

The Tribunal's Delimitation

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CLS technical expert helps set new limits
(Maritime boundary limits, that is...)

Canada Lands Surveyors are accustomed to dealing with demarcating, and in the offshore delineating, the division between rights in land. Sometimes there are overlapping claims that have to be resolved but it is seldom that a Canada Lands Surveyor is asked to help delineate a line between overlapping claims of 37,000 square nautical miles (12.7 million hectares, or 31.4 million acres). In the 2002 arbitration between Newfoundland and Labrador, and Nova Scotia, David Gray CLS, assisted in the division of their interests in offshore resources.

Starting back in the early 1960s, the Atlantic provinces tried claiming the offshore areas as their own and developed possible delimitation lines between themselves in the Gulf of St. Lawrence and through a part of Cabot Strait. The federal government firmly rejected these proposals, but during the 1980s negotiated separate agreements for resource management and revenue sharing. However, the boundary between the two negotiated areas was in dispute. By 1997, the situation came to a head when oil companies wished to explore in Cabot Strait, Laurentian Channel and an area known as the Laurentian Sub-Basin along the continental slope. In May 2000, the federal Minister of Natural Resources created a tribunal to resolve the boundary question.

Gray was asked to assist the tribunal with any technical aspect of the decision. Over the two-year arbitration, he figures he spent about 4½ months on this case - while still doing all of the required work for his normal employer, the Canadian Hydrographic Service. "Needless to say, there were many evenings and weekends devoted to the assignment," said Gray. "Still, I looked forward to the work, I learned a lot doing it, and perhaps I can help Canada even more in its next boundary negotiation or arbitration by having assisted in this case."

The arbitration had two phases. First, the tribunal had to decide if there was an existing, agreed boundary. Finding that there was not, it then had to decide where the boundary ought to be located. The hearings took about two weeks each and were held in Fredericton, NB.

In the first phase, Nova Scotia attempted to prove that the provincial premiers agreed in 1964 to a set of lines delineating their respective claimed areas in the Gulf of St. Lawrence and

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President's Message

The festive season and the New Year are fast approaching and my wish to all members of the ACLS and their families is for a joyous festive season and a healthy prosperous and happy New Year.

Your Council and Committees have been active on all fronts as we make progress and prepare for the annual meeting. That's right! *The Annual Meeting* – mark your calendars now if you haven't already done so. The Annual Meeting will be held at the Delta Bessborough Hotel in sunny Saskatoon, March 14, 2003. Our local AGM committee is planning the social and accompanying persons program. Details will accompany the registration package in January. A block of rooms have been set aside at the Bessborough, so your early booking will ensure your room at convention rates. To reserve your room call **1-800-268-1133**.

We held a Strategic Planning session at the end of October in conjunction with a face-to-face Council meeting. Fifteen CLS members participated in the Strategic Planning session. The exercise was intense as we focused on developing a five-year plan. Details on priority missions and major initiatives for the next 12-18 months will be presented to the members at the 2003 AGM.

Our GIT and Aboriginal Liaison committees are planning seminars for March 12 and 13, 2003. GIS, Aboriginal issues and a workshop on ACLS business (CPD, Practice Review, Strategic Planning) will be the focus. Included with the GIS seminar will be a tour of the Canadian Light Source at the University of Saskatchewan. The \$170 million Synchrotron project is the first one to be constructed in Canada.

With the renewal for your membership for next year, please consider how you can serve our Association. Your input is needed. Please volunteer to serve on a committee. You will find the experience rewarding.

On behalf of Council, I would like to thank all the volunteers for the committee work they do and we look forward to seeing all of you in Saskatoon, March 12-14, 2003.

Wes Jamieson, SLS, CLS
President

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through Cabot Strait. Coordinate values had been computed in 1969 and agreed in 1972. However, the tribunal noted that the federal government stated the premiers were outside their mandate because the British North America Act, now the Constitution Act, made the offshore a federal responsibility. Gray's work was relatively limited in this phase to: providing advice on geography and cartography; measuring the length and direction of several line segments that went seaward from the last identified point in Cabot Strait; determining the location of several oil exploration leases with respect to the line being advocated by Nova Scotia; and preparing maps for the decision.

In the second phase, Nova Scotia continued to advocate that the line rejected in the first phase was the most equitable solution. Newfoundland used the International Court of Justice decision in the Gulf of Maine case as a model to construct a line through Cabot Strait, across the continental shelf, and to the outer limit of the continental margin. Although the parties selected different relevant areas and relevant coasts, both were able to satisfy a proportionality test to determine that the ratio of the coastal lengths was the same ratio as the portions of the relevant area attributed to each province.

The tribunal rejected both claims. It held that the three points in the inner part of the Cabot Strait that had been approved by the premiers in 1964 were appropriate, but accepted only the 1964-construction method and asked Gray to compute the NAD83 values for these points. For the line southeast of the third point, the tribunal decided that the boundary needed to go to a point on the closing line from Cormorandière Rocks (just off Scatarie Island, off the eastern extremity of Cape Breton Island) to Lamaline Shag Rock (at the Southwest extremity of the Burin Peninsula, Nfld.). This point also had to be equidistant from the closest points on the coasts of the two provinces. These proved to be Cormorandière Rocks and SW Turr Island. For the line seaward of this fourth point, the tribunal started by looking at the equidistance line – as is often done

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in maritime boundary cases. The tribunal held that it was inequitable, due to Sable Island's remote location and the substantial disproportionate effect it would have on the delimitation if given full weight.

Gray was then asked to compute an equidistance line that gave only half effect to Sable Island. To do that, he had to compute the zero-effect equidistance line and then determine a line midway between the full-effect and zero-effect lines. The half-effect line, too, was considered inequitable, owing to its cut-off effect and the disparity in the length of the parties' coasts. The tribunal then looked at the zero-effect equidistance line, giving no weight to Sable Island and found it provided an equitable result. The parties had stated that they would prefer rhumb lines (loxodromes) for each line segment, but it was decided that geodesics followed the equidistance principle better than rhumb lines.

The Tribunal decided a proportionality test would be inappropriate in this case since the choice of a relevant area for this purpose was highly subjective and the length of the provinces' coasts had already been taken into account in fixing the dividing line.

The 500 nautical mile long delimitation is the first in the world that divides the full extent of the continental shelf as defined by Article 76 of the Convention on the Law of the Sea.

Many of the newer members of ACLS, would have had contact with David Gray through the Offshore Management examination, which he has set for the past 10 years. Gray has served as an expert witness in over 20 fishing violation cases where the incident location and boundary were required as well as the accuracy of those data. He served on the inter-departmental team for the arbitration between Canada and France over the St. Pierre and Miquelon boundary. He is currently involved in the calculation of the Canada-Greenland Continental Shelf Delimitation Line on NAD83 with his Danish technical opposite. At CHS, he is responsible for the technical data concerning the geographic grid on charts, maritime boundaries and limits of Canada, and radio navigation system information.



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Continuing Professional Development (CPD)

A voluntary CPD program is now in place. The ACLS Council set the standard of minimum recommended participation at a minimum of a total rolling average of 60 hours over 3 calendar years. Details on the program are available on the ACLS Web site at:

www.acls-aatc.ca/FILES/MEMBERS/MEM2000/english/cpd.htm

The Continuing Professional Development Committee prepared a list of recommended categories and delivery methods for a professional development program. It will be reviewed from time to time.

If it becomes apparent from the monitoring process that particular categories need more attention, or need to be updated because of significant technological advancements or statute changes, the CPD Committee will advise the membership accordingly.

It is time for the first annual survey of member's participation. Members are asked to submit their report of participation in CPD activities for the year 2002 by January 31, 2003. A reporting form is available on the ACLS Web site and can be mailed, faxed (613-224-9577) or e-mailed (office@acls-aatc.ca) to the ACLS head office. For the monitoring process there is no requirement to put your name on the submitted form. Comments on the program are welcomed and could be forwarded to the head office on a separate sheet.

The purpose of this reporting is to monitor and gauge success and participation in the program. In the event of a discipline enquiry, a member may present his or her personal record of participation in CPD to support certain competency questions. Supporting documentation such as certificates of completion and invoices will then be necessary.

Prudent members will ensure that they maintain the recommended CPD participation level over a period of three years.

If monitoring shows the membership, as a whole, has not participated sufficiently, the Association can then deliberate alternative methods of addressing the need for CPD. Voluntary reporting will allow the Association to review and evaluate the adequacy of its Continuing Professional Development Program.

Executive Director's Notes

Insurance Notice

The ACLS Insurance Committee would like to remind members that according to section 29, subsection (3), of the CLS Regulations, any member receiving a notice of a claim or impending claim for a professional liability issue must inform the Registrar immediately.

Practice Review

Jim Gunn has been hired on a two-year contract as the first ACLS Practice Review Manager. He's presently hard at work on designing a unique and innovative practice review process for ACLS. A status report will be presented to the membership at the up coming AGM. Practice Review will be discussed during a forum on the afternoon of March 13, 2003.

Permitting and Branch Office Issues

In early 2002, an unusual permitting issue, which could not be resolved by current regulations, caused Council to establish a Task Force to conduct comprehensive research and make recommendations. The Task Force reviewed legislation and regulations of a number of sister associations in every province and considered a number of options and the impact of these on the unique status of ACLS. It then submitted the following recommendations to Council for the October 25th meeting:

1. There should be no change concerning the ownership of entities;
2. Require that at least one ACLS member, who holds a license and will take responsibility for personally

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supervising and directing cadastral surveys for the entity applying for a Permit, be a Director of that entity, in the case of a company, or, a partner, in the case of a partnership;

3. Require that an entity applying for and holding a permit be covered by professional liability insurance equivalent to that required of licence holders.
4. Require that a primary or principal function of an entity applying for a Permit include surveying, as defined in the Act (see section 2 of the Act);
5. In respect to the naming of entities:
 - Council should have approval authority for all names of entities applying for a Permit.
 - Self-laudatory or misleading names and numbered companies would not be acceptable.

Following the submission, Council asked the Task Force to consider a recommendation from the ACLS Insurance Committee to require that a License holder not be allowed to appear on more than one permit. The Task Force reviewed this issue and concluded that current and proposed regulations provide sufficient power for the Association to protect the public in this regard. Any concerns that insurers might have in this regard are not the subject of concern of the Association but a matter between insurer and client.

During the Task Force discussions, the issue of regulation of branch offices arose and was reported to Council as an additional issue requiring some consideration. The Task Force was requested to further investigate this issue and that study is underway.

A reminder that Section 3. (7) (i), of the CLS Regulations, states the following:

(7) *Members shall maintain their competence, integrity and respect for their profession in their relations with*

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colleagues, clients, employers or employees and the public and shall, in particular,

- (i) ***limit their advertising to a level that provides adequate information and avoids misleading and self-laudatory language.***

Regulation and Bylaw Amendments

Last Spring, the 2002 amendments to the CLS Regulations and Bylaws were approved by the membership by a mail-in vote. The Bylaw Amendments came into effect on May 14, 2002. The CLS Regulation amendments received the Natural Resources Canada Minister's signature on November 1. The ACLS Council made the amendments official on December 10.

On October 25, 2002 Council approved the following new formulation of Section 13.4 of the Bylaws:

Amendments

- 13.4(1) *Proposals to amend the Regulations pursuant to the Act respecting Canada Lands Surveyors must be approved by the voting Members "in good standing" before being sent to the Minister of Natural Resources for consideration.*
- (2) *Any Member "in good standing" may propose an amendment to these Bylaws by submitting it to Council supported by at least fifteen (15) voting Members "in good standing."*
- (3) *Approval of an amendment to these Bylaws, or a proposal to amend the Regulations, requires a two-thirds (2/3) affirmative vote of the Members voting.*
- (4) *A proposed amendment to these Bylaws or the Regulations must be presented for discussion at a General Meeting of Members. The proposed amendment must then be sent to the voting Members "in good standing" for approval by mailed-in ballot.*

This bylaw amendment will be presented for discussion at the up coming AGM and voted on by mail-in vote shortly there after.

Regulation and Bylaw amendments are expected following the work of the Permitting Task Force. They will also be presented for discussion at the up coming AGM and voted on by mail-in vote shortly there after.

Photogrammetric and Remote Sensing Committee

Because there are not many ACLS members who are pure photogrammetrists or involved in remote sensing and there is some overlap between this topic and GIT (Geographic Information Technology) Council disbanded the Photogrammetric and Remote Sensing Committee and appointed two members of the Committee to the GIT Committee.

Summary of Council Meetings

July 23, 2002: teleconference

- Approval of the Practice Review Committee's recommendation to negotiate a contract with Jim Gunn for the position of Practice Review Manager.
- Appointment of Alain Sansoucy and Wayne Hodges on the Complaints Committee.
- Approval of the CPD Committee's new Terms of Reference.
- Approval of the new Manual of Standards of Practice Committee Terms of Reference.
- Decision to support the new CCLS fee structure and its efforts to get Québec to become a member.

October 25, 2002: face-to-face

- Approval of the Permitting Task Force recommendations on the Permitting Issue. Council also directed the Task Force to consider a recommendation from the Insurance Committee of one permit per licence (licence holder cannot be listed on more than one permit).
- Council also directed the Task Force to investigate and present recommendations on the Branch Office issue.
- Discussion on action to be taken in respect to two alleged instances of illegal practice.
- Approval of an amendment to section 13.4 of the ACLS General Bylaws.
- Council directed the CPD Committee to present a proposal for the management of the Scholarship Fund.
- Decision to submit the proposed Web site legal notices to a lawyer for review.
- Appointment of Bruce McMurchy as Chairman of the Discipline Committee.
- Decision to obtain a legal opinion on the ACLS discipline hearing process.
- Decision to hold an Administrative Law Seminar opened to Discipline and Complaints committee members, Council members, the Executive Director and members who intend on joining the above-mentioned committees.
- Council directed the Insurance Committee to investigate and present recommendations on past action insurance.
- Decision to disband the Photogrammetry and Remote Sensing Committee.
- Decision to invite exhibitors to the next ACLS AGM.
- Presentation of a report on practice Review from J. Gunn, Practice Review Manager. New direction was given by Council.

ACLS AGM 2003 EVENTS

The following activities will be held at:
The Delta Bessborough, Saskatoon, Saskatchewan

For room reservations call: **800-268-1133** (Mention that you are with the Association of Canada Lands Surveyors).
Prices range from standard \$105, Premier & Business \$125, Deluxe \$140 and others with higher prices.
www.deltahotels.com

PRELIMINARY PROGRAM:

- SEMINAR ON GEOGRAPHIC INFORMATION TECHNOLOGY (GIT): Wednesday, March 12, 2003.
- TOUR OF THE SYNCHROTRON: Wednesday, March 12, 2003 at the end of the afternoon.
- SEMINAR ON ABORIGINAL AFFAIRS: Thursday, March 13, 2003, A.M.
- WORKSHOP ON ACLS BUSINESS (CPD, PRACTICE REVIEW, STRATEGIC PLANNING): Thursday, March 13, 2003, P.M.
- ANNUAL GENERAL MEETING:
 - Friday, March 14, 2003, 9 A.M. – 5 P.M.
- ANNUAL LUNCHEON: Friday, March 14, 2003, Noon.

The AGM Committee is working on organising activities for accompanying persons. Details on the program, fees and registration will be posted on the Web site at a later date.

Please do not wait until the last minute. The hotel will release what is left in the block of rooms on February 7th, 2003.

Past Action Insurance

Members considering retiring or leaving the profession for other reasons should, for their own financial protection, take Past Action Insurance. Even though a land surveyor has ceased to practice, professional liability issues may come up in the future and this could potentially have a serious effect on the individual's assets. The cost is minimal. For example one insurance company provides coverage for all land surveyors that have been insured under their program for a period of at least two consecutive years, prior to their retirement or requiring "Past Actions" cover. The surveyor must take out a one year "Past Acts" extension to the practice policy for a premium, which is based on the last fiscal year fees. Following the year of the "Past Act" extension, coverage is maintained on a "no fee" basis as long as the insured maintains appropriate membership status in their respective survey association.

The ACLS Council is presently considering putting in place a bylaw that would make Past Action Insurance mandatory.

GIS Certification

Certification of Geomatics Professionals has been a topic for much debate. A few organisations have tried to address the issue.

According to URISA, "Certification is career recognition through the evaluation and approval of individuals engaged in a specific occupation or profession". In a certification model, anyone may provide a service but those providers who have met specified education and training requirements would be distinguished with an exclusive designation. Licensing, on the other hand, awards the right, to certain individuals who have met specified educational and training requirements, to provide a specified service. The ACLS has a licensing model.

The ACLS GIT Committee did a bit of research on how other organisations are dealing with the certification of geomatics specialists.

Urban and Regional Information Systems Association (URISA)

The URISA Certification Committee recently released its latest version of a proposed GIS Certification Program. The first version was made public in December 2001.

The Committee felt that a GIS Certified Professional should have the following characteristics:

- A formal degree with a number of specific GIS courses or equivalent coursework in CPD courses;
- At least four years of experience in a position that involves data compilation, teaching, etc.; and
- A modest record of participating in GIS conferences, publications, or GIS-related events.

Realizing that many professionals who should qualify do not have the formal background that is available to those now beginning their career, the Program is based on a minimum number of points needed to become a certified GIS Professional. To ensure a broad foundation, specific minimums are required in the following categories: Education 30, Experience 60 and Contributions 8. A total of 150 points are required so the extra 52 points can be counted from any of the three categories.

The applicant must submit a form, similar to the ACLS CPD form, for each category. Renewals are done every 5 years. The Program has not been implemented yet and has met some criticism. For more information on the URISA Certification Program: www.urisa.org/certification/2certific.htm

International Organisation for Standardization (ISO)

ISO set up the Technical Committee 211 (TC211) to produce a set of standards in respect to geographic Information/Geomatics (ISO 19101 to ISO 19137). One of these is the qualification and certification of personnel (ISO 19122).

Much of the driving force behind TC211 came from Canada which in 1998 proposed a widening of the work of the Committee to include certification of personnel. A detailed proposal recommended three levels of competence (technologist, engineers and managers) managed by national bodies.

The scope of TC211 work is to produce a report that describes a qualification and certification system of personnel in the field of GIS that would be managed by a central independent body.

The second phase would be, if accepted, implementation of an accreditation process for those learning institutions that wish their graduates to be eligible for certification.

It is our understanding that the report is presently being voted on by the members of TC211 so the GIT Committee could not obtain a copy. We will follow up on it.

Canadian Institute of Geomatics (CIG)

In May 2001, CIG introduced the Certification Program for Geomatics Specialists. CIG felt that there was a need

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for a voluntary certification that would provide an official recognition for individuals who demonstrated professional integrity and competence in their field of expertise and that would also provide some comfort to the public.

In addition to Geomatics Managers, CIG certifies individuals in five specialties: photogrammetry, remote sensing, GIS/LIS, geodesy and cartography. The requirements are six years of professional experience in the field of expertise for which the individual is applying and references from persons holding a responsible position. Credit may be awarded instead of actual job experience for technology diplomas or degrees based on the length of the program.

Association of Ontario Land Surveyors (AOLS)

The AOLS introduced the concept of a "Certificate of Registration" in 1993. In short it is a certification process for the disciplines of photogrammetry, geodesy, hydrography and geographic information managers (GIM). People with that designation become members of the Association the same as licensed individuals and so are subject to the Code of Ethics, complaints, discipline, etc. but are not subject to peer review.

Conclusion

Certification of GIS Professionals is an issue for debate and has been for years. Is there really a need for certification? Won't this impose unnecessary restrictions to the development of geomatics? Interesting point/counterpoint articles are available at: www.geoplance.com/gr/giscertification/default.asp

This issue concerns the ACLS. It believes that certification may be misleading to the public because it will not be able to readily discern the difference between voluntary certification and mandatory licensure such as the ACLS system.

The CLS profession is unique in the sense that it is truly multidisciplinary. So ACLS licences photogrammetrists, hydrographers, geodesists, land information specialists and so on as well as land surveyors. Could the ACLS have the model of choice for Canadian GIS professionals?

Please use the ACLS Message Board to provide your comments at: www.acls-aatc.ca , in the members only section.

References

- URISA Certification Update (4/17/2002) at: www.urisa.org/certification/2certific.htm
- Iain Greenway (August 2001). Standardisation of the Qualifications and Certifications of Surveyors? International Federation of Surveyors (FIG) at: www.ddl.org/figtree/tf/standards/certifica.htm
- Olaf Ostensen. The expanding agenda of Geographic information standards. ISO Bulletin July 2001 at: www.isotc211.org
- CIG Certification Program for Geomatics Specialists, May 2001.

Jean-Claude Tétreault, for the GIT Committee

First Nations Community Planning

If one were to ask the average land surveyor to describe their business according to the words "Land, Settlement, People, Economics," there would be a wide range of responses. Also, almost every surveyor would be able to relate in some way to the first two words "Land & Settlement".

It was therefore somewhat puzzling when I discussed community planning with some people in our industry and informed them that over the next few years Indian & Northern Affairs will be transferring millions of dollars to First Nations to do comprehensive community planning. Many had trouble relating to this activity as a market for their services. Because of this, I felt that a short article on my own involvement in a community planning process might be useful.

Since 1999 I have been involved with the Joint Community Planning Committee (JCPC), which consists of First Nations representatives, representatives from a number of federal departments and the Cities & Environment Unit of Dalhousie

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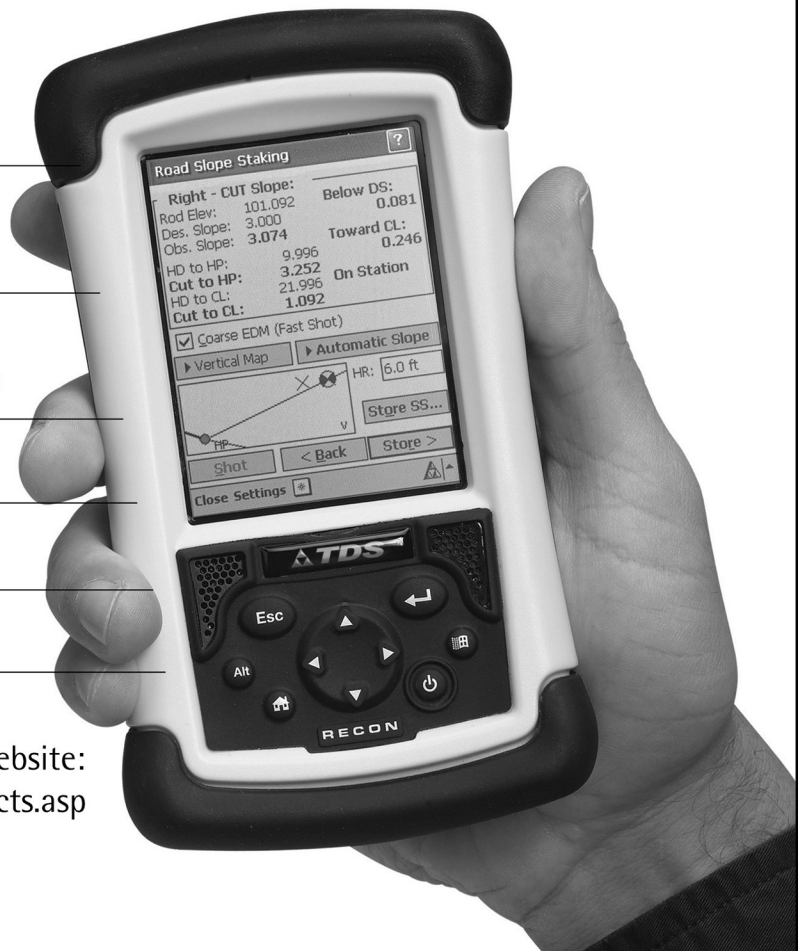
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University. This group was to develop a planning model for First Nations Communities that would be driven and developed from within the community. A secondary objective of the JCPC was to build a capacity in community planning within First Nations.

Over the past three years 14 young people from 13 FN communities have received some academic training in community planning principles at Dalhousie University. They have also received hands-on training through their involvement in the development of plans for three pilot communities, which were carried out to test the model. Over the past three years approximately \$1.3M has been spent in achieving the committee's objectives.

The first project carried out by JCPC project was the creation of a data information matrix for First Nations communities. Through feedback received by the committee, it became apparent that many First Nations managers felt that information about their communities, held by a number of federal and provincial agencies and by other groups, was not readily available to them. The committee decided to carry out a project with Dalhousie University to study these data sources, look at the quality and content of the data and to see how readily available the data was to any user. It quickly revealed that there were numerous sources of data, the quality was not consistent, it could not be integrated without a great deal of work and First Nations were not permitted to access information about their own communities in many instances. The matrix created provided the First Nation, which was used for this project, with information on what was available and where to go to get the information. While planners from Dalhousie University created this matrix for our committee, as land surveyors most of you are better positioned to provide this service. I would also suggest that every FN community would feel that such a project would be beneficial and for those contemplating community planning, this is essential information.

For all three pilot communities that were involved in the JCPC project, our office supplied cadastral mapping, housing data, title information and historical information on land surrenders, settlement etc. Our office maintains 1:1000 scale cadastral mapping for each FN community in Atlantic Canada and this is one of our most demanded products especially for community planning. As far as I know this product is lacking for many FN communities in other parts of Canada and is a potential market for any private sector survey firm. By integrating our data with other data bases such as the CMHC housing records and the Indian Land Registry we were able to provide specialty mapping showing the existing land holdings from the Indian Land Registry and the houses and lots that were subject to CMHC mortgages. This was essential information for the communities when addressing future development in their community planning processes.

This information is a potentially large service market for surveyors who have an expanded concept of the role that they can play with FN clients. Historical research on veterans land holdings, land surrenders etc. is another service that we provided to one First Nation community, hindered by a lack of knowledge of the location of unregistered interests in land.

In the Atlantic region, INAC has recently identified approximately \$800K, which will be distributed to First Nations communities for creation of comprehensive community plans. Over the next three to five years, similar or larger amounts will be provided annually for community planning. If this is the situation in the Atlantic region, then across Canada this annual allotment would be rather significant. If surveyors want access to this market and help First Nations prepare for community planning they will need to take a much wider view of their service roles and will need to be aggressive in marketing their skills and services. If you choose to wait for a phone call from the FN client before getting involved, you may be waiting a long time.

For more information on the JCPC project please visit www.fnpc.com or www.dal.ca/~fnpc2001/

**NB: The Cities & Environment Unit of Dalhousie were awarded the Canadian Institute of Planners grand prize, the Dr. L. Gertler Award for Planning Excellence in 2001 for the First Nations Community Planning Model developed for the JCPC project.*

Gordon Isaacs CLS, NBLs, NSLS
Legal Surveys Division, Atlantic Client Liaison Unit

Land Reform in the Republic of Latvia



Riga, capital city of Latvia

In comparison to Canada, Latvia is very small country with a total area of 65,000 square kilometers. The entire country could easily fit into Lake Huron. My involvement there as a land surveyor started in 1992, shortly after the nation declared independence from the Soviet Union in Sept. 1991.

Latvia is the central Baltic country, bordered by Estonia to the north and Lithuania to the south. All three Baltic countries are located on the southern shore of the Baltic Sea, across from Finland, and Sweden, and are bordered along one boundary by Russia. All three countries have different ethnic origins and non-Slavic languages - as different from Russian as English. Each country hosts a population of about 2 million, with other ethnic groups making up between 20 to 50 percent of the population. Since 1944, the Soviets actively suppressed both the culture and language of these tiny nations, and it is amazing that they have survived.

This region has been constantly desired by powerful nations due to its proximity to the Baltic Sea. The Germans, Swedes or Russians have controlled them at various times. In 1918, Latvia declared its independence as a sovereign nation. Unfortunately this freedom ended in 1940 with Soviet occupation. Germany took the country in 1941, but in 1944 the country was re-taken by the Soviets.

The Soviets nationalized all lands and buildings, and private ownership was abolished. All land surveying records, deeds, survey plans, and maps were confiscated or destroyed. I was told repeatedly that during the Soviet occupation, a person found with these documents in his possession would certainly face conviction and deportation to Siberia. It was a very serious matter.

In 1992, the Latvian government contacted me after some of my company's work was showcased at an international scientific conference and appeared in a Latvian newspaper. I was subsequently invited to visit Latvia in the spring of 1992 to discuss land surveying issues. I expected that all of the original maps and deeds were destroyed, and would have no idea what the original "Latvian Land Cadastre" was like. To my surprise a lot of information was still available in the archives. Some agencies had hidden records behind walls, while others who fled to the West brought records with them. Metal plates also surfaced showing the land cadastre of Riga, Latvia's capital, from the 1600's.

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Once we had a cross section of information assembled, I was flabbergasted at what we had discovered. The Latvian Cadastre was fully integrated into a National Triangulation network, with published coordinates and scale factors, etc. Every survey was also fully monumented. No wonder that the Soviets banished these documents - they could be used for navigation or other military purposes during the Cold War. This discovery made me realize that the 1920's land cadastre in Latvia, lost for over 50 years, was more modern than the one I used as a surveyor in Ontario. Even more fascinating, my Latvian hosts did not fully appreciate the significance of this find, since land ownership, land surveys, and mapping were strictly controlled by the Soviet military and classified secret.

The "Cadastral wheel" had already been invented, and so my strategy was to re-build the original Cadastral fabric, layover the present day situation, and let the legal system sort things out. The Latvian system was based on a modernized German system, which they helped set up after 1918. Now knowing the importance of getting horizontal control information, my Latvian colleagues contacted the Soviets and were able to get all of the triangulation and coordinate data for the Baltic States, kept in Moscow. I am still amazed they pried this information out of the Soviet military in 1992.

At this point there was a huge international interest from other countries like Sweden, Denmark, Finland, Germany, and even NATO, all promoting their own land Cadastral systems. This created a lot of discussion, but everyone agreed that the national control network needed re-establishing. My fear was that the country with the largest wallet would influence cadastral development in Latvia, but I convinced everyone that the 1918 Latvian Land Cadastre was more modern than their own European based systems.

With this roadblock out of the way, a number of GPS surveys were conducted across the country, and horizontal and vertical ties across the Baltic into the Scandinavia system. Triangulation stations were subsequently densified, to permit standard cadastral surveying. Apart from some political problems, the cadastral system evolved from this base.

It is important to note that on the international stage, being a Canada Lands Surveyor is a huge advantage. Most international groups and land surveyors have qualifications that are nationally recognized. All professionals have degrees in Surveying Sciences at a University level and have gone through countless exams. Therefore, in the eyes of the Latvian and other European professionals, I was on equal footing. Everyone recognized the vastness of Canada, and were fascinated how things evolved here.

In conclusion, my firm has successfully trained at least 50 professional candidates in GPS, Total Station Surveying, GIS, and cadastral surveying. Training was conducted both in Latvia and in Canada, sponsored in part by External Affairs. The Latvian cadastral system is once again considered to be the most advanced in the world, and other countries, like Croatia, are now using the technologies and systems developed in Latvia.

As discussions are tabled about expanding the surveying professions across Canada, it is my opinion that the ACLS maintain a strong surveying core. The trend these days is GIS, and compiling data from all kinds of sources. However, accurate cadastral systems set up by surveying professionals stand the test of time. GIS is a fantastic land management tool but should not be confused as a replacement to a sound process.

Aldis (Al) Karklins CLS
Hydro One

The Council and staff of the Association would like to extend our best wishes for the New Year. May you and your loved ones enjoy health and happiness, and you find 2003 a busy and prosperous time.

All opinions stated in this newsletter (except for official notices) belong solely to the authors, and do not necessarily reflect those of the Association.

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