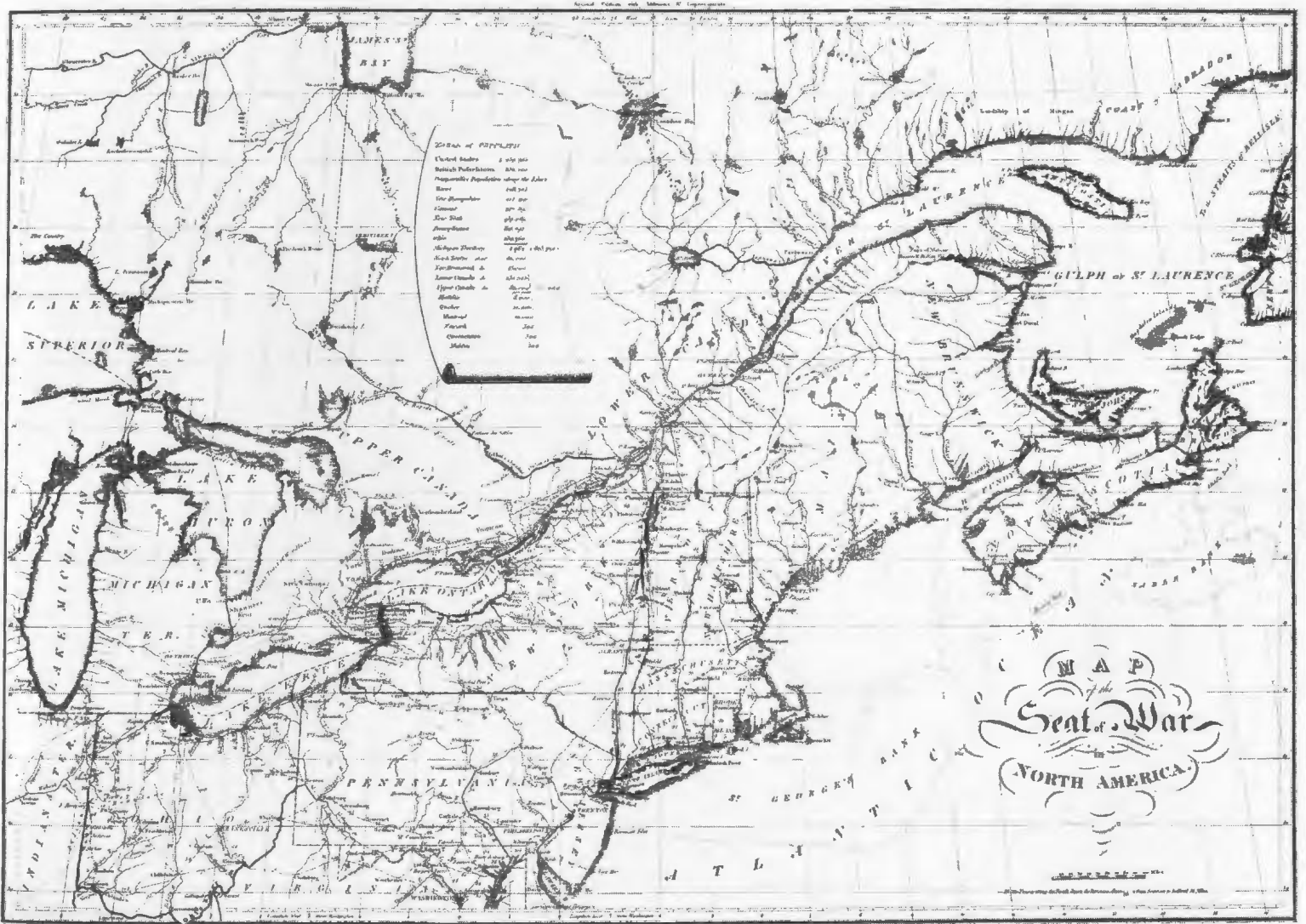


BULLETIN

ASSOCIATION DES CARTOTHÈQUES ET ARCHIVES CARTOGRAPHIQUES
DU CANADA



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ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES /
ASSOCIATION DES CARTOTHÈQUES ET ARCHIVES CARTOGRAPHIQUES DU CANADA

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Les opinions exprimées dans le *Bulletin* sont celles des collaborateurs et ne correspondent pas nécessairement à celles de l'Association.

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PRESIDENT'S MESSAGE

Hello everyone!

With this being my first message, I would like to take this opportunity to say how much I am looking forward to serving you as the new ACMLA President. Since attending my first ACMLA conference in 1999, I have been struck by how passionate and active the membership has been in advocating for the release and dissemination of geographic information in all its formats. Over the years, I believe that the activities and strength of the ACMLA have helped spur various federal, provincial, and even municipal initiatives to make their geospatial data more available to the academic community and beyond.

2009 Conference: Thank You!

Our Annual Conference this past June seems long ago now as we pass mid-September, nevertheless I would like to thank the Organizing Committee of Geomatics Atlantic for putting together a terrific program and providing us with excellent facilities at Acadia University. I especially would like to thank the dedication and hard work of our members Ann Smith and Dan Duda who represented ACMLA on the committee. Also thank you to all who were able to attend. It was quite gratifying to see so many of us make it to the conference (The conference report and some of the papers are featured in this issue).

New Executive

At the 2009 Annual General Meeting, the 2009-10 Executive Board was nominated and confirmed by the membership. The Board includes 1st Vice President, Dan Duda; 2nd Vice President, Wenonah Fraser Van Heyst; Secretary, Susan McKee; Treasurer, Susan Greaves; Past President, Colleen Beard; and President, Andrew Nicholson

Thank you to the membership for your vote of confidence. Please do not hesitate to contact any executive member if you have questions or have an interest in participating on an ACMLA committee. We are always looking for new and enthusiastic committee members. Contact information is on the ACMLA website and at the front of the *Bulletin*.

With the incoming Executive, one long-standing member of the Board has now departed. I would like to extend a very special thank you to David Jones, who has served on the Board for many years in a variety of positions. David will still be quite active though for the Association, serving as the ACMLA representative to the DSP Library Advisory Committee.

Positions Filled

Also at the meeting, it was announced that the Association has filled some key positions. Elizabeth Doyle is our new Archivist replacing Louis Cardinal, who had stepped down from the position in 2006. Siobhan Hanratty is our new webmaster, replacing Gerald Romme who stepped down last year. Thank you to Colleen Beard who filled in on an interim basis. I would also like to welcome Tom Anderson, who has joined "the *Bulletin* team" as our new Regional News Editor.

Summer Happenings

Since our last meeting at the Conference, there has been quite a bit happening in areas that will be of interest to members. One activity has been providing feedback to the Partners in Access survey commissioned by the Library and Archives Canada, which is currently examining its relationship with Canadian Library Associations. Thank you everyone who responded to the survey questions. You provided some excellent feedback which was greatly appreciated.

Another area is copyright reform, which the Government has come back to after seeing its previous reform bill expire on the order paper when the 2008 election was called. Now seeking more consultation, the Government convened a series of Town Halls and Roundtables across Canada. Despite being full, ACMLA managed to get a invite to the Toronto Town Hall meeting (Thank you Marcel Fortin for attending! see report page 25.) I also submitted a letter on behalf of ACMLA to the Consultation Process via their online form. The letter can be viewed at this link: <http://www.ic.gc.ca/eic/site/008.nsf/eng/01421.html>

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CARTOGRAPHIC SOCIETIES OF THE UNITED STATES AND CANADA IN THE 20TH CENTURY

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Honorary Research Librarian
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*Another version of this paper will appear in **The History of Cartography, Volume 6: Cartography in the Twentieth Century**, edited by Mark Monmonier, Chicago, IL: The University of Chicago Press, Forthcoming. An oral version of this paper was presented at ACMLA CARTO 2009 conference in Wolfville, Nova Scotia, on June 11, 2009.*

At the start of the twentieth century the major societies in the United States and Canada with members or objectives with some interest in cartography or mapping were the American Geographical Society (AGS, founded in 1851), Surveying and Mapping Division of the American Society of Civil Engineers (ASCE SMD, established in 1852), the Canadian Institute of Surveying (CIS), now Canadian Institute of Geomatics (CIG, created in 1882 as the Association of Dominion Land Surveyors), and the National Geographic Society (NGS, founded in 1888). The Association of American Geographers (AAG, established in 1904), the American Society of Photogrammetry (ASP, created in 1934), the American Congress on Surveying and Mapping (ACSM, organized in 1941) were the next organizations to be established that had cartography as a subject of interest. All included individuals, companies, and agencies interested in or concerned with cartography or mapping.

Each of the early organizations had broader interests than just cartography, generally geography, surveying, or engineering. In the late 1930's some individuals in the United States initiated the idea of a 'national congress' on 'surveying and mapping' as reported by Walter Dix (1991, 2) with plans for its creation well advanced by 1940. The first conference sponsored by the Committee on Surveying and Geodesy of the Society for the Promotion of Engineering Education, the Surveying and Mapping Division of the ASCE, the ASP, the Federal Board of Surveys and Maps, and NGS was held in 1941 to launch this creation with attendance from the "United States, Canada, Mexico, the Philippines, all of the U.S. government mapping agencies, many universities, commercial

surveying and mapmaking organizations, surveyors and mappers in private practice, and instrument makers" according to Mr. Dix (1991, 3). It began with the name of National Congress on Surveying and Mapping, but this changed in January 1942 to American Congress on Surveying and Mapping to better reflect the fact that members from the United States, Canada, and Mexico were included. At the outset, 10 regions and 14 technical divisions were proposed. While the regions developed quickly, the technical divisions organized less rapidly. Actually formed by February 1942 were Divisions of Surveying, Mapping, and Photogrammetric Instruments, Control Surveys, and Topographic Mapping. By the next month, however, the Cartography Division was formed with John K. Wright of the American Geographical Society as the Chair. It was not very active until 1948.

There was a *Bulletin* being published in these early years, the title of which was changed in Summer 1944 to *Surveying and Mapping*. Representatives, such as the first ACSM President, Robert H. Randall, also Chair of the Commission of Cartography of the Pan American Institute of Geography and History (PAIGH), participated in the first Consultation in Geodesy, Aeronautical Charts, and Topographic Maps, sponsored by PAIGH. This was the first major liaison of ACSM and indicated its progress as an organization of influence. The first women members joined ACSM in 1944. An indication of international impact of ACSM was an invitation to send a representative to a United Nations meeting of "experts on cartography" in 1949. Other invitations to participate in international organizations beyond the PAIGH and the UN grew and included the Canadian Institute of Surveying

(now CIG). Recognition on a national level came in 1950 with the invitation for the society to become a consultant to the Division of Geology and Geography of the National Research Council (NRC) of the United States.

In 1974, the Cartography Division launched a new journal, *The American Cartographer*, with Arthur H. Robinson as editor. The subtitle for it states that it is "an official journal of ACSM devoted to the advancement of cartography in all its aspects." Previously, articles on cartographic topics had been included in *Surveying and Mapping*. In 1989, the title was changed to *Cartography and Geographic Information Systems* to reflect the change of scope caused by the technological changes occurring in the discipline. It changed again in 1999 to *Cartography and Geographic Information Science* to indicate the continued growth and stabilization of work in the field.

By the 1980's ACSM had three divisions—Cartography, Land Surveys, and Control Surveys. However, demands for more autonomy in planning and carrying out programs resulted in a reorganization in February 1981 from Divisions to Member Organizations. The Cartography Division became the American Cartographic Association (ACA), the Land Surveys Division became the National Society of Professional Surveyors (NSPS), and the Control Surveys Division became the American Association of Geodetic Surveying (AAGS). Up until that point, each division had a board and a chairman, with the chair and an elected director serving on the ACSM Board. The Presidency of ACSM rotated through the three divisions. This aspect did not change, but each MO now had a President and other officers (Morrison, p.68-69).

One of the important contributions of the Cartography Division was participation in the launching and continuation of a long running series of specialized conferences dealing with "automated cartography" as it was called in the beginning. These "AutoCarto" events as they grew to be called were begun in 1978 and were continued periodically through the end of the century by CaGIS. Another cooperative effort was working with AAG and URISA on conferences in the fall that focussed on GIS and Land Information Systems (LIS).

The Cartography Specialty Group (CSG) of the Association of American Geographers (AAG) was

established in 1979 a year after the AAG approved creation of such special groups of members sharing common interests as noted by MacEachren (1984, 71). Its purpose is "to encourage cartographic research, promote education in cartography and map use, and facilitate the exchange of ideas and information about cartography, promote interest in and correct utilization of maps and other cartographic products, promote and facilitate the cartographer's role within the geographic profession, promote and coordinate activities and directions with other professional organizations involved with cartography" (http://www.aag.org/sg/sg_display.cfm). Membership in the society when it began was 283 while in late 1999 it was 472. The first president in 1979 was Joel L. Morrison while a society newsletter was first issued in 1980 with Mark S. Monmonier as editor. At the end of the century, CSG sponsored or co-sponsored fourteen paper sessions and two workshops at the AAG in Hawaii in topics ranging from analytical cartography to visualization. It has a tradition of student support and mentoring with students even serving as directors on its board. Other indications of this are various grants and competitions.

Somewhat later in development was the creation of the Geographic Information Systems and Science Specialty Group of the AAG which became organized in 1987-88 with a constitution approved in April 1988. Its purposes are: "To promote the exchange of ideas and information relating to GIS; To promote GIS research; To improve the understanding of the proper application of GIS procedures; To develop materials and promote activities needed to improve the teaching of GIS concepts; To promote and coordinate activities and directions with other professional organizations involved with GIS; and To pursue charitable, educational, religious, or scientific purposes within the meaning of section 501(c)(3) of the Internal Revenue Code." (<http://geography.sdsu.edu/aaggis/constit.html>) Over the years there has been considerable overlapping of interests with the Cartography Specialty Group in terms of members and annual program sessions. However, membership of the GIS group has exceeded that for the Cartography one, being 1,367 in 1995, while Cartography had 631 at that time while in late 1999 it was 472 and GIS was 1246.

While cartographers in Canada participated in the CIS for years, with the development of a Cartography

Committee and addition of a Councillor for Cartography to their Executive, as well as conferences and symposia devoted to cartography, it did not maintain a focus that attracted many people. With the formation of the International Cartographic Association (ICA), the CIS applied for membership in 1961 on behalf of Canada. Meetings with a cartographic focus were held over a number of years and important efforts were made over the years by CIS Presidents to increase participation by cartographers, such as that in 1966 by President L. M. Sebert. Such activities eventually led to the invitation to the ICA to meet in Canada in 1972. The responsibility for Canada's membership in the ICA continued to reside with the CIS (CIG by the century's end). Similarly, the Canadian Association of Geographers (CAG) over its long history had members who taught cartography at universities in Canada making considerable contributions in this manner. However, as an organization the CAG did not provide a venue for regular sessions on cartography though some individual presentations of a cartographic nature did appear at their conferences according to McGrath (1975, 218).

Other organizations began to grow as there became more cartographers in the country. There was a "search for identity and self-determination" as Gerald McGrath noted (1975, 220). Among the earlier ones was the Ontario Institute of Chartered Cartographers (OICC) established in 1959 primarily as a certification device for cartographers in that province to enable them to qualify for government jobs. However, by the end of the century, it had ceased to exist. In 1964 an organization called the Society of University of Cartographers (SUC) was founded in the UK, and a Canadian branch was formed in October 1970 at York University. It held at least one meeting at York in 1971, but according to McGrath (1975, 218) those who motivated the foundation were not as involved and its future was uncertain by 1975.

It was reported by Gutsell (1975, 92) that on May 28, 1975, eight people met in Toronto at York University to discuss formation of an organization that would appeal to cartographers in Canada in general. This was followed by an inaugural meeting with 82 registrants in Ottawa on October 18, 1975, at which The Canadian Cartographic Association (CCA) was officially formed. Membership has fluctuated over the years with 286 as of 2000. The first President was Professor Janusz Klawe,

University of Alberta. The association adopted as its journal *The Canadian Cartographer* (by the end of century called *Cartographica*) produced and published initially by B. V. Gutsell and later published by the University of Toronto Press with Professor Gutsell as editor. A more detailed history of this publication is elsewhere in this volume. Shortly after the formation, a newsletter was begun which became a newsletter/bulletin with the name of *Cartouche*. Through the years, a structure of interest groups developed with five being in existence at the end of the century: Analytical Cartography and GIS, Cartographic Education, History of Cartography, Map Use and Design, and Map Production Technology. These groups were responsible for organizing sessions for the annual conferences which were often held with other organizations, such as Carto-Quebec, NACIS, ACMLA, and CIG.

In the Province of Quebec, the Association Québécoise de Cartographie or Carto-Québec, began to organize in 1976 inspired by the formation of the CCA and received its letters patent in November 1981 (Bouchard, v) to provide a focus for primarily French-speaking cartographers in that province. It had a journal called *Revue de Carto-Québec* which was published from 1980 to at least 1998. Membership in 1979 was 170, but grew to nearly 350 by the end of the 1980's. As part of a special publications series there appeared lists of members and in 1986 a history of the association along with an index to the first nine volumes of the journal was published, with a second edition appearing in 1989. The society sent a representative to the National Commission of Cartography during its existence as well as to the International Cartographic Association from 1989. Annual conferences were held from 1979 onwards, some in conjunction with the CCA. This organization was dissolved around the end of the century with remaining funds in its treasury being given to the CCA. These funds are used for awards to promote and recognize excellence in map design that are given to the best student-authored cartographic product created in French.

Another regional organization that developed in Canada was the Pacific Institute of Cartographers Society (PICS), primarily in Victoria and Vancouver. The founding President was Bill Sinclair, who taught cartography at Camosun College in Victoria, according to Ray Squirrell another active member (Squirrell, 2007). It flourished from the late 1970's

to the late 1990's as a grassroots organization (Haworth, Keller). The purpose was to address needs for people involved in mapping and drafting when automated methods started to dominate the field. Focus drifted away from practical activities and these folks lost interest. There was a publication called "The Northwest Cartographer" according to Keller. A remnant of the society continued through the end of the century in an endowment to the British Columbia Institute of Technology (BCIT) for a student award established in 1990 in conjunction with the Urban and Regional Information Systems Association, BC Chapter, as noted on the Internet in 2007 (<http://www.bcit.ca/files/foundation/doc/donorfundedawards.doc>).

In other parts of the country, additional organizations developed on a provincial level, such as Geomatics Association of Nova Scotia (GANS). This is a non-profit association working towards promoting the further development of the Nova Scotia geomatics industry, thus making it competitive both domestically and internationally, and increasing its material contribution to the provincial economy according to its website (<http://www.gans.ca/>).

Also of interest in Canada was a National Commission for Cartography (NCC) that was established in 1975 with representatives from CIS, OICC, SUC, CAG, and Association of Canadian Map Libraries. It was felt at the time that a more clearly defined representation for cartographers was needed. The CCA joined this group shortly after its formation. Talking about this had taken place as early as 1969 and went through many stages of discussion. It published a newsletter entitled *Chronicle = Chronique* from 1976 to 1981 in affiliation with the Carleton University Department of Geography. The NCC did not solve all the problems and eventually dissolved. One of the major issues was Canadian representation in ICA, as well as the holding of symposia and conferences focussing on cartographic topics. In 1993, through the efforts of then CIG President C. H. Wood, a *Memorandum of Understanding* was signed between CIG and CCA to create a Canadian National Committee for the ICA with the CIG Technical Councillor for Cartography as Chair and representatives from CCA, ACMLA, OICC, PICS, and Carto-Quebec. Though three of the organizations had dissolved by around the end of the century, it has proved to be a workable solution.

As technological advances occurred, other organizations developed that included activities of actual or potential cartographic applications, such as the Association for Computing Machinery (ACM, founded in 1947), the Urban and Regional Information Systems Association (URISA, established in 1963), and AM/FM International (organized in 1982). In 1980, another association was created that includes a significant cartographic focus, the North American Cartographic Information Society (NACIS). In addition, two regional societies came into being, the American Cartographic Society in 1965, and the North East Map Organization (NEMO) in 1987. Also, along the way, numerous local groups have been formed by individuals with an interest in maps, such as the various "map societies" which exist in California and elsewhere. Post (1980, 2) noted in 1980 that "organizations are tools created by people to serve specific needs." This is indeed the case, and it is also reflective of the fact that whatever was in existence at the time the new organizations were created did not meet the needs which people had at that time. From materials published at that time, it appears that the two national organizations, NACIS and the second being the Map and Geography Round Table of the American Library Association (MAGERT) formed mostly due to dissatisfaction with Special Libraries Association the parent organization of the Geography and Map Division.

NACIS is comprised of specialists from private, academic, and government organizations whose common interest lies in facilitating communication in the map information community. Its objectives are "to improve communication, coordination and cooperation among the producers, disseminators, curators, and users of cartographic information; to support and coordinate activities with other professional organizations and institutions involved with cartographic information; to improve the use of cartographic materials through education and to promote graphicacy; to promote and coordinate the acquisition, preservation, and automated retrieval of all types of cartographic material; and to influence government policy on cartographic information" according to their web page at <http://www.nacis.org/>.

According to their website (<http://www.urisa.org/membership>), the Urban and Regional Information Systems Association (URISA) is a "nonprofit association of professionals using Geographic

Information Systems (GIS) and other information technologies to solve challenges in state/provincial, regional and local government agencies and departments. URISA is considered to be the premier organization for the use and integration of spatial information technology to improve the quality of life in urban and regional environments." This organization focuses on uses of GIS by their members rather than the broader scope of cartography.

Association for Computing Machinery (ACM) is "an international scientific and educational organization dedicated to advancing the arts, sciences, and applications of information technology" as stated on their web page (<http://www.acm.org/about>). Founded in 1947 in New York, it was first called the Eastern Association for Computing Machinery. It claims to be "the world's largest educational and scientific computing society" (<http://www.acm.org/>). As is the case in many large organizations, it has divisions covering narrower topics of interest within the scope of the organization. Their Special Interest Group on Computer Graphics and Interactive Techniques (SIGGRAPH) has provided a forum for cartographers at times, but is not primarily a cartographic society.

AM/FM International grew out of developments of a system for automated mapping/facilities management at the Public Service Company of Colorado in the 1960's. Beginning in 1978 with a conference at Keystone, CO, attended by 32 people, the not-for-profit organization was formally created in 1982. It had a primarily educational focus and expanded to include GIS as put to work by entities involved especially with utilities. As a result and to better indicate this scope, AM/FM International changed its name to the Geospatial Information & Technology Association (GITA) in 1998. According to their web pages (<http://gita.org/about-gita/background.asp>): "The industries that GITA serves are defined as infrastructure-based organizations that can benefit from the application of geospatial information technologies. GITA defines infrastructure as all fundamental services, activities, and operations that sustain our communities and way of life". This same web page notes the membership had grown in 2000 to include more than "2,200 individuals, 140 user affiliates, and 150 vendor companies". Attendance at their conference that year was over 3,800 with almost 100 sessions

of an educational nature.

American Society of Cartographers (ASC) was formed in 1965 by George N. James, then Chief of the Louisville, Ky, Field Office of the Army Map Service, for persons engaged in the field of cartography (Vogel, 2007). According to their Prospectus (ASC, p. [2]): "We believe that the science of cartography is a distinct profession which deserves exclusive recognition in a professional society." Their basic objective was "to provide a focal point of activities for persons having a common interest in cartography" according to this same Prospectus. "All persons are eligible for membership who are engaged in cartography or activities directly related to cartography and have ONE of the following additional qualifications." Six criteria qualify for this including bachelor or higher degree in 18 subjects such as astronomy, cartography, civil engineering, geodesy, geography, navigation, and surveying; employment in cartographic work; and other work or examination related criteria. While it was primarily located in the Louisville, KY, area, there were members in nearby Lexington, as well. In addition, in 1975 a Washington, DC, Area Chapter was formed. However, after a few years, differences of opinion on whether the organization should have national versus local focus caused the dissolution of the arrangement. There was consideration of establishing a National Society of Cartographers by those in Washington, D.C. Members of this chapter appear to have turned their attentions to ACSM Cartography Division and the ACSM Washington Convention Committee. In 1980 an article was added to the ASC constitution about dissolution. According to the last ASC President, Marcia F. Ehlers, the organization was disbanded in 1994 when the Louisville office was closed (Ehlers, 2007).

According to their web page (Bertucca, 2007), the purposes of the North East Map Organization (NEMO) are "serving as a unifying body for all who use, produce, collect, and market maps and cartographic information in the Northeast; increasing communication between all parties interested in maps; and working with state, regional and national associations and government agencies in the dissemination of maps and cartographic information." The states that comprise the region of interest to NEMO include: Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island

and Vermont. However, some members reside in Colorado (including their membership chair), California, Illinois, Virginia, Ontario, Québec, and Europe. The first meeting of the organization was held on 7 October 1987 on the Storrs Campus of the University of Connecticut in conjunction with the Northeast National Cartographic Information Center State Affiliates' Fall Meeting. Its conferences include talks and demonstrations about the latest techniques and products in cartography and tours of facilities devoted to maps or map production. In the early years of the twenty-first century (2007), a map design competition was instituted.

The relationships among AAG, ACSM, and NACIS have been interesting over the years in particular. Table 1 below illustrates how these three groups were related to each other in terms of individuals having dual or triple memberships. In 1985, the directory of the Cartography Specialty Group of the AAG (Carstensen, 1985) indicated membership in other professional organizations. At that time 89 out of 132 members or 67% belonged to ACSM or NACIS or both (72 or 55% - ACSM, 13 or 10% - ACSM and NACIS, and 4 or 3% - NACIS). In terms of total membership statistics for NACIS, 42% of its members belonged to ACSM or AAG or both. ACSM had a total membership of about 11,000 (2,376 in the American Cartographic Association at the end of 1987), while that for AAG was around 6,000 (Wood, 1989).

By the end of the century, AAG members totalled 6,527 (472 in CSG), NACIS had 519, while ACSM levels were 3,081 in 1999 and 4,210 in 2000, of these 308 and 421 being in CaGIS. There has been a shift in membership away from ACSM and towards AAG and NACIS. An analysis of memberships in these organizations and the CCA show that only 250 people had memberships in more than one organization at the end of the century with 202 of those only having membership in two and only 16 having membership in all four of them. While these

organizations survived at the end of the century and others in the field did not, membership was not as robust for some as it had been 80-85% of the way through the time period. The field saw the proliferation of more specifically focussed societies during the century from the more general ones in the existence at the beginning of it reflecting the growth in the field in general. Diminished numbers do not necessarily reflect reduced vigour.

References

American Society of Cartographers (ASC). *Prospectus*. Louisville, KY: ASC, [1976?].

Association for Computing Machinery (ACM) [online] (New York, NY, ACM, c2009, accessed July 26, 2009); available from <http://www.acm.org/about> ; Internet.

Association of American Geographers. *Guide to Programs in Geography in the United States and Canada, 2000-2001*. Washington, The Association, 2001.

Association of American Geographers. *Constitution of the GIS Specialty Group* [online] Approved at the 1988 Business Meeting, Phoenix, 6 April 1988 (Accessed July 26, 2009); available from <http://geography.sdsu.edu/aaggis/constit.html>; Internet.

Association of American Geographers. *Specialty Groups and Affinity Groups: Cartography*. [online] (Accessed July 26, 2009); available from http://www.aag.org/sg/sg_display.cfm; Internet.

BCIT Foundation Donor Funded Awards. [online] (Last updated: April 20, 2006) p. 65 & 71. (Accessed July 26, 2009); available from: <http://www.bcit.ca/files/foundation/doc/donorfundedawards.doc> ; Internet.

Bertuca, David. *NEMO (North East Map Organization)* [online] (Buffalo, N.Y., University at Buffalo, 2000-2007, accessed April 26, 2009); available from <http://www.northeastmap.org/> ; Internet.

YEAR	AAG & ACSM	ACSM & NACIS	NACIS & AAG	AAG & ACSM & NACIS
1985-88	300	58	34	55
2000	61	17	96	17
CHANGE	-239	-41	62	-38

Table 1.

- Bouchard, Richard, 1959-. *Historique de l'Association québécoise de cartographie, 1976-1988* / préparé pour l'Association québécoise de cartographie (Carto-Québec) par Richard Bouchard. 2e version rev., mise à jour et augm. —Sainte-Foy, Québec : L'Association, 1989. / www.nacis.org/ ; Internet.
- Brief History of GITA* [online] (Aurora, CO, GITA, 2007, accessed 30 July 2007); available from <http://gita.org/about-gita/background.asp> ; Internet.
- Carstensen, Laurence W., Jr. *Membership Directory - 1985*. Blacksburg, VA: Cartography Specialty Group of the Association of American Geographers, 1985.
- Dix, Walter S. 1991. *Recollections of the American Congress on Surveying and Mapping, 1941-1991*. Compiled and edited by Jane R. Kennedy. [Washington, D.C.] : American Congress on Surveying and Mapping.
- Ehlers, Marcia F. "RE: Info Requested on ASC," Private e-mail message to Steven J. Vogel, 23 March 2007.
- Geomatics Association of Nova Scotia (GANS)* [online] (Dartmouth, Nova Scotia, GANS, c2008, accessed July 26, 2009); available from <http://www.gans.ca/> ; Internet.
- Gutsell, Bernard. "Cartographic Commentary: A Canadian Cartographic Association" *The Canadian Cartographer*, vol. 12, no. 1, June 1975, p. 92.
- Haworth, Susan. "RE: PICS," Private e-mail message, 26 July 2007.
- Haworth, Susan. "RE: PICS - RAY SQUIRRELL," Private e-mail message, 6 August 2007.
- Keller, Peter. "RE: PICS," Private e-mail message, 13 July 1007.
- MacEachren, Alan M. 1984. "Cartography Specialty Group of the Association of American Geographers," Section 6, Cartographic Literature, Societies, Sources, and Personnel, *U.S. National Report to ICA, 1984*, Judy M. Olson, ed., special issue of *The American Cartographer*. Supplement to Vol. 11, Summer, p. 71. Falls, Church, VA: American Congress on Surveying and Mapping.
- McGrath, Gerald. "Whither Cartography in Canada: From Under- to Over-Representation?" *The Canadian Cartographer*, vol. 12, no. 2, Dec. 1975, p. 217-221.
- Morrison, Joel M. 1984. "American Congress on Surveying and Mapping and The American Cartographic Association," Section 6, Cartographic Literature, Societies, Sources, and Personnel, *U.S. National Report to ICA, 1984*, Judy M. Olson, ed., special issue of *The American Cartographer*. Supplement to Vol. 11, Summer, p. 68-70. Falls, Church, VA: American Congress on Surveying and Mapping.
- North American Cartographic Information Society (NACIS)* [online] (Milwaukee, WI, NACIS, c2001-2005; accessed July 26, 2009); available from <http://www.nacis.org/> ; Internet.
- Post, Jeremiah B. "Some Thoughts On Organizations." *Bulletin of the Geography and Map Division of the Special Libraries Association*, no. 119, March 1980, p. 2-3.
- Squirrell, Ray. "Re: PICS Info," Private e-mail message, 12 August 2007.
- Urban and Regional Information Systems Association (URISA). *Membership* [online] (Park Ridge, IL, URISA, c2008 ; accessed July 26, 2009); available from <http://www.urisa.org/membership> ; Internet.
- Vogel, Steven J. "American Society of Cartographers," Private e-mail message to Alberta Auringer Wood, 30 March 2007.
- Wood, Alberta Auringer. "Cooperation Among Cartographic Information Specialists Associations," *Bulletin of the Geography and Map Division of the Special Libraries Association*, no. 156, June 1989, pp. 2-13. (This paper was also published in the Western Association of Map Libraries *Information Bulletin* and base line of the Map and Geography Round Table of the American Library Association, while the original oral version was published in the *Bulletin of the Association of Canadian Map Libraries*, no. 70, March 1989, pp. 9-14.)

DEVELOPING GEOGRAPHICAL AND GEOSPATIAL SKILLS IN LIBRARIANS

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*Adapted from a paper presented at the ACMLA CARTO 2009 Conference,
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The growing public awareness and popularization of geographical information systems (GIS) has expanded beyond the domain of natural sciences. Spatial thinking and visualization have become research and presentation tools for engineers, anthropologists, sociologists, historians and many professionals. It has become a social and organizational tool, integrating itself into as many web environments and applications as possible. Quite simply, GIS has woven into the fabrics of our social and academic cultures.

The capability of GIS, combined with society's increasing interest in it necessitates stronger geospatial education. For many educational instructors, organizations and corporations, geographical and spatial awareness have become expected skills to own. The objectives of higher education, however, do not include curriculum-wide spatial thinking or GIS training. GIS resources and programs have therefore become a provision offered by academic libraries—a mandate that seeks to educate and support the needs of all students.

GIS services and information literacy programs are often overseen by GIS librarians. The GIS librarian who is technically skilled in GIS-related applications will often develop collections, offer reference and consultation services, design and deliver training workshops, lead digitization projects, and ensure that data is searchable and retrievable by its users. A review of ten job postings for GIS-related librarian positions had many of these responsibilities in common (see Appendix A). This type of specific knowledge portfolio divides the GIS librarian from many other subject librarians. In other fields, such as psychology or sociology, more than one librarian is trained to support student inquiries and academic needs. For example, there are social sciences resources that cater to multiple departments taught

in academic institutions. But in most libraries, there may be just one expert who can assist a student with their spatial analysis, and maybe two who can aid with simple mapping.

With the recent explosion of online mapping resources and the growing popularity of digital navigation, there are an increasing number of courses embedding GIS resources into the course curriculum. Should it be the sole responsibility of the GIS librarian to cater to all of these students' needs? Does the GIS librarian then need to be well rehearsed in all subject areas in order to successfully anticipate potential mapping needs? Or is geographical and spatial knowledge becoming a conventional skill that all librarians should possess?

Developing geographical and spatial awareness in librarians would enormously benefit students, researchers, instructors and GIS librarians. The GIS librarian, for example, isn't exposed to the psychology student who questions whether she can map her survey results. The spatially-trained social sciences librarian who is asked this question may not necessarily know how to map it, but s/he should know that it can be done and hence forward the student to the GIS librarian for specific assistance. And if a class of engineering students ask their liaison librarian about possible tools to use to help them display their new highway proposals, would the librarian consider showing them Google Earth? Would the librarian have ever used Google Earth? And if a history student asked their librarian about the geographical coordinates of a specific cemetery, could the librarian assist in locating this information, or would they send the student to the GIS librarian? In other words, training the librarians on general geographical reference could prevent having to pass students on to other staff members. More importantly, however, providing geographical

or spatial training to librarians will sensitize them to mapping or spatial opportunities in their subject specialities—something that GIS librarians may miss due to their lack of knowledge in some of the subject areas. Additionally, with potential future amalgamations of map library/GIS departments within the larger library systems, the number of GIS-related requests at the front desk may increase significantly, strongly encouraging librarians to brush up on their GIS knowledge.

Developing Geographical and Geospatial Information Skills in Librarians

The development of librarianship skills begins in the LIS Masters programs. Due to the nature of geospatial content, GIS knowledge may be gained in courses that cover government information, reference services or digital libraries. These courses would cover just enough information to expose the students to the concepts, but they certainly wouldn't provide them with any detailed training. Offering an elective course on GIS in libraries (as opposed to just GIS technology) would better prepare the future academic librarian for reference and liaison responsibilities.

In 2004, Jaime Martindale wrote about an informal e-mail survey that was sent to all ALA Accredited LIS Masters Programs in an effort to learn how much support there was for the field of GIS librarianship. Out of the 43 schools that responded, twenty-three (53%) stated that they did not offer any courses in GIS and in fact had no faculty members interested in this area of specialization. The remaining responses explained that students had opportunities to be exposed to GIS within courses like "government information" or "metadata", or by taking GIS electives that are offered outside the LIS program. Some schools that responded offer dual-degree programs where students can earn two masters degrees, where one can be in GIS [1]. According to these results, it does not appear as though any respondents offered formal semester-long GIS courses within the LIS program.

In 2009, a curriculum review was conducted of all the ALA Accredited LIS Masters Programs in search for GIS-related courses [2]. Specifically, two kinds of courses were of interest: courses focussing specifically on GIS, and courses focussing on GIS

in libraries. The important distinction between the two must be made. A course on GIS focuses on GIS techniques and data management, providing students with a fairly solid background in GIS. These skills may be brought to any workplace, but it doesn't focus on the library as the ultimate place of work. It doesn't train the student for basic GIS reference or multi-disciplinary research consultations. A course on GIS in the context of libraries has the students thinking as GIS librarians, learning how to use resources that library users themselves make use of.

All of the fifty-seven academic websites were visited, and their course descriptions were studied. Only courses offered in the last twelve months were examined. Out of the fifty-seven ALA Accredited LIS Masters programs, seven offered a course on GIS. Four of these seven offered courses specific to GIS in libraries : University of British Columbia [3], University of Hawaii [4], University of Pittsburgh [5], and the University of Western Ontario [6]. The course at the University of British Columbia is the same one offered through the University of Pittsburgh. All courses have similar objectives—to train librarians to answer basic GIS reference questions and to recognize the increasing importance of geographic technologies in research in a wide variety of fields. The other institutions offering GIS courses (not within the context of libraries) are Dalhousie University [7, 8], University of Illinois [9] and Simmons College [10].

This research reveals that stand-alone courses in GIS are not embedded into very many LIS programs' curriculum (12%). Arguably, it is a subject matter that is lacking and requires some development.

Course Content

A thorough review of course content for the *GIS in Libraries* courses mentioned above is not possible from examining just the course outline alone. A more detailed summary of one of the courses, *GIS in Academic Libraries*, offered at the University of Western Ontario will be discussed instead.

Course Objectives

The objectives of courses in GIS within the context of libraries appear to be consistent among the current course offerings reviewed. Librarians should have enough GIS knowledge to be able to

answer basic GIS-related reference questions, as well as be able to detect opportunities for embedding GIS resources in multidisciplinary research and course work. It must be understood however, that the ability to identify the need for geospatial solutions requires a great deal of theoretical and practical training. To develop the ability to spatially visualize problems and solutions takes practice. It also takes time to become familiar with geospatial technology. A science librarian, for example, may never use GIS software to assist a library user with their geoprocessing needs; however the science librarian should have basic knowledge of the program to know its capabilities and hence contact the GIS librarian for further assistance.

GIS in Academic Libraries: University of Western Ontario

Course Description

The course offers an introduction to GIS technology and GIS in academic libraries. Through hands-on exercises, lectures and discussions, students will acquire skills in using GIS software programs, social mapping tools, creating maps, researching geospatial data and developing and offering a GIS service in an academic library. This course provides a GIS background that will prove beneficial in any library or information resource position. [11]

Course Content

Although the course objectives are not to develop GIS librarians (although it may spark an interest, the content presented in the course parallels the responsibilities and knowledge set of GIS librarians. Introducing the students to GIS librarianship will provide them with a theoretical and technological understanding of spatial information.

The core competencies for GIS librarianship, as outlined by the ALA Map and Geography Round Table (MAGERT) Educational Committee, in their document *Map, GIS and Cataloging/Metadata Librarian Core Competencies* [12] provides a thorough breakdown of GIS-related job responsibilities and skill sets. This document had been used as a guide for creating the course content. The following is a list of competencies that students will have acquired after successfully completing the course.

Reference and Research Consultation

- Knowledge of data resources and discovery tools
- Working Knowledge of data organization and data manipulation.
- Working knowledge of reference techniques (including training, information literacy, evaluation)
- Working knowledge of GIS project planning and implementation
- Knowledge of key GIS resources for data and software support
- Knowledge of GIS tutorials & training courses specific to patron needs
- Working knowledge of GIS software, GIS products and companies
- Knowledge of basic cartographic concepts and techniques

Data Acquisition

- Broad knowledge of spatial data resources
- Government resources, including local, provincial, national and international
- Commercial resources
- Research and other user-generated resources (Consortia)
- Knowledge of licensing issues and data acquisition details
- Broad knowledge of data quality, data types, data storage requirements
- Knowledge of map scanning and digitization processes for use in GIS
- Knowledge of collection development principles

Data Discovery

- Knowledge of spatial metadata standards and issues
- Ability to promote metadata standards
- In-depth knowledge of data discovery tools and data repositories, including the web, academic/research community, and offline data resources
- Competence in data reformatting, manipulations (changing projections, converting file formats, editing Shapefiles, etc).

Software

- Ability to perform initial troubleshooting for software issues
- Evaluate/install supporting software tools for GIS use (Google Earth, shp2kml, batch geocode, etc)

Marketing and Outreach

- Communications and event planning
- Ability to plan and organize events such as GIS day, open house, etc.
- Ability to promote GIS services, events
- Assessment skills to identify current and potential GIS users and partners
- Presentation skills for demonstration of GIS

Evaluation

Several projects are assigned to the students to test their knowledge, and to offer them experience with real-world reference scenarios. The course offered in summer 2009 included projects with the following learning outcomes:

- Familiar with GIS usage across disciplines and in society
- Familiar with GIS-related e-zines, newsletters, websites
- Knowledge and evaluation of online data discovery tools, data repositories and metadata
- Knowledge of downloading and working with raster and vector GIS files
- Manipulating GIS data (changing projections, converting formats, editing data)
- Online mapping
- Working knowledge of Open Source *MapWindow GIS*
- Working knowledge of Open Source *ForestryGIS (fGIS)*
- Creating shapefiles out of personal databases (geocoding)
- Knowledge of cartographic map-making techniques
- Working knowledge of Google Earth—creating maps, working with KML
- Knowledge of proper citation formats
- Experiencing trouble-shooting problems with data and software
- Knowledge of library promotion, outreach, training and planning and delivering workshop programs and events

Upon completion of this course, students will have developed geographical and geospatial information literacy skills, as well as a general appreciation for and awareness of GIS in society. Where they were once blind to the concepts and existence of this technology, their minds have now opened to perceive spatial information all around them. Many will go on to use GIS in their own personal lives,

and very likely in their professional careers as librarians. Whether it's to promote their own subject-specific resources, or to use GIS in their own professional research, their new knowledge set will hopefully ignite an interest to continue learning and sharing their knowledge with others.

GIS in Academic Libraries is an example of a course that explores how GIS is being used in libraries by staff, faculty and students. It is hopeful that this type of knowledge will continue to be disseminated among library students across North America, in all library programs, to give students the opportunity to gain skills that are increasingly being desired by library users. GIS librarians have traditionally been responsible for servicing the campus with their GIS needs, but up until recently, these needs were only desired by one or two departments. Now with potentially thousands of students using GIS in their social and academic lives, the GIS librarian will need assistance in offering GIS services to all of the departments. GIS or geographical awareness is becoming a 'general knowledge' type of skill to have. If the students are well rehearsed in it, then librarians must be as well, otherwise the roles will reverse and students will be informing and educating librarians.

Appendix A GIS-related Library Job Postings

Geographical Information Science (GIS) Librarian
University of Illinois Library

April, 2007

http://lincolntrail.typepad.com/library_jobs/2007/04/geographic_info.html (8 August, 2009)

Geographic Information Systems Librarian
University of Maryland Libraries

April, 2009

http://www.lib.umd.edu/PASD/LPO/LibJobs/GIS_pd.html (9 May, 2009)

Geospatial Data Services Librarian
North Carolina State University Libraries

October, 2006

<http://www.lib.ncsu.edu/news/gis.php?p=3583&more=1&c=1&tb=1&pb=1> (9 May, 2009)

Geospatial Data Librarian
Emory University Libraries

http://web.library.emory.edu/services/hr/geospatial_data.html (13 August, 2009)

GIS Librarian

University of Illinois Library

<https://lists.purdue.edu/pipermail/geonet/2007-April/000470.html> (13 August, 2009)

GIS Librarian

McMaster University Libraries

May, 2008

<http://ulatmac.wordpress.com/2008/05/21/employment-opportunity-gis-librarian/> (9 May, 2009)

GIS Librarian

University of California Davis Library

August, 2003

<http://mailman1.u.washington.edu/pipermail/iprojobs/2003-August/002222.html> (8 August, 2009)

GIS/Metadata Librarian

Columbia University Libraries

December, 2006

<http://www.columbia.edu/cu/lweb/services/jobs/soc/70106020.soc.html> (9 May, 2009)

Manager, GeoData, Cartographic and GIS Library

Eastview Cartographic, Inc. (Minneapolis)

June, 2008

http://www.sco.wisc.edu/jobs/job_sum.php?jobs_id=66909 (9 May, 2009)

Spatial and Numeric Data Librarians

University of Florida Libraries

November, 2005

<http://lists.gsdi.org/pipermail/technical/2005-November/000085.html> (8 August, 2009)

References

1. American Library Association: Directory of ALA-accredited Master's Programs in Library and Information Studies. Online. Available: <http://ala.org/ala/educationcareers/education/accreditedprograms/directory/index.cfm> (18 August, 2009).
2. Geographic Information Systems (GIS) for Librarians : School of Library, Archival and Information Studies, UBC : WISE Courses for Summer Session 2009. Online. Available <http://www.slais.ubc.ca/COURSES/wise/summer09/wise-08-09-st.htm> (19 August, 2009).
3. Cartographic and Geographic Issues for Librarians : University of Hawaii, Library and Information Science Program. Online. <http://www.hawaii.edu/lis/courses.php?page=descriptions> (19 August, 2009).
4. Geographic Information Systems for Librarians : University of Pittsburgh, School of Information Sciences, Library and Information Science Program. Online. <http://www.ischool.pitt.edu/lis/courses/descriptions.php>. (19 August, 2009).
5. GIS in Academic Libraries : University of Western Ontario, Master of Library and Information Science. (Online). <http://www.fims.uwo.ca/mlis/courses/Elective-Courses.htm> (19 August, 2009).
6. Digital Media Content and Management : Dalhousie University, Faculty of Management, School of Information Management. (Online). http://sim.management.dal.ca/Courses/MIM_Courses_Offered/Elective_Courses.php (19 August, 2009).
7. Geospatial Information Management : Dalhousie University, Faculty of Management, School of Information Management. (Online). http://sim.management.dal.ca/Courses/MIM_Courses_Offered/Elective_Courses.php (19 August, 2009).
8. Geographic Information Systems : University of Illinois Graduate School of Library and Information Science. (Online). <http://lis.illinois.edu/oc/courses/catalog/catalog.html> (19 August, 2009).
9. Managing Spatial Information : Simmons College, Graduate School of Library and Information Science. (Online). <http://www.simmons.edu/gslis/academics/courses/index.php>. (19 August, 2009).
10. Martindale, Jaime, Geographic Information Systems Librarianship : Suggestions for Entry-Level Academic Professionals. *The Journal of Academic Librarianship* 1(2004), pp67-72.
11. 9764 GIS in Academic Libraries : University of Western Ontario MLIS courses. (Online). <http://www.fims.uwo.ca/mlis/courses/9764.htm> (26 August, 2009).
12. American Library Association : MAGERT Educational Committee. Map, GIS and Cataloging / Metadata Librarian Core Competencies. (Online). <http://www.ala.org/ala/mgrps/rts/magert/publicationsab/MAGERTCoreComp2008.pdf> (16 May, 2009).

WHAT'S HAPPENING IN THE MAP ROOM

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Libraries are interesting places—the more you explore what they have to offer, the more you'll discover. Everyone knows that libraries house books, but not everyone is aware of the many other resources available, such as maps. For some, there may be a variety of reasons for not using maps, including simply being unaware of how their research could be augmented with the use of a map.

Maps are a very visual medium that can stimulate discussion, cause some to wander off on a virtual vacation, or spur ideas for research. To promote the map collection, the use of maps, and geography in general, Map Room staff in the Library at Memorial University of Newfoundland have created a series of displays. These exhibits make use of an assortment of maps and atlases, along with other items from the library's collection to illustrate a variety of themes that may be seasonal, items in the news, or just general interest. Sometimes, maps and other treasures of the library need to come out of their hiding places to be seen and appreciated by the public, to generate interest, or to simply let people know that these resources exist. These displays have become items of great interest and lead many to ask "What's happening in the Map Room?"

The Library has a Map Room?

For many who initially hear that the library has such a resource, their first questions may be: What is it? Where is it? What sort of maps do they have, and who can use them? The Map Room was originally established as part of the Department of Geography at Memorial University and became part of the university library system with the opening of the Queen Elizabeth II Library in 1981. It has a wonderful location on the main floor of the Library and currently holds the largest collection of cartographic materials in Newfoundland and

Labrador which includes over 95,000 sheet maps, 5,300 atlases and reference materials, and more than 45,000 aerial photographs that cover the entire province. The staff members of the Map Room have diverse backgrounds that form a perfect complement to each other and include a historian, an artist and a cartographer. Something common to all, though, is a passion for maps, geographic information and education. As is certainly the case with most map libraries, the collection has world-wide coverage, but with special emphasis on the local area. With some minor exceptions, the Map Room's holdings are from 1900, to the present with pre-1900 material held as part of the rare collection in the Centre for Newfoundland Studies. In addition to its physical holdings, the Map Room also provides access to digital geospatial data and offers four computer work stations primarily for Geographic Information System (GIS) applications and statistical use. The library also offers GIS software on the 50 stations in its classroom to support instruction and to meet additional demands placed on the software. While the library primarily serves the university community, its resources are also available to the general public.

The Map Room is generally a busy location and is one of the preferred study locations for geography students who often get a little annoyed when 'their' space is occupied by 'other' students. Although the collection is well used and staff provide a variety of patron assistance with maps of all sorts, ways are being continually sought to increase the profile of the map library within our community. For some patrons, they may be unaware of the many resources that are offered in the Map Room, or may simply think that they have no need for maps. For others, conventional means of map storage can create an obstacle to use. Map cabinets are not as easy to browse as the open shelving used in other parts of the library. Searching for maps in the

cabinets or even trying to retrieve one can be an intimidating experience and often discourages patrons from using the collection. Normally though, Map Room staff are available to assist with map retrieval and help alleviate these concerns. Staff attempt to be proactive and offer assistance to those who seem lost.

Places in the News

One of the more popular initiatives started by the Map Room is the 'Places in the News' display (Figure 1). Located in the corridor that leads to the room, this display highlights locations of major world events to emphasize the importance of geography as reminded in the video address by Vanessa Lawrence (presented at CARTO 2009) that "...everything happens somewhere". By illustrating in this manner where major news events are taking place, the story becomes anchored to a physical location, which is somehow more real and enables one to see how it possibly ties into other world

events. This initiative came about in the days following the devastation of Cyclone Nargis when many people were asking "where in the world is Myanmar?"

One geographic lesson that has been reinforced by the news display is the importance of location, not just on the map itself but the physical location of the display. Its first location during an initial trial, although just outside the Map Room, was a relatively low traffic area. While it was a location that didn't see many visitors, those that did view the map provided very positive feedback. Later, an opportunity arose to move the display to the main lobby. Unfortunately, it became lost in the many other items that occupy that space and people simply rushed by on their way to somewhere else. Its current location, partway down the corridor leading to the Map Room has proven to be its most popular yet. This is a high traffic area where patrons frequently stop to wait for others and while there, take the time to read the notes that are placed on the map.



Figure 1. Places in the news—where an event takes place is just as important as what takes place. (Photos in this article courtesy of David Mercer, with the exception of Figure 2)

Where're Ya From?

Another aspect of outreach on the part of the Map Room is an effort to demonstrate the diversity of the global community represented at Memorial. Maps have been posted along with the question "Where're ya from?" (Figure 2). This venture has been a tremendous success. Staff frequently take the opportunity to engage people in conversation to ask where they call home, to encourage them to tell us something about their part of the world or their culture—something they are very happy to do. When others express an interest in their home, it seems to help them feel welcome, that they belong, and that we value their presence. This map has also led to some special family moments. A student was taking his father on a tour of campus when they discovered this map. The father started to relate stories of all of the places he'd been and things he had done; it was obvious that this became a very special moment for them.

While response to this map has been extremely positive, there have been some minor problems as some people decide that they'd like to add pins in some very interesting and unusual locations, for instance: Bikini Atoll; the Antarctic; or another place especially popular around exam time, Cape Disappointment. Any pins that seem a little suspect are quietly removed. On a positive note, though, it does offer an opportunity to create some excitement in the library and break the stereotypical perception of the silent, dull library. During 'I Love MUNdays', international students hold a parade of flags from the nations that are represented at Memorial. This



Figure 2. Students place pins to show their homes during the MUNdays Parade of Flags. (Photo courtesy of Joanne Costello)

past year, the parade was led through the library to the Map Room by a percussion group who were doing their very best to attract as much attention as possible! Once at the Map Room, each person was invited to place a pin in the map to represent their home town. The Map Room received some very positive press coverage from this event and plans are already underway for the 2009 Parade of Flags.

A Meeting Place

The Map Room has become a popular space for hosting receptions, seminars, workshops and classes of all sorts. Faculty are often anxious to get their students into the Map Room for demonstrations so they can actually see how accessible the resources are, rather than just hearing about them. On occasions when the library holds an open house, the final stop is often the Map Room where refreshments are usually offered, meaning that visitors generally stay longer than at other stops along the way. The Map Room was recently the site of a series of presentations and displays in celebration of the Gauntlet Press and the work of poet Richard Outram. While not immediately map-related, this event offered the opportunity to pull some of the more diverse maps from their folders and get them out on display. On this occasion, maps and atlases that were related to literary topics were put on display to the amazement of many in attendance who "...never thought maps could do that". Displaying these maps demonstrates to visitors that there is more to this resource than just reference, topographic, and street maps and that the map collection offers a diverse and valuable research tool.

Art in the Map Room

The Map Room has an abundance of wall space which offers the opportunity to display some of the maps in the collection, most notably framed maps and reference wall maps which are normally rolled and stored. On occasion, visitors to the Map Room come looking for maps, but are not exactly sure what and in some instances have said to staff while pointing to a wall map, "I need a map just like that one there". Art also plays an important role in the Map Room. While many maps are considered works of art in their own right, there is the opportunity to display art that has been inspired by maps or by the physical world around us.



Figure 3. Hand-painted welcoming sign created in the shape of a map cartouche.

The art displayed in the Map Room is the work of Joanne Costello and is all about physical geography. Subjects are found by studying topographic maps, geologic maps and aerial photographs to determine if there's a potentially interesting feature in a given location such as a type of rock or the location of a beach. Interesting geological structures or landforms discovered while in the field are researched using the resources of the map collection and in so doing the artist becomes more familiar with the subject. The Map Room, therefore, provides the information and inspiration for the art. Many other artists come to the Map Room for help or inspiration including visual artists, film-makers, set designers and writers, each using the collection to find the visual information they need for their art form.

When the Map Room moved into its current location, staff realized something was needed to attract attention. Walking down the corridor from the library's main lobby all one could see was a blank wall and the window of the Map Librarian's office. While there is a standard sign outside the door, something a bit more colourful and exciting was

needed to beckon users towards the Map Room and this blank wall seemed to be the perfect location for a hand-painted mural. With the permission of the Map Librarian and the building manager the process began. Reference books and atlases were searched for the inspiration for a map cartouche that would be used to announce the Map Room (Figure 3). With that project completed, we were ready for more. The staff in Information Services had initiated a project whereby literary quotes were painted on the supporting pillars in the main public area of the library. To give a cartographic twist to this idea, historic maps depicting Newfoundland and Labrador over the centuries seemed to be a natural fit for the pillars in our space (Figure 4). Utilizing the library's digital archives to find the maps, over 100 scanned images were reviewed from which eight were chosen. The province has been depicted in many different ways over the centuries as knowledge expanded and by cartographers of various countries such as Portugal, France and England. To get a broad sample of images, the criteria used to make the selection were shape, date and nationality of the cartographer. After the selection was made, the original maps were examined in the Centre for Newfoundland Studies and their outlines sketched on large sheets of paper. These images were then transferred onto the pillars over a previously painted blue background. The details of the map, including imagery and text were added to the maps to complete these works.

Display Cabinets

The library had several display cabinets which were not being used and ready to go into storage. A request was made to have them moved into the Map Room and they were immediately put to use displaying maps, map objects and other related items. These cabinets presented the opportunity to assemble displays that were topical and also demonstrated that maps can cover a variety of themes. This display also offered the opportunity to extend our objective of geographic education and promotion of the Map Room by tying the displays to current events, like the Olympic Games. During the Olympics, people not only take an interest in the athletic spectacle, but also in the many nations of the world. Staff used this event to satisfy the geographic curiosity raised by the Olympics by creating a display that used a map to illustrate former host cities along with some facts or trivia

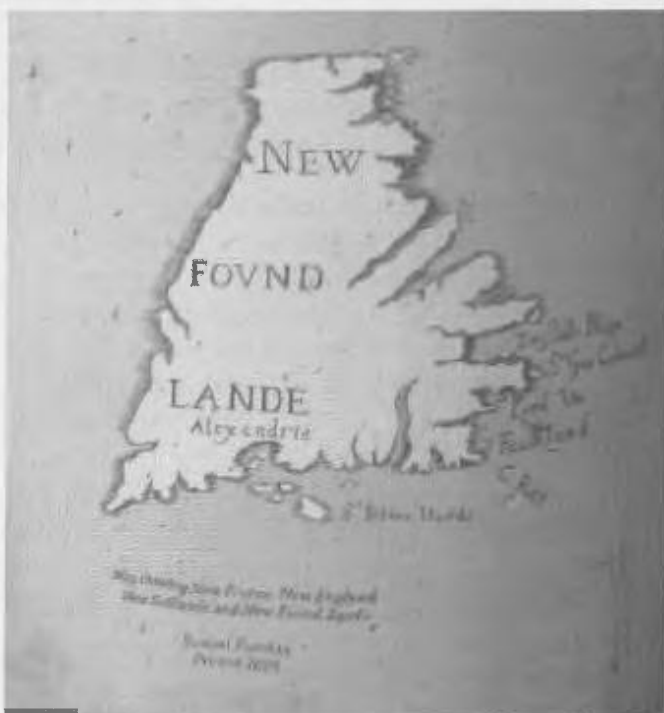


Figure 4. One of the five painted maps on pillars in the Map Room.

from each of the games. One such example is shown below (Figure 5):

1988 Seoul
 160 nations were represented by a total of 8391 athletes (2194 women and 6197 men) in the games. 237 events were held. 27221 volunteers helped to prepare the Olympics. 11331 media (4978 written press and 6353 broadcasters) showed the Games all over the world. Lawrence Lemieux, a Canadian sailor in the Finn class was in second place and poised to win a silver medal when he abandoned the race to save an injured competitor. He arrived in 21st place, but was recognized by the IOC with a special award honouring his bravery and sacrifice.

Figure 5.

The Olympic map was used as the basis of a trivia contest that encouraged people to come and view the map. The money raised from the contest was donated to a local charity supported by the library. The winners of the contest were given prize packages donated by other departments within the university. This contest accomplished a number of things. In addition to the charitable donation, the Map Room received campus-wide promotion of its services, attracted more visitors to view the exhibit, and provided a little fun for visitors. In keeping with the Olympic and sports-themed display (Figure 6), other thematically-related maps and atlases held in the collection were included. Among these resources were: the *Atlas of American Sport*¹; *Newfoundland by Bicycle*²; *The Official Baseball Atlas*³; *Hockey Leagues of North America*⁴; and *The Canadian Hockey Atlas*⁵.

On occasion the Map Room has partnered with other

units of the library such as the Archives and Special Collections Division for materials to use in displays. One such display centred on the theme of remembrance. Remembrance is a special topic since the university was founded in 1925 as a living memorial to the Newfoundlanders who had lost their lives on active service. For this display, among the maps chosen: *The Daily Telegraph Gazetteer War Map*⁶ illustrating the location of the front lines during the First World War; a World War I era Admiralty chart of the Mediterranean with handwritten annotations from operations during the Second World War; a map of the Newfoundland Memorial Park in Beaumont-Hamel, France; along with other maps and atlases. Among the items from the Archives Division that were included were items that depicted more of the human element such as soldiers' letters to home, a copy of a page of the diary of Lieutenant Owen Steele for 30 June, 1916, the day before going into battle with the Newfoundland Regiment. Lt. Steele's writing described the upbeat and cheerful mood among his comrades and the uncertainty of what was to come. It should be noted that following the battle on 1 July, 1916, out of the 801 Officers and Men of his regiment who started that day only 68 were able to answer roll call. To be able to honour this sacrifice through a display of maps, diaries, and letters was very special indeed.

There are some occasions during the year when everything gets decorated. Many of these offer the chance to use maps as a decoration. One such special time is Christmas. One point to note related to this occasion is that there are several geographic locations that are central to the holiday such as Bethlehem and the North Pole. A map of Bethlehem designed with a historic appearance, for example, seems to take one back to the time of the nativity. Of course, the more secular side of the holidays can be represented with maps of the North Pole. In addition, there are also maps of locations with seasonal names like Christmas Island or Santa Claus Mountain (NTS 13K/03). This is also a time of year when friends and colleagues like to send each other greeting cards. Among cartophiles, these cards frequently contain map images or have a geographic theme. Greeting cards like these are always interesting to look at over and over again. Using these maps, cards and other items of geographic interest, combined with some well placed props will form the basis of a display that will draw many people to come visit the Map Room.

Summary

So, how to raise awareness? First of all, it is essential to get the collection out into the open and on display wherever and whenever possible. Show off the maps, what maps can do and the wealth of information they can contain. Get people into the Map Room, even for what may seem to be unrelated activities. Once there, one has the opportunity to demonstrate the many different types of maps that exist and the variety of material that can be presented in map form. The broader the range of interests of visitors to the Map Room, the greater is the opportunity to demonstrate the breadth of the collection. Participate in geographic outreach activities. In the case of Memorial, the Map Room took the lead in securing a site license for GIS software that has become in high demand campus wide. In conjunction with this, the Map Room has been offering workshops to demonstrate the utility of this software and illustrate the possibilities for its application. In addition, the Map Room, along with faculty from the Departments of Geography, Biology, and the Dean of Science's office present an annual GIS Day at Memorial—a one day exhibition of the geo-resources of government and private industry with workshops and speakers to promote GIS at Memorial. As well as promoting GIS within the University community, the Map Room also extends invitations to high school students to introduce them to these resources. The Map Room enjoys an excellent working relationship with Geography Faculty and Map Room staff often assist with geography classes to introduce students to the resources of the library. Faculty have hosted classes within the Map Room and design assignments to familiarize students with the various resources. Map

room staff have become involved with other research projects on campus in a supporting or advisory role assisting with faculty projects, private researchers, artists, and take any opportunity to encourage the use of maps in 'other' disciplines.

While there are traditional areas of support for the resources of the map room, one should reach outside of these areas and show everyone else the importance and utility of maps, aerial photographs, and the myriad of geographic resources that can be found in a map library. We are only limited by our imagination—try something different, anything can happen.

Notes

1. Rooney, J. F., Pillsbury, R., & McMichael, J. (1992). *Atlas of american sport*. New York; Toronto; New York: Macmillan Pub. Co; Maxwell Macmillan Canada; Maxwell Macmillan International.
2. Rowe, V., Newfoundland. Dept. of Tourism, Culture and Recreation, & Bicycle Newfoundland and Labrador. (1996). *Newfoundland by bicycle*. St. John's: Bicycle Newfoundland and Labrador.
3. Rand McNally and Company. (1994). *The official baseball atlas : A sports travel guide*. [S.l.]: Rand McNally.
4. SportsMaps. (2000). *Hockey leagues of north america [cartographic material] : Professional minor-pro major-junior collegiate*. Jacksonville: SportsMaps.
5. Cole, S. (2006). *The Canadian hockey atlas*. Toronto: An Angel Edition for Doubleday Canada.
6. Gross, A., & Geographia Ltd. (19--). *The daily telegraph gazetteer war map. no. 4*. London: Geographia.

Figure 6. A display cabinet showing items from the sports-themed map display.



TOGETHER AT LAST! THE CARTOGRAPHIC BOUNDARY FILE MEETS THE 2006 CENSUS PROFILE TABLE

Dan Jakubek
GIS and Map Librarian
Ryerson University

Summary of a presentation at CARTO 2009, Annual Conference of the Association of Canadian Map Libraries and Archives, Wolfville, Nova Scotia, June 11, 2009.

In collaboration with the Department of Geography, Geospatial Map and Data Centre (GMDC) staff in the Ryerson University Library undertook a project involving the creation of GIS data layers (in ESRI and MapInfo shapefile format) featuring 2006 profile tables at the census tract (CT) level. To date, shapefiles representing 35 Census Metropolitan Areas (CMAs) and Census Agglomerations (CAs) across Canada have been created. Currently, quality control is being performed on the datasets. Upon completion, Ryerson plans to make these files available to academic institutions across Canada. Note that interested institutions must be part of the Data Liberation Initiative (DLI).

The presentation included an overview of the methodology used in the creation of the census tract shapefiles, and an introduction to a Census Data Dictionary (a guide which lists and defines the census variables included in each dataset). In addition, significant changes between the 2001 and 2006 censuses were outlined including the following:

- Addition of several new language variables in the '**Language by mother tongue**' and '**Language by home language**' categories in the 2006 census,
- Categorization of Ethnic origins by '**region**' in the 2006 census,
- Addition of postsecondary educational attainment by '**location**' of study in the 2006 census,
- Reporting of both before and after tax income in the 2006 census.

The question was raised whether the creation of these files takes away from the learning process. Data manipulation using a GIS is a required skill that is most definitely useful; however, the intention of the project was to 'Jump Start 2006 Census Mapping' for non-geographers and to simplify the creation of census thematic map outputs.

35 CMAs/CAs – CT Level



Abbotsford, Barrie, Belleville,
Calgary, Edmonton, Fredericton,
Guelph, Halifax, Hamilton,
Kelowna, Kingston, Kitchener,
London, Moncton, Montreal,
North Bay, Oshawa, Ottawa-
Gatineau, Peterborough, Quebec,
Regina, Saguenay, Saskatoon,
Sherbrooke, St. Catharine's-
Niagara, Saint John, St. John's,
Sudbury, Thunder Bay, Toronto,
Trois Rivières, Vancouver,
Victoria, Windsor, Winnipeg

GPS VISUALIZER

Joël Rivard, GIS Technician
Carleton University

*Paper presented at the OCUL Map Group Library Assistants Workshop,
York University, Toronto, June 2009.*

GPS Visualizer (<http://www.gpsvisualizer.com/>) is a free, online utility that creates maps from GPS data, simple coordinates, or street addresses. This utility allows users to create maps with their own data and export it to Google Maps or Google Earth. Registration is not required.

Input Formats Supported

Users can have the following formats as their input data:

- GPS Formats (Garmin, TomTom, Magellan, GPX, etc.)
- Comma-separated file (.csv) or Tab delimited text (.tab)
- Microsoft Excel or Google Docs

For GPS formats, users can export data from their GPS unit to a specific file format that is accepted by GPS Visualizer. For simple coordinates or street addresses, users should use a spreadsheet software,

such as Excel or Google Docs, to create the file. Keep in mind that specific field names need to be used when creating the data. Table 1 identifies some of the most commonly-used field names that are recognized by GPS Visualizer. An example of field names used in Excel can be seen in Figure 1.

Create a Customized Map

Once users have properly set up their file or exported to a supported format, they can begin to create their custom map in GPS Visualizer by either using the simple or detailed method as seen in Figure 2. Users can **Get Started Now**, where there are no options to set or they can create a map by setting **more detailed options**. Some of the more detailed options include: Size of Google Maps Browser Window, Title, Legend, Labels, Map Symbols, etc. In both cases, users will have to select whether they want the output to be in Google Maps or Google Earth.

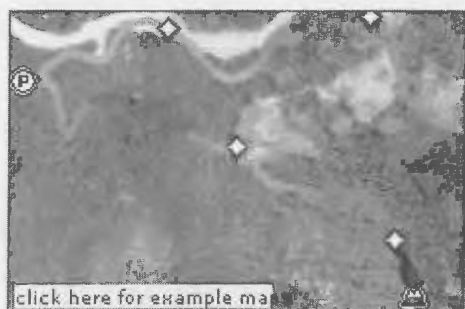
Field Names	Description
Name	Name of a point, as displayed on the map
Desc / Description	The description of the name
Latitude / Lat	Identifies the geographic location; ideally in decimal degrees, but degrees-minutes-seconds works also
Longitude / Long	Identifies the geographic location; ideally in decimal degrees, but degrees-minutes-seconds works also
Address, City, State, Province, Country	Identifies the geographic location using the address. Each part of the address should be in a separate field
Zip / Zipcode / Postcode	Identifies the geographic location by zip code or postal code
Color	Colour of the point
Sym / Symbol / Icon / Style	Symbol of the point
URL	Turns the point into a URL

Table 1. Field names recognized by GPS Visualizer.

For a more detailed list of field names that are used in GPS Visualizer, see: <http://www.gpsvisualizer.com/tutorials/waypoints.html#summary>.

	A	B	C	D	E	F	G	H
1	Name	Description	Address	City	Province	URL	Color	Symbol
2	York University Library	Map Library	4700 Keele St	North York	Ontario	http://www.library.yorku.ca/com/Map/index.htm	Red	Camera
3	Sobay's #639	Clark & Hilda Sobays (Keefer)	441 Clark Avenue West	Thornhill	Ontario	http://www.sobays.com	Yellow	Square
4	Real Canadian Superstore	Oufferne and Steeles	51 Gerry Fitzgerald Dr	Toronto	Ontario	http://www.superstore.ca/ontario/default.aspx	Yellow	Square

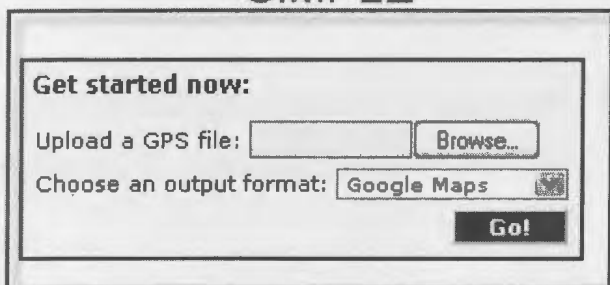
Figure 1. Example of data in Excel using street addresses.



GPS Visualizer: Do-It-Yourself Mapping

GPS Visualizer is a **free**, easy-to-use online utility that creates maps and profiles from GPS data (tracks and waypoints, including GPX files), street addresses, or simple coordinates. Use it to see where you've been, plan where you're going, or visualize geographic data (business locations, scientific observations, events, customers, real estate, geotagged photos, "GPS drawing," etc.).

SIMPLE



DETAILED

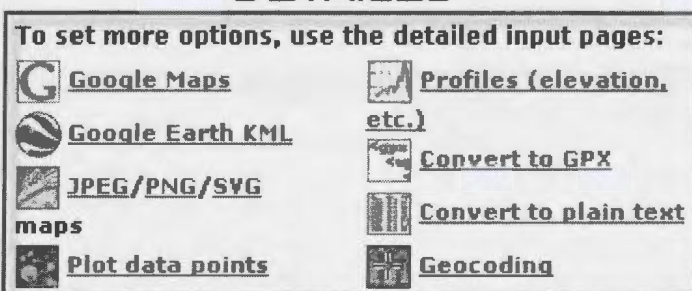


Figure 2. GPS Visualizer webpage.

To create a map with no options, go to **Get Started Now** and click on the **Browse** button next to **Upload a GPS file**. Select the file to map and click **Ok**. Select Google Maps or Google Earth as the **Output format** and click on **Go**. In a few seconds, a separate browser window will appear with the results for either Google Maps or Google Earth.

Google Maps: The Google Maps output will show a Google Maps map with the points plotted on it. Users can choose between many different backgrounds such as Google Terrain, Google Hybrid, Canada NRCAN, Landsat 30m, Daily MODIS and much more. To view only the map, click on **this link** at the top of the webpage to view the temporary link to the map. To save the webpage, go to **File > Save as...** In save as type select **Webpage, HTML Only***.

*Users can either run this webpage from their local computer at any time (need internet) or embed it into a website (need the Google Maps API). They can also do a screen capture of the map and paste it into a powerpoint presentation or in a word document.

Google Earth: A kml or kmz file will be created for users to download. Download the file and open it in Google Earth.

To create a map with multiple options, use the **Detailed Input Pages** by selecting either **Google Maps** or **Google Earth**. Users will be brought to a detailed options webpage for either Google Maps or Google Earth where they'll be able to edit the options as desired. See Figures 3 and 4 for a preview of the options available.

Under **Upload Your GPS Files Here**, click on the **Browse** button next to File #1. Select the file to map and click on **Draw the Map** (for Google Maps) or **Create KML File** (for Google Earth). In a few seconds, a separate browser window will appear with the results for either Google Maps or Google Earth. Users can save the Google Maps or Google Earth in the same way as explained earlier in the article.

GPS Visualizer is an extremely useful tool that should be considered when wanting to add data to Google Maps or Google Earth. It is very valuable for students with little or no GIS background.



Draw a Google Map from a GPS file

Other map forms: [Google Earth KML/KMZ](#), [JPEG/PNG/SVG](#), [Quantitative data](#)

This form will automatically draw your GPS data (or KML/KMZ file, or plain text data in CSV or tab-delimited format) overlaid upon street maps and satellite imagery in Google Maps.

Please note that creating a map with a very large number of waypoints (or very long tracklogs, especially if speed or altitude colorization is enabled) can cause your Web browser to grind to a halt.

General map parameters show advanced options [+]

Width: pixels Height: pixels

Full screen mode: No Yes Title:

Initial map type: Opacity:

Track options show advanced options [+]

Colorize by: Default color:

Track opacity: Line width:

Max. points per track: Tickmark interval:

Waypoint options show advanced options [+]

Default marker color: Style:

Waypoint labels:

Generate list of waypoints: No Yes Width:

Contact information

Your e-mail:

This is for help requests only. NOT a mailing list!

Upload your GPS data files here: ?
(Total size of all files cannot exceed 3 MB)

File #1

File #2

File #3

Or paste your data here: ?

name, desc, latitude, longitude

Force plain text to be this type:

Or provide the URL of static data on the Web:

Or a URL that will be loaded into the map dynamically:

(Google Docs spreadsheets or KML/KMZ files only)

Figure 3. Google Maps detailed options.



Convert your GPS data for use in Google Earth

This form will import your GPS data file, or plain-text data (tab-delimited or CSV), and create a KML file that you can view in the Google Earth application or import into Google's "My Maps" system.

(You might also be interested in the [Google Maps](#) input form, which can create an interactive map that can be viewed in almost any Web browser; you can even use KML/KMZ files as input. For SVG or JPEG maps, use the "classic" map form. To resize and/or colorize Google Earth markers based on a particular field, use the [data form](#).)

NEW: If you want to add altitude data to your KML file, enable the option labeled "Add SRTM elevation data." GPS Visualizer's server hosts a 70GB database of digital elevation data that can be integrated into your data.

General map parameters show advanced options [+]

Output format:

File type:

Google Earth doc name:

Add SRTM elevation data: No Yes

Track options show advanced options [+]

Altitude mode:

Draw a shadow: No Yes (only works with "absolute" altitude)

Draw as waypoints: No Yes

Track opacity: Line width:

Colorize by: Default color:

Waypoint options show advanced options [+]

Show waypoints:

Altitude mode:

Default icon color: Default icon:

Contact information

Your e-mail:

Upload your GPS data files here: ?
(Total size of all files cannot exceed 3 MB)

File #1

File #2

File #3

Or paste your data here: ?

name, desc, latitude, longitude

Force plain text to be this type:

Or provide the URL of data on the Web:

Figure 4. Google Earth detailed options.

REPORT ON THE TORONTO COPYRIGHT TOWN HALL AUGUST 26, 2009

Marcel Fortin
University of Toronto

As you probably know, the Canadian Government is poised once again to write a new copyright law for Canada and they have been holding consultations throughout most of the summer through town halls and round tables (<http://copyright.econsultation.ca/>). I attended the Town Hall meeting in Toronto last night. I was invited to attend on behalf of the Association of Canadian Map Libraries and Archives but alas there were too many people and organizers awarded speaking privileges through a lottery and I did not get to express the map and GIS library and academic communities' views.

Warner Music Canada managed to get three if not four of their representatives to speak. SOCAN got to speak, ACTRA got to speak, CRIA got to speak, and so did countless artists, authors and actors. In all, through two hours of three-minute presentations, only two speakers mentioned the library community's perspective. Leslie Weir of the University of Ottawa represented the Ontario Council of University Libraries and someone from a community college library in Ontario also spoke. Two speakers did mention the need to abolish Crown Copyright, however. Unfortunately not one academic spoke and not one person mentioned the words "data" or "maps".

Most speakers talked about artists (authors, musicians, actors, etc.) who can no longer make a living from their art because of what is perceived as a weak copyright law in Canada. It is clear from their passion and their stories that something needs to be done to help protect culture and artists in Canada through a new copyright law.

However, it is quite unfortunate that the entire debate seems to firmly centre around this one aspect of copyright reform. Have a look at the debate on the web page above in the comments section, read the article by Mira Sundara Rajan

in the *Globe and Mail* ("Copyright: Let's take ownership; Outdated legislation hinders Canada's Digital engagement" August 4, 2009), or Michael Geist's blog this morning <http://www.michaelgeist.ca/content/view/4329/125/>.

If I had been given a chance to speak I would have tried to convey these points:

- In the current Copyright Act, maps are considered a part of what are described as "artistic works". But as we all know, very few paper maps are actually published anymore and most maps fall very short of being works of art. It's not a criticism of maps and map makers; it's just a reality that maps are tools more than they are art. Gone are the days of the cartographer as the only map maker, for better or for worse.
- Most maps are now born digital as databases and anyone with a computer can now build a digital map using a variety of methods. But the key to building those maps is digital data. The better the data the better the maps. Herein is part of the issue. Without proper access to data, the academic and the Canadian public suffer, to say nothing of the economy.
- Canadian governments own most Canadian datasets which means that most data fall under Crown Copyright in Canada. For years governments have, willfully or not, hidden behind the copyright law to restrict access and to impose large fees for use.
- Over the years Crown Copyright restrictions have hindered the development of a proper geospatial industry to say nothing of hindering the education of Canadians in the booming world of digital data and geospatial data.
- As a result of this situation, I would like the Canadian government to single out maps and

digital data (geospatial and otherwise) as separate categories and to eliminate or reform Crown copyright surrounding these in order to allow for better dissemination, flow, and use of these by Canadians.

• And if Crown Copyright cannot be eliminated, that copyright should be less restrictive or at the very least consistent. The issue of consistency is important. For instance the copyright notice on two of the federal government's web pages, Geogratis.ca and Geobase.ca from Natural Resources Canada, state that:

"Canada hereby grants to the Licensee a non-exclusive, fully paid, royalty-free right and licence to exercise all Intellectual Property Rights in the Data. This includes the right to use, incorporate, sublicense (with further right of sublicensing), modify, improve, further develop, and distribute the Data; and to manufacture and / or distribute Derivative Products."

Other Canadian government bodies should be asked to follow the same policy towards Crown Copyright in our new legislation and allow for the free flow of data to Canadians.

Another important aspect of copyright reform, which is often mentioned but not specifically concerning maps and data is that confusion should be eliminated from the legislation (simply think about the debate over the copyright of Fire Insurance Plans). Why, for instance, are paper maps differently handled within Crown copyright than their digital counterparts? Consider National Topographic Maps (NTS) which are some of Canada's most important and popular maps. These are built on geospatial data, or in many cases the digital data have now been derived from their digital copies. Both the datasets and the actual scanned copies of these maps are available for free for download from the Geogratis.ca web pages. But the print of the very same paper map that's available for download cannot be photocopied in its entirety from a depository library. In fact, within the current copyright legislation, only ten percent of a government map can be copied to be considered within the boundaries of fair dealing.

There are many other issues I'm sure, but these are the points I wanted to touch on. With that in mind, I encourage you to let your views be known on this very important matter as the copyright law will be changed soon. Letters are accepted via their web pages here: http://www.ic.gc.ca/eic/site/008.nsf/eng/h_00001.html. Andrew Nicholson, president of the ACMLA, has sent a letter on behalf of the Association but it is important that individuals from the map and GIS community also send letters. If the cultural industries are the only voices heard, you can bet that only their concerns will be examined in the new law.

Sincerely
Marcel Fortin
Map and GIS Librarian
University of Toronto

Have You Seen This?

Telegraph.co.uk

World's Oldest Map

<http://www.telegraph.co.uk/news/worldnews/europe/spain/5978900/Worlds-oldest-map-Spanish-cave-has-landscape-from-14000-years-ago.html>

(posted to CARTA by David Jones 10 August 2009)



Should Geospatial Education Create Subject Matter Experts or Geospatial Thinkers?

Podcast by Joe Francica and Adena Schutzberg
Directions Magazine

<http://www.directionsmag.com/podcast.php?id=3135>

**GEOMATICS: THE WORLD FOR EVERYONE
ACMLA CARTO 2009 CONFERENCE REPORT
JUNE 9-12, 2009
WOLFVILLE, NOVA SCOTIA**

Compiled by
Eva Dodsworth
University of Waterloo

With contributions from Colleen Beard (CB), Diane Boyd (DB), Gail Curry (GC), Susan Greaves (SG), Marcel Fortin (MF), Wenonah Fraser van Heyst (WvH), David Jones (DJ), Susan McKee (SM), Jenny Marvin (JM), Gavin Moore (GM), Cathy Moulder (CM), Rosa Orlandini (RO), Jesslyn Stoncius (JS) and Alberta Wood (AW)

Geomatics Atlantic 2009, a joint conference with the Geomatics Association of Nova Scotia (GANS), the Canadian Cartographic Association (CCA) and the Association of Canadian Map Libraries and Archives (ACMLA), took place at Acadia University in Wolfville, Nova Scotia, a small historic town located in the heart of Annapolis Valley. The conference's theme was **Geomatics: The World for Everyone**, showcasing and sharing knowledge of mapping and GIS-related research, products and services.

Tuesday, June 9

Several GIS workshops preceded the conference. The hands-on workshops requiring computer labs were held off-site at the Nova Scotia Community College Kingstec campus, in Kentville. School buses transported interested participants for the morning and/or afternoon sessions.

There were three concurrent workshops in the morning. Doug Foster, Jamie Whitters, Sharon McDonald and John MacKinnon offered a workshop at Acadia University on *Practical GIS Applications for Municipal Planners*. Their presentation and discussion focused on the value of the integration of individual datasets at the municipal level. Working with the concept that the whole is greater than the sum of the parts, they demonstrated increased value using datasets from the Cape Breton Regional Municipality.

The second concurrent workshop was offered by Eva Dodsworth from the University of Waterloo—*Google Earth 5.0: Using Google Earth as a Research*

and Mapping Tool. Due to the large interest in this workshop, Eva presented it twice, both in the morning and afternoon, reaching roughly 80 participants. Using a combination of presentation slides and hands-on exercises, Eva guided us through the vast information resource GE offers and its mapping capabilities. Regardless of academic discipline, Eva showed us that GE is a dynamic tool that can be used campus-wide to promote



Due to popular demand, Eva Dodsworth presented her session on Google Earth twice. (Photo courtesy of Cathy Moulder)

geographic information literacy and to introduce GIS concepts to the non-GIS user. The first part of the workshop, *Google Earth: More Than Just Imagery*, introduced GE as an information resource and how it can be used in teaching and research applications. Various discovery tools and examples were shown to highlight information that can be accessed around the globe, such as the timeline tool to access historical imagery for land use change and site discovery; Streetview and 360 Cities information from the Layer menu were examples used to show geographical and social awareness. Following this presentation, participants worked through a self-guided hands-on tutorial using the line, placemark, image overlay, and other basic mapping tools to create a walking tour map of Wolfville.

The second part of the workshop focused on the concepts of kml (keyhole markup language), importing existing kml files, and shapefile to kml converters. Using the Add Content tool, Eva showed some fascinating examples of existing kml files that she located from other web sources that can be loaded into GE. This clearly demonstrated the increasing trend of public becoming involved with “voluntary geographic information” that was later reinforced throughout the conference. Following this, participants worked through another tutorial using the SHP2KML free software to convert an existing shapefile to kml—a process required for viewing a georeferenced file in GE. Although a bit more technical, in the end it demonstrated that advanced mapping processes can also be achieved in GE as we created a choropleth census map of Nova Scotia.

It is important to note that the Google Earth Pro version does read shapefiles and provides kml conversion that can be subsequently loaded into the free GE version—no need to use a converter tool. Other advantages of GE Pro were discussed, such as the ability to open attribute tables, read geotiffs, measure polygons, open tables with x, y coordinates. Google Earth Pro is available to academic faculty and staff for no fee, however institutions need to apply for this status through appropriate GE contacts. Eva also demonstrated the process of georeferencing in GE and provided a self-guided tutorial.

It was evident from this workshop that as GE continues to support greater mapping functionality,

its use as a tool to promote geospatial literacy in the classroom becomes much more appealing compared to that of sophisticated desktop GIS software. As teachers and promoters of geographic information, participants were able to gain a better appreciation of the ease of use of GE as an instruction tool. (CB)

The third concurrent workshop, presented by Trevor Milne, President of Gaiamatics Solutions Inc, discussed ObliqueMapper, a Gaiamatics Solutions software program. ObliqueMapper allows for the collection of GIS layers from oblique airborne and terrestrial photographs. Trevor explained how users can photograph an area of interest from multiple angles and then through simple digitizing, use the photographs to generate a variety of layers visible in the photographs (e.g. buildings, streets, lampposts, etc.). ObliqueMapper can also be combined with GPS systems, allowing users to create georeferenced data.

Those who chose to leave Kingstec after the morning session were bussed back, and those who stayed at the college to further participate in the workshop offerings, were provided with a wonderful assortment of sandwiches, fruit and drinks over the lunch hour. After lunch, two more concurrent workshops were offered, one being Google Earth and the second *Web Mapping for Everyone: An Introduction to Open Source Web Mapping with MapServer*, presented by Jeff McKenna, Director of Gateway Geomatics.

MapServer is an Open Source platform for publishing spatial data and interactive mapping applications to the web. In his introduction Jeff McKenna was very specific about what MapServer is and what it is NOT. It is an application development system for web-based mapping, server-based, open source, extremely configurable and easy-to-use. And it does support OGC Web Services Specifications. Conversely, MapServer is **not** a desktop GIS, a ready-to-use application, a client-based application, easy-to-use or wizard configurable. It is also **not** expensive.

In Part 1 of the workshop, participants learned how to set up a MapServer environment including configuring a Web server and creating a MapServer application. In Part 2, we were introduced to concepts for using vector data with MapServer.



*Snapshots from the Icebreaker.
(Photos courtesy of Alberta
Auringer Wood)*



Those who were familiar with working in a DOS environment found the procedures fairly straight forward. The rest of us found the workshop a challenge, but at the end we all had a much better understanding of the software and its potential. MapServer was originally developed by the University of Minnesota (UMN) ForNet project in cooperation with NASA, and the Minnesota Department of Natural Resources (MNDNR). Later it was hosted by the TerraSIP project, a NASA sponsored project between the UMN and a consortium of land management interests. MapServer is now a project of OSGeo (<http://www.osgeo.org>), and is maintained by a growing number of developers (nearing 20) from around the world. It is supported by a diverse group of organizations that fund enhancements and maintenance, and administered within OSGeo by the MapServer Project Steering Committee made up of developers and other contributors (<http://www.mapserver.org/>).

The required and optional software include the following:

- Any http server that support the CGI protocol (e.g. Apache, IIS, Tomcat)
- Map Server CGI program and utilities (e.g. shp2img, shptree, sortshp)
- Other geospatial programs / utilities such as GDAL/OGR utilities (e.g. gdainfo, ogrinfo, ogr2ogr), Proj.4 utilities and Grass or QGIS.

For those who would like to consolidate their knowledge of MapServer Jeff McKenna has kindly published on the web the documents and tutorial data (<http://www.gatewaygeomatics.com/dl/mapserver-workshop/>). Click the geomaticsatlantic link. The documents are inside the `/ms4w/apps/ms101/docs/` folder. More information is also available on the MapServer website <http://www.mapserver.org/tutorial/index.html>. (DB)

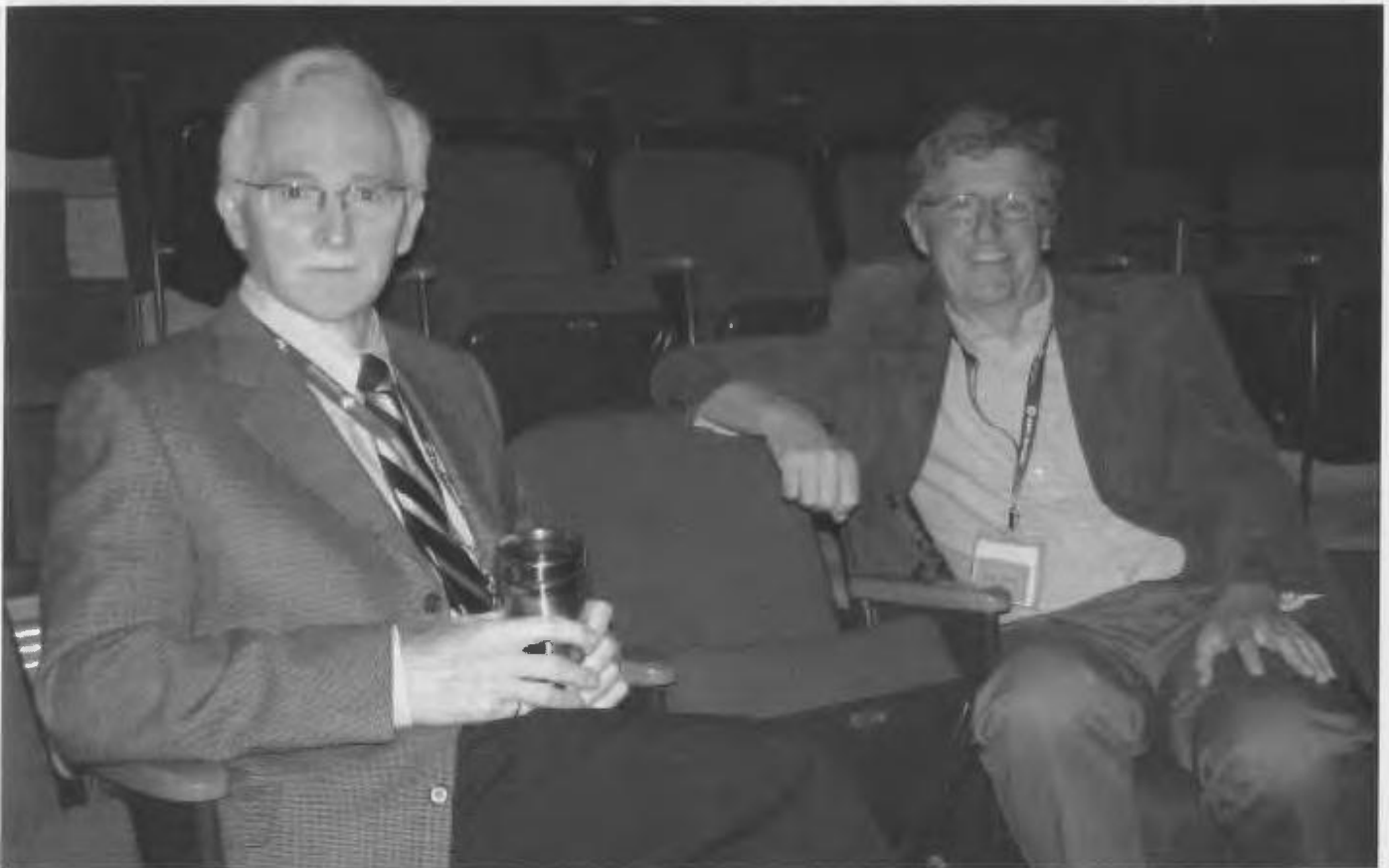
After both workshops ended, participants were bussed back to Acadia to freshen up for the Icebreaker, where an assortment of wines and cheeses were offered throughout a room filled with new and old and friends and colleagues.

Wednesday, June 10

Geomatics Atlantic 2009 officially began with introductory remarks made by Acadia University's

President & Vice Chancellor, Ray Ivany. Following him, the renowned geographer and GIS thinker, Michael Goodchild (University of California, Santa Barbara) presented the first keynote address, entitled *The Changing Face of GIS*. Using the example of geographic name assignment, he noted that most geographic information has been created by authorities with no role for public involvement. But going back 500 years, names such as 'America' were supplied by map-makers such as Waldseemüller, and Goodchild feels that this return to "volunteered geographic information" and "user generated content" is an important step in the empowerment of citizens to create and use geographic information. He noted that crowd-sourced examples, such as Murmur Toronto (<http://murmurtoronto.ca/>) and Wikimapia (<http://wikimapia.org>) are remarkable because they represent hours of freely volunteered time. The movement to Web 2.0 and volunteered geographic information means the breakdown of traditional systems of government control and monopoly, limited sources, slow production and cost. Aided by web-based tools, it is now possible to georeference almost anything (without actually knowing any geospatial concepts). Goodchild gave several examples where this type of volunteered geographic information has proven invaluable, such as citizen-sourced alerts sent on Twitter for a recent California wildfire.

As an educator, Goodchild reflected on how to train GIS students in this world of Google Earth. His advice is to concentrate on the concepts of critical spatial thinking, the fundamentals that everybody needs to know. He suggested that, at present, education does not focus sufficiently on the development of spatial intelligence; there are geography IQ tests and quizzes but not enough teaching of fundamental spatial skills (such as location, distance and direction, and scale). The textbooks from the 1960s by Haggitt and Gould were recommended as emphasizing these fundamentals, as was the report "Learning to Think Spatially" (http://www.nap.edu/catalog.php?record_id=11019). Finally Goodchild mentioned the development of the Center for Spatial Studies at UCSB (<http://www.spatial.ucsb.edu/>) as an example of a forward-looking educational initiative linking many forms of spatial thinking beyond just geography. (CM)



Keynote speakers Alex Miller (left) and Michael Goodchild. (Photo courtesy of Cathy Moulder)

The first paper session of the day was by Ed Symons, from the Centre of Geographic Sciences, who presented *New Model for Delivering Geomatics Training at the Centre of Geographic Sciences*. Symons, a curriculum consultant, gave an overview of COGS and explained the impetus behind the curriculum review. COGS, part of the Nova Scotia Community College, has about 250 students and is based in Lawrencetown, NS. The driving forces for the review are: need for increased flexibility for learners, enrolment and retention issues, technology and user changes, and need for program revitalization. The review process included a literature review, surveys of alumni and industry, and faculty working groups. The new program model will focus on a new Diploma in GIS beginning this year. Future directions for COGS include offering advanced courses for alumni, online courses, and joint degrees with universities. (SM)

Christine Homuth spoke on *Cybercartography for Education: A Multimedia, Interactive Approach for Teaching and Learning*. Homuth is a Masters student at Carleton University, studying under Dr. Fraser Taylor, director of the Geomatics and Cartographic Research Centre. Fraser Taylor coined the term

cybercartography in 2003; it refers to the organization and presentation of spatially referenced information in an interactive, dynamic, multimedia, and multidisciplinary format. More details are available at: <https://gcrs.carleton.ca/confluence/display/GCRCWEB/Cybercartography>. The purpose of her research project is to explore cybercartography, in particular the cyber atlas, as a new way of presenting and delivering online educational materials. She will be working with the Nunaliit Cybercartographic Atlas Framework project, which aims to create a model for building a cybercartographic atlas. More information on this project can be found at: <http://nunaliit.org/index.html>. (SM)

Bill Kidman, Leading Edge Geomatics, Lincoln, New Brunswick, presented *Digital Camera and LiDAR Data for Community Mapping in Cape Breton, NS*. He spoke about a LiDAR (Light Detection and Ranging) and imagery project undertaken for the Cape Breton Regional Municipality, NS in November 2008. The project area, located near Sydney, NS, covered ca. 400 sq. km. Deliverables were 15 cm imagery and various resolutions of LiDAR data. Client specifications required that the data be

delivered in less than 120 days. To meet this requirement, the company chose an all-digital solution including a high accuracy mapping camera, the Applanix Digital Sensor System (DSS), and an Optech 3100 LiDAR system. (SG)

Following Bill Kidman, Tim Webster presented on *Using LiDAR to Map Local Subsidence & Mining Features and Potential Surface Runoff Locations in the Cape Breton Coal Fields, Nova Scotia, Canada*. He spoke about using LiDAR to map mining features and potential for acidic surface runoff around old bootleg mining operations in the historic Cape Breton coal fields. Typical air photos show no sign of these illegal pits, but a June 2008 LiDAR survey provided data for constructing grid (DEM and DSM) surfaces that successfully revealed the pit locations. Further analysis revealed distinct linear patterns related to the strike of the buried coal seam—actually a better geology map of the area than any other to date. As well, elevation lows, surface drainage networks and flow paths have been constructed from the DEM to highlight potential pathways for contaminated surface waters from the abandoned mine sites. (SG)

The final presentation of the morning was by Roger Wheate, University of Northern British Columbia, who presented a paper on *LiDAR Mapping Applications in Forested Landscapes in Northern British Columbia*, focussing on the Aleza Lake Research Forest near Prince George. He noted that LiDAR is the only remote sensing system that can record multiple echoes from one pulse. This dense cloud of data points can be used to generate information on multiple vegetation levels in a forested landscape, including tree canopy height, sub-canopy layers, individual tree mapping, total vegetation biomass and carbon storage, in addition to DEM production and terrain visualization. (SG)

Keynote speaker Alex Miller, President of ESRI Canada Ltd, brought everybody back after lunch to speak about how the geomatics industry in Canada has evolved significantly in the past 35 years. He spoke about the challenges faced by the geomatics community today: online mapping, emerging technologies, GIS as a decision-making tool and geographic education. He demonstrated, with examples, how many industry sectors (transportation, health, and natural resources) are using GIS as a tool to monitor and analyze our rapidly changing world. (RO)

The first paper presentation in the afternoon was given by CoGS student Chris Olive, who reported about *Geographical Patterns on Spending on Food in Nova Scotia* using Pitney Bowes MapInfo data. He and co-author Konrad Dramowicz compared household food spending by Statistics Canada census dissemination area (DA) from the Canadian Food Expenditures 2001 survey. Nearly three hundred food variables were aggregated into four groups: healthy and unhealthy food, and inexpensive and more expensive foods categories. The authors used geographical analysis and data mining techniques to look at geographical clusters (hot spot and cold spot analysis) and explained some of the spatial variation across the province due to socio-demographic characteristics of the DAs. (WvH)

In a presentation entitled *Food Safety Track and Trace Monitoring: From Field to Fork*, William Jones and co-author Raymond Carmichael explained briefly how precision agriculture can be used to link an agricultural product with the field where it was grown and to follow that product right through to retail. Not only do growers need to keep track of field treatments, on-farm food safety, and environmental practice, they must also be able to show they are complying with regulations. To that end, the New Brunswick provincial government in cooperation with Agriculture and Agri-Food Canada is developing an electronic agricultural mapping service. The Agricultural Resource Management System (ARMS) is now on-line and associates one-metre digital aerial photography of the agricultural land of the province with various layers of environmental information, and allows users to zoom, pan and switch layers on and off. They developed a field registry in which each field used for agricultural production in New Brunswick has been assigned a unique identification number. The intent of this project is to provide a support tool “to enable farmers to better identify their fields and livestock production facilities for their resource management planning, developing or updating their Environmental Farm Plan, food traceability, and animal health purposes.” Try it at <http://www.gnb.ca/0027/0027-e.asp>. (WvH)

Trevor Milne, president and co-founder of Gaiamatic Solutions Inc., introduced ObliqueMapper, software for creating GIS data from oblique airborne and terrestrial photography. From a user's set of overlapping digital photographs (even handheld



Participants in the acronym session, PPGIS and HGIS. Left to right: David Jones (moderator), Morgan Hite and Jenny Marvin. (Photo courtesy of Cathy Moulder)

ownership. The Bulkley Valley has a population of about 10,000 people. It is several hours away from the nearest city, which is Smithers, BC. In 2007, recreation enthusiasts started using GPS units in the town of Quick. They began mapping waterfalls, trails, wetlands, bird areas, etc. with the assistance of a "GIS Helper". Hite explained that GIS Helpers are individuals who carry PPGIS projects forward. The GIS Helper is someone who volunteers his/her time to help with tasks such as data conversion, software help, data maintenance etc. The group

ones taken from an airplane), first the images are aligned with each other using tie points, which are features in common from a few views. Then the photos are linked to "real world" coordinates by establishing control points to fully georeference them. Once thus aligned, 2D and 3D vector data can be digitized directly from the photos. Any object visible in the photos can be captured and assigned attributes. Models of buildings were shown, exported into ArcScene, with the models created from only six airphotos and a small collection of ground control points (collected using basic code-phase GPS). Sample applications include municipal mapping, coastal mapping, mapping of floods and glaciers, and archaeology. Since the scale of a digitized item is not an impediment to modeling it in three dimensions using this software, even a small football-sized rock with fossils or a table in a lab room can be digitized from close-up photos and a 3D model created. (WvH)

negotiated with the BC government access to data to build their online mapping application. The web site uses Mapchat software, which is built onto Mapserver technology with Chameleon. The software was developed at the University of Waterloo. Along with the Bulkley Valley Stewardship Coalition, the group held mapping training in people's homes. Hite's advice to would-be users of this type of free software is that "free is not always free" in the sense that you will often need the help of someone and that base data is not always free. (MF)

After a health break, there were two sets of concurrent sessions. Session one started with Morgan Hite presenting a paper on a Public Participation GIS (PPGIS) project he has been involved with in British Columbia's Bulkley Valley which focuses on the community mapping done by an ad hoc group. The group started out by wanting to map out features in their area in the way the Community Mapping Network of BC has done for features such as churches, eelgrass, and restoration projects—features, as Hite described, as having no

Next, Jenny Marvin, from the University of Guelph presented a paper on *Historical GIS*, commonly known as H-GIS or HGIS. In particular, the focus of her presentation was on the implications for librarians and libraries of the development of this burgeoning discipline. Marvin defined HGIS as being, according to Wikipedia, Geographic Information Systems that display, store and analyze data of past geographies and track changes in time. HGIS is regarded as a subfield of historical geography and geographic information science. She noted a recent influx in demand in libraries for help with finding and creating historical data as well as for assistance in historical or temporal analysis. A notable example she has worked on involved an HGIS of the Presbyterian Church in Toronto. Using the example of this project, Marvin elaborated on the opportunities open to libraries with the advent of the demand for HGIS from scholars. These

opportunities range from simple visualizations using scanned maps and social directories of parish families to the level of the analysis of data. The analysis of this particular project centred on the use of church and census records and examined hotspots of where families lived and the relationships between social class, location, and the church. The implications and challenges of HGIS for scholars and libraries include the need to develop cross-disciplinary skills. It also involves developing research networks of collaboration. Error in data is also a new factor to most



Snapshot of the vendors' display area. (Photo courtesy of Alberta Auringer Wood)

of us in libraries since we are accustomed to getting government data that have been acquired using very scientific methods. Using older maps and other material introduces error through the need for interpretation, inference and even guessing. Temporal analysis is also quite a difficult issue to deal with since there is no accepted or standard method of showing time in a GIS. Most temporal studies use animation to demonstrate change over time. Money is also an issue since it costs time and consequently money to dedicate people to creating data, not to mention the time for most scholars to get trained in geospatial methods. As well, to the scholar, HGIS and the creation of GIS data does not yet fit into the publication and academic rewards system. Specific to libraries and librarians, HGIS offers an opportunity for us to act as facilitators in terms of geospatial literacy. Librarians have the opportunity to integrate themselves in research projects through partnerships with faculty. We can offer expertise and infrastructure specific to hardware, software, data storage and information management. We can also offer expertise in developing and using best practices for scanning, digitizing, storage and file management. Expertise in data collections in libraries can also help in areas of data creation, archiving, and to develop new access tools such as data portals. (MF)

Session Two began with Eva Dodsworth presenting a session on *Introducing Library Students to GIS*

Librarianship, in order to gage what skills the geospatial librarian community want future librarians to possess. The course is currently offered at the Faculty of Information and Media Studies of University of Western Ontario. The course combines practical GIS technology workshops with lessons on geospatial data collections and librarianship. The objectives of the course are to provide future librarians the geospatial background necessary to recognize opportunities for geospatial resource usages, as well as to train those who will specifically enter the field of GIS librarianship. The students are introduced to mapping using open source GIS products. It is offered as a distance course using an online platform, enabling a broad range of library students to increase their geospatial literacy. (JS)

The final presentation in the second current session was given by Andrew Nicholson, with *Picture This! Map & Poster Printing at the U of T Mississauga Library*, who reported on their adventures in purchasing and implementing a plotter. A pilot program was drafted to make the plotter printing service available to students for academic purposes at an affordable rate, while minimizing the staff time needed for maintenance. Printing has been offered from \$3.50 to \$4.50 a square foot depending on the type of paper used. The plotter has been used primarily for conference posters. A best practices guide was created for students in how to make an attractive poster. (JS)

The busy but productive day ended with several activities offered in the evening: the orienteering challenge, the ACMLA mentoring social as well as a very well received Fireside Chat with keynote speakers.

Thursday, June 11

Thursday morning's session began with a video presentation by keynote speaker Vanessa Lawrence. Ms. Lawrence titled her hour-long presentation *Ordnance Survey: Underpinning Great Britain Decision-Making*. Utilizing a video feed coordinated with a PowerPoint presentation, she talked about the unprecedented challenges and opportunities for the organization. It was nearly as good as a live presentation except that it lacked the opportunity for questions from the audience. An important aspect of decision-making is community participation, such as that of the geographic information community which plays a leading role in traffic, lift sharing, and sentience. Location was mentioned as the fourth driver of decision-making for business and the public sector. Lawrence cited the November 2008 "Place matters: the Location Strategy for the United Kingdom" launched by Baroness Andrews which is available at: <http://www.communities.gov.uk/publications/communities/locationstrategy>.

According to Lawrence, the Ordnance Survey is 218 years old and is a trading fund with no government funding. They have to raise money and pay dividends of 5.5%. Less than 50 % of the trading is from the public sector. Headquartered in Southampton, it has 28 field offices around the country. It creates and maintains the 'master map' of Great Britain down to building level

detail and has a 40 cm resolution guarantee. She pointed out that one of the key things is knowing of changes and incorporating them. It used to take 2.2 people to do any survey but thanks to modernization it now only takes 1.1, with many people working from home. Lawrence described the general composition of the 'master map' and the status of their current network. They help other government agencies, such as Highways, especially after accidents. They are working on customer-focused supply models and on demand web mapping services launched on May 12th. It is the Ordnance Survey Open Space which allows many people to incorporate maps into their websites. This is an example of their chosen business model which is a hybrid one with users paying. She ended with a description of a four part plan to reduce costs through innovation and increasing uptakes by business. (AW)

Daniel Jakubek started off the first paper session with his presentation entitled *Together at Last! The cartographic Boundary File meets the 2006 Census Profile Table*. He explained how the Geospatial Map



Participants in the session about Canadian Census. Left to right: Suzette Giles, Dan Jakubek, Trudy Bodak and Lori Martin (session moderator). (Photo courtesy of Cathy Moulder)

and Data Centre and the Department of Geography at Ryerson University have been working together on a project to create new ESRI shape files and MapInfo TAB files for the 2006 census tracts that include the Profiles tabular data. The pre-processing of these files has proven to be an excellent resource to the novice GIS user. Jakubek also provided an overview of the changes between the 2001 and 2006 profiles and highlighted the user-friendly data dictionary created by the project to support the variables in the 2006 census. Following quality control, Ryerson is willing to share these files to DLI members and encourages others to consider sharing similar data that they may have created. (JM)

Suzette Giles and Trudy Bodak continued the census mapping theme by presenting on *Mapping Canadian Census and Lifestyle Data the Easy Way: An Update on SimplyMap*. This presentation provided an update to the state of Simply Map from last year's conference. The presenters emphasized the potential this product holds for users with little to no GIS experience and demonstrated the ease of use provided by the point-and-click interface. SimplyMap is working on a Canadian version that includes census and household expenditure potential data. The Geospatial Map and Data Centre at Ryerson is working with SimplyMap to improve Canadian usage. Currently it is projected that this product will be on the market by fall 2009. Those interested in the software can inquire about a free trial via the following email: sswartz@geographicresearch.com. (JM)

After the health break, Scott Tweedy of Natural Resources Canada's Centre for Topographic Information (CTI) provided us with an update on the new Topographic Mapping Initiatives program, which will see 900 CanTopo print-ready map files published over three years. Production of these files has begun, and BC Olympic maps have been completed. Freely available PDF, GeoPDF and TIFF files will be appearing on GeoGratis. Full-size paper plots will be distributed to libraries through the Depository Services Program and will be available for purchase through the existing reseller network. Content will be derived from multi-sourced digital data, which will be enhanced, manipulated and amalgamated into CTI's Cartographic Database (CartoDB). Surround changes will include the addition of ISBN/ISSN numbers and metadata blocks. CTI is looking at the possible future inclusion of CartoDB data in CanVec. (GC)

The importance of good figure and ground contrast in the accuracy and efficiency of cartographic communication was evident in research results presented by Cliff Wood in his session entitled *Using Eye Movements in Cartographic Research*. Wood found that strong figure and ground contrast played a definitive role in subjects' ability to perform estimation and comparison map analysis tasks. Contrast did not seem to affect the outcome of counting tasks, but Wood suspects that this might be due to the subjects' familiarity in identifying the features being counted. (GC)

As part of the annual Library and Archives Canada (LAC) report, David Brown showcased four maps purchased to fill gaps in LAC's Early Cartography collection. Of particular note was a 1765 James Cook map entitled *A Chart of the Sea-Coast of Newfoundland between St. Laurence and Point May*. Also purchased was an anonymous Township of Nipean in Upper Canada map circa 1828, an 1827 Joseph Bouchette map (*Plan Shewing that Section of the Country Lying Between the Old Seigi*), and an 1850 Richard Pease map (*Map of French & English Grants on Lake Champlain*). Natalie LeBlond reported that LAC is acquiring approximately 1,000 legal deposit maps per year. She also announced that a new map web page, focusing on how to find and consult maps, is about 80 percent complete and will soon be ready for user testing. (GC)

ACMLA members spent their lunch hour at the ACMLA annual general meeting, where over delicious lunches they welcomed Andrew Nicholson as their new President, and Colleen Beard as the new Past President.

Thursday afternoon's Keynote presentation was an illustrated talk by Sat Nandlall covering some of his observations as a world traveller, amateur geographer and CBC News videographer. He has visited about 1/3 of the countries in the world and many hot spots and conflict zones. Sat was born in South America but grew up on the east coast of Canada. He commented that as the son of a surveyor he enjoyed many aspects of the conference and seeing how technologies have advanced. He also reflected on the Fireside chat session and the parallels that he could see in the issues that we face and those of his profession—especially the issues relating to quantities of information being generated, its organization and the challenges of archiving. His slides were from many of the conflict



Sat Nandlall from CBC shared many moving slides and stories from his travels to news hotspots around the world. (Photo courtesy of Cathy Moulder)

zones he has visited and filmed—Afghanistan, Angola, Darfur—and locations of documentaries from India to Cape Dorset. These images reflected the issues of the modern world, the commonality of human suffering and the devastation of war on the human scale. The slides also included informal shots of reporters and correspondents who we know by name but rarely see. Sat talked of his love for maps and the importance of trying to understand them; how the map does, or doesn't, reflect the actual terrain or community. He always has maps of where he's going. Sat concluded by noting that although GPS may be wonderful, maps don't have batteries which can die! (DJ)

Cathy Moulder presented the next session, *Keeping up on Geo-Everything*. Librarians and geospatial professionals are challenged to stay on top of all the emerging geographic technologies and news. Ten tools were presented, which can assist a busy individual in becoming aware of the latest and greatest. A fundamental way to keep up with the flow of information is by subscribing to RSS feeds through a feed-reader. Relevant and fascinating

news blogs can be identified through the use of a search tool such as Technorati or Digg. (JS)

Next, Alberta Auringer Wood shared the story of *Cartographic Societies of the United States and Canada in the 20th Century*. Today's professional cartographic associations derive from an extensive and winding history. At the start of the twentieth century, there were four different societies of geography in North America. Cartography was one of the many issues addressed by these groups. In the 1940s, organizations devoted specifically to cartography began to pop up. The Canadian Cartographic Association was founded on October 18 1975. A variety of groups with cartography as a focus have prospered over this period. (JS)

What's Happening in the Map Room of Memorial University was presented by David Mercer and Joanne Costello. With the largest collection of maps in Newfoundland, the goal of the library staff is to get students in to see the collection whenever and wherever. A board showing news clippings attached to the places that they are about has been installed in a high-traffic location with directions to the map library. A giant world map indicating where Memorial students have come from is a popular spot, and has been featured on the news. Hand-painted maps are used to decorate the space creating even more excitement about this map library. (JS)

The final presentation of the day was by Linda Guay who spoke about *The New Canadian Geoscience Map Series*. Linda compared Natural Resources Canada's old map series with a new map series. She distinguished open file maps from A Series maps and described the process for generating print-ready maps. An open file map is a quick, one-time release that is subjected to a critical scientific review by one peer. Open file maps are not edited scientifically and have limited cartographic quality control. Some researchers avoid open file maps because they are considered preliminary and of lower quality. NRC decided to create a new series of maps that are of higher quality. NRC's long-term goal is to end the release of open file maps. It was determined that standard scale sizes were needed and NRC proposes the following scales and dimensions:

- 1:50,000 – 36 in. x 42 in.
- 1:100,000 – 54 in. x 60 in.
- 1:250,000 – 40 in. x 50 in.

The new map series will include geological maps, climate change maps and maps of the ocean floor. It is recommended that the maps be aligned by the NTS (National Topographic Survey) index wherever possible. While NRC is proposing a single map series, it also foresees the production of special editions. Any preliminary edition will be clearly labelled as such. All maps will have a common look and feel aligned with the Canadian Topographic Map Series. They will be generated from an ArcGIS spatial database and will include a consistent symbology and legend structure. Metadata will follow the Federal Geographic Data Committee (FGDC) standard. Each map will have a bar code, an ISBN, an ISSN and a digital object identifier. All maps will be available in paper and electronic format.

Open files of maps in the new map series will be offered on request. 80 copies of each map will be distributed through the Depository Services Program. Each preliminary edition of a map in the new map series will undergo a scientific review and a technical review and will include:

- A recommended citation
- An abstract in both official languages
- A 500 word text box
- A paper and digital release
- Preliminary edition label at the top and bottom of the map

When required, final versions will include accompanying items of 5 pages on 8.5 x 11 paper. The documentation will include metadata and will be cross-referenced with the map. All maps that have accompanying material will include the note: "accompanied by booklet."

Digital copies of maps will be available through Mirage in GeoTIFF, Shapefile and ESRI Geodatabase formats. All paper maps will include a stamp indicating that the map was printed by a certified printer. NRC anticipates that the benefits of the new A Series maps will be ease of use, accessibility, quicker turnaround and persistent links. The level of scientific interpretation and quality control has improved as the field data for all projects will be stored in a single repository based on a geological data model. Scientific and Technical Publication Services at NRC is holding consultations with all internal and external stakeholders regarding the new map series. Linda Guay welcomes any feedback

you might have. She may be reached by email at: lguay@nrcc.gc.ca. (GM)

Thursday evening offered conference delegates and speakers some time to unwind, socialize, laugh, eat, drink and dance during the Geomatics Atlantic 2009 Banquet. Attendees were treated to live music, raffle draws and overall good cheer. A night to remember by all.

Friday, June 12

Friday's session opened with Daniel G. Cole, GIS Coordinator of the Smithsonian Institution, who spoke about *Launching the Ocean GeoPortal*. According to his abstract, the Ocean GeoPortal will encompass the geo-referenced portion of the US National Museum of Natural History's 33 million marine specimens from eight of the museum's divisions (Invertebrate Zoology, Fish, Mammals, Amphibians and Reptiles, Minerals, Botany, and Paleobiology). These large data sets may be combined for display and analysis (based on fields of taxonomy, location, depth, collector, ship, expedition, etc.) with environmental data sets from partners at NOAA, in addition to any world-wide or site-specific data sets from collaborators (NASA, USGS, Woods Hole Oceanographic Institute, Scripps, Monterey Bay Research Institute, National Geographic Society, New England Aquarium, other Smithsonian research units and other academic institutions with marine programs). Cole noted that they are working with ESRI on it. He stressed the



Incoming ACMLA president Andrew Nicholson acknowledges the cheers. (Photo courtesy of Alberta Auringer Wood)



*Snapshots from the Banquet.
(Photos courtesy of Alberta
Auringer Wood)*



importance of metadata as it all runs off of it, and if it is not there it does not work. (AW)

Next, Paul Boudreau, Atlantic Coastal Zone Information Steering Committee Secretariat, spoke about *Update and Status of COINAtlantic: A Network of People and Technology in Support of Integrated Coastal and Ocean Management*. In the area of integrated coastal and ocean management (ICOM), information is needed on land, fresh and salt water that no one agency can provide. The solution Boudreau described was the Coastal and Ocean Information Network Atlantic or COINAtlantic. It applies modern technologies to facilitate the exchange of information among the various information providers and users. It is not a portal, not a metadata catalogue, not GIS or refined mapping engine, but rather people, information and technology. The website is: <http://coinatlantic.ca/>. They also do training and support, have a list of contacts, provide guidelines, best practices, software and standards. (AW)

Byron Moldofsky, Chief Cartographer, University of Toronto, gave a presentation on *Development and Cartographic Design of a CGDI-Compliant Online Injury Atlas for Ontario*. Funded by GeoConnections as part of their regional atlases initiative, it is restricted access and requires sign-on permission. It uses Map Server, Carto Web and WMS to prepare maps utilizing their cartographic office files, GeoBase, and a data base at Ryerson University. Preliminary user testing has been done and is ongoing. They have found that interactive maps were most appealing and the addition of more injury types and side-by-side comparison were desired. In the map design, they went for the simplicity of choropleth maps as the users wanted them. Modified natural breaks were used, as well as a sequential color scheme. Metadata was considered to be important and should be easy to understand. They included histograms. Some lessons learned were that the iterative process was worthwhile but expensive; that Open Source has great advantages, but also drawbacks such as support; that WMS was good for confidentiality; and that CGDI distribution data is limited. (AW)

Gerard D. Eddy, Nova Scotia Environment, Environmental Assessment Branch, spoke last in the session about the *Environmental Assessment Screening Application (EASA)*. Environmental

Assessment (EA) plays an important role in decision-making for projects in the province. EASA is a web-based GIS tool that helps do things before the registration process and improves the quality of the registration. It shows the cumulative affects over space and time in order to quickly identify possible environmental interaction. It was also GeoConnections-funded and had GeoNova as a partner along with others. In terms of the system requirements, Eddy indicated that it produced and consumed SDE data, consumed WMS layers, and was publicly accessible. They use ArcGIS Server 9.3 and an Oracle 11 Gig database. It has both public open access and password protected areas. They are doing the final data cleaning and testing is nearly complete with the target to go live over the summer. (AW)

After the health break, Stephanie Lea presented *Using GIS as a Tool to Describe Service Provision of the Nova Scotia Breast Screening Program (NSBSP) from 2002-2006*. According to her abstract, the NSBSP is the first province in Canada to encompass all of breast cancer screening within an organized program, however there are concerns regarding the equity of service provision. Descriptive statistics and GIS were used to map the delivery and use of screening services for a sample of women between the years 2002-2006. Results showed that there were substantial differences in participation by District Health Authorities. In spite of mobile van availability, there remained rural areas with little service access. These results are being used to ensure more equitable service access for all women in NS.

David Crawford and Konrad Dramowicz described the NSBSP in more detail in their session *Optimizing Geographical Accessibility to the Breast Screening Program in Nova Scotia*. They explained how the program serves the women of Nova Scotia by offering breast screening via 11 facilities located in major population centres throughout the province. The NSBSP has future plans to utilize a single mobile unit to service those in less populated areas.

Dawn Mooney, from the UBC Centre for Health Services and Policy Research spoke next on *Maps: Data Exploration and Knowledge Translation in Health Services Research*. He explained how GIS is used in the health system—from tracking the spread of infectious diseases, to routing ambulances, to

forecasting demand for hospital beds. Maps enhance communication and translate research results into new knowledge.

The final presentation of the conference was delivered by Dr. Peter Dare, from the University of New Brunswick, who shared his experiences collecting GPS data during the collapse of the Montserrat Volcano. Using images, and many graphs, Dare described the many GPS processing scenarios and interpreted the results as related to the deformation of the volcano.

Following the final paper presentation, closing remarks were made—and those who stayed till the end were entertained with a cleverly produced play, starring James Boxall!

Although the afternoon hours offered cool air and rain, several delegates enjoyed the remainder of their day partaking in a guided stroll through the historical town of Wolfville, while others wandered

through eclectic gift shops scattered along Main Street. Thanks again to all the conference organizers and volunteers, for a great time in Nova Scotia!



And for the grande finale, a skit produced by James Boxall. (Photo courtesy of Alberta Auringer Wood)



Sincere thanks to all the conference organizers who worked hard to put together CARTO 2009. (Photo courtesy of Richard Pinnell)

REGIONAL NEWS / NOUVELLES REGIONALES

Compiled by Tom Anderson

Alberta

Provincial Archives of Alberta
Tom Anderson
tom.anderson@gov.ab.ca

The Provincial Archives of Alberta (PAA) was pleased to have a Young Canada Works student onsite over the summer. We were able to digitize 4,700 township maps of Alberta, and make these highly used materials available online. These maps were transferred to the PAA by the ministry of Sustainable Resource Development, and detail the provincial government's effort to establish homesteaders throughout the province. While the PAA holds many township maps, these digitized maps are annotated and identify homesteaders by name and provide detailed topographic information on surrounding areas. Researchers can view the maps (in accession GR2004.0214) through the PAA online database at: <https://hermis.alberta.ca/paa>.

Our maps also feature prominently in one of the PAA's new educational resources, *Homesteading Alberta* (<http://culture.alberta.ca/archives/educationalresources/homestead/hs1.aspx>). This online resource is aimed at the elementary-level curriculum, and utilizes a number of township-related maps, photographs and textual records to explain and illustrate the acquisition of land in the West.

University of Alberta
David Jones
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It's late August and as we prepare for the annual onslaught of new and returning students we can take just a few moments to reflect on the activities of the summer.

One of the highlights was, of course, the annual meeting and conference of ACMLA - Geomatics Atlantic 2009. The conference report, elsewhere in this issue, will refresh the memories of those of us

who were there, and provide a summary for those who could not attend.

Here at the William C. Wonders Map Collection, University of Alberta, we have been busy with a number of projects and activities. We (primarily Grace Romanow and Bonnie Gallinger) have rebuilt the library resource guide for the Map Collection. This summer the Library migrated its resource guides to the LibGuides platform and we took the opportunity to up-date the maps guide. It's available through the Library home page www.library.ualberta.ca or directly at <http://guides.library.ualberta.ca/maps>.

We also have begun a project to digitize many of our older (pre 1930) maps of Alberta and the prairies. Working with colleagues in the Peel's Prairie Provinces project <http://peel.library.ualberta.ca/index.html> we are moving ahead with digitization. The actual scanning is done by the University's Earth & Atmospheric Science Department's Digital Imaging Facility (DIF) with maps staff involved in selection and tracking of the maps. There will be much still to be done mounting the image files, etc., but the opportunity to scan and build resource was not to be missed.

The Map Collection also enjoyed the company of a visiting scholar this summer. Dan Duda, Memorial University, and a former member of our Maps Team spent several weeks on campus using the resources of the Map Collection and the Bruce Peel Special Collections Library. It was most enjoyable to have Dan back with us for a while. Next month we are expecting a researcher from Kiev to visit to work with our extensive holdings of maps of Ukraine.

We continue to push ahead, slowly, with the processing of a number of large map donations. Sometimes it seems like an endless task but we do continue to add records to our database, <http://maps.library.ualberta.ca/> and the maps to our cabinets to make these items available to our research community.

British Columbia

Historical Map Society of British Columbia
Fran Woodward
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The Historical Map Society of British Columbia is pleased to announce it has set its program for 2009-2010. Highlights of 2009 will include presentations by Derek Hayes and David Malaher, and December will see the first Society meeting outside Metro-Vancouver, to be held in Victoria, where Margaret Hutchison will speak on the BC Archives map collection. If you would like more information, please contact Fran directly or go to the Society home page, <http://www.historicalmapsocbc.com>.

Ontario

Carleton University
Susan Jackson
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The Carleton Library's Maps home page (<http://www.library.carleton.ca/madgic/maps/index.html>) has undergone a facelift to highlight our Google custom search engine for online maps. From our Google Analytics statistics, we are delighted at the amount of traffic this search engine is getting from across North America. We were also very pleased to be included as a link on the Perry Castañeda site for Canadian resources. Congratulations to David Sharp, GIS Librarian, together with Beth Ray and Monica Ferguson, Map Specialists, for their work on this improved maps home page.

MADGIC has also recently launched a new blog called "The MADGICAL Web" (<https://blogs.library.carleton.ca/roller/themadgicalweb/>) developed by Denize Tan, Government Information Specialist, to highlight both local collection and Web resources. In addition to feeds for each of the sectors in MADGIC, including maps and GIS, there is a weekly wiki pointing to sites of interest harvested from a variety of other Web collector sites. This is an initiative designed to raise awareness of our collection and services and it will be developed further as the fall term moves ahead. Suggestions and feedback of any kind are very welcome.

Ryerson University
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During the summer months, Geospatial Map and Data Centre (GMDC) staff in the Ryerson University Library hired a student from the Computer Engineering Program to assist with back-end programming for the Maps and Data at Ryerson (MADAR) website. A MADAR Management System was created to increase efficiency for adding new records to the geospatial collection database and for the generation of monthly/annual reports featuring unique user and download statistics.

A significant addition to the MADAR Management System is a web mailing application developed to support a new initiative: **The Ryerson University Library & Archives (RULA) Geospatial Community**. The community was created in response to the growing demand for geospatial resources in research, teaching and course work. This mailing list is intended to inform users of new geospatial data holdings and services offered through the GMDC in the Ryerson University Library. Subscription to the RULA Geospatial Community will allow Ryerson students, staff, and faculty to receive regular emails detailing new geospatial data holdings searchable through the MADAR search page. In addition, MADAR web site updates, relevant software upgrades to Ryerson Library workstations, and notifications for upcoming GIS drop-in sessions and tutorials will be announced.

Noel Damba (GIS and Data Technician) has been experimenting with the development of ArcGIS Server web applications in a test environment. We hope to acquire a production server in the near future that will support web applications intended to aid users with geospatial data search, discovery, and access.

Finally, presentations were delivered by Dan Jakubek and Suzette Giles at the ACMLA – Geomatics Atlantic 2009 conference in Wolfville. For a description of Dan's presentation, consult 'Together at Last! The Cartographic Boundary File meets the 2006 Census Profile Table' elsewhere in this issue of the *Bulletin*.

University of Ottawa
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Chantal Ripp is joining our team as our Geography and GIS Replacement Librarian, starting this September, while Nancy Lemay is on maternity leave. Chantal already worked for the GSG as a student part-time employee in 2007-2008. Having graduated from the Geography program at University of Ottawa, Chantal immediately enrolled in the library school at the University of Western Ontario and completed her MLIS degree this past August. We are all looking forward to working with Chantal again!

Over the summer the GSG has been under renovation, along with the rest of the third floor of the Morisset Arts and Science Library. Videos and photos of the old space and ongoing renovation are posted under the *What's New* section of our web site at www.biblio.uottawa.ca/gsg/.

Features include:

- individual librarian offices for the GovDocs, Data, and GIS specialists;
- twenty four seats around three large flat surfaces for clients to conduct map consultation;
- improved arrangement and access to the print collections (for our centre and the third floor in general);
- a new drum scanner to digitize full-size maps;
- a neighbouring computer lab of 22 work stations for workshops and clients' everyday use.

More details outlining the plans and decisions surrounding our renovations are sure to follow in a subsequent article.

Finally, we're happy to announce that Nancy Lemay gave birth to a baby boy on Friday July 31st at 12:28 am. Gabriel arrived one week early and weighed 7lbs. 7oz.

University of Western Ontario
Cheryl Woods
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As of May 11, 2009 Western Libraries has assumed the responsibility for the operations of the Serge A. Sauer Map Library and the Data Resources Library.

Cheryl Woods, Elizabeth Hill and Vince Gray, the librarians of the Map and Data Libraries, have been transferred to Western Libraries, from where they will continue to deliver services in their areas of expertise.

A transition working group has been established with the goal of creating joint maps and data services within Western Libraries. The transition period may last a year or more, during which time a new facility will be created within Western Libraries to house the new service with prominent visibility. Library service for maps and data will continue to be offered from the current locations in the Social Science Centre until the physical move occurs.

For the upcoming academic year, the Map Library will be open 30 hours a week and service will be delivered by Cheryl and casual student assistants.

Saskatchewan

University of Regina
Marilyn Andrews
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The Department of Geography Map Library at the University of Regina is the largest collection of cartographic material in Saskatchewan. We maintain a comprehensive collection of maps, atlases, cartobibliographies, periodicals, air photos and other reference materials. The department also houses TERRA: The Environmental Research Response Applications Lab, which allows faculty and students to model environmental, economic and social responses to innovation in energy production and use.

The Department of Geography will host the 2010 annual meetings of the Canadian Association of Geographers, the Canadian Remote Sensing Society, the Canadian Cartographic Association, and the Canadian Geomorphology Research Group.



Library and Archives Canada / Bibliothèque et Archives Canada

David Brown and Isabelle Charron

David.Brown@lac-bac.gc.ca

In March 2009 Library and Archives Canada acquired an important hydrographic chart of the southern Newfoundland coast by James Cook. It is believed to be one of only two manuscript charts, in a Canadian collection, by the famous explorer of the south Pacific.

Following the Treaty of Paris in 1763, Britain moved to secure its sovereignty over Atlantic Canada. Cook, who had already spent several years in North America working on various mapping projects connected with the siege of Louisbourg and Quebec, was chosen to conduct a survey of Newfoundland waters. He spent five years on that project. The chart purchased by Library and Archives Canada was produced by Cook during the summer of 1765.

Cook's chart details the rugged Newfoundland shoreline between Little St. Lawrence and Point May -- the French islands of St. Pierre and Miquelon lie just about twenty km off this coast. It notes the depth of the sea bottom and several sites connected with the cod fishery, a vital industry at the time. The official Geographer to King George III, Thomas Jefferys, used Cook's Newfoundland charts in his *North American pilot for Newfoundland, Labradore and River St. Laurence*, which was first published in 1770s and was used by mariners for more than a century.

Following his Newfoundland assignment, the Royal Navy promoted Cook and gave him command of three successive expeditions to the Pacific where he quickly earned an international reputation as the first European to sail the eastern coast of Australia, the Hawaiian (Sandwich) Islands and the first circumnavigation of New Zealand.

This precious document was purchased with the assistance of a Movable Cultural Property grant accorded by the Department of Canadian Heritage under the terms of the *Cultural Property Export and Import Act*, and with the contribution of the Friends of Library and Archives Canada.

En mars 2009, Bibliothèque et Archives Canada a acquis une importante carte marine de James Cook de la côte sud de Terre-Neuve. Il s'agit de l'une des deux seules cartes manuscrites de l'illustre explorateur du Pacifique dans une collection canadienne.

Suite au Traité de Paris de 1763, l'Angleterre désirait affermir sa souveraineté sur ce territoire et Cook, qui avait déjà plusieurs années d'expérience nord-américaine à son actif – il avait notamment travaillé à des cartes liées à la prise de Québec et de Louisbourg – fut choisi pour diriger un important projet d'arpentage des côtes de Terre-Neuve auquel il consacra cinq années de sa vie.

Réalisée au cours de l'été de 1765 alors que Cook et son équipe arpentaient la côte sud de l'île, cette carte représente le territoire situé entre Little St. Lawrence et Point May, face à l'archipel français de Saint-Pierre et Miquelon. Parmi les détails intéressants qui y apparaissent, notons les profondeurs de l'eau et l'identification d'endroits propices à la pêche et au séchage de la morue, enjeu économique fondamental à l'époque.

Les cartes dérivées de ce projet furent publiées par la suite dans les années 1770 par Thomas Jefferys, géographe du roi, dans un atlas intitulé *The North American pilot for Newfoundland, Labradore and River St. Laurence*. Elles furent utilisées par les navigateurs pendant plus d'un siècle.

Suite à son expérience à Terre-Neuve, Cook obtint une nouvelle mission au cours de laquelle dirigea trois expéditions dans le Pacifique, ce qui lui valut d'être le premier Européen à avoir navigué sur la côte est de l'Australie, dans l'archipel d'Hawaï et sur les côtes de la Nouvelle-Zélande.

Ce précieux document a été acheté avec l'aide d'une subvention des biens culturels mobiliers accordée par le Ministère du Patrimoine canadien en vertu de la *Loi sur l'exportation et l'importation de biens culturels* et grâce à la contribution des Amis de Bibliothèque et Archives Canada.





Authors: James Cook, unidentified draughtsman [William Parker?], commissioned by Hugh Palliser

Title: *A Chart of the Sea-Coast of Newfoundland between St. Laurence and Point May. Survey'd by Order of Hugh Palliser Esqr. Commodore & c. & c. by James Cook.*

Date: 1765

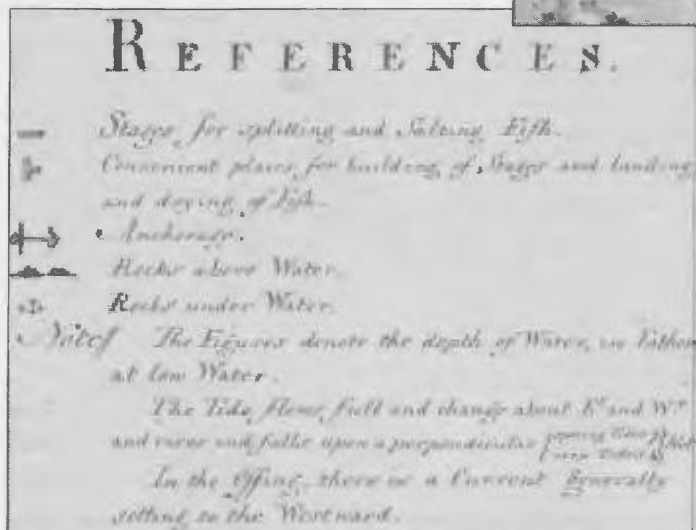
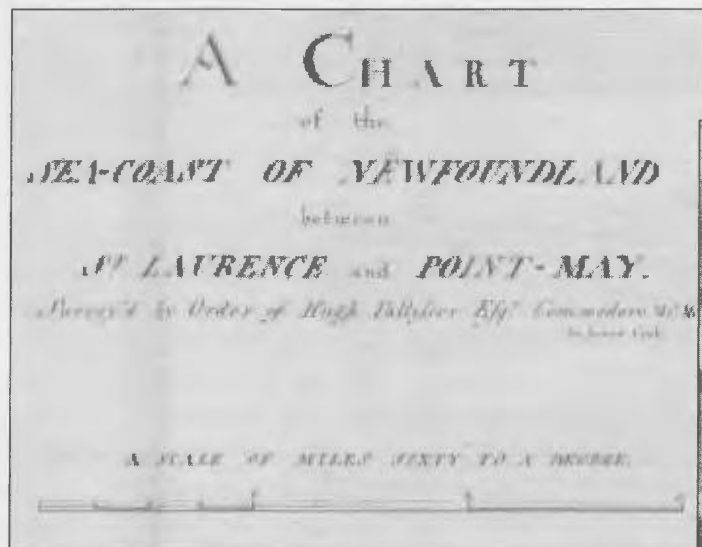
Credit: Library and Archives Canada, R12788. Purchased with the assistance of a Movable Cultural Property grant accorded by the Department of Canadian Heritage under the terms of the *Cultural Property Export and Import Act*.

Auteurs : James Cook, dessinateur anonyme [William Parker?], sous les ordres de Hugh Palliser

Titre : *A Chart of the Sea-Coast of Newfoundland between St. Laurence and Point May. Survey'd by Order of Hugh Palliser Esqr. Commodore & c. & c. by James Cook.*

Date : 1765

Crédit : Bibliothèque et Archives Canada, R12788. Acheté avec l'aide d'une subvention des biens culturels mobiliers accordée par le Ministère du Patrimoine canadien en vertu de la *Loi sur l'exportation et l'importation de biens culturels*.



Cartouche, legend and detail of the Little St. Laurence area, from the recently acquired Cook map. (Photos courtesy of Library and Archives Canada)

NEW BOOKS AND ATLASES

Compiled by Eva Dodsworth

Barnes, Ian. 2009. *The historical atlas of Native Americans*. Secaucus, NJ : Chartwell Books. 400 p. \$24.98 US. ISBN 9780785823322.

Benewick, Robert, et al. 2009. *The state of China atlas*. Berkeley, CA : University of California Press. 128 p. \$19.95 US. ISBN 9780520256101.

Butt, Kirk. 2009. *Early settlers of Bay St. George*. 3rd ed. Whitby, ON : Boonen Books. 384 p. \$29.95 CDN. ISBN 9780973891034.

Cajune, Julie, et al. 2008. *Protecting wild nature on Native lands : case studies by Native peoples from around the world*. Boulder, CO : Wild Foundation. 141 p. \$19.95 US. ISBN 9781555916817.

Cartwright, Willam, et al. 2009. *Cartography and Art*. New York : Springer. 391 p. \$199.00 US. ISBN 9783540685678.

Del Casino, Vincent. 2009. *Social geography*. Toronto : John Wiley & Sons. 336 p. \$89.95 US. ISBN 9781405154994.

Dorling, Daniel, et al. 2008. *The atlas of the real world*. New York : Thames & Hudson. 416 p. \$63.00 US. ISBN 9780500514252.

Douglas, Bruce. 2008. *Achieving business success with GIS*. Toronto : Wiley. 166 p. \$113.99 CDN. ISBN 9780470727249.

Evergreen Pacific. 2009. *Evergreen pacific cruising atlas for northwest waters : complete coverage from Olympia to Queen Charlotte Sound*. Surrey, BC : Evergreen Pacific Publications. 181 p. \$54.00 CDN. ISBN 9781934707111.

Foster, Robert, et al. 2009. *Wind energy : renewable energy and the environment*. Boca Raton, FL : CRC Press. 328 p. \$119.95 US. ISBN 9781420075387.

Gottfried, Bradley. 2009. *The maps of the first bull run : an atlas of the first bull run (Manassas) campaign, including the battle of Ball's Bluff, June – October 1861*. El Dorado Hills, CA : Savas Beatie. 144 p. \$34.95 US. ISBN 9781932714609.

Hayes, Derek. 2009. *America discovered : a historical atlas of North American exploration*. Vancouver, BC : Douglas & McIntyre Ltd. 244 p. \$35.00 CDN. ISBN 9781553654506.

Heritage, George and Andy Large. 2009. *Laser scanning for the environmental sciences*. Toronto : John Wiley. 288 p. \$119.95 CDN. ISBN 9781405157179.

Huadong, Guo. 2009. *Atlas of remote sensing of the Wenchuan earthquake*. Florence, KY : Routledge. 259 p. \$149.95 US. ISBN 9781439816745.

Marriott, John. 2009. *The Canadian Rockies : Banff, Jasper & beyond*. Canmore, AL : J.E. Marriott Photography. 96p. \$19.95 CDN. ISBN 9781894768030.

Mullaney, James and Wil Tirion. 2009. *The Cambridge double star atlas*. Cambridge : Cambridge University Press. 154 p. \$35.00 US. ISBN 9780521493437.

Nag, Prithvish. 2008. *National atlas of India : environment, science and technology*. Kolkata, India : National Atlas & Thematic Mapping Organization. 20p., 43 maps. \$166.70 US. ISBN BB54367.

Parker, Mike. 2009. *Map addict*. New York : Harper Collins. 288 p. \$21.22 US.

Rand McNally. 2009. *Goode's world atlas*. Upper Saddle River, NJ. 371 p. \$39.80 US. ISBN 9780321652003.

Riddel, Frank. 2008. *A historical atlas of West Virginia*. Morgantown, WV : West Virginia University Press. 306 p. \$30.00 US. ISBN 9781933202273.

Roche, Stephane and Claude Caron. 2009. *The organisational side of GIS*. Toronto : John Wiley. 320 p. \$156.00 CDN. ISBN 9781848210851.

Ruffell, Alastair and Jennifer McKinley. 2008. *Geoforensics*. Toronto : Wiley. 340 p. \$59.50 CDN. ISBN 9780470057353.

Singh, Rana. 2009. *Banaras, the heritage city of India : geography, history and bibliography*. Varanasi, India : Indica Books. 457 p. \$17.28 US. ISBN 9788186569856.

Tucci, Paul. 2009. *The handy geography answer book*. Detroit, MI : Visible Ink Press. 450 p. \$21.95 US. ISBN 9781578592159.

Wernecke, Josie. 2008. *The KML handbook : geographic visualization for the web*. Boston, MA : Addison-Wesley. 368 p. \$39.99 US. ISBN 9780321525598.

World Bank Group. 2009. *Atlas of global development : a visual guide to the world's greatest challenges*. Washington, DC : World Bank Group. 144 p. \$22.95 US. ISBN 9780821376034.

President's Message, *continued from page 2*

Although the Consultation process is now officially closed, it is never too late to share your views on copyright reform. Writing to your MP would help or even leaving a comment on the Consultation website (which is still active as I write this) would be useful. While I think we would all agree on the need for reform, we need to try and ensure that it is not at the expense of our users or at the risk of recent initiatives toward greater and more open dissemination of geospatial and numeric data.

Wishing everyone a happy Fall!

Andrew Nicholson
ACMLA President

Welcome!
New ACMLA Members



Lori Martin (Full member)
Geomatics Analytical Technician
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Joanne Costello (Full member)
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Allison Tremblay (Full member)
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Barb Cloutier (Full member)
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NRCan Library (Earth Sciences)
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Ottawa, Ontario
K1A 0E9



NEW MAPS

Compiled by Cheryl Woods

Brussels.

Scale: 1:12,000.

Publisher: Borch Map.

Year of Publication: 2009.

Buenos Aires.

Scale: 1:15,000.

Publisher: Borch Map.

Year of Publication: 2009.

Florence.

Scale: 1:7,000.

Publisher: Borch Map.

Year of Publication: 2009.

Rio de Janeiro.

Scale: 1:13,000.

Publisher: Borch Map.

Year of Publication: 2009.

Ecuador.

Scale: 1:1,000,000.

Publisher: Borch Map.

Year of Publication: 2009.

Sao Paulo.

Scale: 1:15,000.

Publisher: deDios Editores.

Year of Publication: 2008.

Havana.

Scale: 1:9,000.

Publisher: Freytag & Berndt.

Year of Publication: [2009].

*Grey Bruce, ON, Canada. 2009/2010 Official
Visitor Map.*

Scale: graphic.

Publisher: County of Bruce.

Year of Publication: 2009.

Simcoe County. Guide Map 2009.

Scale: graphic.

Publisher: County of Simcoe.

Year of Publication: 2009.

Canada East.

Scale: 1:900,000.

Publisher: Reise Know How.

Year of Publication: 2009.

Canada West.

Scale: 1,900,000.

Publisher: Reise Know How.

Year of Publication: 2009.

Uganda.

Scale: 1:600,000.

Publisher: Reise Know How.

Year of Publication: 2009.

Submarine Cable Map.

Scale: 1:28,500,000.

Publisher: TeleGeography.

Year of Publication: 2009.

Global Traffic Map.

Scale: 1:28,500,000.

Publisher: TeleGeography.

Year of Publication: 2008.

Global Internet Map.

Scale: graphic.

Publisher: TeleGeography.

Year of Publication: 2009.

Flower Route. 3rd ed.

Scale: 1:417,000.

Publisher: MapStudio.

Year of Publication: 2009.

Southern Africa. 3rd ed.

Scale: 1:3,500,000.

Publisher: MapStudio.

Year of Publication: 2009.

Mineral Wall Map of South Africa. 3rd ed.

Scale: 1:1,500,000.

Publisher: MapStudio.

Year of Publication: 2009.

- Botswana Political Wall Map.*
Scale: 1:6,500,000.
Publisher: MapStudio.
Year of Publication: 2009.
- Africa Political Wall Map.* 9th ed.
Scale: 1:10,000,000.
Publisher: MapStudio.
Year of Publication: 2009.
- Angola & Luanda.* 2nd ed.
Scale: 1:1,500,000.
Publisher: MapStudio.
Year of Publication: 2009.
- Africa North & West.*
Scale: 1:4,000,000.
Publisher: MapStudio.
Year of Publication: 2009.
- Africa Cape to Cairo.*
Scale 1:4,000,000.
Publisher: MapStudio.
Year of Publication: 2009.
- World Wine Map.*
Scale: unknown.
Publisher: Vinmaps.
Year of Publication: 2009.
- Italy postcode.*
Scale: 1:1,000,000.
Publisher: Freytag & Berndt.
Year of Publication: 2009.
- Tourist Map of Jordan.*
Scale: 1:750,000.
Publisher: Royal Jordanian Geographic Centre.
Year of Publication: 2009.
- Tourist Map of Amman.*
Scale: 1:20,000.
Publisher: Royal Jordanian Geographic Centre.
Year of Publication: 2008.
- Camino de Santiago/Way of St. James travel map.*
Scale: 1:400,000.
Publisher: Freytag & Berndt.
Year of Publication: 2009.
- Kilimanjaro - Arusha.*
Scale: 1:80,000.
Publisher: Freytag & Berndt.
Year of Publication: 2009.
- Zanzibar - Pemba - Mafia.*
Scale: 1:100,000 to 1:150,000.
Publisher: Freytag & Berndt.
Year of Publication: 2009.
- Bolivia.*
Scale: 1:2,950,000.
Publisher: BolivianGuide.
Year of Publication: 2009.
- Canadian Arctic North.*
Scale: 1:1,750,000.
Publisher: GoTrekks.
Year of Publication: 2009.
- Canadian Arctic West.*
Scale: 1:1,750,000.
Publisher: GoTrekks.
Year of Publication: 2009.
- Canadian Arctic East.*
Scale: 1:1,750,000.
Publisher: GoTrekks.
Year of Publication: 2009.
- Worldwide Commercial Nuclear Power Plants.
Operable, under construction, or ordered - 2009/
2010.*
Scale: unknown.
Publisher: American Nuclear Society.
Year of Publication: 2009.
- Northern Canada Diamonds: Nunavut and
Northwest Territories, mining and exploration
activity.*
Scale: 1:3,300,000.
Publisher: Intierra Mapping.
Year of Publication: 2009.
- World LNG Map.*
Scale: not given.
Publisher: Petroleum Economist Ltd.
Year of Publication: 2009.

**ACMLA BULLETIN
REVIEW GUIDELINES**

Format

Your review should include three sections in this order: 1) the bibliographic citation and source information; 2) the body (text) of the review; 3) your name, title, institutional affiliation, city and province/state.

The bibliographic citation should include: author, title, edition (if applicable), place of publication, publisher, date, number of pages, price (if known) and ISBN. An example is given below:

Bussey, Ben and Spudis, Paul D. *The Clementine Atlas of the Moon*. Cambridge: Cambridge University Press, 2004. 316 p. \$80.00 US. ISBN 0-521-81528-2.

The length of the review is at the reviewer's discretion, but should normally reflect the importance of the work being reviewed. A typical review is 500 words. An electronic copy of your review should be submitted to the Reviews Editor via email.

Content

In describing the book or atlas, the body of your review should analyze and evaluate the work, and, if appropriate, compare it with similar titles. Typical analytical/evaluative elements include: the scope and purpose of the work; the authority of the author; the format, e.g. cartographic vs. textual; the work's usefulness as a research tool; and its suitability for library collections, and in which types of libraries.

Editorial Policies

Opinions expressed in reviews are those of the reviewer, not of the ACMLA. The Reviews Editor may edit reviews lightly, without communicating with the reviewer. Should the Reviews Editor determine that a major revision is required, she will contact the reviewer for discussion. Reviews in either English or French (or both) are welcome.

Thank you for your attention to these guidelines.

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GEOSPATIAL DATA AND SOFTWARE REVIEWS

Compiled by Richard Pinnell

Digital Polling Division Boundary files. Elections Canada. [downloadable data]. Free from GeoGratis portal (<http://geogratis.gc.ca>).

The Digital Polling Division Boundary files are boundary files that are created by Elections Canada. This review will examine the boundary files from the last three federal elections (2004, 2006 & 2008). Included for each year are two ESRI shapefiles, the polling division boundaries (polygon) and the polling division locations (points). These files correspond to the Federal Electoral Districts (FED) under the Representation Order of 2003.

According to Elections Canada, a polling division is “a small geographic section of an electoral district, for which a list of electors is prepared and a polling station is set up on election day. Each electoral district has many polling divisions.”¹ Below (Figure 1) is an example of the 2008 polling division boundaries and polling division locations for the Ottawa-Centre FED. In 2008, there were 220 polling divisions within the Ottawa-Centre Federal Electoral District (FED) Representation Order 2003.



Figure 1. Elections Canada's Digital Polling Division Boundaries: Ottawa-Centre.

As evident in Figure 1, the digital polling division boundary file is much more detailed when compared

to the Federal Electoral District (FED). Also notice that the polygon boundary file is much more useful than the points location file since there doesn't appear to be many locations depicted in the file. This is because polling locations include only mobile polls and single building polling divisions (apartment buildings) and don't include poll sites such as schools, community centres or churches. This lack of information limits the use of the point file as users can only map a fraction of the polling site locations that are actually being used in a given election.

Attribute information for both the boundary and the location files are included in Figure 2, along with a description of each set of attributes. The same attribute names are used in all three years.

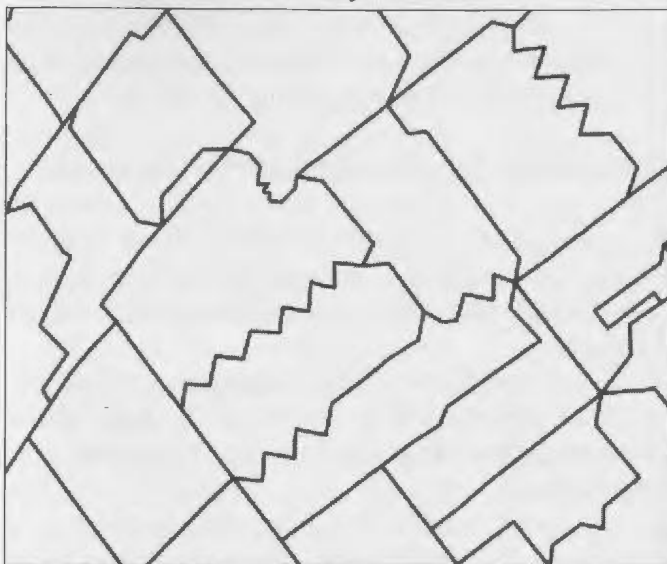
Field Name	Description
PD_NUM	Polling Division Number (e.g. 126)
PD_NBR_SFX	Polling Division Number Suffix (e.g. 2)
PD_TYPE	Single letter indicating the Polling Division type. Allowable values are "N" for normal, "S" for single building PD, and "M" for mobile polls.
ADV_POLL	Advanced poll number (e.g., 608)
FED_NUM	Federal Electoral District Number (e.g., 35061)

Figure 2. Field Name Descriptions.

Unfortunately, the digital polling division boundaries change slightly between each of the three election years. These changes in the boundaries limit the ability to conduct precise historical analyses. See Figure 3 for an example of changes to the boundary files between the 2006 General Election and the 2008 General Election.

The projection for each of these datasets is a modified version of the Lambert Conformal Conic. Each shapefile is accompanied by a projection file (.prj), which is automatically recognized in most GIS software. Below are the Lambert Conformal Conic parameters for the Elections Canada boundary files.

2006 Polling Division Boundary: Ottawa-Centre



2008 Polling Division Boundary: Ottawa-Centre

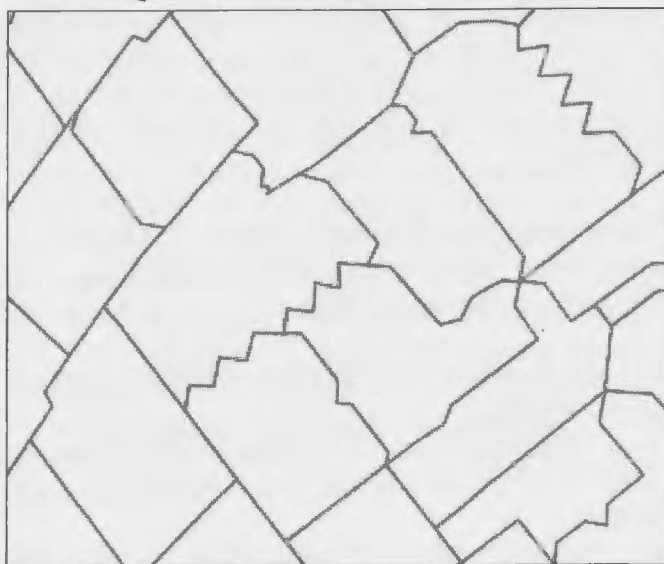


Figure 3. Changes to the digital polling division boundaries.

Elections Canada Projection Parameters:

1st Standard Parallel: 49 0 0.000

2nd Standard Parallel: 77 0 0.000

Central Meridian: -91 52 0.000

Latitude of projection's origin: 63 23 26.430

False Easting (meters): 6200000.00000

False Northing (meters): 3000000.00000

As is the case with many geospatial datasets, there is unfortunately no xml metadata included with the shapefiles. However, there is a technical guide that accompanies the data, which gives basic information about the shapefiles such as projection information and details of the field names (included in this data review).

The digital polling division boundaries are available for free on the GeoGratis website. Users can download the boundaries for the past four elections (back to the 2000 election) along with the Federal Electoral District (FED) Boundary file for all of Canada. <http://geogratis.cgdi.gc.ca/geogratis/en/option/select.do?id=1169>

A licence agreement from Elections Canada accompanies the data. Users are advised to read the licence before starting any analysis on the data. Worth mention is a statement in Article 4 (Inspection) of the licence which declares that "the Licensee agrees that Elections Canada may at any reasonable time, upon notice to the Licensee, have access to the Work being used by the Licensee in order to permit Elections Canada to inspect the Work as transmitted by the Licensee and to verify

its conformity with the terms and conditions of this Agreement."

Joining Boundaries to Voter Results

Data on voter results for polling stations are available for free on the Elections Canada website (see below for more information.) The data can be downloaded as a comma-separated file (.csv) for individual Federal Electoral Districts. These data have been available at no cost for some time now, but one can assume that they were never fully used since it is very difficult to determine the geographic location of each polling division. With the availability of the digital polling division boundary file, users are now able to join the voter results data from Elections Canada to this specific geographic boundary. Unfortunately, the spatial join is not as straightforward as might be expected and both datasets need to be tweaked before the spatial join can be accomplished.

The main issue with joining both datasets is that there can sometimes be multiple polling stations set up for a specific polling division. Both the boundary file and the voter results table treat these multiple entries differently. In the boundary file, two columns are setup to record the multiple entries; PD_NUM gives the number of the polling division and PD_NBR_SFX gives a number for the suffix. For the voter results table, the information is in one column and includes the polling station number and an accompanying letter or number as the suffix (e.g.88A or 88-1). Users wanting to join both

datasets have a few options. Explained below are two options on how to prepare the data for merging. Option 1 explains how to merge the data for the multiple polling stations into one while option 2 explains how to preserve the original polling stations.

Preparing the Digital Polling Division Boundary files: (e.g., 2008 polling division boundary file)

- 1) In ArcMap, add the digital polling division boundary file.
- 2) In the table, use the "FED_NUM" column to select the records for only one Federal Electoral District.
- 3) Once the records are selected, export the data to a new shapefile. This will create a shapefile with the polling division boundaries for one FED. Users can join voter results data to the polling division boundaries only one FED at a time.
- 4) Open the table and under the "PD_NUM" column, scroll through to identify multiple entries.
 - a. **Option 1:** Once the multiple entries are found, notice in the "PD_NBR_SFX" column that each record is assigned a different number for a suffix (e.g., 0, 1, 2). A straightforward solution is to merge the multiple records into one specific polling division. To merge multiple records in ArcMap, select the multiple records in the table. In the Editor Toolbar, start an edit session and select merge. If a merge of multiple records is not done, the voter results for that specific polling division will only join to one of the records from the voter results.
 - b. **Option 2:** Once the multiple entries are found, create a new text field in the table and name it PD_COMBO. Query the features from "PD_NBR_SFX" = 0. Use the field calculator to calculate the selected fields, PD_COMBO = [PD_NUM]. Do a switch selection on the "PD_NBR_SFX". Use the field calculator to

calculate the selected fields, PD_COMBO = [PD_NUM] & "-" & [PD_NBR_SFX]. The information from multiple entries should now be in the PD_COMBO field (e.g., 88-1).

Preparing the Election Voter Results

- 1) Go to the Elections Canada website (<http://www.elections.ca/>). At the top right of the webpage, select **Past Elections** and **Choose a General Election**.
 - 2) Under **Official Voting Results** (or for 2008 – Official Reports) click on **Go to the Raw Data Version (for Researchers)** to download the voter results data.
 - 3) Select the desired Electoral District and download the **PollbyPoll_bureauparbureau** format*.
- Users can also download the voter results for an entire province, but will still receive separate .csv files for each FED.
- 4) Click on **Search** to begin the download of the voter results.
 - 5) Once the download is complete, open the .csv file in a spreadsheet program (e.g. Excel). Notice in Figure 4 that the dataset is not completely GIS-ready.
 - 6) Change the column headers so that each has a maximum of 10 characters and includes only letters, numbers and underscores.
 - 7) Scroll through the spreadsheet and identify the multiple entries. Multiple entries will include the polling station number and a suffix, which is a letter or a number.
 - a. **Option 1:** Once the multiple entries are found, add up the values of the multiple records and include it in one record for the polling division. Once the information is added up in the one record, remove the remaining records and ensure that only record remains for a polling station.
 - b. **Option 2:** Once the multiple entries are

Electoral District Number/Numéro de circonscription	Electoral District Name/Nom de circonscription	Polling Station Number/Numéro de bureau de vote	Polling Station Name/Nom du bureau de vote	John Ahearn	Patrick Colbourne	Paul Dejar	Ian Hunter	Alisa McGary	Unrecorded Responses	Total Voting/Total Votes	Turnout/ Démarage
53062	Ottawa Centre	1	Ottawa	1	32	38	14	38	0	141	155
53062	Ottawa Centre	2	Ottawa	0	57	76	17	44	0	194	247
53062	Ottawa Centre	3A	Ottawa	3	84	95	28	75	1	186	459
53062	Ottawa Centre	3B	Ottawa	1	57	100	21	37	2	199	441

Figure 4. Voter Results for Ottawa-Centre (PollbyPoll Data) downloaded directly from Elections Canada.

found, use the "Text to Columns" tool in Excel and use the hyphen as a delimiter of text. This should split up the polling station numbers into two separate columns, one containing the number and the other, the suffix. Unfortunately, a hyphen cannot be used to separate the polling station number when the suffix is a letter. In this case, delete the letter from the polling station field and include a number in the newly created suffix field. The merging of these two columns into one can be done in the same way as previously mentioned.

**The only drawback to using the PollbyPoll data is that users have to determine the political party of each candidate, as only the names of the candidates are listed as column headers. For certain election years, users also have the option to download the Poll_Results data. This latter file has some useful information (such as party identification for each candidate) but should not be used to join to the boundary file since this file is even less GIS-ready, having multiple records for each polling station.*

Figure 5 shows an example of data that has been cleaned up and ready to be brought into a GIS using option 1.

FED	FED_Name	PollNumber	PollName	Akpata	Collenette	Dewar	Hunter	McGarry	Rejected	TotalVotes	Electors
35062	Ottawa Centre	1	Ottawa	1	32	58	14	36	0	141	255
35062	Ottawa Centre	2	Ottawa	0	57	76	17	44	0	194	347
35062	Ottawa Centre	3	Ottawa	3	101	195	50	113	3	465	900

Figure 5. Voter Results for Ottawa-Centre (PollbyPoll Data) cleaned-up.

In option 1, users lose some geographic detail when merging the multiple entries for a particular polling division. In option 2, the geographic detail is preserved but users have to assume that suffix numbers from the boundary file matches up with suffix letters or numbers of the voter results table. In certain voter results tables, number and letters are used interchangeably and it makes it hard to determine the exact match in the boundary file. Regardless of the method used, users should be aware of the advantages and disadvantages of using either method when joining both files.

Joining the data on voter results to the digital polling division boundary files allows users to map voter results within a Federal Electoral District. Users can overlay the voter results to demographic data and administrative data to gain a better understanding of the local voting patterns. Attempting to map voter results at the national level may be a somewhat time-consuming task as the joining of the data would have to be done separately for each of the 308 federal electoral districts for each election year. The addition of the digital polling division boundary file to the GeoGratis website should encourage more researchers and members of the general public to analyse voter results of their local communities.

Notes

1. Elections Canada : General Information : Glossary, Elections Canada, 28 November 2007. Web: 10 June 2009. <http://www.elections.ca/content.asp?section=gen&dir=glo&document=glossary4&lang=e&textonly=false>

Special thanks to Mark Adrian de Jong, GIS Library Assistant in the University Map Library, University of Waterloo for helping with a method of preparing the data before merging.

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The conference was convened by four interested map librarians to discuss common problems and to investigate the possibility of a national organization, a national union catalogue, of map holdings, and other co-operative ventures of use to map libraries. The organizing committee was as follows: Theodore E. Layng, Chairman, Public Archives of Canada; Karen Edwards, Department of Energy, Mines and Resources; Yves Tessier, Université Laval; and Joan Minearls, University of Toronto. Seventy people from all parts of Canada attended for all or part of the conference. This volume contains the papers given at the conference and edited summaries of the following discussion.

From the ACMLA Archives...

Thanks to Elizabeth Doyle, ACMLA's new archivist, for these interesting excerpts from the Proceedings of the First National Conference on Canadian Map Libraries, Public Archives of Canada, Ottawa, June 14-16, 1967.

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Dr. W. Kaye Lamb, Dominion Archivist and National Librarian, welcomed delegates to the conference in a short address. He expressed his pleasure that we were at last meeting to discuss the future of Canadian map libraries. Too often, he said, he had seen valuable maps stuffed in drawers uncatalogued and rarely used. But recently, he had been pleased to note that interest in and knowledge of maps has greatly increased and that librarians and archivists were now in a position to provide the proper services for the maps in their keeping. Dr. Lamb considered the item of most importance on the agenda to be the discussion of a union catalogue of maps. Through this he felt we can record the nation's cartographic output and provide speedy information on holdings of maps throughout the country. The discovery of hitherto unknown maps would be an undoubted additional benefit. In preparing a union catalogue, he considered the greatest problem to be that of cataloguing - the necessity of establishing a uniform code so that all our catalogues may be easily merged. At the moment the national union catalogue of books contains nine million entries representing the holdings of 280 Canadian libraries. Dr. Lamb concluded his remarks by saying that he was pleased to be able to offer the conference the facilities of the new National Library and Public Archives building.



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