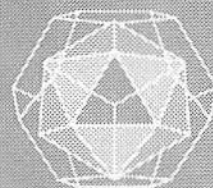


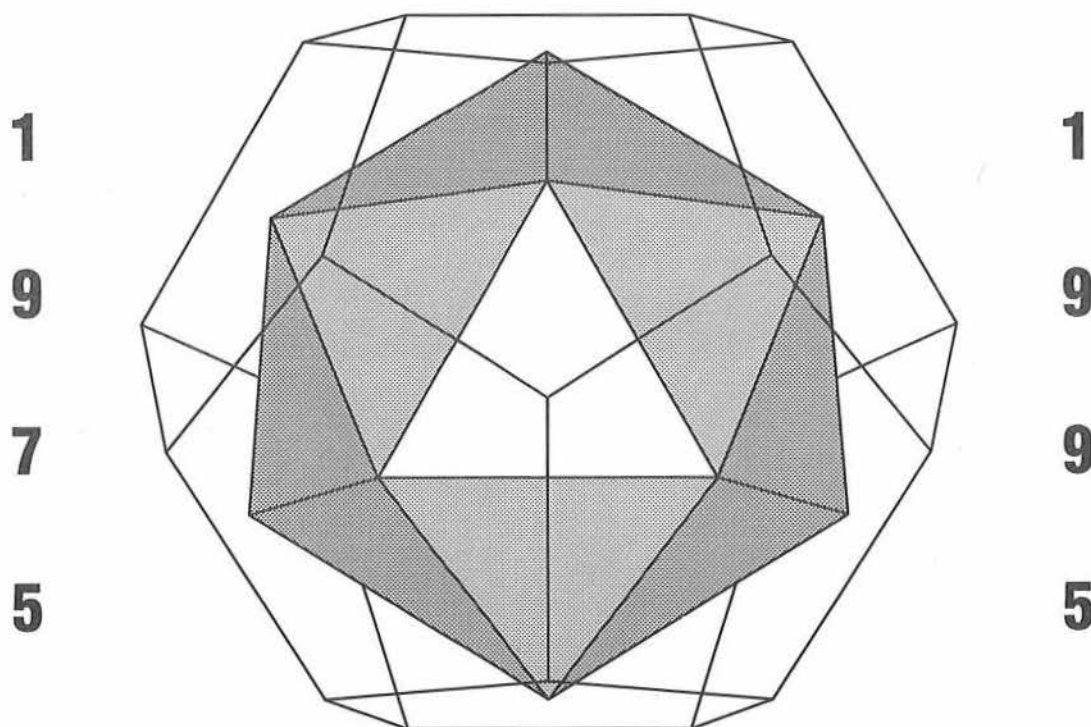
Cartouche



Newsletter of the Canadian Cartographic Association
Bulletin de l'Association canadienne de cartographie

Number 20 Winter, 1995
Numéro 20 hiver, 1995

*For the study and furtherance of cartographic communication.
Pour l'études et l'avancement de la communication cartographique.*



CCA 20th Anniversary Issue
20^{ième} anniversaire de l'ACC

Cartouche is published quarterly by the Canadian Cartographic Association. Members are welcome to submit articles for publication. Articles and notices submitted for publication are subject to editorial approval. Please address your submissions to the editor. It is the policy of the editor to provide dual language copy for editorial content and journal mechanics. All other articles will appear in the language of submission. While every effort is made to ensure accuracy of content, the editor cannot be responsible for errors in compilation, or loss of any item submitted. Opinions expressed in the editorials, submitted articles, and letters are not necessarily those of the Canadian Cartographic Association. The Canadian Cartographic Association gratefully acknowledges the financial support given by the Social Sciences and Humanities Research Council of Canada.

Cartouche est publié trimestriellement par l'Association canadienne de cartographie. N'hésitez pas à soumettre des articles que vous désirez publier dans le bulletin. Les articles et annonces soumis pour parution sont sujets à l'approbation de la rédaction. Veuillez les adresser à l'éditeur. Selon la politique en vigueur, l'éditeur publié, en français et en anglais, l'éditorial ainsi que la description du processus de publication du bulletin. Les autres articles paraîtront dans la langue dans laquelle ils ont été écrits. Bien que beaucoup d'efforts soient déployés en vue d'éviter de tels problèmes, l'éditeur n'est pas tenu responsable des erreurs de compilation ou de la perte d'articles que leur seront soumis. Les opinions exprimées dans le cadre des editoriaux, des articles et des lettres publiées dans le bulletin ne reflètent pas nécessairement celles de l'Association canadienne de cartographie. L'Association canadienne de cartographie remercie vivement le Conseil de recherches en sciences humaines du Canada pour son apport financier.

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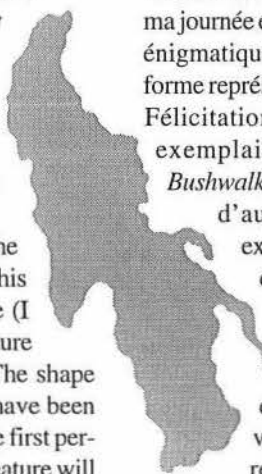
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15 février, 1996

Rorschach's Map

I almost did it! I thought the last issue's "blot" would have been the stumper I was looking for but **Peter Bromley** had to ruin my day by coming up with the correct answer, **Lake Eyre, Australia**. Congratulations Peter and enjoy your copy of the Lonely Planet's *Bushwalking in Australia*.

This time I am pulling out all the stops. No more ruined days. This "blot" should be a real challenge (I don't know the answer!). This feature could be political or physical. The shape and orientation may or may not have been altered (I really don't know!). The first person who correctly identifies this feature will receive a valuable prize and solve a mystery that has been haunting me for years. Go ahead, make my day. Oh yes, you will also be acknowledged in the next issue of *Cartouche*. Please send your response to the editor (address above). The identity of this "blot" may or may not be revealed in the next issue.



Carte énigmatique

Je croyais bien avoir trouvé l'énigme pour vous confondre mais **Peter Bromley** a ruiné ma journée en trouvant la réponse à la forme énigmatique de la dernière parution. La forme représentait le **Lac Eyre (Australie)**.

Félicitations à Peter qui se mérite un exemplaire de Lonely Planet's *Bushwalking in Australia*. Pour l'énigme d'aujourd'hui j'ai mis un effort extraordinaire pour éviter que l'un d'entre-vous trouve la réponse.

Cette fois-ci, le défi est de taille puisque je n'en connais même pas la réponse. Comme d'habitude, la forme que nous vous proposons d'identifier peut représenter un lieu, une entité physique ou politique et son orientation pourrait être altérée (je ne peux le certifier). La représentation graphique est telle qu'elle pourrait apparaître dans sa réalité géographique. La première personne à identifier la représentation se méritera un prix de valeur et résoudra ainsi un mystère qui me hante depuis de nombreuses années.



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Nous vous invitons nombreux à tenter votre chance et si vous le pouvez, essayez de me faire plaisir, ne me gâchez pas ma journée. Bien entendu, le nom de la première personne qui nous fera parvenir la solution ainsi que la réponse sur l'entité représentée par l'énigme seront connus dans le prochain numéro de la revue *Cartouche* à moins que personne n'aie trouvé la solution.

Faites parvenir vos solutions le plus tôt possible à l'adresse de l'éditeur mentionnée à la page 2.



President's Message / *mot du Président*

by/par Janet Mersey

Happy Anniversary!

The Canadian Cartographic Association is twenty years old! Although this may seem young compared to some of our sister organizations (the Canadian Association of Geographers is 44 years old), this represents a time span in the development of cartography that has seen incredible changes in the way maps are produced, disseminated, and used. Providing an active forum for cartographers to exchange their ideas and knowledge about our evolving discipline has been a vital role of the CCA for the last two decades. But how did the CCA begin?

In 1975 there was no shortage of professional societies for cartographers to join. The Canadian Institute of Surveying (CIS; now the Canadian Institute of Geomatics, CIG) included cartography among its seven core disciplines - the others being geodesy, photogrammetry, photo-interpretation, land surveying, hydrographic surveying and engineering surveying. The Ontario Institute of Chartered Cartographers (OICC) attracted mainly provincial government employees involved in the practice of cartography. Established in 1959 with the support of the Civil Service Commission, it had as a principal objective the set-up of a certification and job description program for employment purposes. The Canadian branch of the Society of University Cartographers (SUC), founded in 1970, consisted mainly of academics while the Association of Canadian Map Libraries (ACML; now the Association of Canadian Map Libraries and Archives, ACMLA) was also aimed at a particular subset of cartographers. Finally, the Canadian Association of Geographers (CAG) included cartographers in its membership but did not actively promote mapping or have a specific interest group for cartographers.

Recognizing that the cartographic community was split among these various groups, and that some cartographic interests (such as historical or analytical) were not adequately represented by any group, the idea of creating a new national association encompassing all cartographers sprouted. In May, 1975, Bernard Gutsell organized a meeting at York University to discuss the possibility of forming such an association. Present at this meeting were others who shared his vision - Henry Castner, Ron Curtis, Leonard Guelke, Aubrey LeBlanc, Lou Sebert, and Fiona Cowles.

In true scholarly fashion it was decided at this meeting to send out a questionnaire to the Canadian cartographic community to assess the support for such a national organization. Only three questions

were asked: would you join; would you pay \$10 to do so; and which interest groups would you like to see included (a list was provided). By the end of September, with 301 positive responses, the Inaugural Meeting to found the Canadian Cartographic Association was scheduled for October 18, 1975, in Ottawa. With a motion at that meeting by Janusz Klawe and seconded by Thomas Wray, the Canadian Cartographic Association was born.

Election of the first executive and a discussion of the constitution followed immediately. Janusz Klawe was elected president by acclamation, with Gerald McGrath and Liane Ottmann being elected first and second vice-presidents respectively (see later in this issue for a complete chronological listing of the CCA's executive). The constitution pronounced the aim of the association as the "study and furtherance of cartographic communication." The following year, at the Annual General Meeting in Kingston, *The Canadian Cartographer*, edited by Bernard Gutsell, became the CCA's official journal. In addition, a newsletter was to be regularly published and distributed to members.

But support for the association was not unanimous. Members of some existing societies feared that this new group might reduce their own ranks, and instead proposed a commission consisting of representatives from all associations with interests in cartography. In fact, the National Commission for Cartography had been founded only a few months before the CCA, in June 1975, at the Annual Meeting of the Canadian Institute of Surveyors. Like the CCA, they also planned to publish a newsletter.

Could the relatively small community of cartographers in Canada support this plethora of organizations? This question prompted Gerald McGrath to present a report at the CCA's Inaugural Meeting entitled "Whither Cartography in Canada: From Under- to Over-Representation?" (reprinted in full in *The Canadian Cartographer*, Vol. 12, No. 2, 1975).

The Canadian branch of the Society of University Cartographers quickly became subsumed within the CCA. The OICC continued to operate as usual for about a decade, but declining membership numbers caused it eventually to cease activities. The fledgling National Committee for Cartography produced a quarterly newsletter, *Chronicle*, for about six years before dissolving in 1982. Happily, it was successfully reborn in 1991 as the Canadian National Commission for Cartography (CNCC) to the ICA. This flourishing group, chaired until this year by Norman Drummond, recently won the bid to be host to the 1999 ICA conference in Canada. The CIS (now CIG), ACML (now ACMLA), and CAG (still CAG) has continued to thrive and embrace cartography among their interests. The CCA has enjoyed joint annual meetings with all groups, and the CNCC has provided an effective liaison among representatives from the various national and provincial societies.

As for the CCA, our first twenty years have indeed seen the visions of our founders realized. The association has served to reinforce and promote the identity of cartography as a distinct discipline, and has unified cartographers both geographically and topi-

cally. National and regional meetings have been held coast to coast, and our endorsed journal (renamed *Cartographica* in 1980) continues to receive international acclaim. Through the efforts of successive editors, our once modest newsletter has evolved into *Cartouche* - an attractive and informative publication. Although our membership numbers have levelled off over recent years, the increasing number of student members is encouraging.

The success of our association in the future, as in the past, depends entirely upon the enthusiasm, commitment, and active participation of its members. So here's to another twenty years and see you in Toronto in 1996! 🌐

Membership File / *Filière du membres*

by/par Monika Rieger

The CCA would like to welcome the following new members to the Association:

Kenton Friesen	Winnipeg MB
Robert Grant	Middleton NS
Richard Hinton	Mount Pearl NF
David Howard	State College PA USA
Glenn MacDonald	Peterborough ON
Shawn MacGillivray	Regina SK
Edward Norcott	Vancouver BC
Daniel Pauzé	Guelph ON
Jeff Rusk	Guelph ON
Dr. Alvin Simms	St. John's NF
Sean Smith	Vancouver BC
Diane Speary	Montreal PQ
Jonathan Springborn	Buffalo NY USA
Monika Templin	Lawrencetown NS
Markus Volberg	Ratingen Germany
Jeffrey Wettlaufer	London ON

I plan to have the renewal notices for 1996 sent out by the time you read this. Please note that the membership fees have increased after holding steady for the past several years. As always, we accept your cheque or credit card (VISA or Mastercard) payment. You may also e-mail me your renewal with a credit card; be sure to include your credit card number and expiry date. My e-mail address is mkrieger@acs.ualgary.ca.

The label you will find on the renewal form reflects your name and address as I currently know it. If there are any corrections or updates to your phone numbers and/or e-mail address, be sure to make these corrections on the form.

Vice-President's Message / *mot du vice-Président*

by/par Gary McManus

As Vice President, my primary duty is the promotion of the Association. In recent years many organizations have experienced the trend of decreasing membership rolls such as ours. This is generally attributed to current fiscal policies of restraint in a down sizing economy. This however should not deter us. One question we need to ask: is the number of cartographers or the number of people making maps declining? With the increase of simpler and more accessible computer technology, especially with drawing, publishing and GIS software, I would argue that the numbers of individuals involved with maps is increasing. I believe we need to look for new members in new places.

I am also quite sure that all of us know someone (at least one person) who is working in some aspect of the mapping discipline who would benefit from becoming a member of the Association. They might be someone within a government agency using a desktop drawing package to produce maps. Or they might be someone in a private sector business using a GIS to interpret markets. I would like each and every CCA members to ask someone to join the Association. That is right, just one. ONLY ONE!

I realize this may not be an easy task for everyone. I do not ask that you make it into a big deal. It could be as simple as a telephone call. I am sure we can all say a few words about why the CCA appeals to us and why we feel it would benefit them. You may want to lend them some copies of *Cartouche* or *Cartographica*. Or you might just photocopy and send them an article from either publication that you feel would be of interest to them. I would not expect that you high pressure anyone, nor is it my intent that you lose a friend to gain a member. However, sometimes it never hurts to ask and remember you only have to do it once.

If you can think of others (or the one) and would rather not bother them yourself, please send their names and addresses to me. I will send them a personal invitation to join. Please let me know if you would want me to mention that I am approaching them on your recommendation or not. I personally feel that such an invitation coming through a known connection would be more effective. Indeed, I think that one of the main selling points of the CCA is that it is a very personal and friendly Association.

If only 20% of us are successful, it will make a significant difference. My e-mail, fax and address are listed on the page 23. 🌐

The Canadian Cartographic Association: The First Twenty (One) Years

by Alun Hughes

Origins

The Canadian Cartographic Association was formally established at a one-day meeting held in Camsell Hall in the Department of Energy, Mines and Resources in Ottawa on October 18, 1975. To quote from the program, "A Canadian Cartographic Association is proposed as a private, non-profit organization of members who are interested in the study and furtherance of cartographic communication. Anyone is eligible for membership who is interested in the art, science and practice of cartography - it has interest equally for the planning office or the classroom. We know that you will find your participation in the Association enjoyable, informative and instructive."

Numerous individuals have since become members. Many have gone further and have participated as officers and interest group chairs or served

in other capacities. The main purpose of this article is to recognize these people. Some also played an important part in the events leading to the creation of the CCA, and they are named by Janet Mersey in her President's Message in this issue of *Cartouche*. Two persons deserve special mention of the truly pioneering efforts they made. They are **Bernard Gutsell** of York University and **Lou Sebert** of EMR, whose exceptional contributions have been recognized by granting them Honorary Membership in the CCA.

For full details of the origins of the CCA see the Cartographic Commentary section of volume 12, number 2 of *The Canadian Cartographer*. For details of the people who have served the Association since, see the charts below and on the following page.

Officers and Conferences

Year	President	Vice-Presidents		Secretary	Treasurer	Conferences
1975-76	Janusz Klawe	Gerald McGrath/Liane Ottmann-Clish		Lou Sebert	Thomas Wray	Queen's University
1976-77	Gerald MacGrath	J. Ross MacKay/Lou Skoda		Lou Sebert	Thomas Wray	University of Ottawa
1977-78	Leonard Guelke	Lou Skoda/Gordon Shoup		Lou Sebert	Jim Mazerall	University of British Columbia
1978-79	Fraser Taylor	Brian Cromie/Jean-Claude Muller		Lou Sebert	Carolyn Weiss	York University
1979-80	Fraser Taylor	Jean-Claude Muller/Michel Rheault		Brian Cromie	Carolyn Weiss	Université du Québec à Montréal
		Vice-President	Past President			
1980-81	Ray Boyle	Henry Castner	Fraser Taylor	Brian Cromie	Carolyn Weiss	Memorial University
1981-82	Henry Castner	Michael Coulson	Ray Boyle	Cliff Wood	Carolyn Weiss	Sir Sanford Fleming College
1982-83	Michael Coulson	David Douglas	Henry Castner	Cliff Wood	Carolyn Weiss	University of Calgary
1983-84	David Douglas	Michel Rheault	Michael Coulson	Cliff Wood	Carolyn Weiss	University of Western Ontario
1984-85	Michel Rheault	Cliff Wood	David Douglas	David Forrest	Carolyn Weiss	University of New Brunswick
1985-86	Cliff Wood	Malcolm Brown	Michel Rheault	Tom Poiker	Louis Cardinal	Simon Fraser University
1986-87	Malcolm Brown	Chris Gold	Cliff Wood	Roger Wheate	Louis Cardinal	Université Laval
1987-88	Chris Gold	Norm Drummond	Malcolm Brown	Roger Wheate	Louis Cardinal	York University
1988-89	Norm Drummond	Jean Carrière	Chris Gold	Gordon Shields	Louis Cardinal	St. Mary's University
1989-90	Jean Carrière	Claudette LeBlanc	Norm Drummond	Gordon Shields	Gary McManus	University of Victoria
1990-91	Claudette LeBlanc	Peter Keller	Jean Carrière	Jim Britton	Gary McManus	Brock University
1991-92	Peter Keller	Majella Gauthier	Claudette LeBlanc	Jim Britton	Gary McManus	McGill University
1992-93	Majella Gauthier	Alun Hughes	Peter Keller	Jim Britton	Gary McManus	University of Winnipeg
1993-94	Alun Hughes	Marcia Faurer	Majella Gauthier	Jim Britton	Shelley Laskin	University of Ottawa
1994-95	Marcia Faurer	Janet Mersey	Alun Hughes	Jim Britton	Shelley Laskin	University of Calgary
				Secretary/Treasurer		
1995-96	Janet Mersey	Gary McManus	Alun Hughes	Shelley Laskin		University of Toronto

The CCA has held its annual conference in every province except Prince Edward Island and Saskatchewan. Ontario has the lead with eight visits (1996 will make it nine), followed by Québec and BC with three each. Alberta with two, and Manitoba, New Brunswick, Newfoundland and Nova Scotia with one. Eight conferences were joint meetings with another asso-

ciation: the Ontario Institute of Chartered Cartographers (1982, 1988, and 1991), Carto Québec (1987 and 1992), the Canadian Institute of Surveying (1989), the Pacific Institute of Cartographers Society (1990), and the North American Cartographic Information Society (1994). A number of regional meetings have also been organized from time to time.

Interest Group Chairs

Year	Automation	Education	History	Technology	Map Design	Map Use
1975-76	---	Fraser Taylor	Richard Ruggles	Aubrey LeBlanc	Henry Castner	Leonard Guelke
1976-77	---	Fraser Taylor	Richard Ruggles	Aubrey LeBlanc	Henry Castner	Leonard Guelke
1977-78	Sid Witiuk	Fraser Taylor	Richard Ruggles	---	Henry Castner	Carolyn Weiss
1978-79	Chris Gold	Michael Coulson	Richard Ruggles	---	Bert Farley	Tim Wood
1979-80	Chris Gold	Michael Coulson/ Michel Rheault	Ed Dahl	Antoine Cormier	Bert Farley	Tim Wood
1980-81	David Douglas	Michael Coulson/ Michel Rheault	Ed Dahl	Antoine Cormier	Lillian Wonders	Jacqueline Anderson
1981-82	David Douglas	Norman Drummond	Betty Kidd	John Belbin	Lillian Wonders	Jacqueline Anderson
1982-83	Jean-Claude Muller	Norman Drummond	Betty Kidd	John Belbin	Shelley Laskin	Grant Head/ Jean Carrière
1983-84	Jean-Claude Muller	Gary DeLeeuw	Jean-Marc Garant	Malcolm Brown	Shelley Laskin	Jean Carrière/ Grant Head
1984-85	Mike Goodchild	Gary DeLeeuw	Jean-Marc Garant	Malcolm Brown	Majella Gauthier	Roger Wheate
1985-86	Mike Goodchild	Janet Mersey	Gordon Shields	Dawn Rogal	Majella Gauthier	Roger Wheate
1986-87	Margaret Sommerville	Janet Mersey	Gordon Shields	Dawn Rogal	Claudette LeBlanc	Bob Packer
1987-88	Ron Eastman	Peter Keller	Gordon Shields	David Mark	Claudette LeBlanc	Bob Packer
Map Use & Design						
1988-89	Ron Eastman	Peter Keller	Margaret Hutchison	David Mark	Diana Dacen Nagel	
Automated Cartography & Gis						
1989-90	Ron Eastman	Brian Klinkenberg	Margaret Hutchison	Tim Wood	Diana Dacen Nagel	
1990-91	David Douglas	Brian Klinkenberg	Jeff Murray	Roy Doyon	Janet Mersey	
1991-92	David Douglas	Marcia Faurer	Jeff Murray	Roy Doyon	Janet Mersey	
1992-93	Y.C. Lee	Marcia Faurer	Iain Taylor	Roy Doyon	Christine Earl	
1993-94	Y.C. Lee	Nigel Waters	Iain Taylor	Patricia Chalk	Christine Earl	
1994-95	Y.C. Lee	Nigel Waters	Carol Marley	Patricia Chalk	Morrie Portnoff	
Analytical Cartography & GIS						
1995-96	Douglas Banting	John Belbin	Carol Marley	David Mercer	Morrie Portnoff	

Miscellaneous

Membership

Prior to 1985 memberships were handled by the Secretary, and for the next two years they were looked after by a volunteer membership coordinator. In 1987 the responsibility was transferred to an appointed Office Manager, who had various other administrative duties also. Cliff Wood served in this position for two years, and Roger Wheate for four. In 1993 the Manager's position was abolished, and a separate Membership Secretary (Monika Rieger) was appointed.

Newsletter

The newsletter was begun by the first Secretary, Lou Sebert, and initially came out on an irregular basis. The current quarterly format was introduced by Cliff Wood in 1981. With the exception of 1985-86, when it was edited by David Douglas, the newsletter remained the Secretary's responsibility. In 1994, however, a separate Newsletter Editor (Weldon Hiebert) was appointed. It acquired the name **Cartouche** in 1991.

Journal

The Canadian Cartographer, founded by Bernard Gutsell in 1964 as **The Cartographer**, became the official journal of the Association in 1977. Three years later it was renamed **Cartographica** (the name of the monograph series that had accompanied the journal since 1971), and it was subsequently published by the University of Toronto Press. Bernard Gutsell remained Editor until 1995, when he was succeeded by Michael Coulson, previously Review Editor and Chair of the CCA Publications Committee. Many others have made major contributions to the journal over the years, notably Fiona Cowles, Ed Dahl and Leonard Guelke as Associate Editors, and Bernard Gutsell's wife Barbara as Assistant to the Editor.

Acknowledgement

This article is based in part on *The CCA: the First 15 Years* by Roger Wheate, published in **Newsletter**, Vol. 16, No. 1, 1990. We welcome feedback on any errors or omissions. ☺

Triple vue sur la cartographie canadienne: Quelques réflexions pour souligner les 20 ans de l'ACC

par Majella-J Gauthier, Jean Carrière et Michel Rheault*

C'est avec plaisir que nous nous associons pour broser un petit tableau qui concerne les 20 premières années d'existence de l'Association canadienne de cartographie et des activités cartographiques qui lui sont rattachées. Nous ne pensons pas faire un historique, une synthèse, ni une analyse critique de ce qui s'est passé. Nous voulons seulement signaler quelques moments et quelques dimensions qui apparaissent spontanément lorsque l'on se prête à l'exercice.

Nous n'avons pas été des témoins privilégiés de la naissance de l'Association puisque nous débutions notre carrière universitaire au milieu des années '70. Fort heureusement, des cartographes très dynamiques, avec plus d'expérience que nous, voyaient la nécessité de promouvoir la cartographie comme discipline et de regrouper les forces. Une association à l'échelle du Canada était née. Vingt ans plus tard, il n'est inutile de regarder en arrière et voir comment cela a évolué.

Il serait peut-être exagéré de dire qu'au début de l'Association les techniques cartographiques en étaient encore à la plume d'oie c'était sûrement le temps des plumes à l'encre, du Lettraset, du Lettratone et des queues de coq. C'était le début du tracé sur couche et des incontournables chambres noires. L'ordinateur personnel ne devait apparaître que 10 ans plus tard. SYMAP faisait des dégâts; on appréciait ses capacités de traitement et d'analyse mais très peu ses qualités graphiques qui ont souvent déçu aux cartographes qui aimaient également les belles représentations graphiques. La cartographie a pris le virage technologique et l'ordinateur est maintenant dans tous les projets. Cependant, ceci n'empêche pas de constater que les préoccupations des cartographes en termes d'intérêts sont empreintes d'une constance certaine; pour cela, il s'agit d'observer la dénomination des groupes d'intérêts qui se sont succédés au cours de 20 dernières années; à part le mot ordinateur, les mêmes désignations reviennent souvent. En fait, la science cartographique transcende la technique et la méthode.

L'ACC a été un témoin et un acteur de tout premier ordre non seulement dans le domaine des technologies mais aussi dans le développement de la science cartographique. Elle a favorisé les échanges entre les personnes intéressées à la cartographie lors de 20 congrès annuels répartis dans toutes les régions du pays; elle a organisé et parrainé des symposiums sur des thèmes toujours collés à l'actualité scientifique. Elle fut le forum national pour débattre des questions importantes et elle a toujours permis à ces membres de se tenir à jour et de continuer à évoluer. À ce propos, il est impératif de mentionner que le Bulletin de l'Association (*Cartouche*) anciennement le *Newsletter* et la revue *Cartographica*, autrefois *The*

Canadian Cartographer, sont autant de vecteurs d'information et de connaissance de grande qualité.

L'Association n'a pas voulu se créer de oeillères. Elle s'est ouverte aux autres associations canadiennes et elle s'est impliquée vivement dans la formation et la marche du Comité national canadien de cartographie. Elle s'est associée avec des organisations nationales et étrangères (étatsuniennes par exemple) pour réaliser des activités scientifiques et elle n'a pas hésité à se joindre à des associations régionales pour la tenue de congrès annuels. Il est toutefois malheureux de constater que les associations cartographiques régionales ne se sont pas créées dans toutes les grandes régions du pays: Carto-Québec et PICS vont bien, l'O.I.C.C. est dans un état comateux, les Prairies et la région Atlantique n'ont pas d'organisation formelle de cartographie. Il n'est pas mauvais d'avoir des points d'ancrage dans les régions.

Puisque l'on parle de niveaux d'échelle, il ne faut pas négliger le rôle que joue l'ACC et ses membres au plan international: représentations à tous les congrès de l'Association cartographique internationale; et même, l'un de ses anciens présidents, Fraser Taylor (pour ne pas le nommer) a assuré la présidence de cette société durant deux mandats. Puis, que dire de l'obtention du prochain congrès international de cartographie au Canada en 1999? N'est-ce pas là la marque d'une reconnaissance dont il faut partager le mérite.

La cartographie n'est plus pratiquée que par des cartographes. Les applications sont diverses et des spécialistes en aménagement du territoire, en environnement, en géographie, en santé, en navigation, en gestion des ressources, etc. partagent maintenant les mêmes outils. C'est un éclatement heureux qui doit s'ouvrir vers des partenariats fructueux et mener à un langage commun, une standardisation des concepts et des procédures.

Voilà quelques réflexions faites à l'occasion des 20 ans de l'ACC. Certes, la célébration de ce moment exceptionnel aurait mérité un plus grand développement que les quelques lignes qui précèdent. Il ne nous reste plus qu'à souhaiter longue vie à l'ACC et à remercier tous ceux et celles qui ont de près ou de loin participé à sa création et à son dynamisme. ☉

Note: *Respectivement professeurs à l'Université du Québec à Chicoutimi, l'Université du Québec à Montréal et l'Université de Sherbrooke. Tous trois anciens présidents de l'Association, à qui il faudrait ajouter le nom de Norman Drummond pour compléter la liste des présidents provenant du Québec.



Map Production Technology / *Technologie de production cartographique*

by/par David Mercer

Cartography on the Web

It is no secret that the technology of cartography is undergoing constant change especially in production technologies. The final form, or display of the map, however, has not seen the same degree of change as other aspects of cartography. The most common display format for the map is, by far, the printed map. Although the printed map may take on different characteristics depending on paper stock and other physical attributes, the parameters for design remain relatively fixed for a given project. When given the specifications that a map will be printed to fit within a 4" x 6" image area and printed at 133 lpi screen frequency, the cartographer knows exactly what types of problems they are facing and can produce a map to work within these parameters.

In the current excitement surrounding the Internet and the World Wide Web, new home pages are springing up on a daily basis with all kinds of interesting photos and graphics. Consequently, one area that had seen a dramatic rise in demand is cartography for web pages. Now, when someone accesses a web site, it is becoming more likely that they will see a map. When designing a map for this forum, the medium of presentation is no longer fixed as it was for printed maps, but has become more dynamic. The map will be viewed with different software and on computers of a wide range of calibre. The dynamic nature of the display medium, not to mention demands of system administrators are placing a new set of restrictions on the cartographer. Since the viewing medium is no longer constant, cartographers often try to design for a worst case scenario. Designing a map to suit these needs usually renders an inadequate image on a higher end device. At this point, it may be a trial and error process, searching for a design to work at both ends of the scale, hoping that everything between will work.

Besides the physical limitations placed on the image and attributes of display, the cartographer often faces limitations of the size of the file. In many cases, system administrators will place strict limits on the size of the file to enhance the speed of operation. While it sounds like an unfair restriction, it is often in the best interest of the cartographer to keep files to the smaller sizes. If the map is not the object of the search, the image can be easily bypassed in search of other information. Maintaining files at some smaller size presents an interesting problem. The client provides a set of material to display

and an outline of the type of image they are expecting. The map with all the requested data is produced, it appears to work on a variety of machines chosen to test the image, but then the client asks; "How big is the file?" "60K", you proudly respond. "No good, still too big" is the familiar reply. The next sequence can be followed like a recipe. Edit an original image to generalize the map and reduce graphic elements. Once the image has been edited, it must be further processed with additional software to get the correct colour modes, correct format, and appropriate size. Repeat as required. While cartographers have always had to work within limitations on design, 'performance throughput' is a new concern that may cause cartographers to reconsider cartographic design and techniques used in production.

Cartography for the World Wide Web is a timely topic that could make an interesting and stimulating technical session for the upcoming Toronto conference. If you are interested in participating in a session on producing maps for the world wide web, please contact me.

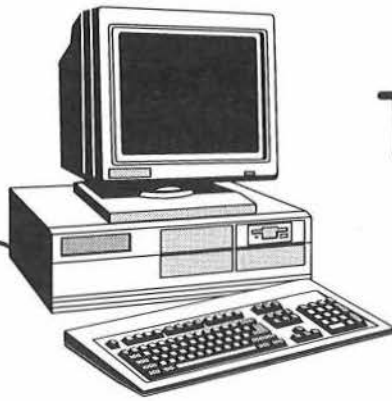
On the following page is another segment of our **Technical Tip** column. In this issue, Phil Stooke of the University of Western Ontario writes about rubbersheeting in Adobe Photoshop. If you have a tip you would like to share with us, send your idea to myself (address on page 23) or the editor of *Cartouche*. 🌐

Election to the Executive Committee

The Nominating Committee is in the process of seeking candidates for election to the 1996/97 Executive Committee. The positions to be filled are Vice-President, Chair of the History of Cartography Interest Group, and Chair of the Map Use and Design Interest Group.

Our original intention was to publish a preliminary slate of candidates in this issue of *Cartouche*, but because of unforeseen circumstances this has not been possible. Instead the slate will be e-mailed to all members who have an Internet address once it is ready. Members who are not on the Internet but who wish to receive the slate should send a request to the Chair of the Nominating Committee, Alun Hughes, at the address listed on page 23.

There will then be an opportunity for members to submit additional nominations, as provided for in the Constitution. The final slate of candidates will be published in the next *Cartouche*, together with candidate profiles. A ballot form will be supplied at the same time.



TECHNICAL TIP

BY PHIL STOOKE

Rubbersheeting in Adobe PHOTOSHOP

I have used Photoshop extensively in the last 12 months for a purpose for which it was not designed, the conversion from one map projection to another. This was necessitated by the desire to convert from a nonstandard projection, in fact an extremely unconventional one (my own) to a simple cylindrical projection, and vice versa. My comments on this would also apply to rubber-sheeting of an air photo (or an oblique photo from a high viewpoint) to fit a base map.

First, if high precision is the requirement, Photoshop is not the answer. However, there are many situations in which high precision is not necessary. The software required for sophisticated map projection conversion or air photo orthorectification is either unavailable, or it is too expensive. We can make Photoshop to work in these circumstances. I have used it to scan sections from a globe, convert each section to a simple cylindrical or other convenient projection and assemble tiles to create a flat map of a globe. This was done as an experiment to test the feasibility of digital reproduction of historically significant globes, where the item itself is too fragile for frequent handling. I have also prepared global photomosaics of three small moons, one from original spacecraft images, the other two converted from mosaics in another projection.

Second, a few tips: The function to use is **Image/effects/distort**. The **effects/scale** function is sometimes useful, but on no account use **effects/perspective** that appears just to 'taper'

an image but in fact introduces unexpected distortions. Working it at the highest resolution possible is imperative, higher than needed for the finished item. Each cell to be transformed may require numerous individual manipulations, and each resamples the original data. If you work at too low a resolution the multiple resampling will result in severe blurring or distortion. Setting sampling to **bilinear** in **Preferences** is preferable. An unexpected problem that I encountered was that the side of a selection cannot be rotated more than 45 degrees in **effects/distort**. If this is necessary for a certain transformation, the selection should be rotated to a more satisfactory orientation using the normal rotate operation, before distortion. Finally, for best results in either map projection conversion or fitting an image to a base map, working it with numerous small sections is advantageous, selected with a slight overlap to ensure a perfect fit.

If all this sounds fussy and time-consuming, it is! Nevertheless, the results can be very pleasing, and some might not be feasible without software as flexible as Photoshop.

Phil Stooke
Dept. of Geography,
University of Western Ontario

Analytical Cartography & GIS / *Cartographie analytique et SIG*

by / par Douglas Banting

A Classification Of Geographic Processing Functions

In the text I have been using, Stan Aronoff (1991, p. 191) suggests that "the art and science of using a GIS is to know how to combine the analysis functions available on a particular system to provide the required information using the available data". Although this statement is very difficult to take issue with, what I consider as analysis differs from Aronoff's interpretation. My approach is to identify what he regards as analysis as the "Processing" tasks of GIS. They convert data records into "information products". Among these tasks are three broad, albeit arbitrary categories: measurement, manipulation and analysis. This approach seems to make sense, but not only differs from Aronoff's usage, but from how the choices for processing spatial data are presented to the GIS user by the software.

A. Measurement

Measurement is concerned with the calculation of dimensions and frequencies of features. Point counts, linear and cumulative distances and sizes of areas are typical of this class of processing tasks. Although associated with certain of the manipulations and analyses described below, these may often be the primary outcome for which GIS is used, frequently in response to a particular query, such as where is the nearest hydrant, or how many land parcel severances have been requested in this area? Such interactive queries are quite primitive in the GIS processing environment, leaving it up to the user to interpret, for instance, whether there are significant differences among specific distance, area or density measures. PC-based packages now seem to provide distance calculation as pointing function, via a "tool" button, but other measurements seem to require programming.

B. Manipulation

What I have been referring to as manipulation tasks are those that evaluate data without drawing inferences about their information content. In this category are procedures for exploring the fitness-for-use of data, for transformations and for sorting and selecting, but there is no deciphering of pattern in the data.

1. Exploration of Data Quality:

Prior to accessing data for drawing inferences, it is prudent to assess its quality and fitness for use. In general this means establishing that inferences in use will not be jeopardized by correctable error. Inherent and operational errors may be inherited from data

capture unless precautions are taken in registration, pointing, cleaning, checking for linear connectivity and polygon closure, reconciling lines with other layers etc. Questions of data error and its opposite, data quality are not merely academic or abstract questions, but dimensions of data that must be recognized before further usage. If metadata describing the limitations of data have been retained, they can be queried for the constraints they set on the usage of the data. Exploratory manipulative procedures could serve well in forcing users to establish valid values for attributes (range limits, logical consistency, precision levels) and a spatial pointing tolerance (precision and accuracy limits). Specific GIS capabilities for quality assurance include browsing of attributes, plotting of histograms, and zooming in on map displays. While the objective is noble, the tools to assure data quality do not appear to be fully developed. For instance, metadata fields are now part of the IDRISI documentation files, but there is no requirement for the user to refer to these before proceeding with GIS analyses.

2. Transformations:

Clarke (1992) presents arguments in support of the contention that analytical cartography is essentially a set of transformations. In most applications of GIS this seems to be only partially borne out. Commonly transformations are used to convert input data to provide consistency within a database. Attribute conversions are involved in standardizing measurement units, such as the reclassification of specific categories (i.e. crops) to broader ones (agriculture) and may result in spatial aggregation of polygons. Positional data are transformed to provide consistency in the size and orientation of grid cells or other spatial entities, to standardize the projection, to convert vector to or from raster, or to compress a raster. Concatenation (patching together a mosaic of maps from separate files) and tiling (dividing a large coverage area into more manageable units) are also examples of commonly used transformations. GIS packages do not lump these tasks together as a menu item.

3. Sorting and Selecting:

Rearranging records to isolate and display according to user-defined conditions does not change the data, it merely involves manipulation based on spatial or attribute properties. These are perhaps the most widely used of GIS processing tasks. A spatial sort or select involves finding features within a user-prescribed location on the map. Though this is commonly via a rectangular "window tool" or a search radius, some systems have automated searches within a square or circle centred on the intersection of identified streets, and most now enable buffer definition based on points, lines or polygons.

The "art and science" identified by Aronoff is very evident in the use of these searches. For instance, rarely is a truly circular or square search polygon justified in the real world. Trade areas and impact zones can be represented by these geometries, but is seldom more justifiable than an irregular polygon that is sensitive to spatial processes (consumer travel preferences, atmospheric dispersion models, slope setback considerations etc.).

An attribute sort or select involves finding features and locations where user-specified attribute conditions are met. Boolean logic is used to isolate a specified group of objects for further actions, such as summary or spatial pattern analysis. For instance, municipalities might be interested in identifying all land parcels where the assessed value is over or under some threshold and taxes are in arrears. A widely used procedure of this type is address matching. By linking a table of selected street addresses (specified incidents) with a street network file, dispatching and route-mapping applications are facilitated.

Manipulation tasks such as these are therefore very useful, and are widely used in the application of the technology. The objective is to isolate specific records rather than deciphering the information content of the data.

C. Analysis

A dictionary-based interpretation of analysis is that it is the separation of something into its constituent parts, the opposite of synthesis. In the context of data processing in a GIS, this is interpreted to mean to separate irregularities from pattern. This enables for instance, the derivation or inference of new information from the regularity or pattern in the data. What is unique in GIS is the ability to simultaneously evaluate features and their attributes - the fullest test of the utility of the spatial-data conceptual model. Spatial analytical techniques include processing to interpolate values at locations where there are no observations, to quantify pattern, to assess interactions between data sets, and to model networks.

1. Interpolation:

The most familiar of methods for interpolating between spatially-distributed point observations is "contouring". Automated contouring procedures convert a point-based attribute to a model based on attribute-labelled lines indicating the inferred pattern. Akin to this are spatial autocorrelation methods such as kriging, moving averages, and distance-weighted averaging procedures that provide more sensitive interpolations. Trend surface models, discussed below, also permit interpolations but are based more on regional patterns than adjacent points.

Increasingly popular are digital elevation models or digital terrain models which determine attribute values for a raster, or a TIN. Both the raster and the triangles of the TIN provide a choropleth interpretation of the attribute and facilitate deriving measures of slope steepness and aspect. Similar conversion of point observations to a polygon-based surface is provided by generation of Thiessen polygons, (also referred to as proximal mapping Dirichlet regions, Voronoi, spatial allocation modelling and districting). The assumptions in each of these models have provided geographers and others with considerable academic fodder since the 1960's, but there is limited opportunity to explore these in most of the commercial GIS software packages.

2. Pattern Quantification:

Though it has a long tradition, Nearest Neighbour Analysis is seldom found in GIS. The ability to quantify the distribution pattern of points in space -- as random, uniform or clustered -- is important in evaluating many phenomena in the natural and human world. These may include fire hydrants, theatres, or sampling plans where spatial pattern may have implications.

Pattern analysis of lines does not have a significant presence in GIS. Measures such as sinuosity, used in assessing fluvial systems are not present, though modelling of networks is not at all uncommon.

Trend Surface Analysis is also not commonly built into commercial GIS software. This procedure assesses the distribution of an attribute based on point observations. X and y coordinates and their associated z values are combined using polynomial or trigonometric functions to isolate pattern and irregularities from the modelled "surface". The functions can then be used to interpolate, based on the regional pattern of variation, rather than merely using the nearest points as is the case in conventional interpolation procedures.

3. Interactions between data sets:

Among the most widely identified reasons for acquiring GIS is the ability to assess how one set of data relates to another. Most commonly the users are referring the simultaneous and ephemeral display of different layers of data, for inspection of the degree of coincidence among features -- merely co-display. Less frequently needed, but often used and much more important is the process of overlay -- the combining of one layer with another producing composite features (such as two sets of polygons being merged to form new polygons, with attributes apportioned from the originals). This is widely accepted as the appropriate procedure for constraint mapping. Other options exist for assessing interactions between data sets in some raster packages, including correlation and crosstabulation. Also, by draping one variable over a three-dimensional rendition of another, regardless of whether the "surface" is topographic, is another means of depicting a relationship. Overlay, however is very commonly cited as the reason for acquiring a GIS.

4. Network Modelling:

Among the uses of network data are the address-matching applications identified as a manipulation procedure above, but also connectivity analysis (route identification), and interaction or flow modelling (modelling attribute status changes along routes). These procedures tend to be lacking in vector-based desktop GIS packages, unless programmed in the systems's scripting environment. Only when users have linear network records of sufficient quality and completeness can their capabilities be useful. School boards and transit authorities are among the many potential users which would benefit from access to network modelling, however utilities, fast-food deliveries and emergency services seem to have registered the most success in the Toronto area to date.

Summary

The usefulness of a classification system is that it organizes observations and interpretations, hopefully into something coherent that facilitates understanding. The manner in which processing functions are presented to the user is important both for their successful completion, but also to ensure that the user realizes what is being completed. Distinction among measurement, manipulation and analysis seems to provide a structure to the data processing tasks of GIS. I try to design assignments around this framework, including term papers that evaluate GIS applications in the workplace. This is done in order to overcome a tendency to focus on the organization of the user interface rather than on the nature of the information needed and how to efficiently extract it from the data. What should be learned is derived from what Aronoff suggests -- that the ability to string together the appropriate "processing" procedures to solve a problem is the true "art and science" of GIS use.

References

Aronoff, S., 1991, *Geographic Information Systems A Management Perspective*, WDL Publications, Ottawa. 294 p.

Clarke, K. C., 1992, *Analytical and Computer Cartography*, 2nd Edition, Prentice Hall, Englewood Cliffs, N.J. 290 p.

Note: In my last column I neglected to provide a reference for the article by Crain and MacDonald. It is:

Crain, I., and MacDonald, C., 1983, *From land inventory to land Management The evolution of an operational GIS*, Proceedings of AutoCarto VI, Ottawa, pp 41-50. ☉

History of Cartography / *Histoire de la cartographie*

by/par Carol Marley

Access to Information

"Our current approach to information resembles our old agricultural policy. We used to store mountains of excess grain in silos throughout the Midwest and let it rot, while millions around the world die of starvation...Now we have silos of excess data rotting...while millions hunger for solutions to unprecedented problems." (Al Gore, *Earth in Balance*, 1992)

On this, the 20th anniversary of the CCA, Gore's comments are just as applicable to Canada as well as our neighbours to the south. Over the past 20 years our governments have been amassing infor-

mation at an unprecedented rate, but are we doing the job of distributing it that we did 20 years ago? Many of us think not. A discussion on this issue, as it pertains to cartographic data in digital format, took place at our last annual conference in Calgary.

In this article, we will consider two recent developments, the **Data Liberation Initiative**, and the release of the final report of the **Information Highway Advisory Council**.

Coordinated by the Social Science Federation of Canada, the Data Liberation Initiative aims to provide affordable access to statistical micro data files in electronic form. Statistics Canada, the Depository Services Program and the academic community, particularly the Canadian Association of Research Libraries, are cooperating to share costs and benefit in a five-year pilot project. Universities and colleges will subscribe to a consortium-like organization that will purchase data files on a cost-shared basis from Statistics Canada, and then will support indirect costs including personnel, hardware and software. Statistics Canada will provide data files, offer product support and cover storage costs. The Depository Services Program will administer the initiative, establish criteria such as eligibility, restrictions on data use, future data acquisition, etc.

Subscription costs will be a fixed annual price based on the size of the institution and its research profile in the social sciences. A three tiered approach, ranging from \$12,000 for large institutions to \$3,000 for small, undergraduate institutions, has been proposed.

The data files included under this initiative consist of specialized survey files not available in paper format, and databases and geographic files. Many universities have already committed to the project. Although the pilot project focuses on Statistics Canada data, they could include data from other federal departments in a subsequent phase. This leaves the spatial data many of us in the CCA need, out of reach, at least for the moment under this initiative.

Will the information highway be the answer to our needs? It is hard to say. Those of us who spend time helping students find digital data on the Internet for GIS projects are finding some data sets, but they are not Canadian data sets. What can we look forward to in the future? The Information Highway Advisory Council in its recently published final report has formulated the shape of future events, *Connection, Community, Content: The Challenge of the Information Highway* (September 1995). Copies of the report are available via FTP from: [info.ic.gc.ca/pub/info-highway](ftp://info.ic.gc.ca/pub/info-highway), or via Gopher from: [info.ic.gc.ca port 70/Information Highway Advisory Council](gopher://info.ic.gc.ca:70/Information Highway Advisory Council), or on the WWW at: <http://info.ic.gc.ca/info-highway/ih.html>. For paper copies contact: Distribution Services, 208D, East Tower, Industry Canada, 235 Queen Street, Ottawa, Ont. K1A 0H5. Tel: (613) 947-7466, Fax: (613) 954-6436.

The Government of Canada set out 15 issues on which it sought the Council's advice. Three objectives guided the Council's deliberations:

1. creating jobs through innovation and investment in Canada;
2. reinforcing Canadian sovereignty and cultural identity; and
3. ensuring universal access at reasonable cost.

and five principles:

1. an interconnected and interoperable network of networks;
2. collaborative public and private sector development;
3. competition in facilities, products and services;
4. privacy, protection and network security; and
5. lifelong learning as a key design element of Canada's Information Highway.

The report consists of eight chapters that cover: The Information Highway; Transition to a Knowledge-Based Society, Competitiveness and Job Creation; The New Marketplace, Canadian Content and Culture; A Strong Canadian Presence, Access and Social Impacts; The Human Dimensions, Learning and Training; The Knowledge Society, Research and Development, Applications and Market Development; New Opportunities, Implementing Our Vision; and The Council's Recommendations.

The Copyright and Intellectual Property Recommendations will be of interest to anyone concerned with access to information. Equally important are the recommendations on Universal Access. Each will be addressed in turn.

The report submitted by the Council's Copyright Subcommittee represents one of the first attempts to examine copyright law and practice in the context of the information highway in Canada. Claude Brunet, long associated with proposed copyright legislation in Canada, chaired the subcommittee. Other members included: Jeff Carruthers, Globe Information Services, Ottawa; Gail Dykstra, Director Publishing and Government Relations, Micromedia, Toronto; Michael Eisen, Partner, Morris/Rose, Ledgett, Toronto; Peter Grant, Partner, McCarthy, Tetrault, Toronto; and Andrea Rush, Partner, Gowling Strathy and Henderson, Toronto. It is interesting to note the number lawyers represented on this subcommittee. Brunet himself is a partner in Martineau, Walker, Montreal.

The Subcommittee made 16 recommendations, the first of which is to maintain a "balance between the rights of creators to benefit from their works and the needs of users (including the education and learning community) to access and use those works on responsible terms." The Subcommittee thinks that the categories of works currently contained in the Copyright Act need not be amended or eliminated in a digital environment.

One issue that has been particularly complex is browsing. The Subcommittee concluded that "the act of browsing a work in a digital environment should be considered an act of reproduction." The group further recommended amending the Copyright Act to clarify what constitutes 'browsing' and what works are 'publicly available'.

As to fair dealing, they recommend that they should clarify the concept. "Specific criteria and guidelines as to the scope of the fair dealing exception should be provided in the Copyright Act, including explicit clarification that fair dealing applies to the making of an electronic copy of a work and to the storage and transmission of that copy by electronic means."

Turning to Crown Copyright the Subcommittee recommends that it should be retained. They also recommend that "The Crown in Right of Canada should, as a rule, place federal government information and data in the public domain...Where Crown copyright is asserted for generating revenue, licensing should be based on the principles of nonexclusivity and the recovery of no more than the marginal costs incurred in the reproduction of the information or data." Further to this point, the federal government should create an inventory of Crown works covered by intellectual property that is of interest to the learning community and information production sector. Also the federal government should negotiate nonexclusive licenses for their use on the basis of cost recovery for digitization, processing and distribution. Provincial and territorial governments should provide similar services.

With respect to bulletin boards, no operator should be liable for copyright infringement if they did not have knowledge that the material infringed copyright and they acted reasonably to limit potential uses.

Universal access is a concept dear to the hearts of many Canadians. The first section in the Recommendations for Universal Access stipulates that, "Under the leadership of Industry Canada and in conjunction with other government departments, the federal government should develop a national universal access strategy." Among the many other recommendations "public policy should rely primarily upon competitive market forces to ensure the universal access to Information Highway services...at affordable prices." The vision statement in the Recommendations of Consumer Awareness and Learning envisages that Canada "will provide an environment for lifelong learning in which all Canadians will have access to the widest possible variety of learning opportunities and tools to succeed in such an economy."

One thing seems certain, the Information Highway as outlined in this report, will be a different environment than what it is today. Similarly, imagining the shape of *Cartouche* in the future is hard. Its best legacy will be to bring pertinent and timely information to the attention of the cartographic community. ☉



Cartographica Report

by Michael Coulson

I am delighted to contribute to issue #20 of *Cartouche*. It has prospered under its new name and is a fitting improved newsletter, a fitting testament to those who have worked so hard over the years to develop a newsletter of excellence for the association. Congratulations Weldon. I also rather sheepishly note that it appears on schedule.

My promises of the Fall issue seem to have come to naught, at least from the point of view of the membership. In spite of the fact that volume 31 #4, was essentially complete in early August, it has just (10th November) gone to the Press. I am neither going to try to explain in detail, nor to seek a villain. A combination of events, absences for conferences and mistakes beyond our control have provided a very frustrating experience to both Art Cuthbert (the manuscript editor) and myself. If Volume 31 issue 4 has not arrived at the time you receive this *Cartouche*, look for it any day.

Volume 32 #1, will be a set of papers and #2 will be the monograph on orienting ourselves in space. Details of the contents for both of these were laid out in *Cartouche* #19, and I refer you there. The essence of both issues is already with the manuscript editor. We should be completing work on this before Christmas and it will proceed to the Press just as soon as we can. Likewise the monograph.

New information is of a forthcoming monograph on *Issues of Data Integration in Both Raster and Vector Domains* (a working title). This should contain about fifteen papers. Progress toward completion of the manuscript for this issue is going well and the issue editor, Dianne Richardson, is most keen to have it ready for printing early in the new year. This may be a double issue, but if so it will because it really is twice a normal issue.

There is no pause between issues and I am already fitting together papers for the second set of papers in volume 32. Contents should be available by the next *Cartouche*. Looking forward to volume 33 (1996), it should include a selection of international papers on **Tac-tile Mapping** and another monograph issue on **Cartography and Education**, edited by Ute Dymon and Peter Keller.

I am still aiming for on schedule publication by the end of 1996. In the meantime, please bear with us and feel free to write if you have questions or comments or, of course, praise. I have been very pleased by the overall quality of manuscripts that have been submitted to me. 🌐

Geomatics 1996: 8th International Conference on Geomatics

By Bob Ryerson

The 8th International Conference on Geomatics will be held at the Ottawa Congress Centre from May 28-30, 1996. Preceding this will be conference workshops from May 26-27, 1996. This year's theme **The Business of Geomatics - Real Solutions for Real Problems** is more relevant today than ever before. Decision-makers are turning to geomatics to solve problems of business location and management, resource allocation, community growth, government information requirements, environmental management, client needs and work force downsizing and budget cuts. It is increasingly critical for those in business to remain profitable in today's market. Individuals who know how to use the building blocks of geomatics gain that competitive advantage.

This Conference will bring together the best in Geomatics from industry, government departments and academe in Canada, the United States, the European community and from all over the world. With its broad base of support and interest, the Conference deals with an ever increasing area of daily life - the use of spatial data. The Geomatics 1996 Conference represents a high standard of quality and excellence in the geomatics field, and builds on its reputation as one of the finest geomatics conferences worldwide.

The Technical Program Committee of Geomatics 1996 is building on the success of the 1995 technical program. Authors are again invited to submit abstracts. Deadline for abstract submissions is **January 12, 1996**. Abstracts should be sent to Dr. M. D'Iorio, Chairman, Technical Program, Geomatics 1996 (address below). Exhibitors are invited to participate in the technical program as well. The Conference will be held in conjunction with The Canadian Institute of Geomatics 89th Annual General Meeting and The Geomatics Industry Association of Canada 37th Annual General Meeting. We extend a warm welcome to CIG and GIAC members, as well as CCA members, and we encourage you to register so as to reap the full value of the Conference and the Annual General Meetings.

Information regarding the Conference can be obtained from the following address:

Geomatics 1996
615 Booth St., Room 220
Ottawa, Ontario
K1A 0E9
Telephone: (613) 992-4902 or 996-2817
Fax: (613) 947-7059

Children's World Map Competition Barcelona, Spain, 1995

by Jacqueline Anderson

In 1994, information on a **Children's Map of the World Contest**, the Second International Cartographic Association (ICA) Canadian Barbara Petchenik Prize, was distributed in *Cartouche*. The following is a summary of the outcome of this map competition.

A total of 230 maps (158 from elementary students and 72 from high school students) were received from 15 schools. The maps presented a wide range of themes which included conservation, pollution, peace and futuristic maps on topics such as **The World in the Year 2000**. Maps were submitted by students aged from 6 to 15 years and the majority had a single author. Entries were received from the following schools in five provinces and one territory.

a. **Newfoundland** - where the three elementary schools of Indian River (Springdale), St Patrick's School (St John's) and Truman Eddison Memorial School (Gunner's Cove) together contributed 36 maps.

b. **Nova Scotia** - with one high school entry submitted by the Windsor Regional High School in Windsor.

c. **New Brunswick** - who also sent one entry at the high school level from the École Cormier in Edmundston.

d. **Ontario** - where two Thornhill schools, Thornlea Secondary School and the Thornhill Secondary School, submitted a total of 36 maps.

e. **British Columbia** - where six schools sent a total of 148 maps. One hundred and nineteen maps at the elementary level were received from four Prince George schools (Southridge Elementary School, Gladstone Elementary School, Sacred Heart School, and College Heights Elementary), Edgehill Elementary School (Powell River) and Murrayville Elementary School (Langley). Sacred Heart, in Prince George, also contributed 29 maps at the secondary level.

f. **Yukon** - three maps at the elementary level were received from the Hidden Valley School (Whitehorse). Riverdale School, also in Whitehorse, sent four maps at the secondary level.

In Montreal, in late April, a five person committee judged all the entries and selected five maps to represent Canada at an exhibit to be held during the 17th International Cartographic Conference in Barcelona, Spain, September 3-9, 1995. The Canadian winners, in order of age, were:

College Heights Elementary School in Prince George:
Get Connected by Taryn Brown (12 years)

Peace in the World by Desiree Zantolas (11 years) and Shawna Dempsey (12 years)

Thornhill Secondary School:

Our Endangered Species by Rachael Levine (14 years)

Ozone Depletion by Sean Herzog (14 years)

Immigration in 1988 by Rishi Boodram (15 years)

Each winning author received a certificate and a \$25 money order. The prize money came from the joint Canadian Cartographic Association and Carto-Québec Congress held in Montréal in 1992. Schools that contributed maps were sent a letter and certificates thanking them for their participation. Where individual classes could be identified, the certificates were produced for each participating class.

At the ICA Barcelona Congress maps from 20 countries (including those described above from Canada) were exhibited. These attracted a lot of attention. After much deliberation, the judging committee selected 10 winners, aged from 5 to 15 years, for submission to UNICEF for consideration as part of a wall sheet for use as an educational and display tool. One winner was selected from each of the five continents: Africa (Republic of South Africa), Australasia (Australia), Asia (Vietnam), North America (United States of America), and South America (Chile). Most of the maps were submitted by 13 European countries, so the five additional winners were selected from this group (Hungary, Poland, Slovak Republic, Spain and the United Kingdom.)

The Barcelona contest was the second Barbara Petchenik Children's Map Competition, the first being held in 1993 in Cologne, Germany. Maps from that contest have been included on a UN CD-ROM called *My City* which was exhibited at the World Summit on Social Development in Copenhagen in March 1995 and at the Women's Summit in Beijing in September 1995. All the finalists from both the competitions are being preserved in the permanent collection of the Carleton University Map Library, Ottawa.

On behalf of the Canadian Organizing Committee I would like to take this opportunity to thank everyone who made the 1995 Canadian competition a reality: teachers, councillors, administrators and the students. It is probable that a similar competition will be held in future years. To ensure continued Canadian participation, please keep your eyes open for information about such a competition in a future newsletter. 🌐

International Cartographic Association

Barcelona, Spain, September 3-9, 1995

by Norman Drummond

The 10th General Assembly and 17th International Cartographic Conference of the International Cartographic Association was held in Barcelona, Catalunya, Spain, from September 3 to 9, 1995. The overall theme was **Cartography Crossing Borders**. Approximately 1330 delegates registered, representing 72 different countries. As well as 150 oral presentations in three parallel sessions there were 350 poster offerings, a map exhibit of 2000 maps and atlases, and a technical exhibit by more than 45 vendors and map publishers. There were numerous exhibitions and social events. The 120 finalists, from 20 countries, in the Barbara B. Petchenik children's map competition were on display. There was a special exhibit of Spanish cartography and of 52 portolan charts from the 15th to 17th century. Other exhibits included a memorial exhibition for Eduard Imhof, containing examples of his relief shadings and rock drawings, and an extensive collection of map-stamps in a special philatelic exposition. Some dozen Canadian delegates gave technical papers, chaired sessions, led workshops and participated in related activities, especially with working groups and commissions. The variety was impressive. All the details are available in a catalogue of the map exhibits and in a 3000 page two volume Proceedings.

The most significant result of the business meetings at the General Assembly was that Canada won its bid to host the ICA in Ottawa in 1999 for the 11th General Assembly and 19th International Cartographic Conference. Most of the credit for winning the bid is due to the creative efforts of Dave Carney of Natural Resources Canada and his team of workers who prepared and staffed the Canada kiosk. Dave, who will be the 1999 Conference Director, has, with the help of his advisory committee, already begun detailed planning for 1999. The theme for Ottawa is **Touch the Past - Visualize the Future, Images du Passé - Vision d'Avenir**. Canadian cartographers can expect calls for assistance and cooperation!

In other "Canadian" business, Eva Siekierska of NR Canada was elected chair of an ICA commission on Gender and Development and Jacqueline Anderson of Concordia University chair of a working group on Children and Cartography. They will need help in carrying out their mandates. Claire Gosson, also of NR Canada, helped coordinate the exhibition of Canadian maps and was very happy when the Historical Atlas of Canada, Volume II, won a "highly commended" award.

Fraser Taylor, of Carleton University, after serving eight years as president of ICA, now becomes immediate past-president and is in an excellent position to serve as liaison between the new ICA executive and the committee for 1999. Michael Wood, of Aberdeen, Scotland, was elected ICA president for the period 1995-

1999. Jean-Phillipe Grelot, IGN France, was reelected Secretary-General and Treasurer and Christopher Board, London School of Economics, is the new editor of the ICA Newsletter. Seven vice-presidents were also elected. Alberta Wood, Memorial University, who chaired the judging committee for the children's map contest, becomes one of two Honorary Auditors of ICA for 1995-1999.

The Canadian delegation for the business meeting of the General Assembly was led by Norman Drummond, McGill University. He was backed up by Clifford Wood, Memorial University, who played a double role as leader of the bid committee, substituting for, and reading the speech prepared by Tony O'Connor, who was hospitalized just before leaving for Barcelona. Tony was, himself, substituting for Hugh O'Donnell of NR Canada who was unable to come due to changes in that organization.

Of additional interest to Canadian cartographers, some fifteen working groups, task forces and commissions were formed. In the near future their elected chairs will be calling for suggestions for nominations for members. When this occurs, the Canadian National Committee for ICA will be happy to propose names of interested Canadians. Peter Keller, University of Victoria, will be the new chair for 1995-1999 and should be contacted in this regard.

The next International Cartographic Conference will be held in Sweden in June 1997. Plan now to participate.

This, my final report on ICA activities, has been prepared with reference to a longer and more personal report by Alberta Wood (copies available from her). In retiring as chair of CNC for 1991-1995, I wish to thank all those who have helped make my term an exciting and rewarding experience. Special thanks go the executives of the Canadian Cartographic Association and the Canadian Institute of Geomatics. Lets all pull together behind Peter Keller as the new chair of CNC and Dave Carney as the Conference Director for ICA Ottawa 1999. ☺

Membership in the CCA is not only a place to learn about cartography and to meet cartographers. It also provides an opportunity to develop ones administrative and interpersonal skills among a group of mostly sympathetic colleagues. That has been my experience and good fortune. May others continue to do so and to be as lucky!

Norman Drummond

Report from the Canadian National Committee to the ICA

by Peter Keller

At the November meeting of the Council of the Canadian Institute of Geomatics I took over as chair of the Canadian National Committee (CNC) for Cartography to the ICA from Norman Drummond. Before reporting on business, a note of thanks to Norman. Norman pioneered this appointment following the CNC's official establishment through a memorandum of understanding signed between the CCA and the CIG with endorsement from other cartographic societies within Canada. During his four years in office, Norman was given ample opportunity to demonstrate his skills as ambassador, leader and organizer. He set a high standard and it will be a challenge to match his dedication to Canada's cartographic community. On behalf of the entire Canadian cartographic community we thank you Norman.

The Canadian National Committee to the ICA met Friday, November 10 in Montréal. Norman reported on the Barcelona meeting. The highlights were that Canada won the bid to host the 1999 meeting of the ICA in Ottawa. Keep August 1999 open in your calendar. Congratulations to David Carney, Norman Drummond, Cliff Wood and the rest of the Canadian team for their efforts beating out strong competition from South Africa for hosting the 1999 meeting. Canada's map exhibit in Barcelona again showed our nation's strength and commitment to maps and mapping - with the National Historical Atlas of Canada winning the prestigious "highly commended" award. Congratulations to all involved in putting this atlas initiative together. The next ICA meeting will be in Stockholm, Sweden, June 22-28, 1997. Keep your calendar open for this one, too. Preliminary program announcements suggest an exciting program. One of the responsibilities of the CNC is to coordinate Canada's contributions to ICA meetings, including the map exhibition and paper presentations. Let me know if you are thinking of going to Sweden's meeting and/or presenting a paper.

The terms of reference of the original memorandum of understanding between the CCA and the CIG were reviewed. It was agreed that membership in the committee for the next four years should be representatives from the CCA (Iain Taylor), CIG (Cliff Wood), Carto-Québec (Jean-Marc Garant) and ACML (Alberta Wood). The committee is to be chaired by the CIG Technical Councillor for Cartography nominated by the CCA (Peter Keller) who also is a member of PICS. It was agreed further that the committee should seek more direct input from industry, government and education through invitation of guests and observers at their meetings. Finally, it was agreed that David Carney should be asked to sit on the committee as an invited observer for the next four years given his role as chair of Canada's committee organizing the 1999 meeting of the ICA in Ottawa.

The issue of funding for the Canadian National Committee for Cartography to the ICA was raised. So far, the committee has operated without a direct budget although the CCA has been paying the chairs CIG membership and the CIG has contributed limited travel subsidies and support through its office. It was resolved that a formal budget should be prepared. I am pleased to report that at the subsequent council meeting of the CIG a line budget for the committee was approved. For now, this budget has received a one time \$4,000 contribution from the CIG and will also receive all royalties from a book soon to be released by Wiley entitled *Cartographic Design: Theoretical and Practical Perspectives* edited by Cliff Wood and myself. Other cartographic organizations will be approached about contributing to the budget in the near future.

The committee agreed to continue its support for Canada's efforts to solicit and judge the ICA's children's map competition organized by Jackie Anderson. Canadian membership in the various ICA commissions and working groups was raised. In the interest of reporting to you about and helping coordinate Canadian involvement in the ICA, I would like to hear from you if you are a member of one of the commissions or working groups, if you have been approached about becoming a member, or if you are interested in getting involved. Canada's proposal for a new Working Group on Children and Cartography led by Jackie Anderson was approved in Barcelona. Jackie is now looking for financial support for this initiative and any ideas or funds are welcome. Eva Siekierska is chair of the new Commission on Gender and Development.

Dave Carney gave a presentation to our committee about Canada's strategy to organize the 1999 meeting. A general organizational structure is about to be put into place and the next step will be the formation and filling of various committees and subcommittee. Are you interested in getting involved? If yes, get in touch with myself or Dave. Your organization may wish to think about holding its 1999 annual meeting in conjunction with the ICA meeting in Ottawa. Let us know if you are considering this option.

The next meeting of your Canadian National Committee for Cartography to the ICA will be held in conjunction with the CCA meeting in Toronto, June 12-16, 1995. Let me know if you want anything to be put on the agenda.

In the meantime, happy mapping. ☺

International Cartographic Association *Association Cartographique Internationale*

10^e Assemblée générale - 10th General Assembly
Barcelone, septembre 1995 - Barcelona, September 1995

Résolutions - Resolutions

Résolution n° 1:

La 10^e Assemblée générale de l'Association Cartographique Internationale, constatant les changements intervenus dans les techniques et les utilisations de la cartographie et des cartes, ainsi que les résultats du Groupe de travail sur les définitions cartographiques conclus en 1991, adopte les définitions suivantes:

- Une **carte** est une image codifiée de la réalité géographique, représentant une sélection d'objets ou de caractéristiques, relevant de l'effort créateur de son auteur par les choix opérés, et destinée à être utilisée lorsque les relations spatiales ont une pertinence essentielle.
- La **Cartographie** est la discipline traitant de la conception, de la production, de la diffusion et de l'étude des cartes.
- Un **Cartographe** est une personne qui pratique la cartographie.

Résolution n° 2:

La 10^e Assemblée générale de l'Association Cartographique Internationale adopte la présentation suivante de la mission et des objectifs de l'ACI.

La mission de l'ACI est de promouvoir la discipline cartographique et la profession de cartographie dans un contexte international.

L'ACI est l'organisme faisant mondialement autorité en matière de cartographie, qui est la discipline traitant de la conception, de la production de la diffusion et de l'étude des cartes. Une carte est une image codifiée de la réalité géographique, représentant une sélection d'objets ou de caractéristiques, relevant de l'effort créateur de son auteur par les choix opérés, et destinée à être utilisée lorsque les relations spatiales ont une pertinence essentielle.

L'Association Cartographique Internationale a pour fonction:

- de contribuer à la compréhension et à la résolution des problèmes mondiaux par l'utilisation de la cartographie dans les processus de décision;
- d'accroître la diffusion, au plan international, de l'information environnementale, sociale, économique et spatiale par la cartographie;
- de fournir un forum général de discussion sur le rôle et le statut de la cartographie;
- de faciliter le transfert de nouvelles techniques et connaissances cartographiques entre les nations, et particulièrement à desti-

Resolution 1:

The 10th General Assembly of the International Cartographic Association, given the changes occurred in the techniques and uses of cartography and maps and the discussions of its Working Group on Cartographic Definitions finalized in 1991, adopts the following definitions:

- A **map** is a symbolized image of geographical reality, representing selected features or characteristics, resulting from the creative effort of its author's execution of choices, and is designed for use when spatial relationships are of primary relevance.
- **Cartography** is the discipline dealing with the conception, production, dissemination and study of maps.
- A **Cartographer** is a person who engages in cartography.

Resolution 2:

The 10th General Assembly of the International Cartographic Association adopts the following statement about the mission and objectives of the ICA.

ICA mission is to promote the discipline and profession of cartography in an international context.

ICA is the world authoritative body for cartography, the discipline dealing with the conception, production, dissemination and study of maps. A map is a symbolized image of geographical reality, representing selected features or characteristics, resulting from the creative effort of its author's execution of choices, and is designed for use when spatial relationships are of primary relevance.

The International Cartographic Association exists:

- a) to contribute to the understanding and solution of world-wide problems through the use of cartography in decision-making processes;
- b) to foster the international dissemination of environmental, economic, social and spatial information through mapping;
- c) to provide a forum for discussion of the role and status of cartography;
- d) to facilitate the transfer of new cartographic technology and knowledge between nations, especially to the developing nations;
- e) to carry out or to promote multi-national cartographic research in order to solve scientific and applied problems;

- nation des nations en voie de développement;
- de mener ou de promouvoir des recherches cartographiques concernant plusieurs nations afin de résoudre des problèmes scientifiques ou de techniques appliquées;
- d'améliorer la formation cartographique, au sens large, par des publications, des séminaires et des conférences;
- de promouvoir l'utilisation de standards techniques ou professionnels en cartographie.

Pour parvenir à ces buts, l'Association oeuvre avec des organismes nationaux ou internationaux, gouvernementaux ou commerciaux, ainsi qu'avec d'autres organisations scientifiques internationales.

- f) to enhance cartographic education in the broadest sense through publications, seminars and conferences;
- g) to promote the use of professional and technical standards in cartography.

The Association works with national and international governmental and commercial bodies and with other international scientific societies to achieve these aims.

Pignon sur rue Les quartiers de Montréal

par Michel Fournier

Faire le portrait de la ville de Montréal n'est pas évident, son côté cosmopolite ayant imprégné au fil des siècles sur trame urbaine. L'approche de Michèle Benoit et de Roger Gratton est fort judicieuse. Ils nous proposent un découpage de la ville en 13 secteurs qui reflètent assez fidèlement les diverses étapes du développement de la ville et de ses quartiers.

"*Pignon sur rue*" est la réédition des 13 fascicules publiés en 1991, traitant des différents quartiers de la ville de Montréal et ce, dans le but de mettre notamment en valeur le Vieux-Montréal et le patrimoine montréalais. Les fascicules sont regroupés sous une même couverture, pour la première fois, et sont le fruit d'une étroite collaboration entre la Ville de Montréal et le ministère des Affaires culturelles.

Les monographies recèlent une mine d'informations étonnantes sur l'histoire et l'architecture des quartiers de la ville. Chaque fascicule ou chapitre se divise en deux parties et est richement illustré de nombreuses photographies récentes et d'archives, de tableaux et de cartes. Le tout complété par un texte admirable qui retrace la vie, l'histoire des gens du secteur concerné de la ville.

Dans la première partie de chaque fascicule est fait un survol de l'aspect historique, de l'environnement et du contexte socio-économique. Une carte esquissée du relief et des cours d'eau sert à localiser le secteur dans son contexte géographique. L'habillage de ces cartes est souvent sommaire. En effet légende, échelle et flèche du Nord se font plutôt discrètes. Les cartes d'étapes de développement sont fort intéressantes car en plus de montrer la progression du secteur, les grandes infrastructures et les ruisseaux aujourd'hui canalisés, elles transposent le tracé actuel de certains axes routiers et les berges du Fleuve.

Un tableau des événements historiques 1700-1945 fait la synthèse des grands courants de l'histoire, de certains événements

mondiaux et locaux et le développement de la ville sous différents aspects tels le transport, le commerce, les services publics, l'industrie et l'immigration. Une courbe cumulative de la population de Montréal et de ses faubourgs se superpose au tableau permettant ainsi d'observer l'évolution de la société montréalaise et de mettre, d'une certaine manière, en évidence ces gens qui ont permis à la ville de devenir ce qu'elle est aujourd'hui. Ce tableau demande une certaine gymnastique intellectuelle pour bien comprendre le déroulement de l'histoire.

La deuxième partie du fascicule présente l'architecture résidentielle, industrielle, institutionnelle et publique. Un tableau synchronique des éléments architecturaux fait la synthèse chronologique de la période d'utilisation des parements, des éléments décoratifs, de la forme du toit et ce en corrélation avec les périodes de style architectural. Quelques photographies illustrent ces éléments.

L'emplacement des nombreuses photos et illustrations, qui couvrent les pages du fascicule, figurent sur la carte de quartier tout en mettant en évidence la trame urbaine avec ses parcs et ses principaux bâtiments. La qualité de la photographie et le choix des immeubles, des lieux ou des événements sont généralement de grande qualité et représentatifs d'un mode de vie, d'une époque.

L'ensemble de l'ouvrage est accessible et attirant pour le lecteur. C'est un vibrant témoignage du passé. Montréal ville de rêve et de mille-et-une réalités, une ville à découvrir par ses façades et ses lieux que l'on doit scruter attentivement en s'y attardant.

Michèle Benoit et Roger Gratton, *PIGNON SUR RUE, Les quartiers de Montréal*, Les Éditions Guérin - littérature Montréal, 1991, 393 pages. (22.95\$) ISBN : 2-7601-2494-0

The Norman L. Nicholson Memorial Scholarship In Cartography

The Canadian Cartographic Association is proud to offer the Norman L. Nicholson Memorial Scholarship in Cartography in honour of our late colleague. The scholarship, valued at \$500, is awarded annually, and is intended to recognize and encourage exceptional student achievement and ability in any aspect of cartography.

Eligibility:

To qualify the applicant must be:

1. A Canadian citizen or landed immigrant.
2. A student who proposes to continue full time studies with a concentration in cartography, and is:
 - a) entering the final year of a college, CEGEP or under graduate honours program, or
 - b) entering the first year of a graduate program.

Membership in the CCA is not required.

Application:

The applicant must submit the following:

1. A completed application form (a blank form is enclosed with this copy of Cartouche);
2. Official transcripts of all college/CEGEP/university courses completed and grades received;
3. A one-page typed statement outlining the applicant's plans for continuing education in cartography;
4. Letters of recommendation from two faculty members who are familiar with the work and abilities of the applicant (to be sent directly to the Chair of the Awards Committee by the faculty members in question).

All materials should be sent by May 1, 1996 to:

Alun Hughes,
Chair, CCA Awards Committee,
Department of Geography,
Brock University,
St. Catharines, Ontario, L2S 3A1

Tel: (905) 688-5550, ext. 3489

Fax: (905) 688-6369

Email: ahughes@spartan.ac.brocku.ca

Judging:

Applications will be judged by the CCA Awards Committee, and the name of the winner will be announced at the Annual Conference in Toronto. The Committee reserves the right to withhold an award if the applications are not of sufficient standard. The winner must accept the award in writing within two weeks of notification by the Chair of the Awards Committee. ☉

Bourse d'étude en cartographie en mémoire de Norman L. Nicholson

L'Association canadienne de cartographie est fière d'offrir une bourse d'étude en cartographie en mémoire de notre collègue le Dr. Nicholson, professeur reconnu et respecté dans la communauté et également membre de l'Association. La bourse d'étude d'une valeur de 500\$ sera remise annuellement. Elle est dédiée à la reconnaissance et à l'encouragement du travail exceptionnel d'un étudiant et de sa capacité dans différents aspects de la cartographie.

Conditions d'admissibilité:

Pour se qualifier le candidat doit:

1. Être citoyen canadien ou immigrant reçu;
2. L'étudiant doit poursuivre à temps plein des études orientées en cartographie et:
 - a) doit être rendu dans la dernière année du programme d'étude suivi dans un collège, un CEGEP ou un programme d'étude spécialisé sous-gradué ou
 - b) doit débiter sa première année d'un programme de second cycle.

L'adhésion à l'Association canadienne de cartographie n'est pas requise.

Règlement:

Le candidat doit soumettre les pièces suivantes:

1. Un formulaire d'application complété (un exemplaire est joint dans ce numéro de Cartouche);
2. Un relevé des cours suivis et diplômes obtenus dans un collège, un CEGEP ou une Université;
3. Un exposé dactylographié d'une page décrivant le plan d'études en cartographie de l'étudiant;
4. Une lettre de recommandation de deux représentants du département qui sont familiarisés avec le travail et les capacités du candidat (Les lettres doivent être envoyées directement au Président du Comité des Prix par les représentants de l'institution).

Faire parvenir les pièces avant le 1 mai 1996 à:

Alun Hughes, Président du Comité des Prix
Département de géographie
Brock University
St. Catharines, Ontario L2S 3A1

Téléphone: (905) 688-5550, poste 3489

Télécopieur: (905) 688-6369

Email: ahughes@spartan.ac.brocku.ca

Jugement:

Les soumissions seront jugées par le comité des prix de l'ACC. Le nom du récipiendaire sera annoncé lors de la conférence annuelle qui se tiendra à Toronto. Le Comité se réserve cependant le droit de suspendre la remise de la bourse si les candidatures n'atteignent pas un niveau satisfaisant. Le gagnant doit accepter son prix par écrit dans les deux semaines de sa notification par le Président du Comité des Prix. ☉

Demande d'assistance financière pour déplacement à l'assemblée générale annuelle qui se tiendra à Toronto du 12 au 16 juin 1996

Application for Travel Assistance to the 1996 AGM Toronto, Ontario June 12 - 16, 1996

L'assistance financière pour déplacement à l'assemblée générale annuelle est défrayée par le Conseil de la recherche en sciences sociales et humaines du Canada (CRSSH) à même son programme de subvention. Les critères d'éligibilité ont été établis par l'Association canadienne de cartographie (ACC) de façon à permettre à tous les membres en règle d'obtenir une distribution équitable de la subvention disponible. Nous avons toutefois réservé une partie de la bourse pour permettre la présence de membres étudiants. **Tous les membres en règle qui désire se prévaloir de cette aide doivent soumettre une demande d'assistance avant le 30 avril 1996.**

La priorité sera accordée aux membres éligibles de l'Association qui contribue directement à l'Assemblée générale annuelle (conférenciers, modérateurs et les présidents de groupe d'intérêt). La distribution de la subvention sera effectuée par l'exécutif de l'ACC selon les critères établis par l'Association. Tous les reçus doivent être soumis au plus tard 45 jours après l'Assemblée générale annuelle. Le versement des frais de déplacement se fera les jours suivants **le 31 juillet 1996.**

Les demandes pour la subvention du CRSSH, reçues après l'Assemblée générale annuelle pourront être considérées selon la disponibilité des fonds. Faites parvenir votre demande d'assistance financière à l'Assemblée générale annuelle de l'ACC, avant **le 30 avril 1996**, à mon attention, en utilisant le formulaire que vous trouverez dans cette édition de *Cartouche*.

Shelley Laskin
Trésorière, ACC

Travel assistance to the Annual General Meeting is provided by the Social Sciences and Humanities Research Council of Canada (SSHRC) through their Travel Assistance Grant Program. Based upon criteria established by the CCA, it is our intention to ensure that all CCA members in good standing have equal opportunity to the funding available. However, we have reserved a set amount of the grant to help fund student travel. In order to do this, **all eligible members must submit a request for funding by April 30, 1996.**

Priority to funding will be given to those eligible members of the CCA who contribute directly to the AGM (speakers, moderators, and chairpersons). The grant will be distributed by the CCA Executive according to criteria established by the Association. Please note that we will not advance travel funding.

All receipts must be submitted no later than 45 days after the Annual General Meeting (by **July 31, 1996**). Disbursements will be made shortly thereafter. Requests received for SSHRC funding after the Annual General Meeting may be considered if all available funding has not been disbursed. Please send "Application for Travel Assistance to the Annual General Meeting of the CCA", a copy of which is included with this edition of *Cartouche*, by **April 30, 1996** to my attention.

Shelley Laskin
Treasurer, CCA



Cartography/GIS at the University of Northern British Columbia (UNBC)

by Roger Wheate

A year after UNBC was officially opened in August 1994, it can claim one of the largest GIS courses in Canada, with 85 enrolled students this fall. This results partly from having one of the best equipped labs in Western Canada, containing 20 Silicon Graphics Workstations along with input/output peripherals. As significant however, is the integrated faculty structure that requires students majoring in Biology, Forestry and Geography to take the GIS course, within the Faculty of Natural Resources and Environmental Studies (NRES) that combines the five programmes of Geography, Forestry, Biology, Environmental Studies and Resource Recreation Tourism.

This interdisciplinary approach along with very close community ties and a host of applications associated with the locally predominant forestry industry and First Nations concerns have generated an exciting atmosphere in Canada's most northern University. In addition to the GIS course, there are two other courses in the 'geo-spatial techniques'.

The first is an introductory course that will become a prerequisite to GIS, entitled **Spatial Data Techniques** (formerly Cartography) to reflect the range of associated tools available in the digital era, including cartography and map design, geodesy and photogrammetry, aerial photography and image processing, global positioning systems and an introduction to GIS procedures. The second is an **advanced GIS** course that deals mostly with remote sensing and the interface between image processing and GIS.

The three courses fit a sequence that could as well be named Spatial data techniques I, II, III, Cartography I, II, III or GIS I, II, III. This integrated approach combining the sub-fields of Cartography, GIS and remote sensing has been determined by the increased fuzziness of the lines between these areas in digital mapping, cartographic philosophy and necessity in a small university.

In addition to these three formal courses, students may take up to two more 'directed studies' that can be aimed at individual areas of interest or exposure to specific software programs. Current projects include glacier mapping and change detection using image processing, digital elevation modelling and data integration through Microstation.

UNBC already has a graduate program with more than 40 Masters students in NRES and a PH.D. program on-line. Many of these students have GIS data processing as a main component of their graduate work, using the GIS Lab.

For further information about Cartography/GIS/Remote Sensing at UNBC and the Faculty of Natural Resources, please contact Roger Wheate, e-mail: wheate@unbc.edu or view the UNBC home page at <http://quarles.unbc.edu/keen/welcome.html> and the Natural Resources Home Page at <http://quarles/unbc.edu/nres/nres.html>.

Footnote/disclaimer: whatever you read about UNBC in the *Maclean's* annual university ranking issue is quite irrelevant!! ☹



Calendar / calendrier

February 13-15 février 1996

GIS '96

Wiesbaden, Germany

For information / pour renseignements:

Tel / tél: 49 (69) 664 43490

Fax / téléc: 49 (69) 664 43240

April 9-13 avril 1996

American Association of Geographers

Charlotte, NC, U.S.A

For information / pour renseignements:

Tel / tél: (202) 234-1450

Fax / téléc: (202) 234-2744

April 20-26 avril 1996

ASPRS/ACSM 1996

Annual Conference and Exhibition

Baltimore, Maryland, USA

Contact / communiquer avec:

Denise Calvert

Tel / tél: (301) 493-0200

Fax / téléc: (301) 493-8245

May 11-16 mai 1996

Canadian Association of Geographers /

L'Association canadienne des géographes

Saskatoon, Saskatchewan

May 28-30 mai 1996

Geomatics 1996 / Géomatique 1996

8th International Conference on Geomatics /

8^e Conférence internationale

sur la géomatique

Ottawa, Ontario

For information / pour renseignements:

Tel / tél: (613) 996-2817

Fax / téléc: (613) 947-7059

June 12-16 juin 1996

Canadian Cartographic Association /

L'Association canadienne de cartographie

Toronto, Ontario

Contact / communiquer avec:

Shelley Laskin

Tel / tél: (416) 481-9513

Fax / téléc: (416) 481-0552

E-mail / Courr. élect: shelly@io.org

June 22-28 juin 1997

ICC '97

18th International Cartographic

Conference / 17^e Conférence

cartographique internationale

Stockholm, Sweden

For information / pour renseignements:

Tel / tél: 46 (26) 153 000

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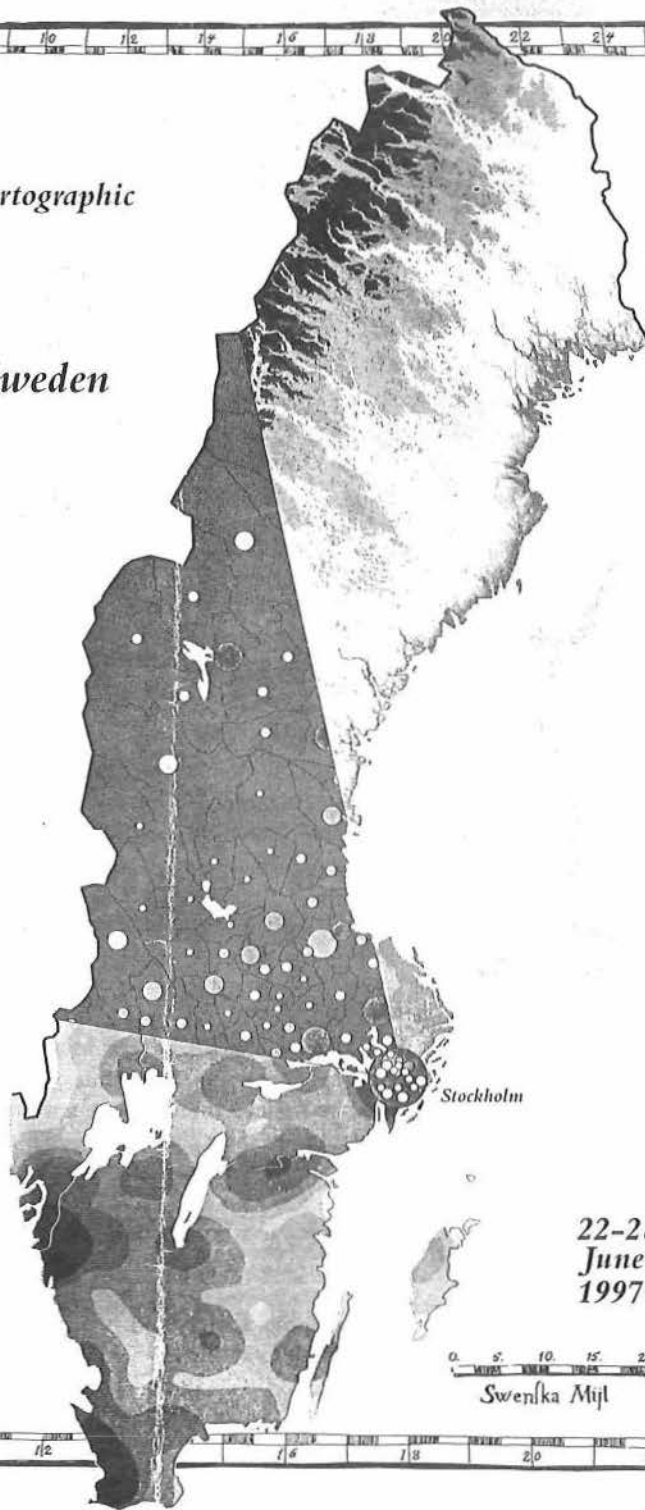
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