wolfe — Commission #294
- Malcolm Vanstone — Commission #297
- Jill Burridge (née Cheverie) — Commission #293

Six is the largest number of commissions issued in one year since 1985-1986.

President's Message

Ravi B. Shrivastava
SLS, P. Surv., CLS, P. Eng.
President

Upcoming Events

Sept. 3 - 5	AMLS AGM Winnipeg, MB
Sept. 6 - 8	CCLS AGM Winnipeg, MB
Nov. 6 - 8	ANSLS AGM Halifax, NS
Jan. 22 - 24	ANBLS AGM (t.b.a.), NB
Feb. 18 - 20	AOLS AGM Toronto, ON
Feb. 26 - 27	ABCLS AGM Vancouver, BC
Apr. 23 - 25	ALSA AGM Banff, AB
May 27 - 29	ACLS AGM Canmore, AB
Jun. 11 - 13	SLSA AGM Waskesiu, SK

I appreciate the confidence that you have bestowed upon me in electing me as president. Thank you for giving me this opportunity. It will be an honour and privilege to serve with utmost sincerity, dedication and to the best of my ability to meet your expectations. Thank you for this opportunity.

This is my fourth year with the council and during this period I have worked with several dedicated professionals. I also would like to thank the outgoing members of council, and welcome those who have just joined us. I also take this opportunity to congratulate the newly commissioned surveyors and call upon their increased participation in the business of our association. It is a great place to learn and contribute.

Our 98th annual general meeting was held at Cypress Hills Provincial Park located at the highest elevation between the Rocky Mountains and Labrador. It was a well organized and equally well attended event. I am certain that in addition to business, you could play and relax in the striking park that honours its heritage by disregarding the Saskatchewan-Alberta boundary it spans. Cypress Hills Interprovincial Park is the first and only interprovincial park in Canada.

During the AGM, "harmonization" was the one word that dominated the presidents' forum. Having all sister land survey associations on board, seamless professional mobility is now a possibility under the provisions of the Mutual Recognition Agreement. As well, there has been a convergence towards a common core syllabus, and the establishment of a truly national board of examiner seems not only possible but likely. The success of these developments, coupled with the opportunity and challenges common to all land survey associations in Canada, has fostered the need for strong national leadership. Precisely what form that leadership will take is the subject of the "Future of the Profession" initiative being coordinated by the CCLS.

This year we expect to see the completion of the "Surveyor in a Crate" project and we plan to carry on lobbying for clarification of riparian rights in Saskatchewan. It is unfortunate that we lost Neil Nicholson who brought the riparian rights issue to the 96th Annual General Meeting at Manitou. Neil was passionate about ambulatory boundaries and property rights. He was also able to bring a great deal of history and background to the discussion and was a great source of inspiration. He will be greatly missed.

In the coming year, my wife Namrata and I look forward to travelling across the country attending the annual general meetings of our sister associations. The first will be at Winnipeg, Manitoba for the AMLS AGM on September 3rd to 5th. That will be followed by the CCLS working group on the future of the profession on September 6th.

During the busy time of a booming economy, I hope you will manage some time off work to enjoy with your family and friends. I wish you all a safe and rejuvenating summer.

Cheers!

Outgoing president Dale Rosnes (left) watches as Ravi Shrivastava swears the oath of office of president at the 2008 AGM

Council Highlights

Carl Shiels, M. Sc., P. Eng.
Executive Director

2007/2008 - Meeting #07

- The president reported on his attendance at the AGM's of the ALSA (April 24 – 26) and ACLS (May 5 – 8). Notable issues at the ALSA AGM included:
  - The mutual recognition agreement under TILMA will go into effect on January 1, 2009. Under the terms of the agreement, a candidate who holds a commission in the one of the provincial associations need only pass a three hour exam in order to be eligible for membership in the other association.
  - An MOU was signed between the ALSA and the Alberta Society of Surveying and Mapping Technologies (ASSMT) which provides for mutual recognition of the status of members of each other's associations.
- Notable issues at the ACLS AGM included:
  - The meeting was held in conjunction with the Canadian Hydrography Association (CHA).
  - The ACLS expressed strong support for the Future of the Profession Initiative proposed by CCLS by voting to contribute $100,000 to the project.

CCLS Report

- The top three priorities for the CCLS in recent months have been:
  - The Future of the Profession Initiative. Presentations have been made to all association councils and to the general membership of some associations at their annual general meetings. The next step in the initiative will be a workshop and development of a business plan in Manitoba in September 2008 (following the AMLS AGM).
  - Career awareness. This involved a one-stop-shopping approach for students and others who may be interested in careers in surveying by providing on-line information about how one becomes a professional land surveyor in Canada.
  - Harmonization. In particular, efforts have been made to establish a common syllabus for use by all boards of examiners and academic institutions in Canada. This resulted in a revised syllabus which, if approved by all associations, would consist of a core of eleven subject credits and four elective credits with each candidate having to obtain two of the four electives in order to receive a certificate of completion.

Riparian Rights Task Force

- At a preliminary meeting held on April 1 it was agreed at that a well documented report would be prepared for presentation to the provincial government. Tasks associated with preparing the report were allocated to various committee members. It had been hoped that the first draft of the report would be completed by September 15, 2008. In light of the untimely death of committee member Neil Nicholson, some of the tasks will need to be re-assigned. It was also agreed that the Saskatchewan Law Society should be contacted to see if their members would have any interest in the issue.

David Thompson Brigade

- Council approved a $1,000 donation from the Survey Promotion and Education Fund to help support of the team of Alberta Land Surveyors participating in the David Thompson Brigade retracing one of Thompson's canoe routes across western Canada.

Future of the Profession Initiative

- An update was received on the CCLS initiative investigating the formation of a new national survey association that will better assure the future of the survey professions in Canada. A workshop is planned for September 2008 (immediately following the AMLS AGM) at which both G. D. Craig and R. B. Shrivastava will represent the SLSA.

Resignation of Public Member

- Council reluctantly acknowledged the letter of resignation of Lloyd Gillies as public member on Council. The letter was to be forwarded to the Minister along with a recommendation for the appointment of a new public member by the Lieutenant Governor in Council.

CCLS Core Syllabus and Electives

- A new syllabus has been prepared by the CCLS and is being considered for adoption by the Canadian Board of Examiners for Professional Surveyors (CBEPS). The revised syllabus would still require completion of thirteen credit courses but of those eleven would be core subjects and two would be electives drawn from a selection of four. The intent of the revised syllabus is to maintain university degree equivalency in the number of credits required but provide some options for students interested in additional study in areas of specialized interest. A decision on the revised syllabus was deferred until after the AGM during which a presentation would be made, followed by a general discussion.

Applications for Commissions

- All six students who wrote their professional exams in April passed the exams and their orals. All but one of the candidates had also had their practical survey projects and reports accepted by the Board of Examiners. Those five had all submitted applications for their commissions.
  - SLS Commission #294 was granted to Travis G. Wolfe of Swift Current, SK
  - SLS Commission #295 was granted to Ryan P. Maloney of Weyburn, SK
  - SLS Commission #296 was granted to Regan W. Rayner of North Battleford, SK
  - SLS Commission #297 was granted to Malcolm M. Vanstone of Regina, SK
  - SLS Commission #298 was granted to Daniel S. E. Cook of Saskatoon, SK

New Candidates Under the MRA

- Troy Motz of Calgary, AB (N. S. Whitley, SLS supervisor) was admitted as an SLSIT under the MRA.

New Student Land Surveyors

- Daniel Codling (R. J. Morrison, SLS supervisor) and Wade E. Phair (R. J. Eichel, SLS supervisor) were admitted as Student Land Surveyors.

New Land Surveyor in Training

- C. Bourrassa of Saskatoon, SK (W. J. Peters, SLS supervisor) was admitted as an SLSIT.

Criteria for Admission as P. Surv.

- A specialist in Photogrammetry, who has a certificate in Geomatics Technology and many years of experience in the field but who does not have a Baccalaureate Degree, had inquired about whether he would be eligible for membership in the SLSA as a Professional Surveyor. Following a careful review of subsection 19(5) of the Land Surveyors and Professional Surveyors Act it was concluded that the Act does not provide discretionary authority for Council to consider applicants who do not have a Baccalaureate degree when applying for registration as a Professional Surveyor. The Admissions Board for Professional Surveyors will be asked to review the provisions in the Act and prepare a recommendation on whether the Act should be amended to include a provision for non-degree applicants similar to subsection 19(3) clause (b) of the Act regarding to the academic requirements of Saskatchewan Land Surveyors in Training.

Convention Committee

- Because of a conflict with the ACLS AGM in 2009, the SLSA AGM will be scheduled for June 11th, 12th & 13th.
- The incoming vice-president will be expected to work very closely with all standing committee chairmen to plan the events for the 2010 centennial anniversary meeting.

Education Committee

- Committee Chairman J. H. McLeod explained that the practical experience reports of seven, randomly selected members were reviewed in February and that all had met or exceeded the minimum number of PDC's required in the 2006 -2007 Continuing Education Period. All of those who were audited received a letter confirming the audit and the results. One member received advice on activities for which an excessive number of credits had been claimed.
- Dr. Brian Ballantyne would be providing a full day seminar related to survey law on Thursday, May 30, 2008.

2008/2009 - Meeting #01

CBEPS Adoption of Revised CCLS Syllabus

- Council confirmed their support for the adoption, by the Canadian Board of Examiners for Professional Surveyors (CBEPS), of the revised CCLS Core Curriculum plus any two of four electives as the requirements for CBEPS Certificate of Completion. The resolution also included strong condemnation of any signatory to the Mutual Recognition Agreement on Labour Mobility that refuses to accept a CBEPS Certificate of Completion without the applicant having taken specific electives.

Resolution from the 2008 AGM

- A resolution was passed at the 2008 AGM instructing Council to investigate the feasibility and cost of having a survey law in Saskatchewan publication prepared in time for distribution during the 2010 Centennial Anniversary. A prospective author would be invited to submit a proposal.

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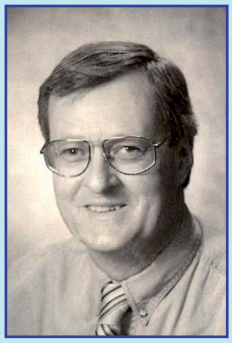
Councillor's Corner



Jack Redding
SLS, P. Surv.
Councillor, Year 1

The Survey Nail and the "Reluctant" Starter

As Jack Webb would say "give us stories, stories, stories". I have tried to think of some interesting or unusual survey circumstances; however, the majority of the situations deal more with the business of surveying than with actual survey projects. For example, the work vehicle has supplied a number of unusual circumstances.

My first legal survey job was with George Bennett in Regina in 1972. Day one, I was presented with the keys to what was probably the former family car, i.e. a late mode Plymouth station wagon. As I was leaving the office the senior party chief added "oh by the way, occasionally the starter doesn't cut in." He went on to explain that the procedure to follow when that happened was to turn on the ignition, pop the hood, lay one of the large survey nails across the posts on the starter, and you would soon be mobile.

My first opportunity to try the above procedure occurred probably within the first week.

One thing about vehicles from the 1960's, you don't have that much under the hood; just the basic engine, starter, battery and fan. The starter was easy to find, the posts visible and accessible. Allowing ample clearance from the fan and expecting a possible electric shock, I placed the nail across the posts and, to my great surprise, the car started.

By the way, if you try this, the nail tends to stick to the posts, either due to electric current or magnetism, so be prepared for a good hard pull.

Well, "occasionally" became "fairly often" and then "almost always."

I decided the starter definitely needed replaced one morning when, after following the procedure adjacent to Victoria Park, I looked up to find two elderly ladies watching me. The expressions on their faces left no doubt that they were witnessing a car theft in progress.

We arranged to drop the car off at a local service station with instructions to replace the starter, but were somewhat surprised to receive a phone call later in the day from the garage. Apparently they couldn't start the vehicle in order to get it into the service bay. We explained the required procedure and picked the car up, complete with a working starter, later that day.

A total of 22 past-presidents were 'up' for the 2008 Past-presidents' Breakfast.
From left to right:
Standing - Max Putnam, Tom Webb, Guy Craig, Dale Rosnes, Jack Webb, Larry McLeod, Jim Clarke, Wes Jamieson, Jim Condon, Don Franko
Seated - Peter Unger, Wilf Peters, Wayne Stockton, Merv Zulynik, Gord Webster, Pat Maloney
Front Row - Bob Webster, Bill Soroski, Murray Marien, Mike Waschuk, Ed Desnoyers, Dave Gurnsey

WHO ARE WE ?

By J. H. (Jack) Webb, SLS (LM)

Hopefully, we are the Professional Land Surveyors who work diligently every day to maintain the legal survey system in our Saskatchewan society.

But before we give ourselves a blue ribbon, maybe we should reflect on the past and determine how and why the public should endure our self-appointed status.

Looking back through the early days of our western existence we note that federal governments, prior to 1905, determined how our profession would be formulated.

Without the determination of some very dedicated Dominion Land Surveyors, who wanted provincial status, our profession might still be controlled by various agencies in Ottawa. To those Dominion Land Surveyors, a belated thanks.

There are many quotations and sayings about surveying that have been passed down in our profession over the years, by various writers; quotations such as:

> *"The security of individual land titles boundaries has always been foremost in the life of a land surveyor."*

> *"The study of land surveying in the early days consisted of not only a 'one on one' field experience but examinations in 'arithmetic, algebra, the first four books of Euclid, plane trigonometry and the use of logarithms' ".*

There is no doubt we have improved on the book learning but there appears to be a lack of field learning in cadastral surveying.

The trend today, in most quarters, is to have well trained party chiefs do the fieldwork. However, it is still the registered land surveyor who must accept all of the responsibility.

It was in the 1980's that we saw the "Digital Age" taking hold in land surveying. This is clearly a factor in how we practice today.

In my opinion - and I don't think I am alone on this point - changes in technology and the economic growth in the past twenty-five years have substantially increased the number of survey projects, of all types, undertaken by our members.

Changes in the work habits of most land surveyors has meant reducing the amount of time we spend in the field. We are still professionals but in a different form.

All types of technologists from real estate agents to sanitary workers have overworked the word "Professional". We in the land surveying profession should remember that just because we have a few letters after our names does not necessarily make us "Professional."

Quoting from Surveyor General Richard Hargrave of British Columbia:

> *"Surveyors must remain steadfast in being ethical and non-judgmental in maintaining the Cadastre. We're really working for the land - that's the thing."*

So who are we?

As registered professional land surveyors we must maintain a professionalism that is never in dispute and we must never transgress from our duty to the public.

This may sometimes be a difficult priority to maintain but it is the only way to be true professionals.

Remembering Neil Nicholson, SLS (Life Member)

By. A. Carl Shiels, Executive Director

Neil in 1964

Leonard "Neil" Nicholson was born on April 19, 1929 – six months before the infamous crash of the New York Stock Exchange. As a result, his earliest years were lived during the depression of the 1930's, an era that left indelible marks on all who lived through it. In Neil's case, it probably contributed to his strong work ethic and his do-it-yourself approach to everything from repairing survey equipment to - in his retirement years - baking his own bread in a home-built clay oven.

Neil's registered place of birth was SW-13-30-13-W2 near the tiny village of Leslie Station (shortened to Leslie in 1962) on the CN rail line between Elfros and Foam Lake. Although that area was developed predominantly by Scandinavian settlers with names such as Helgason, Sigurdson, Stephanson and Tarfason, the Nicholson family roots were actually the British Isles. Neil's parents, Walter and Doris Nicholson, came to Saskatchewan from England.

Neil attended Mount Hecla School – one of hundreds of tiny one-room rural school houses that dotted the countryside before farms became larger and travel to schools in nearby towns became the norm. For his grade XI, Neil attended one of those 'larger' schools in the village of Leslie but subsequently moved to Regina where he took his grade XII by correspondence. For the next few years, Neil worked on the family farm during the summer and went diamond drilling near Flin Flon, Saskatchewan during the winter.

In May of 1956 – at the age of 27 – Neil signed his *Articles of Pupil to Saskatchewan Land Surveyor* with Harold Barling Smith, SLS #123, who was also a Nova Scotia land surveyor, employed by the Saskatchewan Department of Agriculture. Soon after signing his articles, both Neil and his mentor joined the firm of *Kent Phillips & Associates Ltd.* in Saskatoon. Over time, the firm evolved to *Phillips, George, Nicholson & Associates* and more recently, *George, Nicholson, Franko & Associates.*

By May 2, 1960, Neil had passed his professional exams and was granted SLS Commission #163.

Neil in 1997

Until his retirement in 1992, Neil was active in both the business and the profession of land surveying. He served on several SLSA committees including the Disciplinary Committee (1964 - 1967), the University Coordinating Committee (chairman 1975 & 1976) and the Complaints Committee (chairman 1987 & 1988). He was a member of the SLSA council from 1966 to 1968 and again during his presidential cycle from 1972 to 1975. He also worked on the Manitoba-Saskatchewan Boundary Commission from 1971 to 1972 and was one of the participants in the development of the digital mapping and cadastral database for the province of Saskatchewan.

Throughout his career as a Saskatchewan land surveyor, Neil served as mentor to two young men who went on to obtain their commissions; Rob Hillier who was granted commission #249 in 1983, and Murray Marien who was granted commission #260 in 1985.

In 1998, fellow members of the SLSA voted to elevate Neil to the status of Life Member; the thirty-third member to be honoured with that designation.

Neil's great love of the outdoors prompted him to become active with the Saskatchewan Archeology Society, the Royal Canadian Geography Society, the Canadian Nature Federation, the Saskatchewan Natural History Society and the Saskatchewan Wildlife Federation. He was also a member of the Big Brothers Association.

Neil was married to Velma Potts with whom he had four children; Christopher "Mark", "Wanda" Charlene, Norah "Wynne" and Andrew "Ross". Sadly, Velma passed away in February of 1999 following an extended period of medical challenges. Some years later, Nora Doyle became Neil's second wife.

Neil had four grandchildren, Olver and Celeste (Mark) Nicholson and Rina and Joshua (Wanda) Veltkamp.

Neil was admitted to hospital in Saskatoon, on April 22, 2008, for what was expected to be routine knee replacement surgery but he died suddenly on May 9 as a result of heart failure.

When talking about Neil as a professional land surveyor, the common theme from those closest to him was Neil's hard work, conscientiousness and dedication to the integrity of the survey system. "We certainly learned how to use a shovel when working with Neil" said business partner Don Franko. "I recall digging a lot of 'graves' looking for survey evidence" he noted wryly. "He was also quick to adopt innovation" added Don. "This was evident in both the office setting and in Neil' participation in the development of the provincial cadastral database" he said.

Rob Hillier - Neil's first articled student - summed up Neil with one word "consistent." "He also had great empathy for land owners' rights and listened carefully to their concerns. But, by the same token, he did not suffer fools lightly" added Rob.

"Neil was a pretty tough to work for" recalled Murray Marien of his days as a student with Neil. "He expected you to work very hard and he questioned everything you did. But once you had proven yourself to him, he became your staunchest ally" said Murray. (For more thoughts from Murray Marien, see "*A Student's Tribute to Neil*" on the following page.)

Neil's daughter Wynne recalls that growing up as the child of a Saskatchewan Land Surveyor had its good and bad aspects. The extended periods of absence are common recollections for the children of surveyors and Wynne's experience was no exception. "However this was more than offset by the wonderful experiences we shared out doors as a family - often camping and picnicking all across Saskatchewan" she adds. "We spent so much time travelling and camping that one of our cousins referred to dad as 'the explorer of the prairies' " she said.

Less well recognized by most of the survey community were Neil's great gifts as a singer, musician, artist and photographer. "Those artistic talents have been passed down, in various forms, to all of his children" says Wynne proudly. Wynne's particular talent is as a writer, a passion she ascribes to her father's great love of books.

Neil would not have considered his work as a Saskatchewan Land Surveyor complete at the time of his death. In the spring of 2007, Neil expressed his concern, both in writing to the SLSA Council and in the form of a resolution at the 2007 Annual General Meeting, about the policy of the province of Saskatchewan in denying the rights of riparian land owners who should gain land through the natural process of accretion. Details of Neil's concerns, along with various background documents, were published in the Summer, 2007 edition of SLSA Corner Post. As a result of Neil's initiative, an ad hoc SLSA committee was formed to research the matter further and to develop a position paper for presentation to the province. Neil enthusiastically agreed to participate on the committee in the hope that it would influence the government to restore the principals of riparian rights to Saskatchewan land owners - rights that are recognized by most other provincial governments as well as the government of Canada. Perhaps Neil's final legacy will be the eventual success of that initiative.

Highlights from 2007 - 2008

- R. Dale Rosnes was president.
- A resolution at the 2007 AGM, prompted the association to begin lobbying the province for clarification of the law regarding riparian property rights.
- Jill Cheverie became the first woman to receive a commission as a Saskatchewan Land Surveyor
- D. L. Gurnsey stepped down as chairman of the Board of Examiners for SLS. The position was reassigned to E. J. Desnoyers.
- The number of members on the Board of Examiners for SLS was increased from six to eleven.
- Significant changes were made in the Rules and Syllabus for Professional Examinations.
- The SLSA Council established the "Survey Promotion and Education Fund" for the retention and allocation of money from the sale of survey monuments.
- Ed Willett was contracted to write of a book on the history of the SLSA, to be published in time for the 2010 centennial anniversary of the association.
- Lloyd Gillies resigned as public member on the SLSA Council.
- Six new commissions were granted - the largest number since 1986.
- The 2008 AGM was held in Cypress Hills Interprovincial Park.

A Student's Tribute to Neil

By Murray Marien, SLS, P. Surv.

When asked if he had a few thoughts to share about Neil Nicholson, Murray Marien passed along the text of comments he prepared for the 1998 Annual General Meeting when Neil was nominated for life membership. Unfortunately, Murray was unable to attend that meeting so his words were delivered by Neil's business partner Don Franko.

As many of you know, a special relationship exists between a student and his mentor. There are a lot of details that only pass between the two of them.

Not everyone fits the mentor's image of an acceptable student. When Rob (Hillier) and I showed up at Neil's doorstep, he had been looking for some time for someone with promise and his wits about him, to pass on his wealth of knowledge. So when no one was forthcoming, Neil apparently concluded that a couple of half wits would have to do.

Although I didn't spend a lot of time in the field with Neil, his presence was always there. One of the first summers I spent in the field was surveying grid roads. After the initial thrill of looking through the instrument and reading a few angles, I soon realized that the best part of surveying is 'the discovery' - finding a monument or evidence that hadn't been visited for a few decades. Unfortunately, for my first few years, there were few such discoveries. I cursed my mentor at every monument for having already scouted the job uncovering any evidence that I would need. It took a tremendous amount of effort to find something that I thought he may have missed. On those occasions when Neil did join us, he made us dig at every corner, even when my inexperienced eye 'knew' that nothing could possibly be found. The value of those lessons learned became obvious in later years. Anyone can find monuments on the surface. What my mentor taught me was to find the ones that aren't so obvious.

Even today, I can still pick up a few pointers from Neil. Just last year we drove out to a project where I was sure I had uncovered something that he had missed twenty years prior, only to return and correct my plan. Again the question was not whether I found a monument, but whether I found the original monument and was it still in the proper place. I still get fooled with that rule once in a while and Neil still takes the time to set me straight.

Although Neil may not always have had the time to spend with me personally, for one summer he sent along the next best thing. His son Mark had sixteen or seventeen years of exposure to Neil's healthy respect for nature and happily shared what his father had taught him. There wasn't a lot of flora or fauna that didn't have a Latin name and a distinct character. Although I was from the farm and thought I knew something, I was treated to ground owls, swamp pumps, flying squirrels and tiger lilies; something you take for granted until someone takes the time to point them out to you.

For those of you that know Rob and I, you will also know that some of our work habits are a bit peculiar. These are often habits picked up from our time under the watchful eye of our mentor. Rob in particular seems to get along just fine without any assistance in the field. I can remember a time when Neil sent Buck (Lafonde) and I out with Rob to survey grid roads for a few weeks. I had never seen a shovel before and Rob thought that if it wasn't paved, you couldn't call it a road. Buck had a lot of heart, but he just didn't have a lot of patience with the likes of us. Talk about three loose canons together in a confined space. It was shortly after that experience that Rob started to prefer the solitary crew, although I would like to believe that it was because Rob just hasn't been able to replace our talent.

Neil did instill a deep respect for the survey fabric and the historical significance of all those that came before us to mark boundaries on this vast prairie. So much so that most of my time is spent admiring the system, with little time left to make a dollar from it.

Perhaps, in the end, Neil didn't do such a bad job, considering what he had to work with. And you never know, maybe a couple of nit wits will stumble onto my doorstep and I can make them dig holes until they become surveyors.

Congratulations Neil. Not only have you fulfilled the written requirements of a Life Member, but you've earned such respect from your peers that they willingly place you in this special category, above all the rest. That is an honour few of us will achieve.

Self Regulated Professions
Balancing Competition and Regulation

By The Competition Bureau of Canada

Reprinted from "ALS News" March 2008

Executive Summary

Despite comprising a significant part of the service economy in Canada, perhaps as much as one fifth, the professions comprise one of the overall economy's least productive sectors. According to the Conference Board of Canada, professional services rate in the bottom quintile for productivity per hours worked. In addition, labour productivity in the professions in Canada is approximately half that of the professions in the United States. At the same time, the professions are one of the most regulated sectors of the Canadian economy, and the regulation in place in the professions is more restrictive in Canada than in many member nations of the Organization for Economic Co-operation and Development.

Given a considerable body of evidence that shows that reducing regulation improves competition and, as a result, productivity, it is reasonable to ask whether and how professional services could be less regulated in Canada. The Competition Bureau is ideally placed to answer this question, since one of its primary responsibilities is advocating for competition in Canada. On several occasions, the Bureau has advised Canadian regulatory bodies on how to improve their approach to regulation to realize the benefits of competition. The Bureau also has considerable experience investigating anti-competitive behaviour in the professional services sector.

The five groups of professionals—accountants, lawyers, optometrists, pharmacists and real estate agents—the Bureau chose for this study of the self-regulated professions in Canada are vital to the Canadian economy and are of great importance to Canadians in their daily lives. Access to advanced, innovative and competitive professional services is essential for individual Canadians as well as businesses. These professions affect the cost of many other services as well as most goods, including the most basic consumer goods.

These professions are also self-regulated, meaning that they have been given some powers that normally only governments hold. The organizations given self-regulating powers may therefore put in place restrictions that have the force of law. At the same time, these organizations have potentially conflicting concerns and interests—their own and those of the public. This is all the more reason to ensure that competition, from which both professionals and consumers benefit, is protected. The Bureau selected these particular groups of professionals based on their volume of commerce as well as on the volume of complaints about anti-competitive behaviour in these professions it received, both from the public and from within the professions themselves, which gave it good reason to believe that existing regulation might be restricting competition excessively. However, the Bureau's findings are transferable to other professions, since it is reasonable to expect the type of regulation found in these professions generally exists in others.

Competition and Regulation

Competition is generally the best means of ensuring that consumers have access to the broadest range of services at the most competitive prices and that producers have the maximum incentive to reduce their costs as much as possible and meet consumer demand. However, professional services markets are characterized by particular qualities that can justify some form of regulation to protect consumers and ensure service quality. At the same time, there are compelling economic arguments that regulation can have the effect of severely limiting competition, thus preventing consumers from benefiting from the many advantages of a competitive environment.

The Bureau does, however, advocate that to be effective, regulatory decisions must be fully informed, keeping in mind the many direct and indirect impacts they may have on consumers through reduced competition.

The Competition Bureau does not argue blindly for competition at the expense of all other policy objectives, since there may be legitimate public interests other than the efficient allocation of resources at issue. The Bureau does, however, advocate that to be effective, regulatory decisions must be fully informed, keeping in mind the many direct and indirect impacts they may have on consumers through reduced competition. Regulation that is excessive or restricts competition more than an equally effective alternative comes at great cost and should be removed or modified.

This is an important message for all professions. Regulators—comprising provincial and territorial governments, and self-regulating organizations—must evaluate regulatory decisions through a balanced, evidence-based assessment, taking into account the numerous channels through which regulation can be beneficial or harmful to consumers of professional services. To this end, the governance structure of each profession must ensure broad representation. It is the Bureau's hope that this study will increase awareness of the competitive impact of regulation in professional services and motivate an expansive deliberation among regulators of the effects—favourable and not—of regulation.

Findings and Recommendations

This study is the Bureau's first effort to identify potentially unnecessary and anti-competitive restrictions that exist in a representative group of self-regulated professions and that may well be present in other professions. (The specific examples below are just that, examples to illustrate the Bureau's findings. Chapters 3-7 contain all the recommendations.) The Bureau's recommendations are not based on findings of wrongdoing; rather, they reflect opportunities the Bureau believes regulators should seize.

Restrictions on Entering the Profession

Most professions maintain substantial entry qualifications, coupled with continuing education requirements. The Bureau found that these qualifications are, in some instances, noticeably uneven across the country.

In general, the Bureau supports the need for entry requirements to assure quality in the provision of professional services. However, any proposed increase to required entry qualifications should be justified as being the minimum that will reasonably ensure consumer protection. Furthermore, jurisdictions that maintain higher standards than others should look to the outcomes of less regulated jurisdictions when defining the minimum necessary level of qualification.

The Bureau was interested to find that the authority to accredit all Doctor of Optometry programs in Canada and the United States rests with the US-based Accreditation Council on Optometric Education, which almost entirely comprises members of the American Optometric Association. The Bureau is of the view that there is a risk that the Council's accreditation policies are formed and evolve based on conditions of supply and demand in the US and do not necessarily reflect conditions in Canada. As a result, provincial and territorial colleges of optometry should consider ways to ensure that the Council takes conditions of supply and demand in Canada into account when developing accreditation policies.

The Bureau also reviewed empirical studies on the effect of market entry restrictions on the price and quality of professional services. Generally, the studies found that the incomes of members of professions with restrictions on entry are higher than the incomes of comparable professionals who do not face restrictions. The effect on quality is unclear.

Restrictions on Mobility

Generally, the professions are moving in the right direction with respect to interprovincial and international mobility. In each profession, the majority of provinces have signed a mutual recognition agreement to remove unnecessary barriers to mobility of qualified professionals and to establish the conditions under which professionals registered or licensed in one jurisdiction may have their qualifications recognized in another. Further work can be done to get all Canadian jurisdictions on board and to develop strong dispute-handling mechanisms and consistent implementation of these agreements.

Most professions use various mechanisms to assess the qualification of foreign professionals wishing to have their credentials recognized in Canada. Many of these mechanisms take the form of national organizations that assess basic educational or professional qualifications on behalf of the provinces and territories. However, the pharmacy profession in Canada does not use any of these mechanisms, relying instead on each province to set its own evaluation and entry criteria and assessment process. Given that the roles and responsibilities of pharmacists are essentially the same across the country, there is no apparent reason for the variation in the admission requirements for foreign-trained pharmacists. When the requirements are higher than necessary, the cost of entry can be needlessly high, resulting in fewer foreign-trained professionals applying to become pharmacists in certain provinces and territories.

Restrictions on Overlapping Services and Scope of Practice

The Bureau has identified a number of instances in which professionals who provide overlapping services are requesting that their scope of practice be expanded to include one or more activities currently beyond their authorization. Regulators should conduct a thorough assessment of the overall effect of any proposed expansion. A full evaluation should take into account both the potential costs, in terms of public safety, and the potential benefits, in terms of lower prices, increased choice and enhanced consumer access to professional services.

For example, the Bureau learned that members of some accounting designations in some Canadian jurisdictions are not allowed to provide the full extent of public accounting services. Such restrictions limit the number of accountants who can offer this important service and therefore limit competition. The Bureau recommends that regulators reconsider these restrictions so that all accountants who are qualified to provide public accounting services may do so.

Restrictions on Advertising

The Bureau has identified numerous restrictions that appear to go beyond what is necessary to protect consumers from false or misleading advertising and, as a result, limit consumers' access to legitimate information that greatly benefits competition. Among these are restrictions that limit the use of certain words and expressions and those that limit the size of advertisements. The Bureau is particularly concerned by restrictions on comparative advertising. Such restrictions obstruct competition between service providers and make it difficult for new entrants to advertise any distinct features of the services they offer, protecting incumbents from the full forces of competition.

The Bureau found many such restrictions on lawyers in many Canadian jurisdictions. Removing these restrictions would go a long way toward bettering this profession's competitiveness. Moreover, the Bureau recommends that the regulators in all professions review existing restrictions on advertising and remove those that go beyond prohibiting false or misleading advertising.

The Bureau also reviewed empirical studies on the effect of advertising restrictions on the price and quality of professional services. Generally, these studies found that restrictions on advertising increase the price of professional services, increase professionals' incomes and reduce the entry of certain types of firms. The effect on quality is small, except that the restrictions may result in fewer consumers using the service.

Restrictions on Pricing and Compensation

Some regulators publish suggested fee guides, which they claim to be non-binding. Fee guides that are purely voluntary in nature, while unquestionably preferable to any mandatory directive, remain a source of unease from a competition perspective, since they risk facilitating overt or tacit collusion. Given the negative effect of collusion on consumer welfare, the Bureau urges regulators to look to less intrusive means than fee guides to provide consumers with the information they need about prices. In addition, regulators should ensure that any maximum prices they set are not functioning as fixed prices in practice.

In the real estate industry, all provinces and territories but Quebec restrict agents' remuneration to either a fixed amount or a percentage of the selling price. Ontario goes even further and uses the phrase but not both in its restriction, meaning that real estate agents may not, for example, ask for a fixed amount for their initial work and then a percentage of a property's selling price. Such a restriction disallows two-part fees, a type of pricing arrangement one would expect to arise in a competitive real estate market in which some fixed level of work is generally required, but anything beyond it is uncertain. This approach prevents what would otherwise be a perfectly acceptable compensation arrangement that should spur competition among agents, since it maintains the incentive for them to work to get a higher selling price for their clients while ensuring that they will be fairly compensated for the preparatory work they do.

Restrictions on Business Structure

The Bureau is of the view that certain restrictions on business structure, namely restrictions on multidisciplinary practices between complementary service providers, have the potential to significantly reduce the benefits of competition.

The Bureau is of the view that certain restrictions on business structure, namely restrictions on multidisciplinary practices between complementary service providers, have the potential to significantly reduce the benefits of competition.

Lawyers and public accountants, for example, appear to be natural complements to one another in terms of the services they provide. By working together, they would also be able to realize business efficiencies. However, the Bureau uncovered some restrictions in some provinces that prohibit or discourage members of these professions from working together or with other professionals in multidisciplinary practices.

Professions justify restrictions on multidisciplinary practices as preventing possible conflicts of interest, which is a laudable goal. However, the Bureau recommends that regulators consider less intrusive mechanisms than an outright prohibition on multidisciplinary practices to circumvent possible conflicts of interest, such as requiring all participants in collaborative relationships to adhere to similar rules of conduct.

Conclusion

An examination of competition in the self-regulated professions is a legitimate exercise at any time, since the right to self-regulate brings with it the responsibility for regulators to consider the greater good in all that they do, including competition. The professions in general, and those included here, currently face a situation that is rich with opportunities to benefit from increased competition. These benefits will accrue not only to the professions themselves but also, and perhaps more importantly, to Canada and Canadians. This study is, as such, only a starting point. There is ongoing work for regulators to do. For the Competition Bureau's part, it plans to review in two years whether the professions have addressed the recommendations this study presents.

Managing the Survey Infrastructure -
The City of Winnipeg Experience

By Steve Bossenmaier

Reprinted from "Ontario Professional Surveyor" - Volume 51, No. 2 - Spring 2008

Scenario ... a land surveyor preparing a plan of subdivision finds the majority of the surrounding key survey monuments in the area missing or damaged. The surveyor is not surprised, this is a routine occurrence when undertaking retracement within the municipality. Signs of recent construction activity are evident. The surveyor goes about his work spending the additional time restoring the missing monuments, dealing with boundary uncertainties caused by the lack of evidence and trying to explain to his client the reason why the project is overdue and over budget. And on to the next job...

Perhaps due to the hectic times in which we live, it's human nature to leave the solutions to problems of seemingly significant proportions to others. Survey Infrastructure maintenance is a fine example of this. Unless members of the land surveying community take ownership of the problem, status quo will be the only result. Regardless of any legislation in place to protect the Survey Infrastructure there still needs to be a guardian to ensure that the legislation is actually enforced. Who other than the land surveyor is best suited to take ownership and be the guardian of the Survey Infrastructure? It is unreasonable to simply sit back and expect legislation to somehow protect survey monuments from the backhoe - it is land surveyors' inherent responsibility to control the protection process and maintenance of the Infrastructure.

A number of factors make managing the Survey Infrastructure and the associated reimbursement for replacement costs as a result of damage difficult;

- in most jurisdictions the value of protecting the infrastructure and the consequences of not doing so has not been effectively communicated to those parties whose activities may impact the Survey Infrastructure,
- we cannot realistically expect anyone to protect the Survey Infrastructure simply on their own accord, legislation or not,
- survey monument damage can easily go unnoticed for a great length of time, as unlike other infrastructure monuments, they don't explode when impacted, there is no power failure, and because it can go unnoticed responsibility is easily avoided,
- in order to identify the party responsible for damage it must be proven that there was a monument in good physical condition prior to the excavation, the contractor was aware of the monument and the contractor was in fact the one who damaged the monument (often difficult when there are multiple contractors on the same site),
- when damage has occurred then it must be acted upon in a reasonable period of time from the date of damage to have a realistic probability of recouping costs.

For many years in the City of Winnipeg, land surveyors had been frustrated by the continual destruction of survey monuments and the seemingly endless costs incurred for their replacement. In Manitoba, provisions of the Surveys Act (Appendix "A") place the onus on the individual municipality to cover the costs of missing block outline survey monument replacement when requested by a Manitoba Land Surveyor. In Manitoba's largest municipality, City of Winnipeg, there are more than 70,000 block outline monuments, each having an approximate replacement value of $500 -$1000, equating to a potential liability of $35 - $70 million. As a consequence of years of unchecked construction activity, approximately 30% of the block outline monuments in the City have been damaged or destroyed. So in fact, we have an actual current liability of $10 – $20 million and no budget to address the situation.

Prior to 1999, the approach taken by land surveyors working for the City of Winnipeg when monuments were found to be damaged by a contractor was to berate the offending party and to attempt to seek restitution. Restitution was seldom forthcoming as it was often uncertain who was responsible for the damage or the parties would simply refuse to pay. To pursue the damages was a very time intensive and more than often, fruitless endeavor. In time, such efforts to prevent monument damage simply ceased. It was essentially open season on survey monuments.

Accordingly, the concept of monument protection was unheard of in both the surveying and construction industries in Winnipeg. In 1999, we set about to change all that by altering the perception of survey monuments within the construction industry. Changing a cultural or societal perception is generally difficult but we found, with perseverance, it can be done.

One of the first steps we took was to coin the phrase "The Survey Infrastructure". Those involved in the construction industry are familiar with infrastructure and the importance of maintaining and protecting infrastructure. As water and gas lines form an interconnected fabric, so do our systems of survey monuments. A break in the system causes problems. In adopting the term and speaking the language, we quietly elevated the lowly survey bar to "Infrastructure" status. This was somewhat similar to how Surveying Engineering was perceived prior to the introduction of the term Geomatics Engineering - it's all about perception. Correspondence and communication from that point forward referred to survey monuments and evidence thereof as The Survey Infrastructure.

We utilize several tools to manage the infrastructure: SIPP, DA's and the Survey Outline Monument Restoration Program.

SIPP — Survey Infrastructure Protection Program

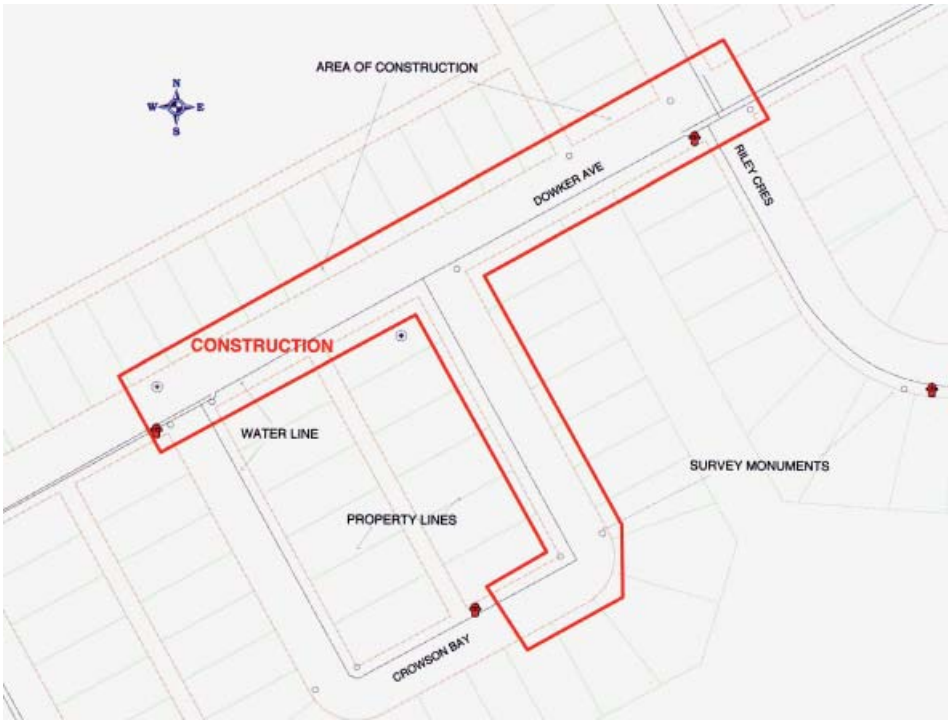
Approximately 70,000 block outline survey monuments have been mapped in conjunction with a corresponding data base of monument information which comprises the City of Winnipeg Survey Infrastructure GIS. The beauty of utilizing a GIS is that you can not only track monument condition in time but also construction activity, which allows us to clearly establish responsibility for Infrastructure damage.

Like most other public infrastructure, a systematic "call before you dig" type of a program has been established to protect it from damage. The program offers flexibility by accepting information via telephone, fax and e-mail. We have developed software allowing us to digitally overlay survey monument locations on engineering type AutoCAD construction drawings, enabling us to pinpoint potential danger to monuments in the construction planning stage. With this technique we can review large numbers of proposed engineering projects of all sizes in an efficient manner and provide this information back to the submitting agency. Accordingly, through realignment of proposed utility corridors, survey monuments may often be avoided in a proactive manner.

The program operates by receiving and reviewing information provided by parties involved in proposed construction. Where there is the possibility of conflict, an appointment is generated and a survey field crew meets the contractor on site at a scheduled time and location. The infrastructure within the project site is located, marked and shown to the contractor who signs a clearance sheet indicating that he is responsible for specific monuments for the duration of the work. All attribute information is recorded in real time via laptop computers mounted in the clearance crew's vehicle.

Upon completion of the project the contractor contacts the program for a final inspection. If monuments are found to be damaged as a result of the project the party responsible for the damage is invoiced for replacement costs.

Another key section of the Surveys Act (Appendix "A") places the responsibility to protect survey monuments on those parties undertaking construction. When monuments are deemed to be in danger, they are to be referenced by a land surveyor. Although participation in SIPP is voluntary, our staff is vigilant in monitoring unreported construction in the course of their travels. When such activity is identified, the contractor is requested to provide the name of the land surveyor who is providing protection to the monuments on the project. Generally, after noting the stunned look on the face of the contractor, we follow up by adding, unless you can provide evidence indicating otherwise, all monuments found missing or disturbed within the worksite upon completion of the job will be attributed to this project. And if this still hasn't gotten their attention we note that replacement costs can exceed $1000 per monument. The contractor is provided with a SIPP business card and requested to contact us prior to their next job.



The diagram shows a simple clip from the GIS, illustrating the area of construction, the location of utilities (water lines), and the location of block outline monuments in relation to property boundaries, i.e. a snapshot of the “infrastructure”.

The basic steps to institute a program for monument protection are;

- identify primary sources of damage
- identify primary players and those in key positions to influence policy
- develop a program plan in principle
- initiate PR with primary players and others
- involve primary players in a pilot project
- develop and implement program
- on-going PR and continual program modification

Launching a pilot project involving the key parties from both the construction and land surveying sectors was found to be an ideal way to encourage dialogue around the importance of the Survey Infrastructure and to receive buy-in from all parties.

DA - Development Agreements

In Winnipeg and in various municipalities across Manitoba and elsewhere in Canada, Development Agreements have become commonplace. In areas of new development these agreements ensure that the developer does the things that the municipality asks of them. The City of Winnipeg inserts a survey infrastructure restoration clause (Appendix "B") into the development agreement as part of the subdivision approval process. The clause basically states that you are to replace any missing monuments within your site. The developer provides the City with a letter of credit to ensure the conditions of the agreement have been satisfied. This has become a simple and effective method to protect the City from incurring the cost of restoring survey monuments once the monuments become the responsibility of the municipality.

Survey Outline Monument Restoration Program

The Manitoba Government recognizes the importance of the Survey Infrastructure to the Municipalities, their residents and society in general. Accordingly, the government established an annual fund to assist municipalities with the expense of survey monument restoration on a 50/50 cost share basis.

In the City of Winnipeg the program works hand-in-hand with SIPP to ensure that the monuments are not destroyed at the same rate as they are replaced.

Conclusion

In the development of a program to manage the Survey Infrastructure it is imperative to identify and involve key people and get "buy-in". Deal with professionals in the public agencies that administer the bulk of the municipal construction, managers in the provincial government, professionals in the private sector who oversee construction projects and professionals through their governing bodies. Let the message flow from the top down to those doing the actual digging.

In developing our program in the City of Winnipeg, we;

- met on numerous occasions with the primary engineers in the City's Public Works Department and the Water and Waste Department. Initial reluctance to change was overcome with dialogue and these parties became fundamental in the ultimate success of the program.
- met with engineers from all major engineering firms to discuss their issues and to solicit their support.
- met with engineers and representatives from all major utilities in the City of Winnipeg.
- launched a pilot project involving members of the private land surveying and engineering communities, and land surveyors and engineers from the City of Winnipeg. The project investigated different survey monument protection methodologies and resulted in formulating the template for our current program (SIPP).
- assisted in the establishment of a joint board with the Association of Professional Engineers and Geoscientists of the Province of Manitoba, and the Association of Manitoba Land Surveyors. We continue to serve on the board today. The board has been quite active and has published several key resolutions including several on survey monument protection.
- meet annually with representatives of the Manitoba municipalities and the Property Registry (Land Titles) to review the terms of the Survey Outline Monument Restoration Program.
- continue to provide literature to all parties undertaking construction in the City regarding SIPP.
- Established a web page for the SIPP program: www.winnipeg.ca/ppd/surveys.stm.

In a nutshell, if we want others to value the Survey Infrastructure, then we must have them understand the value of protecting the Infrastructure and the consequences of not doing so.

Steve Bossenmaier is a graduate of Red River College (Geomatics Technology 1980) in Manitoba and of the University of Calgary (Geomatics Engineering 1985). He is a Registered Professional Engineer and Land Surveyor in Manitoba, employed as a Geomatics Officer with the City of Winnipeg. Steve is currently the vice-president of the Association of Manitoba Land Surveyors. He can be contacted by email at: sbossenmaier@winnipeg.ca.

APPENDIX A

Protection Legislation

The Land Surveyors Act C.C.S.M. c. L60

Offence and penalty

58(1) Every person who knowingly or willfully defaces, alters, or removes, any mound or landmark, post or monument, placed by, or under the supervision and on the instructions of, a Manitoba land surveyor or a Dominion land surveyor under the *Canada Lands Surveys Act (Canada)*, to any limit, boundary, or angle, of any township or section, or any legal subdivision, lot, parcel of land, in Manitoba is guilty of an offence and liable, on summary conviction, to a fine of not more than $100 or to imprisonment for a term of not more than three months or to both.

The Surveys Act C.C.S.M. c. 5240

Outline monuments public property

3 All outline monuments, whether defining directly any line or limit or indirectly defining a line or limit as a reference point, are equally public property, and as such shall be kept available to surveyors at any time, and shall not be unnecessarily interfered with by any person or municipality.

Persons and municipalities to protect outline monuments

4 All persons and municipalities when making improvements, public or otherwise, shall protect all outline monuments from being disturbed in the course of the improvements, and shall provide traps in pavements or sidewalks covering the monuments when necessary to make them easily accessible.

The Criminal Code of Canada R.S., 1985, c. C-46

Interfering with Boundary Lines

442. Every one who willfully pulls down, defaces, alters or removes anything planted or set up as the boundary line or part of the boundary line of land is guilty of an offence punishable on summary conviction.

Interfering with International Boundary marks, etc.

443. (1) Every one who willfully pulls down, defaces, alters or removes

(a) a boundary mark lawfully placed to mark any international, provincial, county or municipal boundary, or

(b) a boundary mark lawfully placed by a land surveyor to mark any limit, boundary or angle of a concession, range, lot or parcel of land,

is guilty of an indictable offence and liable to imprisonment for a term not exceeding five years.

Restoration Legislation

The Surveys Act C.C.S.M. c.S240

After improvements monuments to be restored to original location

5 Where any improvement is to be made of such a character as to alter permanently the surface grade or to otherwise disturb or render practically inaccessible any outline monuments, the municipality or other person responsible for the improvement shall have a survey made under the direction of the registrar-general referencing the monuments; and during the course of completion of the improvements the monuments shall be restored to their original location or suitable monuments substituted there for, to the satisfaction of the registrar-general.

Remedying of disturbance of monuments

6 The registrar-general, upon receiving a report from any surveyor indicating the disturbance in any way of any outline monument, may require the municipality in which the monument is situated to remedy any such disturbance of monuments or surveys to his satisfaction; and if, upon being required to do so, the municipality refuses or neglects to comply with the requirement, the registrar-general shall remedy the disturbance to his satisfaction and the cost thereof shall be paid in the first place out of the Consolidated Fund, and subsequently collected from the municipality through the minister; but if the cost will exceed the sum of $1,000., the registrar-general shall not take the proceedings without the approval of the Lieutenant Governor in Council.

APPENDIX B

Sample Development Agreement Clause:

Payment to the City of a deposit/letter of credit for survey monument replacement costs in the amount of $ _____. Subsequent to the completion of any works that may damage the survey monuments in the subdivision the applicant will provide the City and the Winnipeg Land Titles Office, a Survey Monument Replacement Certificate confirming the positions of all survey monuments within the planned area. Upon receipt of this Certificate, the deposit/letter of credit will be refunded.

CONTROL POINTS

By Warren Andrews, PLS

Reprinted from "*Side Shots*" February 2008 - As seen in "*Evergreen State Surveyor*" Spring 2008 Volume 32 No. 1

To me, the fundamentals and history of surveying are fascinating. For example, where do the trigonometric tables come from? If you as a surveyor had to start from scratch with nothing but a piece of paper, pencil, and a formula, how would you calculate the six functions of an angle? It sounds pretty complex but it really isn't. The six functions are the three primary ones (sine, tangent, and secant) and the three complementary ones or co-functions (cosine, cotangent and cosecant). If you remember, the cosecant is the reciprocal of the sine, the cotangent is the reciprocal of the tangent, and the secant is the reciprocal of the cosine.

So you've already cut your calculating in half if you can come up with the sine, cosine and tangent. But there's one other combination to remember and that is the tangent is the sine divided by the cosine. So now you're down to two numbers, the sine and cosine of an angle that you need to calculate from a formula.

Unfortunately, there's one other gimmick you need to know before you start calculating. The formula needs to have the angle converted from the usual surveyor's degrees, minutes, and seconds to radians which to a surveyor is a mathematician's cop out and never comes out exact. The conversion is 360 degrees equals 2π radians where π is equal to 3.14159265359 to 11 decimal places.

Here's an example:

If your angle is say 27 degrees 13 minutes 45 seconds, you need that in decimal degrees which is 45 divided by 60 plus 13 and that result divided by 60 and that added to 27 which is 27.2291666667 to 10 decimals. Divide that by 360 to get what decimal part of a circle it is (0.0756365741) and then multiply that by 2π to get radians (0.475238611).

If you symbolize the angle by the Greek letter theta (Θ) then the Taylor's Series Formula for the sine of theta is:

$$\sin \Theta = \Theta - \Theta^3/3! + \Theta^5/5! - \Theta^7/7! + \Theta^9/9! -$$

on out as far as you want to go. If you've forgotten, 3! (3 factorial) is 1 times 2 times 3 and 5 factorial is 1 times 2 times 3 times 4 times 5 and so on for 7 factorial and 9 factorial, etc.

To put numbers in the formula if you want to check it out:

Sin 27°13'45" = 0.0475238611 - 0.017888911 + 0.000202012 - 0.000001086 + 0.000000003 = 0.457550629 which checks my HP32S calculator exactly to 9 decimals.

For the cosine of theta, the Taylor's Series Formula is:

$$\text{Cos } \Theta = 1 - \Theta^2/2! + \Theta^4/4! - \Theta^6/6! + \Theta^8/8! - 10/10! +$$

and for cos 27°13'45" = 1 - 0.112925869 + 0.002125375 - 0.000016001 + 0.000000065 - 0.000000001 = 0.889183570 which again checks my HP32S calculator exactly to 9 decimals. From these two numbers you can calculate the other four trig functions. And that's how it's actually done and how it's hard-wired into any calculator. (You didn't think the calculator stored all those tables internally did you?) Just be glad you don't have to figure each one of your angles that way.

My Omnipage® 'Typist'

One of the risks associated with using an optical character recognition program for reprinting articles from other newsletters is that the program may or may not recognize and accurately reproduce odd characters such as math symbols. This may have been the problem when some of the formulas from the "*Control Points*" article didn't come out quite right when reprinted in the "*Evergreen State Surveyor*". Fortunately, we were able to correct the formulas by 'Googling' the following web site:

http://mathforum.org/library/drmath/view/53964.html

The program I use at the SLSA office for 'reading' articles from other publications is called ***Omnipage® Professional*** version 15 by Nuance (www.nuance.com). Ownership of the program has changed over time and the program has evolved to become pretty reliable at accurately reproducing most fonts and characters. Any text that it isn't sure of is displayed in three separate windows; one showing the original image, another the context of the sentence in which the word appears, and the third with suggested alternatives to its 'best guess'. It even reproduces some embedded graphics, somehow magically having recognized them as such.

With my very slow and inaccurate typing, I have come to rely on this program to manage a huge part of the work associated with preparing the SLSA Corner Post each quarter.

Carl Shiels

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Architectural model courtesy of Archetype 3D and Riverfront Park.

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WORKING WITH ATTORNEYS

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

Reprinted from SDSPLS "*Backsights & Foresights*" Volume #19, February 2008 - as seen in MARLS "*Treasure State Surveyor*", April 2008

As a surveyor, engineer, and attorney, I often find myself working with attorneys on engineering and surveying legal problems. Without a doubt there are some members of the Bar with whom I have clearly enjoyed working alongside. Bright, intelligent, knowledgeable, good listeners, eloquent, logical, and capable are among a few of the attributes that these attorneys share. However, not all interactions with attorneys have been enjoyable. For those engineers and surveyors who have not worked with attorneys or within the legal system, I would like to share some frustrations and advice about working with certain attorneys and the legal system.

What's good for the goose is good for the gander

One time I had the pleasure of listening to a state supreme court justice speak. During the course of his speech, he remarked that he was recently involved as a party in a lawsuit. He remarked, rather appropriately, that every attorney should be sued at the beginning of his/her career in order that they may approach the practice of law with humility and some common sense.

Unfortunately, few attorneys have been sued and many opt for the shotgun approach to litigation. In other words, sue everyone that was ever involved with the project and let the legal system sort out the negligent parties. I have always been very frustrated with the shotgun approach to litigation that some lawyers adopt and employ. I've heard one lawyer justify the process by saying the approach is necessary to bring all relevant persons before the judge and let the judge decide who is at fault. I would opine that those attorneys that employ this tactic have never been a party in a lawsuit and undergone the agony, apprehension, and emotional trauma involved with litigation not to mention the expense, time and resources required to defend against a frivolous complaint.

Furthermore, for those trying to operate a consulting firm, there is the stain on the reputation of the firm every time a lawsuit involves the firm. As a consequence, I believe it would be in the best interest of surveying and engineering firms if a system was adopted that required the loser to pay the legal expenses of the winner. This system would reduce litigation faced by engineers and surveyors. I know a few victims will go uncompensated under this policy. However, under the present policy a lot of innocent firms become victims of frivolous lawsuits.

Procrastination and Negligence

Without a doubt, we have all procrastinated from time to time. However, when we procrastinate to the point that our client's position or project is jeopardized, we are negligent. Procrastination, to the level of negligence, seems to happen so frequently in legal practice that I am appalled by its common occurrence.

For example, I will receive a call the day or night before trial asking if I would be an expert witness. (Let me make it clear that a week before trial is no less negligent in my opinion.) I am bothered by this behavior for three reasons. First, there is the inference that the engineering or surveying testimony that I will be presenting is so simple that it does not require any preparation time. Second, there is the attitude from the attorney that their client should immediately use priority over my existing clients. Third, there is the unquestionable inference that I will give testimony that helps the attorney's client. In other words, as an engineer or surveyor I am a hired gun and can be expected to provide only favorable testimony without knowing or analyzing the facts and the situation.

If engineering and surveying firms were to operate in a similar manner on behalf of their client, I have little doubt attorneys would find it very easy to convince the court the engineer or surveyor is liable for negligence. I would advise engineers and surveyors to avoid situations where an appearance in court will occur without adequate and thorough familiarity with the facts and probable questions that will be asked.

Learning Curve

Before attending law school, experience taught me there are three types of attorneys. First, there are attorneys who simply do not want to listen or learn. These attorneys are easily identified because they prefer to argue some unrelated legal concept or go to great lengths to settle rather then litigate the question (but settle only after great expense to their client). This attorney tends to be arrogant or subject to unreasonable procrastination.

Second, there are some attorneys that, try as they might to learn, will not be able to understand because they lack the fundamentals required to understand the problem. Let me explain this category by way of selected experiences. I went to law school in the era when the HP-41 was just making its appearance so, as most readers know, calculators had been around for some time (so much so that I had long since gotten rid of my log tables and slide rule). Nevertheless, when the instructor announced that everyone would need a calculator for tax class, I was shocked to learn that many of my classmates had never owned a calculator. The instructor, seeing the student's

consternation at the suggestion of using a calculator for the first time, tried to reassure the class by stating that only rudimentary calculations were going to be performed such as adding, subtracting, multiplication, division, and percentages. Again, I was shocked to hear many of my fellow law students ask me if I could show them how to do a "percentage." I was incredulous that any person could have earned an undergraduate degree without owning a calculator or knowing how to do a percentage, yet these people exist and many are now attorneys practicing law.

Now the purpose for this discourse is not to make light of all the attorneys with bachelor degrees in political science art history, English, social work etc. who don't understand simple math yet practice law. No doubt they are familiar with many seemingly simple subjects that I am unfamiliar with. My point is to convey some idea of the frustration I often face when explaining to certain attorneys an engineering or surveying problem requiring far more mathematics than simple percentages. To present the problem in other terms takes at least 30 credit hours of course work to bring engineering students with SAT scores of 1400 or better to some level of understanding. Surely not every attorney is up to the task after only an eight hour session.

This brings me to the last categories of attorneys. These attorneys take the time to learn, listen to you when you explain, and do learn what it takes to understand and present the surveying or engineering problem in an intelligent and accurate manner. Unfortunately, when I have the pleasure to work with these attorneys, more often than not they have to argue before a judge who falls in one of the first two categories.

The bottom line - because of the learning curve among some members of the Bar, there really is no logical defence engineers and surveyors can use to counter frivolous litigation or prevent illogical verdicts from occurring. As a result, it is not enough that an engineer and surveyor know they are correct in their analysis and opinion when it comes to litigation. The engineer or surveyor must meet four criteria to stand a chance of success:

1) the practitioner must be thoroughly familiar with the facts and engineering or surveying principles relevant to the problem;
2) the practitioner must have the skill, resources, and time to adequately educate the attorney and judge on the relevant engineering or surveying principles;
3) the client's attorney has to have the ability and be willing to devote the time to learn;
4) the judge must have the ability and be willing to devote the time to learn.

Seldom are all four criteria present. My advice is to encourage alternate dispute resolution to resolve engineering and surveying problems whenever possible. Encourage your client to compromise rather than litigate.

Speedy justice or litigation

Flowing from the last category of frustration, is my latest frustration with certain members of the Bar. I have been a zealous proponent of alternate dispute resolution, also known as ADR, for solving engineering or surveying problems. Frankly, 1 have had little success in convincing other attorneys that ADR is an acceptable alternative to litigation.

I will accept some of the blame because I am usually pushing for engineers and surveyors to be arbitrators and mediators rather than attorneys. Not a smart political move when many attorneys can't find work or enough billable hours as it is. In my defense, I feel if there has to be some ignorance in the system, justice is better served when the arbitrator or mediator understands the problem, rather than the law. For my efforts I hear comments from attorneys such as "without the rules of evidence my client won't stand a chance." "I need the time to beat my client on the head with his wallet," "I won't put my kids through college that way," etc.

As a consequence of this disdain for ADR, I see people win judgments of $100,000 and have a $120,000 legal bill after spending five years in litigation. Of course, it has been pointed out to me by several engineers and surveyors even ADR falls prey to the ills surrounding litigation if enough attorneys get involved.

In spite of the few frustrations I have been allowed to vent, I find practicing law in conjunction with engineering surveying a very rewarding experience. A good deal of credit goes to the many exemplary attorneys, engineers, and surveyors I encounter and work with in my practice. To these individuals I offer a heartfelt "thank you." There is always an outstanding offer to work with you as a team in order remove these frustrations from your practice and mine.

Hermansen is a professional land surveyor, engineer, and attorney at law. In addition to consulting work, Hermansen teaches al the University of Maine in the Surveying Engineering Technology program.

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D.R. (Don) Hanson	**#248**
R.J. (Rob) Hillier	**#249**

Only Doug Jordens has retired from the 'series'.

Our Changing Economy

By Bob Wallace, ALS, ALSA President

Reprinted from "ALS News" March 2008

Executive Director's Note

As the Saskatchewan economy continues to heat up, there may be lessons to learn from our sister association to the west as their economy begins to cool down.

Our ALSA landscape has changed rather abruptly this year as our economy slows down. In the past five years, our profession has seen unprecedented growth which has translated into increased revenue for our Association. This has given our committees greater funding enabling such endeavors as public awareness, youth education, scholarships, and the creation of a vision for the future.

We have been fortunate to have a full-time staff comprised of talented and dedicated individuals. With the backing of this staff, it has allowed our Council and committees to concentrate on being proactive on issues facing our profession as well as providing the opportunity to look ahead. The daily operations have been handled by the staff, as well support for committees by providing agendas, minutes and research. Our staff handles numerous inquiries and concerns from the public, removing this burden from our members.

The ALSA revenue is based upon iron posts, memberships and miscellaneous. Our iron posts sales are down 40% this year which will translate into a projected overall deficit of $150,000. In order to balance the budget, Council will have to reduce expenses and/or increase revenue. In the interim, we can supplement the budget with a transfer from the financial stabilization fund which was created during the years that the ALSA had budget surpluses.

There are three areas that make up our budget: Systematic Practice Review (SPR) comprises 35% of the budget (not including indirect costs), administration 46% and committees 19% respectively (and 8% other). Council is struggling with what areas would receive budget cuts in order to lessen the impact to the membership.

As we evolve into Phase 4 of SPR, there may be a solution that demands fewer resources in order to achieve the same results. A combination of continuing education and SPR may put a greater onus on the membership. We wait in anticipation for the results of the SPR survey and resulting recommendations from the Practice Review Board. In the short term, major budget cuts may hamper our ability to conduct the practice review program for the remainder of Phase 3 in a timely fashion.

Committee expenses represent a small portion of the overall budget; therefore a cut in this area of any substance would severely compromise some committees' ability to do their work. Committee work enables our Association to deal with issues confronting our profession in Canada.

Strategic decisions were made over a decade ago to enhance the profile of the ALSA, in order to heighten the public's perception of our profession and to attract new members to our ranks. We have succeeded in both of these areas. The result is an association that is vibrant and has strong demographics in all age categories. Other land surveying associations in Canada are struggling with an identity crisis plus an aging and declining membership. This has resulted from a lack of resources to address solutions to these problems. Many other provincial councils struggle to keep up with the workload of the day-to-day business of running their associations, let alone have the resources to be proactive.

If we are to maintain or perhaps increase the level of service we offer our members, then we must increase our revenue in existing areas or develop other potential revenue sources. We have not had an increase in the iron post surcharge since 1988, but our costs have risen dramatically in that time. In the past, the sheer volume of post sales has allowed the ALSA to meet its expenses. Council has recently requested the authority (from the provincial government) to increase the iron posts surcharge by $1.50 for general revenue as well as a $2.50 increase for the creation of a Boundary Dispute Fund. This proposed increase will give the public greater access to boundary dispute solutions as well as continued support for legal survey concerns.

The argument still persists, that the firms that plant iron posts, fund a major portion of our Association. Perhaps we have to look at a more equitable method of obtaining revenue.

Our membership fees have remained very stable over the past decade, although our corporate revenues have increased dramatically. Compared to other survey asso-

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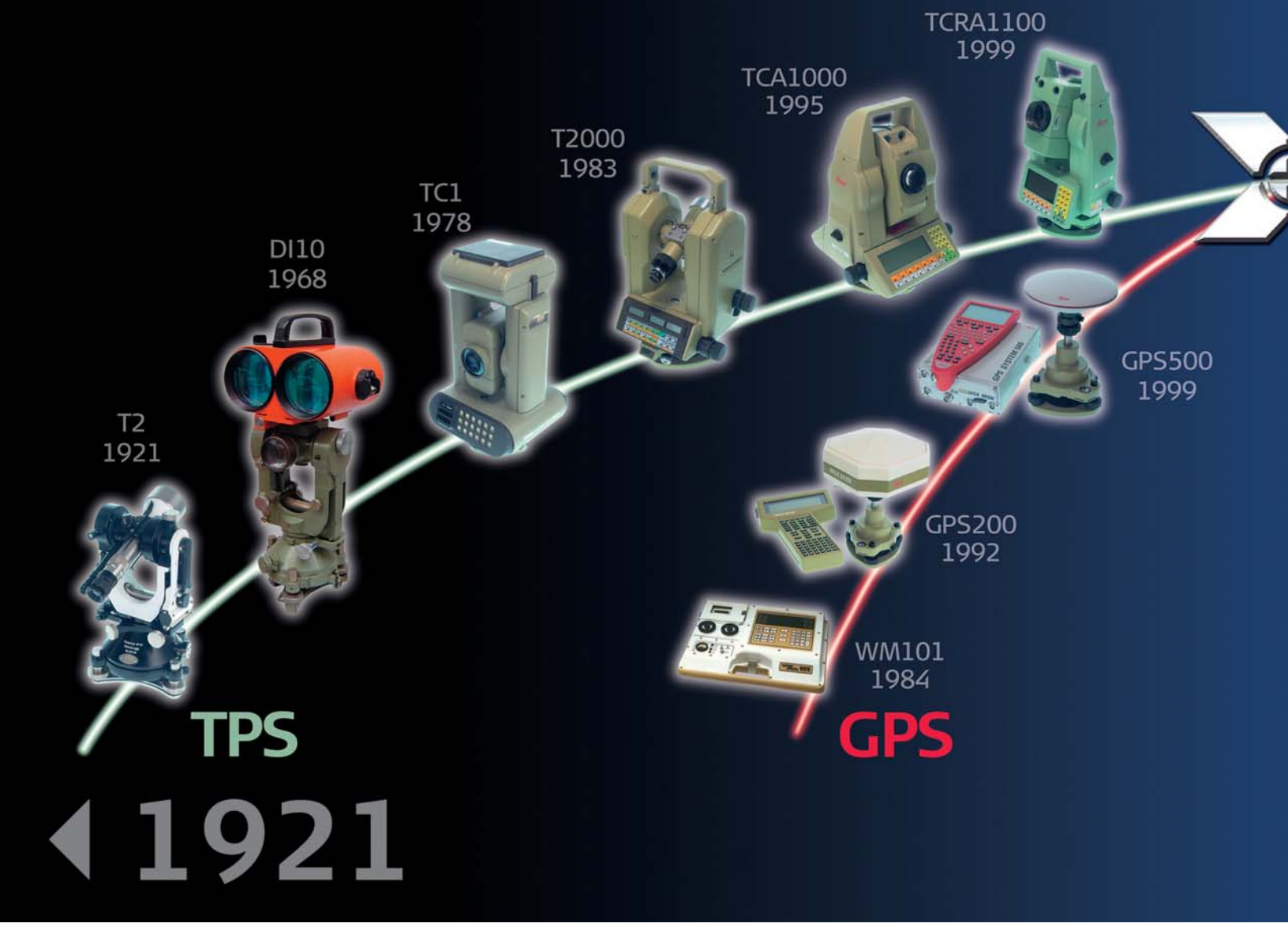

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DARK AGE AHEAD FOR AOLS?

By Will O'Hara and Anna Husa

Reprinted from "*Ontario Professional Surveyor*" - Volume 51, No. 2, Spring 2008

Professional self-governance has a long and rich history that can be traced back to the early clerical societies. These powerful religious groups resented interference from the state and jealously guarded their independence. Traditionally there has been a recognition on the part of governments and the public alike that certain fields of activity – land surveying among them – were complicated enough to be practiced only by "individuals meeting certain predetermined standards of education, training and experience." [1] It has generally been accepted that the best people to set the standards and regulate the members of those professions were the people most expert in the field: the professionals themselves.[2] This view is changing.

There are currently at least twenty different types of health professionals and at least fifteen other types of professionals that are self-regulated in Canada, including lawyers, funeral directors, architects, and, of course, land surveyors.[3] The notion of serving the public interest is integral to all of them. Section 2(2) of the *Surveyors Act*,[4] stipulates that the "principal object of the Association of Ontario Land Surveyors is to "regulate the practice of professional land surveying and to govern its members ... in order that *the public interest may be served and protected*." The Law Society Act,[5] provides that in carrying out its functions, duties and powers, the Law Society "has a duty to *protect the public interest*." The *Funeral Directors and Establishments Act*[6] provides that the principal object of the Board of Funeral Services is to "regulate the practices of funeral directors ...in accordance with this Act...in order that the *public interest may be served and protected*." The same applies to all of the self-regulated professions. This is the trade-off. Professions are given the privilege of self-governance as long as they govern themselves in the interest of the public.

But why do we allow some groups the right of self-governance and deny it to others? Why do builders have to comply with building codes imposed by the province or the municipality? Why do truckers have to submit to random inspections by the province? Could the learned professions find themselves in the same position?

Some argue that self-governing professions are essential to the existence of our culture. In her best selling book *Dark Age Ahead*[7], Jane Jacobs describes in great detail how perilously close our culture is to decay. She points to five "pillars of our culture that we depend on to stand firm", and included in that impressive list of institutions, along with family, higher education, science and government is self-policing by the learned professions. Jacobs describes the role of self-governing professions like the AOLS in contemporary society:

> *Members of the learned professions have traditionally been regarded by themselves and others as capable of responsibly regulating and even policing themselves... These people not only enjoy status as educated experts; they are seen as establishment figures with stakes in maintaining - stability, honesty and good order for the common good.*

Jacobs says that self-governing professions are well tolerated in North America partly because their reach is confined mainly to internal professional concerns, but also because there is no better alternative to self-governance: "The likely alternatives are probably burdensome and irrelevant bureaucracies..."

Unfortunately, these same self-governing professions are under attack from outside and from within. Jacobs describes the rot that sets in when the professional bodies put their own interests ahead of the interests of the public, citing cover-ups of professional misconduct or crimes committed by members, unreasonable tardiness in dealing with complaints from the public, price fixing and attempts to justify practices that cannot be justified, particularly in the accounting profession that led to the Enron disaster. Jacobs says that the personal shortcomings of professionals are caused by lack of education. Speaking as only an elder writer and philosopher can[8], she observes: "Like children, professionals need to be taught right and wrong, and why."

Jacobs says that the personal shortcomings of professionals are caused by lack of education.

All of these signs of decay described by Jacobs lead to an erosion of public confidence in institutions that are mandated by statute to govern themselves in the best interests of the public, and when the public loses confidence in these self-governing institutions they come under attack

from the outside. This is happening throughout the Europe and North America.

In January 2007, the Solicitors Regulation Authority ("SRA") officially came into being. The SRA is an independent regulatory body set up to regulate more than 100,000 solicitors in England and Wales. Its purpose, as advertised on the SRA's website, is to "protect the public by ensuring that solicitors meet high standards and by acting when risks are identified." Among other things, the SRA sets the standards for qualifying solicitors, drafts the rules of professional conduct, sets requirements for solicitors' continuing professional development, provides guidance and rules to solicitors on ethical issues and provides information to the public about solicitors, their work and the standards the public is entitled to expect.[9] All of these functions had previously been performed by the Law Society itself. The SRA acts independently of the Law Society of England and Wales. The Board of the SRA is made up of sixteen members, only nine of whom are solicitors. The others are lay persons, including a Chartered Accountant, a consultant in human resources, and the former controller of editorial policy for the BBC.[10] As the SRA proudly proclaims on its website, even its name is meant to emphasize its independence from the Law Society.

When public trust is eroded for any of the reasons listed by Jacobs, the light of public scrutiny will be shone on the professions and the privilege of self-governance will be lost.

The SRA is a response to a report by Sir David Clementi, which examined the regulatory framework for legal services in England and Wales. The report's findings were clear: "the current system is flawed."[11] Among other things, the Clementi report discussed the perceived shortcomings of a system where complaints about lawyers are handled by lawyers themselves. Sir Clementi questioned whether "systems for complaints against lawyers, run by lawyers themselves, can achieve consumer confidence".[12] This is due to the fact that there is often a feeling among members of the public that the legal profession is still an old boys' club where members will act to protect their own. There is no doubt that such a concern exists in Canada as well as in England and that it is not limited to lawyers but all self-governing professions.

As is true of lawyers in Ontario, complaints about land surveyors in this Province are handled by the AOLS members themselves. Whether this is a good thing or a bad thing may depend on your point of view. If you are reading this article in the Ontario Professional Surveyor you may feel that there is no better group to govern land surveyors than the AOLS and its members. So far the public and the legislature have retained a level of confidence – or at least indifference – in the ability of the professions to govern themselves. There has been no serious breach of trust in Ontario in recent years that would outrage the public to the point of concluding that the existing system is flawed. The inner workings of the AOLS and other professions go largely unnoticed by the public.

That may simply be because the professions in Ontario are, for the most part, complying with their statutory obligation to act in the public interest.

Recent history shows us that the privileged position of self-governing professions is tenuous. When public trust is eroded for any of the reasons listed by Jacobs, the light of public scrutiny will be shone on the professions and the privilege of self-governance will be lost. The obvious alternative to self-governance is being governed by some other group. Who will teach professionals the difference between right and wrong if it is not the professions to which they belong, including the AOLS? Who will judge the conduct of land surveyors if it is not other land surveyors? Will it be the "burdensome and irrelevant bureaucracies" that Jacobs feared? If the experience with the SRA is any guide, the answer is probably yes.

Will O'Hara is a partner at the firm of Gardiner Roberts LLP, practicing in professional liability litigation, intellectual property, insurance and dispute resolution. He is certified by the Law Society of Upper Canada as a Specialist in Civil Litigation and teaches a post-graduate course at Ryerson University entitled Legal and Ethical Issues in GIS and Data Management. woharagardiner-roberts.com.

Anna Husa is an associate at Gardiner Roberts LLP practicing in the areas of professional liability, insurance, litigation and dispute resolution. ahusa@gardinerroberts.com.

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1 *"Professional Independence and the ABCPF Member" available at http://www.abefp.ca/regulating_the_profession/documents/guideline-independence.pdf*

2 *Ibid.*

3 *"Geoscience - How we regulate ourselves and are regulated for others", Presentation to APGO Professional Practice, September 2005 available at http://www.apgo.net/news/presentations/OBonhamSept15%20PPCSeminarRegula tingGeoscience.pdf*

4 *R.S.O. 1990, c. S. 29*

5 *R.S.O. 1990, c.L.8*

6 *R.S.O. 1990, c. F. 36*

7 *Published by Vintage Canada, 2004*

8 *Jane Jacobs died in 2006, a few days before her ninetieth birthday.*

9 *http://www.sra.org.uk/about.page*

10 *"Report of the Review of the Regulatory Framework for Legal Services in England and Wales" located at http://www.sra.org.uk/about/board.page#pwilliamson*

11 *http://www.legal-services-review.org.ukkontent/report/foreword.htm*

12 *Ibid.*

Council Liaison

- The following members of council are to provide liaison with the indicated standing committee:
  - Practice J. S. Redding
  - Education J. H. McLeod
  - Public Relations R. D. Rosnes

Convention Committee

- R. B. Shrivastava was authorized to make such financial commitments as are reasonably required for the 2009 Annual General Meeting on June 11, 12 & 13, 2009 at Elk Ridge Resort.
- D. L. Gurnsey was authorized to make such financial commitments as are reasonably required for the 2010 Centennial Anniversary Meeting of the SLSA schedules for March 25th, 26th and 27th, 2010 in Regina.

2008/2009 - Meeting #02

- An invitation was received from Marie Robidoux of Challenger Geomatics in Edmonton to participate in the development of a new Survey Law In Canada publication. Council indicated support in principal but asked for further details of the amount of the contribution that would be expected from the SLSA and whether an 'in kind' contribution might be acceptable in the form of a "made in Saskatchewan" survey law book.
- A Land Surveyor in Training Agreement signed by Scott L. Colvin and Ron J. Eichel, SLS, was approved.
- A Student Land Surveyor Agreement, signed by R. L. Forbes and R. B. Shrivastava, had been approved by the executive director under authority delegated by Council.
- A letter was received from the Controller of Surveys expressing concern about a minority of surveyors who regularly submit plans that must be returned for corrections thereby adding to the cost of reviewing surveys and creating delays in the approval of surveys submitted by other surveyors. He also noted that there were a small number of surveyors who have a large number of plans that have been returned for correction but which have never been re-submitted and finalized. Such plans can cause monument uncertainty and delays in approval of any other plans that might tie into them. Repeated attempts, by the Controller of Surveys, to resolve the problems with the individual surveyors have not been successful. Council instructed the executive director to contact all active members advising them of Council's concern about the problems being encountered by ISC and reminding the members to the serious implications of failing to meet all of their professional responsibilities when submitting survey plans to ISC.

Relating GPS Baselines to "Ground" Distances and Bearings

By Dr. Robert Radovanovic, ALS

Reprinted from "ALS News" March 2008

Author's Note:

This article was created at the SarWiki site (www.sarpigroup.com/sarwiki). This site is a repository of survey-related articles and workspaces. Anyone can join and then contribute to articles and projects on the site. In particular, the site features discussion groups that may be of use to surveyors and articled students on topics ranging from using GPS to studying for professional exams.

Surveys incorporating GPS (and particularly RTK) derived information are today commonplace. However, despite the widespread use of GPS-derived information, there has been little Association-wide discussion with regards to how to appropriately use this information on a plan of survey. Instead, individual practitioners usually rely on procedures provided to them by equipment and software suppliers which are not necessarily optimal for surveying in Alberta. This article discusses how to transform GPS-derived data into "plan-ready" bearings and distances and provides a standard that allows surveyors to directly compare their work.

GPS processing, whether via RTK or post-processing, is intrinsically done in the WGS-84 reference frame. The resulting baseline vectors can be considered "pseudo-observations" in a subsequent adjustment, relating coordinate differences between observed points in WGS-84 (i.e. [dx dy dz]). For the rest of this article, we will use the term "GPS observation" to actually mean these baseline vectors, rather than the raw observations (satellite ranges) themselves.

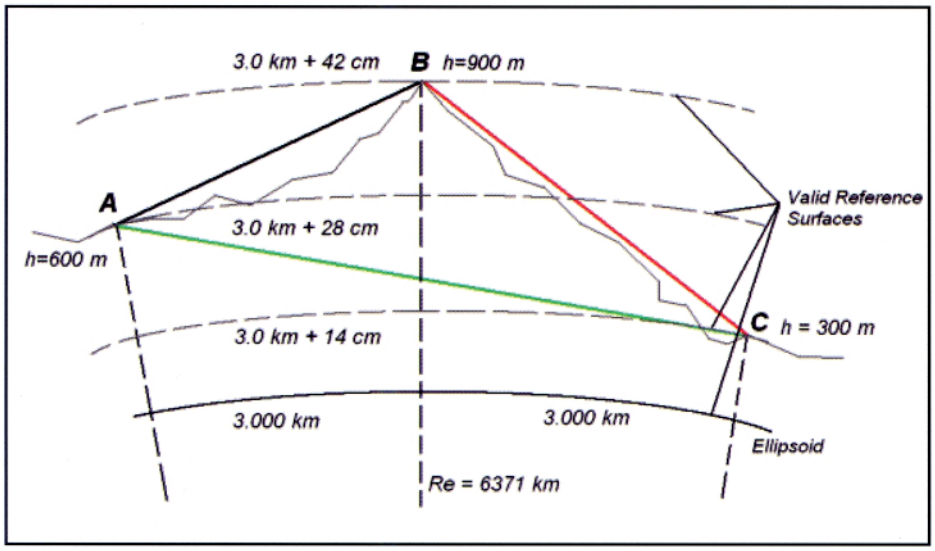
Given a set of points tied together via GPS observations, the coordinates of these points can be rigorously determined in the WGS-84 reference frame. Note that under normal surveys, the coordinates of one or more points in the network must be known to establish a datum. In special circumstances, the coordinates of the points may be determined directly, for example using NRCan's Precise Point Positioning service. It is important to bear in mind that when using RTK or DGPS, the coordinates of the receiver points are NOT directly observed via GPS, but rather, the inter-receiver coordinate differences are the observables and the coordinates are subsequently derived based on applied datum constraints (i.e. the assumption of a coordinate for at least one point in the network).

As an aside, one should be aware that some knowledge of the location of the network is actually required for the processing of the raw observations (i.e. to solve the baselines), but that the results are only weakly dependent on the initial assumptions about the position of the network. If you took a set of GPS observations located near Taber, and fixed a coordinate of one point such that it was incorrect by 100 metres, the resulting baseline vectors would still be correctly calculated within a few millimeters. However, if you said the network was near Peace River, errors in even the relative quantities would result. Suffice it to say that using the autonomous (i.e. handheld-derived) position of a single receiver will allow processing of the baselines to sufficient surveying accuracies. Once the baselines are determined, they can be directly translated to "better" known coordinates.

Since coordinates can be rigorously transformed between WGS-Cartesian and WGS-lat/long/height formats, it makes no difference whether the results of GPS processing are presented as a set of WGS-84 Cartesian coordinates or latitude/longitude/height triplets. Indeed, even mapping plane coordinates can be considered "complete," if map projection parameters are provided. From an adjustment perspective, the Cartesian solution is best, but from a semantic perspective, map projection results are more understandable. It's tough to have a "feeling" of what a vector of [640 x, 240 y, 300 z] looks like in the WGS-84 frame, but "390 N, 635 E and 40 up" makes some sort of physical sense.

In the case of land surveying, arbitrary bearings are shown on a survey plan, along with "ground distances." The concept of "ground distance" is ambiguous, as it implies a constant reference surface for the entirety of the survey. This poses a problem even for terrestrial surveys, as demonstrated in the diagram below. Assume that three stations are set up in a direct line (See figure on next page). Each station is at significantly different elevation and inter-station distances are measured. We will assume that no atmospheric effects exist and that there are no error sources present in the results. The stations are arranged such that the distances on the ellipsoid between stations A and B, and B and C are exactly 3 km. Since the measurements are perfect, the distance on the ellipsoid between A and C is exactly 6 km.

If one would like to represent the measured distances on a plan of survey, it will become quickly evident that a single reference surface is required to be defined or else artificial (and purely computational) misclosures will be introduced. The choice of this reference surface is completely arbitrary to the surveyor. Furthermore, if a subsequent surveyor attempts to replicate this experiment, they will come up with different results unless they use the same choice of reference surface. In the diagram above, Surveyor A could assume the 300 metres level is ground, and say



the distance from A to C is 6.0 km + 28 cm. Surveyor B could then replicate the survey, assume 900 m is ground and come up with 6.0 cm + 84 cm. Neither is right, neither is wrong, but Plan A does not correspond to Plan B (granted, they do within 1:5000, but that is a poor example of sweeping today's problem under the 1960's rug).

A similar issue arises in the use of GPS-derived observations since the baselines are fundamentally line-of-sight observations. A common reference surface must be defined for all projects in an area or discrepancies will become evident. Although these discrepancies are small (a 10 m change in elevation would alter the reduced distance of a 10 km line by 2 cm), they are certainly within the accuracies achievable and ranges utilized for conventional GPS.

The simplest reference surface to use would be the ellipsoid. However, due to the requirements for survey plans to indicate "ground distances," this is not appropriate. Instead, a solution is to break up the province into townships over which a particular map projection applies. Since GPS observations can be directly and consistently transformed between WGS-84 and any given map projection, surveyors would be able to directly compare observations and derived quantities such as the bearing and distance between two surveyed points.

An appropriate map projection to use would be a modified transverse mercator projection with a latitude and longitude of origin corresponding to the latitude and longitude of the NE 33 of the township. This would immediately result in derived bearings referred to the central meridian of the township, thus being very similar to bearings expected from past work based on original township surveys. This map projection would also closely approximate the design of unsurveyed territory.

Rigorously, a proper survey would require a direct occupation of the NE 33 to determine its latitude and longitude and ties from this point to the survey would be made. However, simply using the ATS-derived latitude/longitude of the NE 33and ensuring that the relative position of the survey network with respect to the NE 33 is known within 20 metres (achievable via the single-point solutions of the receivers) will result in a properly-rotated network. If the NE33 is directly tied at a later date, coordinates can be appropriately translated.

A consistent scale factor can be derived for the "township tiles" by assuming an average elevation for the township, derived from an appropriate DTM. In this case, we have derived such elevations using the results of the Space Shuttle Topography Mission, and sampling 144 points per township. Even in the foothills, where elevations can change significantly over a township, use of the average elevation is suitable, since what we are seeking to do is provide a consistent reference surface for the comparison of GPS observations. If a GPS baseline is then compared to a terrestrial survey, a discrepancy will exist, but the amount of the error will usually below the typical terrestrial surveying accuracy.

The resulting map projection parameters for each township within Alberta is available as an excel spreadsheet available at the SarWiki site (www.sarpigroup.com/sarwiki) in the forums section under the topic of "GPS and Geodesy Issues." The lat/long of the NE 33 of every township in Alberta is provided, as well as a scale factor to use for every township.

By using these projections, one can set up appropriate mapping tiles for use with RTK or static GPS operations. The significant advantage of this process is that, if all surveyors use the same tiles, surveys can be directly compared for distances AND bearings (as opposed to distances and angles). A simple notation in the affidavit that "all bearings are derived from GPS and are referred to the central meridian of Township xx, Range xx, WxM" is sufficient to allow rigorous comparisons of results. This system also greatly facilitates the building of "survey databases" within a surveyor's own operations. In addition, in the field, if all the required projections are loaded on a data collector, an operator simply has to specify the township, range and meridian they are operating in and the datum used will automatically correspond to prior surveys in the area. A single known coordinate is all that is required for complete consistency with prior surveys.

See "Important Note Regarding Baseline Initialization"

Important Note Regarding Base Initialization

Although the coordinates of the base station only have to be roughly determined for correct relative baseline quantities to be calculated, gross errors (> 100 m) in the base station position will cause even the relative baseline quantities to be incorrect.

Usually, an autonomous receiver position at the base (i.e. the "here" solution) is sufficient for everything to work fine. However, sometimes the base station will determine a hugely incorrect position for itself (elevations of -3000 m inside the earth, latitude/longitudes in other countries, etc). This usually happens if the base station is suddenly turned off without properly ending survey (i.e. power is pulled) and the base station is restarted at a different job. Ibis behaviour has been detected in Leica and Trimble systems.

Unless you check the base station position when you start the day and confirm it is "reasonable" you might go about your day surveying and incurring a huge (>100 ppm) scale factor error that is totally undetectable unless you compare to prior surveys, or set up the base station in a different spot and re-tie in points. During this doomed survey, the base will show it is properly tracking satellites, and the rover will fix ambiguities and show decent quality control results. The only hint something is amiss MAY be a "Reference Coordinates Differ from Expected" message.

NEVER pull the plug on the base station to turn it off and ALWAYS confirm that the base station is using a reasonable (within 20 m) coordinate for itself. This can be done with a handheld receiver, using the ATS fabric to calculate a rough lat/long for the point the base is set over, or even using a NTS map.

ciations and professions, our fees are very low. This is further accentuated when you factor in what an ALSA member receives in services, representation and public relations.

This year, Council has recommended a slight increase in most categories of membership dues. Future increases will be facilitated through a proposed bylaw change which will require the ratification by the membership at the upcoming AGM.

Careful consideration must be given to the assessment of corporate dues. Dues should be incremental as per the size of the business. The levy could be based upon the number of land surveyors, associate members and articled students in a firm or upon the gross amount of billings (similar to the way our liability insurance is calculated). This will take time to design and implement.

Other provincial associations derive their revenue from the sale of plan stickers. Prior to a plan being registered, a sticker, purchased from the association must be affixed to the document. To make this fair in Alberta, the sticker system could be applied to all products currently certified by an Alberta Land Surveyor. This would include well site plans, legal plans, Real Property Reports, grading certificates, site surveys or any other endorsed product.

It seems reasonable to assume, with our enhanced technology that a coordinate based system may evolve which may lessen the requirement to plant iron pins. In order to supplement this lost revenue the ALSA may have to look had creating a levy per coordinate. This would lessen the dependence on having to renegotiate with the provincial government for rate changes on the iron post surcharge as well as reduce the need for iron posts. The resulting energy savings from the manufacture of iron posts will help reduce the overall Alberta carbon footprint.

I wish to acknowledge the input I received at the regional meetings. This has allowed me to present different scenarios for generating revenues. Please think about this issue and please present your ideas at the AGM, this year in Lake Louise. By putting the time in to design a viable solution will not only ensure our survival, it will ensure we have the resources to continue our quest to remain at the forefront of our industry.

The TwiST Update

By Vic Banks, LSAW Coordinator

Reprinted from "Evergreen State Surveyor" - Volume 32 Number 1 Spring 2008

Three to two, nine to seven, and twelve to sixteen. O.K., O.K. Stupid joke. Dave Berg I'm not. This is really about what has been happening with the Survey Career Outreach, Recruitment and Education program over the last year and a half since its inception. Ready for the obligatory flashback? Here it goes.

In the Spring of 2006, Ken Swindaman, then the LSAW State President, asked me if I would be willing to put together a program of school visitation. He came to me because we had worked together several years before on a similar program for the North Puget Sound Chapter. That program had limited success and eventually died out, but not before we learned something about what didn't work. What obviously didn't work well was sending letters to the school Principals at the beginning of the school year. I found that out (long after the fact) when Ken arranged a meeting with some teachers from Bonney Lake who had attended the C.O.R.S.E. (now TwiST) program in New York. We discussed the logistics of LSAW and teachers working together to implement a viable visitation program. They told me that teachers themselves have to drive any program of that sort. They said, likely as not, most of our letters to the Principals from our previous attempt ended up in the round file. This was good to know.

Ken put me on the August 2006 B.O.T. agenda to present the program and ask for the B.O.T.'s blessing to proceed. I made my presentation (see Evergreen State Surveyor, Fall 2006 edition) and was given the go ahead. So, I'm standing there thinking, "this looks good on paper, but where do I start?" Two things happened then. The first was that a B.O.T. member gave me a list of 200 + teachers that attended the summer North Cascades and Olympic Science Partnership Academy. And they all had e-mail addresses! The second thing was that another one of the B.O.T. members asked the Board how many were involved with Boy Scouts? Scouts offer a perfect platform to get the word out. They have a Surveying Merit Badge, and these are kids that already like being outside. I'm off and running, (I'm old, so it's more like a rapid shuffle).

The NCOSP list was text on paper so I had to type the address into my address book, then I e-mailed the teachers and told them who we were, what we can do for them, and more importantly, whatever we do for them, we'll do for free. I started to compile an additional mailing list that I drew from individual school web sites. Slow going. I got some leads from other Surveyors. All in all, I got invitations to eleven-schools (two of which I visited twice) totaling 28 classroom visits. Not a bad start.

I had to have something to actually present, so I started putting together a Powerpoint presentation that had a little survey background, equipment, U.S. history, local survey, education tracks, duties, pay and various survey disciplines. It started out about 45 minutes, which I found real quick, used up all the class time and didn't give opportunity for questions. I now have it trimmed to 30 minutes. The presentation is available to anyone. Just send me an e-mail

lsaw-outreach@comcast.net.

Boy Scouts were next. I met with the BSA Seattle Council Director and he gave me the name of a Scout Master of a newly formed Troop. I coordinated with Renton Technical College and they volunteered their facilities, equipment and second year students to guide the Scouts through the Merit Badge. Unfortunately, the Troop was small to begin with and the kids either moved out of area or took up other interests. That Troop faded, but I still felt the Boy Scouts was a good target.

I expanded my search for new targets and met with several organizations dealing with kids, but nothing came of that. I searched web sites for educational opportunities, careers, technology, anything that might tie into what we're doing, but nothing came of that. I received a dozen queries regarding school visitation, but nothing came of that. A lot of what I did in the first year was just that, "nothing came of that".

End of obligatory flashback.

O.K. Now into the second year and the stuff that is working. It's all working concurrently, so I'll just itemize and not try to create a time line of events.

Liaisons: I requested a name from each Chapter to act as liaison between me and the Chapter. The liaison receives an e-mail from me once a month with an update on what has been happening. The liaison can act as my voice to the Chapter. If I happen to drop dead, (remember . . . I'm old) there is a record of what's been done and someone should be able to step in. Some of the liaisons have already jumped in. Gwen Roy, liaison for the Southwest Chapter organized three days of GPS/Geo-caching classes for the Aberdeen schools Spring Outdoor Camp. Dozens of kids tramped through the wilderness, (actually, a tree lined big open field)

in search of geo-cache prizes. The schools have invited us back for next year's camp.

Schools: Our biggest target is still the schools. The problem was getting the word out to them. The solution came from the California Land Surveyor's Association effort to do the same thing. CLSA hired some professional graphics and video people to put together folders, brochures, handouts, and best of all, a video. CLSA's intent was to send this material to every school in California. What CLSA also did was offer to license the DVD and print material to other States. With the purchase of the license, we could have our logo and contact info imprinted, then mass produce the DVD and print material. This took most of the summer, but in early fall we had the material and I started putting together the packets. Now I just needed to mail them out, but first I needed addresses. I got an Excel file of all of the schools in Washington from the State School Board, and I was ready. For ease of use, an Access database was made from this file by Dick Lovering, the liaison from South Puget Sound Chapter. I mailed out 400 packets to all of the regular High School Career Centers and Career Counselors (excluding, at this time, institutions and Alternative schools). The mailings were finished in the first two weeks of January and I started getting response by the third week. So far, the mailing has resulted in a day long visit to Woodland High School, invitation to job fairs in Auburn (90 exhibitors) and Walla Walla. Pat Beehler of the Southwest Chapter extended an invitation to the Thurston County area schools job fair. While at that fair, I received an invitation to a job fair in Shelton. I spoke at the Lower Columbia Chapter meeting and learned of a job fair that Clark College was hosting. I attended that and also sat on a panel with other surveyors and fielded questions from prospective students about surveying as a career.

A couple years ago, we funded three teachers from Bonney Lake to attend the C.O.R.S.E. (now TwiST) program in New York. One of the teachers was Dr. David Bellamy of Bonney Lake High School. His enthusiasm with what he learned there has resulted in his creating a pilot program involving hands-on spatial technology. We supported his program through the purchase of 35 Garmin Legends.

GIT/GIS Now on the Map at Bonney Lake High School

Bonney Lake High School, resting near the northwestern tail of Mt. Ranier, is offering the first course strictly dedicated to geospatial information technology in the state of Washington. The idea for the class emerged from intense courses on ArcView and GIT (C.O.R.S.E. - now TwiST) for a couple of science teachers in the Sumner School District. The trainings were financially supported and solely made possible by the Land Surveyors Association of Washington (LSAW). The relevance and pervasiveness of GIT/GIS in everyday life spurred the proposal and development of the course. Two years after the last training sessions back in New York, David Bellamy - a science instructor at BLHS - finally was able to get the class on the course catalogs, and more importantly, a class of students interested in GIT/GIS. And so it goes... the first course of its kind at the secondary level in the state and perhaps on the west coast!

The course is designed to introduce students to the technologies and methods used to display information or data by means of visual maps. The course covers basic geography, map projections, map usage, remote sensing, GPS, ArcView, and basic surveying principles. Since this is the first year of the course, the scope of topics will undoubtedly become more refined as the class develops over subsequent years. Students taking GIT/GIS are either juniors or seniors, who have previously taken at least two years of science and math. The program is intended for mid - to upper level academically performing students. Traditionally, these are the students who are most likely to enter a 2-4 year post-secondary or vocational program. Future plans for the course involve expanding from GIT/GIS I and adding an advanced GIT/GIS II, for those students wishing to learn more. Additionally, plans are underway to connect students with potential surveying internships, as well as local Surveying and GIS programs at Bates and Green River CC.

The class already appears to be generating a lot of attention among the students and it is likely to be the fastest growing science course offered at BLHS. Because the field of surveying is growing so rapidly (as is GIT/GIS), it is hoped this course will offer a gateway for students into these professions in the Pacific NW. The instructor and students at BLHS wish to extend a sincere thank you to the LSAW for their generous and continued support. For further questions about the course, please contact Dave Bellamy at

david_bellamy@sumner.wednet.edu.

We are also supporting Oak Harbor High School with their new Survey program. They wanted to start a Survey class in their Technology Department, so they looked in our direction. R.P. Fakkema outfitted them with the necessary gear, Total Station, tripods, tribrachs, rods, level, etc. We both helped to lay out a course guide and a traverse and leveling course. They could still do with another Total Station, so PPIGroup coordinated with Topcon's Education group and arranged for purchase of another at a huge discount.

Boy Scouts: Currently, I am working with individual Boy Scout Troops on the Survey Merit Badge. The typical program length is 2-3 evening meetings of 2 hours each, and a Saturday field exercise of 3-4 hours. Anything longer and they lose interest. Or maybe they just lose interest in me. How about it? Any young, former Boy Scout, P.L.S.'s want to jump in on this?

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The Usefulness of Case Law Reports -

Arnold v. Mercer [2007] N.J. No. 223

By: Izaak de Rijcke (e-mail - izaak@izaak.ca)

Reprinted from "Geomatica" - Volume 62, Number 1, 2008

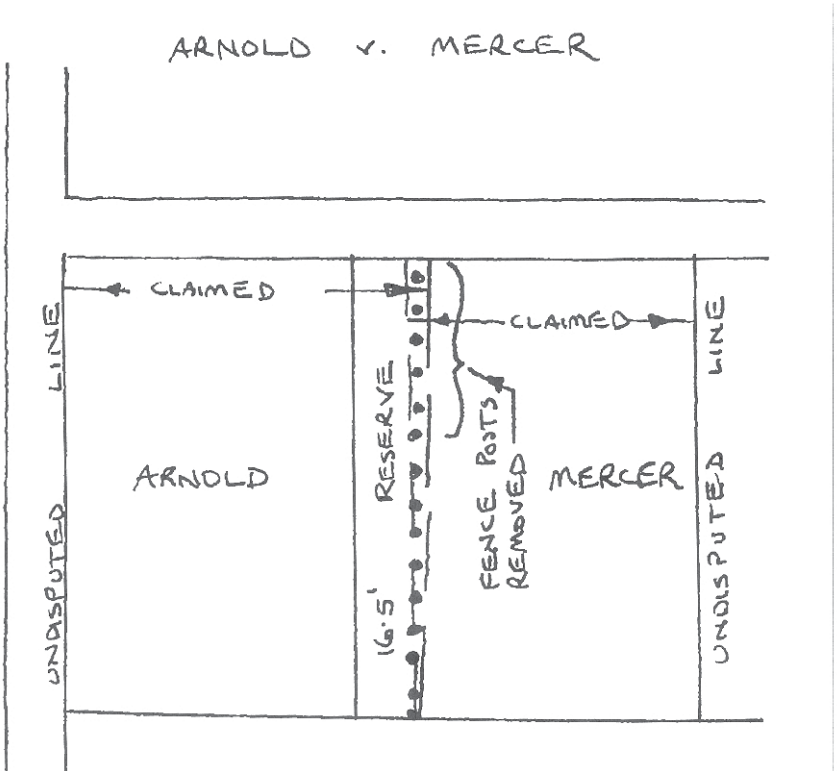
Every licensed cadastral surveyor in Canada understands the importance of common law principles of boundary retracement. Apart from the statutory rules that may apply to the re-establishment of a lost boundary or an un-run line, there is a body of case law which establishes principles to guide the surveyor in making sense out of evidence found on the ground, as well as in other surveyors' notes and records, descriptions, plans and archival records. The assumption, of course, is that the availability of this case law, and being able to meaningfully conduct a search of relevant case law that informs retracement decisions, will be part of the catalogue of information available to cadastral surveyors. Unfortunately, this is most often not the case. Not only are searchable databases with guidance or training as to the correct formulation of search parameters usually unavailable, many databases do not in fact span the whole body of case law that might be relevant. The word "relevant" is used in the sense of spanning all common-law jurisdictions of the world and also extending back in time to a sufficient point in history to allow for the whole body of relevant case law to be made available.

Even then, making sense out of case law continues as a daunting task - in part by reason of the method by which Reasons for Judgment are sometimes written by tribunals and judges.

A good example can be found in the decision in *Arnold v. Mercer* [2007] N.J. No. 223 decided in June 2007 after a trial in Newfoundland. As is common for most on-line searchable case law databases, *LexisNexis® Quicklaw* does not facilitate the reproduction of survey plans, sketches, photographs or other exhibits entered into evidence in the case report itself. While this may be disappointing, it is understandable because the decision has obviously not been written primarily for land surveyors. Increasingly, *CanLii* versions of case reports do include selected exhibits and documents from the trial. The article for this page in the next issue of Geomatica will review a well-illustrated case report—quite the contrast from *Arnold v. Mercer.*

Case law is the result of a dispute between the parties who look to experiencing success after the conduct of a trial in a courtroom. The resulting judgment usually includes reasons that are perfectly understandable by the parties, but can leave the reader wondering what the dispute was all about. The absence of surveys, sketches and plans etc. all contribute to this confusion. *Arnold v. Mercer* is no exception.

The real issue in *Arnold v. Mercer* was a claim for damages resulting from the removal by Mercer of a portion of a fence that had been constructed by Arnold. The fight was really about money. To experience success, Arnold needed to prove that the fence he built was, in fact, located on Arnold's land. The removal of the fence by Mercer would then be considered a trespass, resulting in an assessment of the value of the fence removed, and an award of monetary damages. Of course, from the land surveyor's perspective, the decision is only of interest when read in the context of trying to understand how the court decided who owned the land on which Arnold built his fence.



The court reviewed the title history for both properties, and described how predecessors in title had made improvements, conveyed ownership and, ultimately, had their respective properties surveyed by different surveyors in the last 20 or 30 years. What emerged is that Arnold and Mercer owned adjoining parcels of land, both deriving their title from a Crown grant. The Arnold parcel included a reference to a Crown reserve for a 16.5-footwide road or right-of-way between the two properties. The description for the Mercer parcel contained no such reference. As best as one could decipher, in the language used by the court, "there was more land on paper than there was on the ground, resulting in an overlap of the two properties on paper."

At least five registered land surveyors, their historic field notes and plans, and the oral testimonies of some more recent surveyors involved were all considered by the court. The test to be met by Arnold in order to succeed was "to establish on a balance of probabilities that the land on which the fence line posts were erected were erected on the plaintiff's land or boundary line. The plaintiffs also had to establish that it was the defendant who removed the fence posts and that the plaintiff suffered a loss as a result of the actions of the defendant...."

Arnold and Mercer, through their solicitors, also jointly hired a surveyor to review both properties in order to attempt to determine who owned the land where Mercer removed the fence posts. He produced a report and it was tendered in evidence, but the trial continued and the dispute was not resolved.

Although *Arnold v. Mercer* is an interesting example of how the court attempted to determine ownership of the land in which the disputed activity took place, it ultimately did reach a conclusion without the need to refer to any other case law, and only made a passing reference to the textbook, *Anger and Honsberger Real Property* (2nd edition).

In the reading of this decision, the facts remain confusing. This writer attempted to sketch out what in fact was taking place but could not. The attempt appears in the diagram that accompanies this article. Instead, the decision is equally interesting in how the court described the role and function of the surveyors who had worked in this neighbourhood over the last decades. For example, one surveyor referred to the work of a colleague done in 1999 as being, "not a survey, but was a real property report, the purpose of which was to locate on the survey where certain properties were in relation to the description given." No wonder the decision seems confusing or difficult in fathoming exactly what the dispute was about. A layperson reading the trial result may well conclude that when surveyors do a real property report, a real survey is not being conducted. This would be disconcerting. Other laypersons reading the decision might conclude that surveyors were responsible for creating the "overlap on paper." Perhaps the court was never presented with case authority about the importance of original marks on the ground set when the property was first surveyed or made the subject of a patent from the Crown. Nowhere in the case report was a distinction attempted by the court in respect of "retracement" as opposed to "first running." That distinction appears to have been blurred completely in the preoccupation with the existence or non-existence of the 16.5 foot-wide reserve.

Surveyors need not despair. Although not all case law lends itself to clear principles which may guide a land surveyor's work on the ground, even confusing decisions must still be considered in the context of the whole body of common law which continues to grow and evolve. One must not dismiss decisions of courts that appear difficult to read as somehow "useless" or not relevant if the difficulty in deciphering what in fact took place is insurmountable. If not helpful from the perspective of understanding exactly what was done about resolving a boundary or land ownership dispute, then case law may be helpful in gleaning the view taken by the court of multiple land surveyors testifying about their work. Even for the court, when all was said, a tremendous muddle continued.

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Girl Scouts: The Girl Scouts are more consolidated. They have a 400 + acre ranch in Carnation that is the primary camp for Western Washington. We approached them and told them what we could offer them and it took off from there. They were in dire need of a new compass course and would love to have a geo-caching course. I and Pam Sager and Denise Holcomb (two female P.L.S.'s, to the delight of the Girl Scouts) laid out a new compass course and set permanent monuments at the positions. We also ran a GPS traverse and monumented the new Geo-caching course. To put a little icing on the cake, we purchased 10 Garmin Legends for their use. At our last meeting, they were so appreciative that they are going to sponsor a "Special Survey Event" at the camp in Spring. The importance of the rapport we currently have with the Camp is that now we will have friends that can make contact with the Eastern Washington Girl Scouts.

In summary, those are the areas of concentration for the coming year. It may seem as if I've been throwing names around with abandon, but I wanted to illustrate that this is not just a one man job. Everyone is welcome to join in. As you can see, the efforts of all of us have had positive results. If you have ideas, or contacts, or want to volunteer, let me know.

Highlights From the 2008 SLSA AGM

President Dale Rosnes and Partner Halia Sushko lead the presidential march.

Retiring Controller of Surveys Ed Desnoyers has enough congratulatory cake for everyone.

Jan Webster (left) is the Ladies Top Golfer in the 2008 Murray Memorial Golf Tournament. The trophy was presented by Barry Clark.

Brian Burridge (left) takes home men's top honours in the 2008 Murray Memorial Golf Tournament. The trophy was presented by Barry Clark.

The chef works his 'magic' with Cherries Jubilee following the Pitch-fork Fondue.

President Dale Rosnes presents five of six new commissions granted during his term.

Jill Burridge, Maple Creek - with husband Brian

Daniel Cook, Saskatoon

Travis Wolfe, Swift Current - with wife Leah
"Enough already with the Trevor!"

Ryan Maloney, Weyburn
- with wife Kim

Malcolm Vanstone, Regina
- with wife Sara

Respect

by Jennifer Setiawan

Reprinted from "ALS News" March 2008

We had a field safety broadcast the other day which had a little statement regarding respect. This message made me think about the whole concept of respect.

I thought about everything and everyone that I respected and how it had been earned. I then thought about ways that the Association can earn its respect for the land surveying profession through us as its members. Associations earn my respect when I can understand what they are and what their objectives are. Other people earn my respect when I watch that they are respectful and morally considerate to one another, and my leaders earn my respect on how they lead by example.

In our land surveying field, I have noticed that one of the recurring issues concerns respect and landowners. Most recently, I have come across angry landowners whose anger can erupt over anything, whether it is because we are on their land doing a residence tie, or because they are unhappy with the whole oil and gas industry. In all these instances, I have noticed that, in most of the cases, anger was caused as a result of misunderstanding. The problem is that not everyone understands the concept of land surveying or what land surveyors really do. Of course now, if I saw a surveyor looking for evidence in my backyard, I would know exactly what they were doing and have no problem with it. I believe I would be quite friendly to them since I would be able to relate and I would understand what they are doing. However, if I didn't have this understanding and I noticed someone randomly digging holes in my land, I think I would be furious. The key is to calm down the aggression and try to explain the facts of who we are and what we do. Most of the time, once the landowner learns about our intentions, the anger fizzles away. To prevent that initial anger, we could earn their respect initially by bringing awareness to the public. Our code of ethics outlines our moral obligation to serve and to protect the public. By initially contacting the landowners and letting them be aware that we will be in the area, some of the misunderstanding can be prevented. The Commitment to Property Damage Mitigation prepared by the Association lists courtesy guidelines to instruct the field crews and could be used as a type of oath that a party chief takes before working out in the field.

With all that we have going on in our daily lives with deadlines and issues outside of work to deal with, it is hard to always be cordial. I struggle sometimes to keep my smile sincere with my crew mates after I have spent so many long hours with them. I have, however, discovered that taking our job seriously and enjoying it by being civil to one another is indeed contagious. The way we react with other people reflects upon our identity. I know that when I see someone treating another person badly, I cannot help but feel intimidated by this person, regardless of how kind he or she is treating me. Wouldn't it be great if we as surveyors spread joy to the public by showing the dignity of our profession? As an articling student, I know that I try to absorb as much as possible from my principal and the more experienced land surveyors. I really appreciate the fact that those above me lead by example. Our code of ethics reminds us of our moral obligation to serve and protect the public. I particularly enjoy listening to stories from the field from other land surveyors and about their massive searches for evidence, or even about how things out in the field were different when they did not have the technology that I get to work with today. It makes me think that I should never have a reason to complain with all that we have to help us in the field nowadays. We should think about what we are doing and ask ourselves if we would be proud to talk about what we are doing to lead someone else to do. When I see other land surveyors follow the code of ethics, it makes me feel proud to follow in their footsteps with the hope to one day pass it along.

> The bottom line is that respect should be earned and not demanded.

The bottom line is that respect should be something earned and not demanded. Our Association must continue to earn its respect by creating awareness about what we do and simply passing along those smiles to serve the public and our colleagues.

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