CARTOUCHE

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CARTOUCHE

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In this issue/ Dans ce numéro .....

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Cartouche is produced quarterly by the Canadian Cartographic Association.
Content Deadlines are: January 31, April 30, July 30, October 31.(*see page 24*)
You are welcome (urged!) to submit items to be considered for publication. It is the current policy of the editor to provide dual language copy for editorial content and journal mechanics. All other articles appear in language of submission. While every effort is made to ensure accuracy of content, the editor *(like all cartographers!)* cannot be responsible for errors in compilation, or loss of any item submitted. Opinions expressed in the editorials and submitted articles and letters are not necessarily those of the Canadian Cartographic Association. For advertising policy, please contact the Manager, Roger Wheate.

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Les dates limites pour l'envoi d'articles ou de documents sont les suivantes: 31 janvier, 30 avril, 30 juillet, 31 octobre (*voir page 24*). N'hésitez pas à soumettre des articles (vous êtes même priés de le faire!) que vous désirez publier dans le bulletin. Présentement, selon la politique en vigueur, l'éditeur doit publier en français et en anglais, l'éditorial ainsi que la description du processus de publication du bulletin. Le reste des articles paraîtront dans la langue dans laquelle ils ont été écrits. Bien que beaucoup d'efforts sont déployés en vue d'éviter de tels problèmes, l'éditeur (*de même que les cartographes!*) ne seront pas tenus responsables des erreurs de compilation ou de la perte d'articles qui leur seront soumis. Les opinions exprimées dans le cadre des éditoriaux, des articles et des lettres publiées dans le bulletin ne reflètent pas nécessairement celles de l'A.C.C.. Pour ce qui est des tarifs publicitaires, veuillez contacter le responsable de la publicité, Roger Wheate.

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L' Association canadienne de cartographie

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REMEMBERING MALCOLM BROWN

On December 7, 1991, Malcolm Brown and his 14-year-old son Patrick, were killed when their car collided with a tractor- trailer near Wolseley, Sask. They were returning from a Mapping Conference in Wyoming.

Malcolm was a well-known, highly-regarded, and above all well-liked member of the Canadian Cartographic Community. He was a past president and current member of the CCA, a member of the OICC and CISM, and had often tried to create a society of Manitoba Cartographers. He worked tirelessly for cartography, organizing and helping with many conferences over the years, and was involved in the planning of our 1993 AGM. Last year, he and Marcia Faurer had organized the fourth of what is now an annual colloquium at Red River College that not only brought a forum for discussion and information to Manitoba, but also resulted in a donation of $200.00 to the Nicholson Scholarship Fund.

The fullness of his cartographic background is mirrored by his education and work history. He had cartographic diplomas from Ottawa's Algonquin College, and ITC in the Netherlands. He held a Bachelors degree from Carleton, a Masters degree in Geography from the University of Manitoba, and was working on a Masters in Survey Engineering at UNB. He had worked for surveying and mapping departments in both Manitoba and Saskatchewan, taught at Red River College, and was currently on a sessional appointment at University of Manitoba.

His death has come as a shock to us all. His energy will be missed for a long time. Missing out most of all will be those students and colleagues he will now never have the chance to inspire. We offer a few observations from those who had worked with him as a form of tribute to his spirit.

"Malcolm was my close friend, neighbour, and a highly respected colleague. His energy, enthusiasm, and knowledge inspired me to explore cartography in much greater detail than I had ever planned on, and for that I am grateful. Because he was so generous with his knowledge, and because his insatiable curiosity made him a perpetual student, he was an excellent teacher. Although Malcolm had only taught at the University of Manitoba for one term, I could tell from recent conversations with his students that he was trusted and admired. From having marked assignments that he had given to his Advanced Cartography class, I could see that they had been well-taught. Malcolm showed me the value of maintaining a high level of enthusiasm in teaching, as well as the importance of respecting the intelligence and abilities of students. I think of him whenever my patience is wearing thin and I find that it actually helps make the job easier. He never placed himself above anyone because it was not in his nature and because he knew that no one can learn through intimidation.

I know that Malcolm placed a high level of importance on education which is reflected in the fact that his M.A. Thesis was on this topic: "The Geographic Information System in the Junior High School Environment" (1990 The University of Manitoba). In this research, he explored the potential use of GIS as a tool for teaching Geography. Over the past several years I enjoyed many discussions and arguments with Malcolm about maps and mapping and about teaching cartography and GIS. I was privileged to be able to team-teach a GIS course at Red River Community College, and most recently to work with on a cartography lab manual with him. This manual is still being prepared and I plan to complete it keeping in mind all of Malcolm's suggestions and plans.

I always knew I was in trouble when Malcolm would call and say "I've got a good idea..." because the idea always involved more work than anticipated but it was always too interesting and valuable to say no. This was how we began the Applications in GIS Colloquium five years ago. Each year the Colloquium was a bigger success, and Malcolm never ceased to amaze me. Within a week or two he could call ten people and get them to speak, and for four years he repeated this with different people each year. Malcolm was a people collector who never forgot anyone he met. He cultivated and maintained friends all over the world, and those of us who were a part of his valued collection were truly fortunate and will miss him."
...Marcia Faurer

"I first met Malcolm in 1980 at a preliminary meeting to form a provincial cartographic association in Victoria, which he had organized. Over the years, the geography of Canada separated us by more than a province, and we met only at CCA meetings. At executive meetings we had regular battles for the last dessert, and I resented that his appetite matched mine.

We remember him more however for his extraordinary enthusiasm in his chosen career and the effect he had on those around him. In 1991 he invited me to Winnipeg for the 4th annual GIS symposium that he had begun with Marcia Faurer. Wherever we went, he carried a copy of Bertin's *Semiologie* with him, even to supper. I would like to think this reflected more his commitment to cartography than the level of my conversation.

The fourth Winnipeg GIS Colloquium, May 1991.
(l to r: Sam Masry, Marcia Faurer, Y.C. Lee, Malcolm Brown)
Malcolm was the main organizer of this event over the past years. Besides acting as a much needed forum for GIS discussion in Manitoba, the colloquium generated a $200.00 donation to the CCA Norman Nicholson Scholarship fund.

Last month in updating the membership database, I had to finally delete his name and record to prevent his home receiving further CCA notices. I gazed at the record for some time before I could bring myself to press 'delete'. As I did, somewhere I glimpsed an image of Malcolm somewhere on a cloud, looking up briefly from his copy of Bertin and smiling."
...Roger Wheate

"I first met Malcolm in my early years with the cartographic faculty at Sir Sandford Fleming College. He was down visiting from Winnipeg and was touring the school to see what is was we did that made us tick. I was struck by his energy and his desire to absorb all that we had to offer. His questions were unending, but his curiosity was so sincere and intense, helping him out was a pleasure. Bringing new ideas and technology out to his home base in Winnipeg was so important to him that he arranged a small meeting of cartographers out there. He managed to swing it that two of our faculty could be brought out to talk and demonstrate to the people in attendance. I found it interesting that the person he wanted most of all was our faculty member responsible for the Graphic Design courses. It showed how Malcolm saw cartography in the overall structure of the arts and sciences and not just a simple technology driven discipline.

Of course, I was to meet him again many times over the next few years. You couldn't be involved in anything cartographic for too long without coming into contact with him. He loved to help out in whatever way he could. He was always ready to enter into discussion about some aspect of mapping, be it technical, philosophical, or anywhere in between. I enjoyed our discussions, mainly because he was never opinionated or pushy, just excited about new things.

I am not sure what Montréal is going to be like without him around. Well, with him not around in person. In time, memories of him will fade I am sure. The spark he set in many cartographers (both young and old) will take much longer to die out."
...James Britton

"J'ai été ébranlé en apprenant que Malcolm nous avait quitté. Je garderai de lui le souvenir d'une être charmant et respirant la joie de vivre. Il était à l'écoute des autres et prenait un plaisir certain à mettre à l'épreuve son bilinguisme. Il s'est impliqué de tout coeur dans la cause de la cartographie et dans l'Association dont il a assuré ta présidence."
...Majella J. Gauthier

Elections to CCA Executive/ Élections au comité exécutif de l'ACC 1992

Vice-president/Vice-président
J. Ronald Eyton
Alun Hughes

Secretary/Secrétaire
James Britton

Interest Group Chairpersons/
Chefs de groupes d'intérêt:

Automation and GIS/
Automatisation et SIG
Y.C. Lee

History of Cartography/
Histoire de la cartographie
Philip Stooke
Iain C. Taylor

Map Design and Use/
Conception et utilisation des cartes
Christine Earl
Morrie Portnoff

Vice-president/Vice-président
J. Ronald Eyton

"As an Associate Professor of Geography (Ph.D., 1975, University of Illinois) at the University of Alberta, I am involved in teaching courses in analytical cartography, digital remote sensing, and multivariate spatial analysis. Recent research efforts include the development of a digital terrain modeling analysis and display software package, production of autostereoscopic maps and the design of algorithms for azimuthal surfacing.

I am particularly interested in, 1. working with the Publications Committee of the CCA to further enhance the excellent reputation of *Cartographica* as a peer reviewed journal, 2. encouraging increased student membership and participation in the Association, and 3. finding some mechanism to bring the products of our work to the attention of the general public, perhaps in the form of popular displays — *maps fascinate*!"

Vice-president/Vice-président
Alun Hughes

"I have an MA in Geography from Cambridge University, specializing in Geodetic and Topographic Surveying, and a Diploma in Cartography from the University College of Swansea. I was a Cartographic Editor with A.W. Gatrell & Co., London, UK, before joining the Department of Geography at Brock University, where I am currently an Associate Professor.

I regard myself primarily as a teacher, and I teach courses across the entire 'cartographic' spectrum: cartography (traditional and computer), surveying, remote sensing, photogrammetry and geographical information systems. My main field is cartography.

I was Cartographic Editor for *The Great Lakes: an Environmental Atlas and Resource Book*, which won the British Cartographic Society Design Award for 1988, and for the subsequent French version. I am presently researching the early surveys of the Niagara Peninsula and working on a GIS project involving native hunting and harvesting data for the James Bay area.

I have been a member of the Canadian Cartographic Association since its inception. Other current memberships include the Canadian Institute of Surveying and Mapping, the British Cartographic Society and the Society of Cartographers.

I was Chair of the organizing committee for the joint annual meeting of the CCA and the OICC at Brock University in 1991, and have presented papers at several recent CCA conferences. I am currently working on a Careers in Cartography booklet for the CCA.

For several years I was faculty administrator for the Map Library at Brock, and in 1979 I chaired the organizing committee for the ACML annual conference. Other administrative experience includes three years as Chair of the Department of Geography at Brock and six years as President of the Welsh Studies Institute in North America. For the last year I have been a Director of GAIN Inc., a small GIS company in Niagara.

At this stage I have no specific goals to present to the membership, other than to serve the CCA and to promote the interests of Canadian cartography to the best of my ability."

Secretary/Secrétaire
James Britton

James is currently the Co-ordinator for the GIS Applications Specialist Program at the School of Natural Resources, Sir Sandford Fleming College where he has been with the Cartographic Faculty since 1983. Before this he operated his own private mapping company producing maps for a variety of clients ranging from small municipalities to large publishing companies.

His main interests are in visual communication, developments in and the application of computer technology, and how changes in these two areas affect cartographic and general education. He teaches courses in Computer Studies (for cartography), Database Applications in GIS, and Remote Sensing.

He first joined the CCA in 1979. He has served as the Secretary and Newsletter Editor since the summer of 1990. In his term he designed and launched the newsletter into its new and current format: *Cartouche.* During this time he has tried to get the magazine out on time and with a minimum of errors. He has met with mixed success in this regard. He also suffers from a inability to say no to requests to volunteer his services to good causes.

Due to this failing, his main desires for his next two year term is to firmly (but nicely) cajole, harass, and otherwise persuade members to get copy for *Cartouche* to him at some time reasonably close to his totally unreasonable deadlines. He would also like to see more members of the CCA contribute to *Cartouche.*

Automation and GIS/
Automatisation et SIG
Y. C. Lee

Y. C. Lee is currently an Associate Professor in GIS in the Department of Surveying Engineering, University of New Brunswick. He holds a Ph.D. in Surveying Engineering from UNB, an M.Sc. in Computer Science from UNB, and a B.Sc. in Computer Science from Simon Fraser University. Since joining the CCA as a student member in 1976, he has served as a Member of the GIS Working Committee, the Nominations Committee, and delivered a workshop on object-oriented GIS at the 1989 AGM.

He started his cartographic career as a technician in the Geography Department of the Chinese University of Hong Kong. After emigrating to Canada and finishing his Masters Degree he led a software team to design and develop CARIS, a GIS now marketed all over the world. In 1986 he joined the faculty of the Department of Survey Engineering at UNB where he teaches and conducts research in the areas of computer mapping and GIS. He is particularly interested in visualization, spatial data structures, spatial databases, spatial data models, GIS architecture, GIS implementation, and the evolution of cartographic principles with technological changes.

History of Cartography/
Histoire de la cartographie
Philip Stooke

Assistant Professor, Department of Geography, University of Western Ontario

"I completed both my B.Sc. and Ph.D. at the University of Victoria. I teach an introductory cartography course (now using the Macintosh rather than pen and ink) and a course in the history of cartography which also involves several projects in time-series map analysis. My research involves the application of geography, especially cartography, to space exploration: the cartography of non-spherical worlds, the history of lunar and planetary cartography, and the geomorphology and stratigraphy of planetary surfaces.

In recent years I have found myself becoming more involved with history and with historical aspects of geography, as well as with the history of cartography itself. I would like to encourage not just the study of maps as historical documents, important though that is in itself, but also the use of time series maps in historical geography. I would try to attract speakers at our sessions to discuss applications of historical material to a variety of problems. I would also encourage historical subjects in displays at our conferences."

History of Cartography/
Histoire de la cartographie
Iain C. Taylor

Dr. Iain C. Taylor was last year appointed Chief Geographer for the Government of Canada, Department of Energy, Mines and Resources in Ottawa. He takes charge of research and development of the National Atlas of Canada and its successor publications within the National Atlas data base and advice on other matters relating to geographic policy within the federal government.

Dr. Taylor has degrees in Geography from the University of Leeds, University of Toronto (where he was re-

search coordinator for two sections of the *Economic Atlas of Ontario* project) and the University of Liverpool where he obtained a Ph.D. with a thesis on the topic of public health and urban planning in the 19th Century. During this period he joined the tutorial staff of the Open University and taught with them for three years.

He was a member of Athabasca University from 1973 when he had been appointed Head, Social Sciences and Associate Professor in Geography at this adult, open university. His last administrative appointment was as Director, Northern Region in which he established and ran the Edmonton as well as two other branch offices of the University in Northern Alberta following the University's relocation.

His research interests lie in the area of urban historical geography, historical cartography, environmental management, and Third World adult education. He has provided consultation assistance to several institutions and agencies in Africa and Asia.

He is currently working on a book for the University of Toronto Press about Mapmakers of Canada to 1867, which will include a shortform listing of all the printed maps of the country to that date.

As chair of the History of Cartography Group he would endeavour to keep the membership informed of developments in the area internationally as well as across the country, and to lend encouragement to the growth of this area of the discipline.

L'année dernière, Iain C. Taylor a été nommé géographe en chef au ministère de l'Énergie, des Mines et des Ressources du gouvernement du Canada, à Ottawa. Il a pris ainsi la direction des activités de recherche et de promotion relatives à l'*Atlas national du Canada* et aux publications subséquentes qui seront réalisées à l'aide de la base de données de l'Atlas national. Ses fonctions comprennent également la prestation de conseils sur diverses questions de politique géographique au gouvernement fédéral.

Monsieur Taylor possède des diplômes en géographie de la University of Leeds et de la University of Toronto, où il a coordonné les recherches pour deux sections du *Economic Atlas of Ontario*. Il détient aussi un doctorat de la University of Liverpool portant sur la planification urbaine et les services de santé au XIXe siècle. À cette époque, il s'est joint au personnel de la Open University, où il a enseigné pendant trois ans.

Membre de la Athabasca University dès 1973, il a été à la tête des Sciences sociales et professeur agrégé de géographie à cette université ouverte pour adultes. Le dernier poste administratif qu'il y a occupé est celui de directeur de la région du Nord; à ce titre, il a mis sur pied et administré les bureaux d'Edmonton ainsi que deux autres bureaux régionaux situés dans le nord de l'Alberta, à la suite du déménagement de l'université.

En recherche, monsieur Taylor s'intéresse à la géographie urbaine historique, à la cartographie historique, à la gestion de l'environnement et à l'éducation des adultes au Tiers-Monde. Il a d'ailleurs fourni des conseils à plusieurs établissements et organismes en Afrique et en Asie.

De plus, il prépare actuellement un livre sur ceux qui ont cartographié le Canada jusqu'à 1867. Cet ouvrage, qui sera publié par la University of Toronto Press, renfermera une liste donnant de l'information en forme abrégée sur toutes les cartes du pays imprimées jusqu'à cette date.

En qualité de chef du Groupe de l'histoire de la cartographie, monsieur Taylor viserait à garder les membres au courant des faits nouveaux survenant dans le domaine tant au Canada qu'à l'étranger et à promouvoir l'épanouissement de cette branche de la cartographie.

Map Design and Use/ Conception et utilisation des cartes

Christine Earl

Christine Earl has been a member of the CCA since 1987, attending every annual meeting since that date, and presented a paper on surface and form in art and cartography at Brock in 1991. Christine holds a B.Sc. in Mathematics and a diploma in Cartography, and is currently a part-time master's student in Geography at Carleton University where she has been employed as Cartographer since 1977. She has been involved in undergraduate teaching of cartography since 1984 with responsibility for the only theoretical course in cartography at Carleton, a third-year half credit. A past member of the Ontario Institute of Chartered Cartographers, Christine was a director of the OICC from 1986 to 1989. Other professional affiliations include the Society of Cartographers and the North American Cartographic Information Society.

"As sole cartographer in the Department of Geography, I carry out all phases of map design and production, and provide consultation on cartography to students and faculty at Carleton. I have produced three compilations for the *National Atlas of Canada*, and am proud of the design work I did on these three maps. Cartographic design is something which has not been frequently discussed in the literature of the past two

years. The term 'design' can mean anything from relatively technical activities, such as layout, to the intellectual process of determining the appropriate scale and projection for the information the map must display, and conceiving the symbolization methodology, which requires understanding of both obvious and inherent cognitive activities of readers. The term 'design' has been partly superceded by the latest buzzword for creating something out of the imagination, namely 'visualization'. Despite many attempts to analyze the design process, it really remains mysterious and intangible, and involves aesthetics, functionality and the operation of cultural, political, and economic factors. It is beyond technique and technology, being a process of imagining. As J.S. Keates sensibly states:

> *...lengthy investigation of design problems does not necessarily mean that a good design will result. In many cases, it is the ability to conceive the problem in a different way which leads to an improved solution. The ability to produce a large number of variations quickly with a computer does not necessarily have this quality, for original starting points still have to be generated by imagination. Scores of variations are of little use if the parameters are inadequate to begin with.*

As chair of the Map Design and Use Interest Group, I will try to stimulate and promote debate on cartographic design and map use in the electronic, and 'postmodern', age through the medium of *Cartouche* and, possibly, discussion groups and seminars locally or at the annual meeting."

Map Design and Use/
Conception et utilisation des cartes
Morrie Portnoff

Employment: Nunavik Graphics, Pierrefonds (Montreal), Quebec
Owner, Cartographer/ Graphic Designer

Education: Cartographic Technologist Diploma, Sir Sandford Fleming College, Lindsay, Ontario, 1984
B.A. Geography, McGill University, Montreal, Quebec, 1980

Work Experience:
"Since 1989 I have been pursuing my "dream" of operating my own cartographic design company. In addition to this, for the past two years I have been the instructor for the Introduction to Cartography course at Concordia University.

Prior to this I was the cartographer for Makivik Corporation, located in northern Quebec, for five years. During this time I was responsible for the design and production of all cartographic material in addition to cartographic staff management and training.

Over the past ten years I have also worked on numerous research projects including the Historical Atlas Project through McGill University, the Environmental Resource Atlas of the Bay of Fundy/Gulf of Maine at Dalhousie University, and as a Cartographic Consultant to the Ministry of Municipal Affairs and Housing of the Ontario Provincial Government."

Service To CCA: Member since 1989

Goals and Objectives:
"I believe that it is vital for the CCA to have a cross section of the cartographic community on the Executive. Therefore it is imperative to get the participation of the private sector active at this level.

As a practicing cartographer for the past twelve years in all three sectors (academic, public and private) I believe that I can bring a perspective to the CCA Executive and particularly the Map Design/Use Interest Group which will be quite positive. My particular interests revolve around the design and production of maps on the Macintosh. With this technology becoming more readily available and powerful, certain concerns must be addressed in order to ensure the continued production of quality cartographic products.

In order to pursue these goals I plan to prepare relevant articles which will appear in *Cartouche.* In addition to this I will organize workshops or paper sessions at the AGM. This is an area which I have been quite active over the last few years. Finally, I would like to organize at least one local workshop on cartographic design/production using the Macintosh."

The Manager's File/ filière du gérant

by/par
Roger Wheate.

1: New members/membres nouveaux

Sarah Abbey	Victoria, BC
Jeffrey Aberle	Toronto, ON
Oivind Buvang	Tromso, Norway
David Carey	Buffalo, NY
Martin Cassel,	Waterloo, ON
Martin Hon-Kee Chiu	Hong Kong
Dianne Denner	Lynn, MA
Arsenale Editrice	Venice, Italy
Lynne Elliot	Waterloo, ON
Douglas Gerull	Huntsville, AL
V. Glickman	Ottawa, ON
Gilles Gregoire	Montreal, QC
Keith Henderson	Winnipeg, MB
Ann Lucas	Bergen, Norway
John Lewis	Montreal, QC
Dave Raymond	Lawrencetown, NS
Andrew Sherin	Dartmouth, NS
Lawrence Smith	Victoria, BC
Mark Smith	Downsview, ON
George States	Burnaby, BC
Lynne Trepanier	Lawrencetown , NS
Nancy Vellenoweth	Fredericton, NB
Arnie Waddell	Winnipeg, MB
Susan Waldorf	Huntsville, AL
Donna Williams	Ottawa, ON
W.A.Winter	Victoria, BC
Michael Young	Toronto, ON

NEW CORPORATE MEMBERS:

Intergraph Corp.,	Huntsville, AL.
John Wiley and Sons,	Toronto, ON

2: MEMBERSHIP RENEWALS

Currently about 60% of 1991 members have renewed, leaving about 150 yet to do so. For those who have not, this issue of Cartouche represents a 'grace copy'. We will not be able to send the remaining issues unless you do renew. Please renew as soon as possible to ensure continuity of receipt of materials and to save volunteer time in processing renewals.

1992 renewal summary by region (as of February 25):

Saskatchewan 100%	Overseas members 83%
British Columbia 68%	Territories 67%
USA members 64%	Maritimes 64%
Manitoba 61%	Quebec 55%
Ontario 55%	Alberta 50%
Newfoundland 40%	

(Is it still 1991 in Newfoundland????)

IF YOU HAVE NOT YET RENEWED FOR 1992, YOUR MAILING LABEL SHOULD CARRY THE DATE 12/31/91
(No date means you have renewed).

Those who have renewed should have received an election ballot with this issue; late renewals will receive this ballot on renewal.

All 1991 members have yet to receive Cartographica 1991 V28 #4, which has been delayed at printing and will now not be distributed until probably April. The CCA presents its apologies to the membership for this inconvenience which is beyond our control.

1992 DRAW FOR 2 YEARS FREE MEMBERSHIP, and free registration to the annual meeting in Montreal:
Winner:
Pat Gilmartin, Columbia, South Carolina

3: Letter to the manager.

"HUG A CARTOGRAPHER TODAY"
(Halifax, 20 January, 1992)

Halifax has a vigorous and skilled graphic design community. Local designers and illustrators are highly capable in all forms of graphic design except for maps. Cartographic design is an area of visual communication that graphic designers in Halifax have taken on even though they have no training or knowledge in cartography. Not surpisingly, the result is extremely badly made maps that not only are dificult to read (if at all) but also "lie" to the map reader. The clients of these designers pay significantly for very poor products. Curiously, they return with repeat business rather than turn to cartographers even after seeing the difference a skilled cartographer can make to their maps. Many of the cartographers graduating from the College of Geographic Sciences make their way to Halifax. This assures a pool of skilled map makers eager to take on the task of designing fine maps that present information clearly and communicate well.

Whether due to ego or stubbornness, graphic designers refuse to acknowledge this talent (and their own failing) and continue to struggle with maps themselves. They are content to produce maps with water inappropriately coloured orange or that would have us believe that Cape Breton Island is a separate province. Have cartographers in other Canadian cities noticed a similar situation, or is Halifax an anomaly? Perhaps it is all due to living by the orange surf of the Atlantic Ocean!

Ken Francis,
Halifax, NS.

President's message/ mot du président

by/par
Peter Keller.

Greetings. Once again, the time has come to take up my keyboard and write to you.

Let me start on a sad note. In the last issue of *Cartouche* we informed you of the unfortunate death of a young, enthusiastic and dedicated member of our society, Malcolm Brown. I am at a loss for words how to share with you my thoughts about the tragic accidental deaths of Malcolm and his son; let me simply say that Malcolm will be missed dearly, and that we are once again reminded about the vulnerability of life. Given Malcolm's commitments to cartography, and especially to educational cartographic issues, I would like to award this year's president's prize for the best introductory monochromatic map in memory of Malcolm.

Continuing on a sad note, I ought also to inform you of the death of Professor Brian Harley. He is well known to many of us for his scholastic contributions published in *Cartographica*, and for his stimulating keynote address at the Victoria AGM in 1990, where he talked on "Deconstructing the Map".

On a more cheerful note, planning appears well on its way for this year's annual meeting in Montreal. This meeting will bring us together with fellow cartographers from Carto Quebec. It also will give us the opportunity to help celebrate Montreal's 350s anniversary. The program looks very promising. Three morning plenaries focus on mapping within government agencies and the private sector, and educational institutions responses to cartographic realities. These plenaries are complemented by workshops, demonstrations, and concurrent afternoon sessions. In keeping with tradition, there will also be ample opportunity for socializing, including fireworks, baseball, and a banquet.

Just in case you forgot, let me remind you that we are actively seeking your participation in our annual meetings. We want to hear from you, and we want to share cartography with you; and it does not matter whether your cartographic interests are primarily in production, government, industry, R&D, academia, education, training, ... Let's use our annual meetings to communicate with each other to learn new tricks of the trade, and to share thoughts and concerns.

Talking about concern and communication, let me bring up something that increasingly is bothering me. More and more, I see published maps that fail to "communicate". All too often do I find images that contain geographical boundaries, points, lines, areas, text and shading - but there is no message. Looking at these images, I am reminded of written documents where there is evidence of content, thought and originality, but where failure to pay explicit attention to logic structure, composition and presentation has resulted in an undecipherable potpourri of words.

Yes, you are right - the bulk of these images carry that distinctive look we have learned to associate with brand X of a digital mapping software product; but it does not stop there.

So, what is happening? Have we cartographers forgotten those tedious hours of lectures and labs spent on map design, figure- background relationships, composition, flow, depth, balance ... ? Or has the world decided that it does not need cartographers to draw maps?

I suspect the latter, and I am deeply disturbed to find increasing evidence that it is notably our historical allies, the geographers, that appear to promote the demise of the art and science of cartography. If you wonder why I make this observation, take the time to examine the attitude of Canadian geography departments towards cartography. Find out what importance and priority they place on cartography in their curriculum, and who they select to teach introductory and advanced cartography once the old cartographer has retired (assuming they have not used the opportunity of faculty retirement to eliminate these courses). And if that has not convinced you, go to a library and examine maps published in a recent issue of Canada's *The Operational Geographer* . Are those maps representative of the cartographic standards set by operational geographers?

As cartographers, perhaps we ought to write to editors, authors and publishers to point out the lack of "communication" in some of their published maps? After all, there is a good chance that these people will listen - remember they are individuals who recognize the importance of quality assurance in written communication.

Enough rambling - time for me to get back to work. Don't forget to plan your trip to Montreal for the AGM, and get out your pen and "communicate" your displeasure next time you find a publication which includes a rotten map.

Bonjour! C'est encore le temps pour moi de vous écrire. Permettez moi de commencer avec un sujet vraiment triste. Dans la dernière livraison de *Cartouche*, on

vous a informé de la mort fâcheuse d'un jeune membre enthousiaste et consciencieux de notre société - Malcolm Brown. Les mots me manquent pour vous exprimer mes pensées des morts tragiques et accidentelles de Malcolm et de son fils. Je voudrais dire qu'on le regrette beaucoup et qu'encore une fois cela nous rappelle de la fragilité de la vie. Puisque Malcolm était si engagé dans la cartographie et particulièrement dans le sujet de l'éducation cartographique, je voudrais décerner le prix du président de cette année pour la meilleure carte préliminaire monochromatique en souvenir de Malcolm.

Il faut continuer sur une note triste. Il me faut aussi vous informer de la mort du professeur Brian Harley. Il nous est bien connu pour ses contributions scolaires publiées dans *Cartographica* et pour son discours-programme stimulant à l'assemblée générale annuelle à Victoria en 1990 où il a parlé de "Disséminer la carte."

Et maintenant un sujet plus gai. Il semble que la planification de l'assemblée générale annuelle pour cette année à Montréal se déroule bien. Cette assemblée nous fera rencontrer des cartographes de Carto Québec. On aura aussi l'occasion de participer à la célébration du 350ème anniversaire de Montréal. Le programme semble vraiment prometteur. Trois plénières du matin concernent le processus de faire des cartes dans les agences du gouvernement et les secteurs privés, et les réponses des institutions scolaires en ce qui concerne les réalités cartographiques. Ces plénières complémentent les ateliers, les démonstrations et les sessions simultanées pendant l'après-midi. Selon la tradition, il y aura aussi de nombreuses occasions de se faire des amis, d'assister au feu d'artifice, aux jeux de base- ball et au banquet.

Si vous l'avez oublié, je voudrais vous rappeler qu'on vous encourage à participer activement à nos assemblées générales annuelles. On veut recevoir vos lettres et on veut partager la cartographie avec vous. Cela ne fait rien si vos intérêts cartographiques sont plutôt dans le domaine de la production, le gouvernement, l'industrie, la Recherche et le Développement, le scolaire, l'éducation, la formation...Utilisons nos assemblées annuelles pour nous communiquer à apprendre de nouvelles ficelles du métier et pour partager nos pensées et nos inquiétudes.

En parlant d'inquiétude et de communication, permettez-moi de soulever quelque chose qui me dérange de plus en plus. Je vois des cartes publiées qui échouent dans leur mission de "communiquer." Trop souvent je trouve des images contenant des frontières, des points, des lignes, des régions, du texte et des noirs géographiques, mais il n'y a pas de message. En regardant ces images, cela me rappelle les documents écrits où il y a les preuves du contenu, de la pensée et de l'originalité, mais où l'on n'a pas réussi à rendre évidente la structure, la composition et la présentation logiques. Alors le résultat est indéchiffrable.

On a raison - la plupart de ces images ont l'allure distincte d'être associées à la marque X d'un produit du logiciel numérique pour faire des cartes. Mais ce n'est pas tout.

Alors qu'est-ce qui se passe? Avons-nous, les cartographes, oublié toutes les heures ennuyeuses des cours et des labos que nous avons consacrées à la conception de la carte, la relation entre les images et le fond, la composition, le flot, la profondeur, l'équilibre...? Ou est-ce que tout le monde a décidé qu'on n'a pas besoin de cartographes pour dessiner des cartes?

Moi, je soupçonne que c'est la deuxième chose. Je suis très troublé par l'augmentation des preuves selon lesquelles ce sont les géographes, historiquement nos alliés, qui encouragent la mort de l'art et de la science de la cartographie. Si vous vous demandez pourquoi je fais cette observation, prenez le temps d'examiner l'attitude envers la cartographie dans les départements géographiques canadiens. Renseignez-vous sur l'importance et la priorité qu'on place sur la cartographie dans le programme d'études et qui on choisit pour enseigner les cours préliminaires et supérieurs de cartographie après que l'ancien cartographe a pris sa retraite (en supposant qu'on n'ait pas utilisé cette occasion pour éliminer ces cours). Si tout cela ne vous a pas persuadé, allez à la bibliothèque et examinez les cartes publiées dans une livraison récente de *la Géographie appliquée* du Canada. Ces cartes-là, représentent-elles les standards cartographiques établis par les géographes professionnels?

Comme cartographes, peut-être devrions nous écrire aux auteurs et aux éditeurs pour leur montrer que la "communication" manque à quelques-unes de leurs cartes publiées. Après tout, il est très possible que ces gens nous écoutent. Souvenez-vous que ce sont des gens qui savent l'importance de l'assurance de la qualité dans la communication écrite.

J'ai assez discouru. C'est le temps de recommencer à travailler. N'oubliez pas d'organiser votre voyage à Montréal pour l'assemblée générale annuelle. Prenez votre stylo et "communiquez" votre mécontentement la prochaine fois que vous trouvez une publication qui inclut une carte mal faite.

Map Design and Use/ Conception et utilisation des cartes

by/par
Janet Mersey

Customizing Map Projections on your PC.

Essential to the design of any small scale map is the selection of an appropriate map projection. Many times this choice is straightforward; world base maps using common equal area or conformal projections can be retrieved quickly from the map library. However, situations may arise where the cartographer wishes to experiment with a less conventional projection solution to portray particular routes, relationships or distributions more effectively. For example, a client may request a map centered on heir head office in Hamilton, Ontario, showing the correct distances to all their branch plants throughout North America. It's unlikely that any existing map will quite fit the bill.

It is exactly problems like this that the WORLD Projection and Mapping Program is designed to solve. This PC compatible program, developed at the University of Minnesota, offers an impressive selection of over 200 map projections ranging from the ordinary to the whimsical (I recently used the Cahill Butterfly projection to produce octahedral Christmas tree ornaments!). The program is extremely flexible in the way that each projection can be manipulated. Oblique, transverse, or polar transformations can be created easily, allowing any area of the map to be aligned to a standard line or point. In the application described above, an equidistant azimuthal projection could be selected and rotated so that the point of tangency coincides with the latitude and longitude of Hamilton. The scale, size, and portion of the earth displayed can also be customized to suit a particular layout. In addition, symbols, text, range rings, great circle routes or rhumb lines can be added to the map, and the graticule can be shown by lines or ticks with a specified degree interval.

The WORLD program comes complete with digital coastline files at several levels of generalization (600 points, 8000 points, and the World Data Bank 1 data file with 100,000 points) or can read imported files in a variety of formats. Output can be generated on the screen, a Hewlett-Packard pen plotter, or written to a plot file in either HPGL or Postscript (Adobe Illustrator) format. This program is not only a useful tool for the map designer, but can play an important role in the classroom as well. Students can compare and analyze various projections easily and see the effects of using an oblique aspect. A module for analyzing distortion characteristics estimates angular and area deformation and plots distortion ellipses on the map.

The WORLD Mapping and Projection Program is available for US$250.00 from P. Voxland, Social Science Research Facilities Center, 25 Blegen Hall, 269 19th Avenue South, University of Minnesota, Minneapolis, Minnesota 55455.

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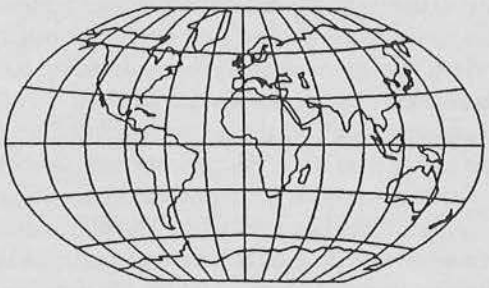

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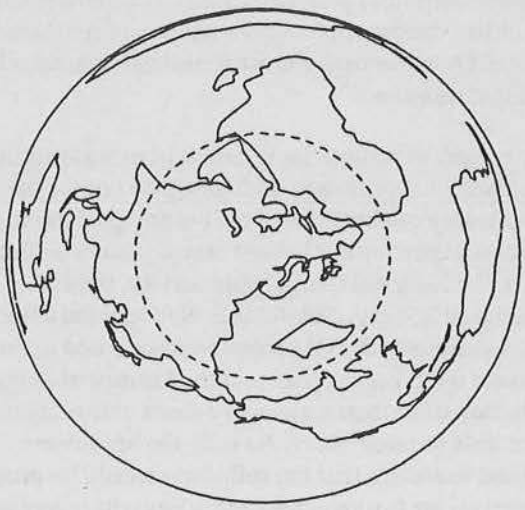

Equidistant (Centered on Moscow)

History of Cartography/ histoire de la cartographie

by/par
Jeff Murray

High Tech to the Rescue

One of the most ambitious map restoration projects to be undertaken in over a decade was unveiled last October by the Library of Congress in their exhibition City of Magnificent Distances. The restoration involved the latest in computer image processing and Pierre Charles L'Enfant's plan of Washington, D.C. The L'-Enfant plan was drawn more than two hundred years ago and is the only plan in the designer's hand to have survived the ravages of time.

When it was first founded, Washington, D.C. was unique among the world's capitals. Unlike its European counterparts, its layout was to be carefully planned and systematically developed. L'Enfant himself recognized this distinction when he wrote Washington in 1789: "No nation perhaps had ever before the opportunity offerd [sic] them of deliberately deciding on the spot where their Capital city should be fixed ...." L'-Enfant also noted that, while the capital could be conceived on paper, and its development controlled, it would take many years of building before the full effect of the plan would be apparent: "The plan should be drawn on such a scale as to leave room for the aggrandisement & embellishment which the increase of the wealth of the Nation will permit it to pursue at any period however remote..." Because L'Enfant's plan served as the model for the preparation of all subsequent maps and plans of the city, it is thought to be the oldest cartographic representation of the American capital. Quite naturally most Americans consider it a national treasure.

The project to restore the L'Enfant plan was originally launched four years ago and was to be part of the 200th anniversary celebrations of the founding of the city. Funded in part by the United States Library of Congress, the National Geographic Society, the U.S. Geological Society, and the U.S. National Park Service, the ambitious $500,000 project was launched in order to make the L'Enfant plan and the Library of Congress collection of unique maps and atlases of the city more accessible to researchers. As well, the organizers wanted to ensure that the collection would be properly preserved for future generations. Since its inception, the project has systematically microfilmed some 4,000 maps and 140 atlases. Each item has also been classified and catalogued using MARC (MAchine-Readable- Cataloguing) format, a computer assisted online cataloguing system.

The highlight of the anniversary celebrations, however, was the restoration of Pierre Charles L'Enfant's 1791 plan. Well worn, stained, and disfigured by varnish, a large portion of the pencilled drawing was almost impossible to read. Because of its advanced state of deterioration, the Library of Congress had not displayed the item in almost 25 years not a very good record for a national treasure. Obviously, any restoration attempts on the L'Enfant plan would have to be carefully monitored and would call for innovative techniques.

Much to their credit, the organizers decided to take advantage of the latest in computer image processing in order to produce a digitized full-colour facsimile of the original manuscript. This process enabled the Library of Congress to enhance the illegible portions of the plan and to remove from the image the unwanted disfigurations that had accumulated from inappropriate conservation practices in the 1920s and 1930s.

The plan was first photographed by the U.S. Geological Survey in Reston, Virginia. They used a special high-contrast panchromatic film to produce a full-size negative. Experts at the Survey then carefully scanned the negative using a Scitex raster scanner. This process converted all points, lines, and area features including the hand-written comments added to the plan by Thomas Jefferson to a digital representation.

Apparently, the original scanned data from the plan occupied 20 computer tapes (or 809 megabytes). However, once all the unwanted stains and the discolouration from the old varnish were removed, the final digitized version was reduced to two tapes, one for the shading (105 megabytes) and one for the map itself (18 megabytes).

In an effort to protect the plan from further deterioration, the Library of Congress decided to stabilize the document "as is." In other words, treatment was to be limited to mending and strengthening the paper, but only where it was absolutely necessary. The plan was then to be protected from further chemical and atmospheric degradation by placing it in a hermetically sealed case containing argon and buffered paper.

The U.S. Geological Survey has produced two separate facsimile packages from their digital data base. One is a full-scaled, full-colour reproduction for use by researchers and curators. The second is intended for a more general audience. It is much smaller and features a current street map of the city on the reverse side. Both packages went on sale to the public on August 24, 1991, the day on which L'Enfant presented his plan to George Washington two hundred years earlier.

Obviously, not all countries can afford to give all their cartographic treasures this type of intense treatment. Even if the technical expertise were more readily available, the work is simply far too costly for most institutions. However, the L'Enfant project does break new ground in the history of cartography. It has helped to restore one of America's most indelible cartographic achievements to its former glory.

People and Places

Lost.

Over the last few months, cartography lost two of its most valued friends, *Gilles Langelier* of the National Archives of Canada and *Brian Harley* of the University of Wisconsin at Milwaukee.

Gilles Langelier passed away on November 13th following a long battle with cancer. He originally joined the National Archives of Canada in 1972, and since 1976, he served as Chief of the Services Section, Cartographic and Audio-Visual Archives Division (formerly the National Map Collection). Gilles was well known to the professional community, making significant contributions to the Association of Canadian Map Libraries and Archives, the Association des Archivistes du Québec, the Society of American Archivists, the Special Libraries Association, the Association Québécoise de Cartographie, and IFLA. Under Gilles direction, the National Archives introduced a state-of-the-art microfilming program, enabling the withdrawal of original cartographic and architectural records from daily circulation. Through this program, the conservation of the collection improved immensely. Gilles wrote a number of articles on early Canadian surveyors for the Dictionary of Canadian Biography , and in 1985 published a general guide to the Division's collections, which is still consulted almost daily and is considered a significant contribution to archival literature.

Brian Harley died suddenly of a heart attack on December 20th while driving to his campus office. Brian's interest in the history of maps was extensive. He spent most of his career trying to uncover the hidden political and cultural agendas of the people who construct maps in order to expose their true meaning. He has enjoyed many academic positions, the most recent being a professor of geography at the University of Wisconsin. He was recently appointed director of the Office for Map History at the Golda Meir Library, which houses the prestigious map collection of the American Geographical Society. Brian is created with several books and more than 100 articles in the history of cartography. Along with David Woodward, he initiated the six-volume History of Cartography , the first of which was published in 1987 to international praise. The second volume in the series is scheduled to appear later this year.

A new treasure house for Canada's cultural memory is one step closer to reality. Ron Keenberg, a partner in the Winnipeg-based firm of IKOY, unveiled his conceptual model for the new **National Archives of Canada** at a special ceremony in Ottawa last November. The building is slated for a 90 hectare site in downtown Gatineau, Quebec, about a 20-minute drive from Parliament hill. Although the new building will only hold about half of the government documents, manuscripts, maps, photographs and computer tapes presently stored by the National Archives, it will be the first national facility designed specifically to meet the environmental standards required of a modern archives. The documents are to be stored in a self-contained, concrete vault, three stories high. The laboratories, offices and mechanical plant will surround the vault in a stainless steal and glass structure. This arrangement should help make it easier to maintain the building's mechanical parts and to protect the vault's contents from possible failures in the system. The entire facility is to be protected on three sides by a 9-metre high earth berm. Even the roof has been designed with a eye to minimizing catastrophes and sustaining the perfect climate required for long-term records preservation. It is to be triple laminated, with alternating layers of stainless steel and rubberized roofing, and is to feature a noticeable slope that will shed water.

Technical Notes

General Guide to Government Records Published by the National Archives of Canada

In keeping with its long-standing tradition of making the records of the government of Canada available to as wide an audience as possible, the National Archives of Canada just released a substantial revision of its general guide to the holdings of the Government Archives Division. The new Government Archives Division - General Guide will serve to familiarize researchers, government officials, and the general public on the nature of the Division's activities and to provide a brief description of the textual and electronic records in its custody.

The first two parts of the Guide outline the methods used by the Division to arrange original documentary material, as well as the services and reference aids it offers. The third part describes the various holdings of government records retained by the Division. These descriptions are organized according to the creating government agency. In an attempt to help researchers understand the nature of the records, the descriptions also include a brief administrative outline of the agen-

cy, noting in particular its principal functions and its relationship with other government bodies.

Researchers studying the history of Canadian cartography will be particularly interested in the records of the major federal mapping agencies: the Department of the Interior (Record Group 15), the Geological Survey of Canada (Record Group 45), the Dominion Observatories (Record Group 48), the Surveys and Mapping Branch (Record Group 88), the Geographical Branch (Record Group 92), and the Canadian Hydrographic Service (Record Group 139). In total, the records of these agencies occupy more than 800 m. of shelving, making them the single largest collection of textual records on the history of mapping in Canada.

RESORS

Of special interest to researchers interested in the history of remote sensing is RESORS, an online bibliographic reference database maintained by the Canada Centre for Remote Sensing (CCRS), Department of Energy, Mines and Resources. First started in 1972, RESORS is now believed to be the world's largest reference source on remote sensing. On average, approximately 6,000 new titles are added to the database each year. Last year the CCRS used RESORS to conduct over 12,000 literature searches, resulting in the compilation of more than 190,000 references on remote sensing literature and the distribution over 6,600 interlibrary loans from its extensive collection of books, journals and theses. In early 1990, CCRS issued a licence to Horler Information Inc. to operate the system on a commercial basis. Under this new arrangement, CCRS retains ownership and maintains the RESORS database, while Horler Information handles user services and marketing. Horler Information will be exploring new ways of disseminating RESORS information to wider Canadian and international audiences. For further information on RESORS services, contact: Louis Marcotte, RESORS Manager, Horler Information Inc., Canada Centre for Remote Sensing, 1547 Merivale Road, Ottawa, Ontario, K1A 0Y7, (613)952-2706.

Obsolete maps map be purchased from the Canada Map Office, the cost being $100.00 - $150.00 per ton. Uses for the obsolete maps include gift wrapping, scratch pads, envelopes, lamp shades, plotting paper, and a variety of other creative uses. Contact:

Canada Map Office
615 Booth Street
Ottawa, Ontario
K1A 0E9

Technology/ technologie

by
Roy Doyon

The driving force in map production technology is an innovation that's less than a decade old. That, of course, (in case you've been asleep) is PostScript page description language (PDL). Let's quickly review what's occurred and examine the implications for our profession. In 1983, Linotype and Adobe Systems signed an agreement which permitted Adobe Systems to use Linotype's prestigious type collection. In return Linotype was given the right to incorporate the PostScript PDL into its imagesetters (high resolution laser output devices). At the time of the agreement neither Linotype or Adobe Systems gave a hoot about cartography. Their concern was primarily typography. We'll address cartography in a minute but first let's talk PostScript. On second thought, PostScript takes too long, we'll stick to English.

While Mr. Gutenberg would have been ecstatic with the progress made since he set his bible, setting type for the printing industry in the early 1980's was still labor intensive, time consuming, and tedious (i.e. expensive). By expediting typesetting, a major component of the pre-press operation, books and other printed matter could be brought to press faster and cheaper. Hence more jobs could be printed. There was an obvious capitalistic motive in all of this and the highly competitive nature of the printing industry encouraged innovation and capital investment. Printing, after all, is the sixth largest manufacturing employer on the North American continent. (We should all feel proud that our printed maps help to keep the engines of our collective economies moving along). Consequently, the evolving computer industry (software and hardware vendors) wished to gain a foothold in the printing sector. In 1983, two years after IBM introduced their first PC, Apple introduced the Macintosh (Mac), the first personal computer to deal intelligently with type on screen. In 1984, Apple introduced the Laserwriter which could read and write PostScript PDL. That same year Linotype introduced new versions of its Linotron 100 and 300 imagesetters which accepted PostScript. Aldus, also in 1984, introduced PageMaker, a Mac desktop publishing program that output PostScript files. All the pieces were then in place for the blossoming desktop publishing (DTP) industry. Initially desktop publishing was primarily a tool to produce camera-ready copy of completely formatted pages. The first desktop publishing programs were a bit cumbersome to use but their appearance

fired the creative imaginations of software and hardware developers.

In 1986, the same year that Aldus introduced PageMaker for DOS and Xerox introduced Ventura for DOS, Adobe Systems introduced Illustrator, a graphics arts program that took advantage of PostScript. In 1988 Aldus introduced its graphic design program called Freehand which complimented its Pagemaker program by allowing designers to create and easily add graphics into their page designs. In 1988 Varityper, Compugraphic, and Monotype chal lenged Linotype's near monopoly by introducing high resolution PostScript imagesetters. In the latter part of the 1980's software developers were expanding the capabilities of DTP and graphic arts programs faster than hardware could be brought into production to take advantage of the programs' innovations (we'll talk about this later.) What's important at this juncture is the rapidly expanding capability of the desktop publishing industry, in addition to its sheer size. PageMaker, alone has sold over 250,000 copies. The repercussions in the printing industry were far-reaching. At the same time that DTP was evolving, for example, high end solutions to the prepress bottleneck also were being developed by some of the larger printing supply firms (Kodak and DuPont). Some of these solutions were rendered obsolete prior to their actual production by the more rapidly evolving DTP technology. Hence, the prepress section of a printer's operation was greatly reduced, and in some cases virtually eliminated.

All of this innovation had the effect of reducing the total cost of printing a piece but it also shifted or added new responsibilities to the users of desktop publishing programs. Graphic artists, for example, suddenly had at their command an almost overwhelming variety of type styles. WORLD, a trade publication for electronic publishing, notes that by 1989 there were over 2000 fonts available in PostScript format. This necessitated a more complete appreciation of typography and of the entire printing process. Instead of bringing boards containing designs and specifications, graphic designers were delivering digital files to the printer which were then feed into the imagesetter to produce final negatives.

By 1990 the new generation of laser imagesetters had solved most of the early screening problems and were capable of producing high quality four color process negatives. Software was developed that allowed the imagesetters to print not just one page at a time, but to print one side of an entire signature imposition on one piece of film.

Several additional items may be mentioned to help explain why DTP solutions were attracting the attention of cartographers. First, the DTP software was developing larger format size capabilities that would enable cartographers to have a viable alternative to manual procedures for larger format maps and to the expensive solutions offered by Intergraph and other high-end hardware manufacturers. With each successive version of the graphic arts software packages the maximum format size increased. Aldus Freehand (a Mac program) is capable of producing a 40 inch square (101.6 cm.) illustration. Illustrator (Mac and DOS) produces an 18 inch square page and pages can be tiled together to produce an even larger graphic. MicroGrafx, a DOS program has a possible format of over 100 inches (254 cm.) which is strictly academic since there are no imagesetters capable of printing a page so large. Recent developments in the area of imagesetters, though they fail to tap the full potential of the graphic software, are still reasonably impressive. Agfa's SelectSet 7000 can accommodate sizes up to 22 by 26 inches (56 X 66 cm.). Optrotech introduced its Sprint Express, maximum format of 32 X 40 inches (81 X 101 cm.) and the Optronic ColorSetter XL with a maximum format of 50 X 40 inches (127 X 102 cm.) is advertised as the world's largest imagesetter.

The introduction of Microsoft's graphic interface software, Windows, particularly the new improved version 3.0, which makes DOS computers a bit friendlier is helping to spread the popularity of the graphic arts programs, particularly within the financially pressed academic community, many of which can't afford to set up a Mac equipped lab. In addition, the new versions of the graphic arts programs are noticeably improved, particularly in the case of Deneba's Canvas package. The most used programs seem to be Illustrator, Freehand, and CorelDraw.

Another factor that motivated cartographers to seek solutions in the software developed for DTP was the lack of a viable alternative. Even though computer cartography software has been evolving for several decades, the kindest remark we can offer about the quality of their output is that they are essentially analytical tools characterized by poor quality.

In summary, for a cartographer to produce quality presentation cartography, PostScript based graphic arts software is an ideal solution. There have been a few other developments that are worthy of your attention. ESRI's recently developed ArcInfo module called ArcView contains a file option that reputedly will save the file in a PostScript format. If all the commands transfer to the PostScript file intact this could be a very significant development. Another item of interest is a software package called Apple File Exchange. The program retails for less than $100.00 (US) and transfers

PostScript files flawlessly between DOS and Mac environments and between FreeHand and Illustrator.

Many of you may be familiar with the popular WORLD PROJECTION AND MAPPING PROGRAM, developed by Philip Voxland at the University of Minnesota (*see also Jan Mersey's article, above*). The good news is that David DiBiase of the Deasy GeoGraphics Laboratory (Penn State University) has developed an algorithm to output WORLD files to a PostScript file that can be read into Illustrator. Voxland has incorporated this option into the latest version of the program. DiBiase recently visited the Cartographic Unit at the United Nations in New York City and conducted a demonstration session for the cartographic staff. The results produced thus far have exceeded our expectations. DiBiase describes this PostScript link to the WORLD program along with linkages to the NCAR and the SURFER programs in a recent article in Cartography and Geographic Information Systems (Oct. 91). If you're producing maps, at a scale of 1 million or smaller, using Illustrator or Freehand, you shouldn't miss this important contribution. Aside from its value for producing maps in Illustrator or Freehand, you should have this program for its instructional and recreational value. The WORLD PROGRAM is available from:

Philip Voxland,
Univ. of Minnesota, (612)625-8556;
Bitnet: voxland@atlas.socsci.umn.edu.

With technology evolving so quickly what are the skills we should learn as production cartographers. What do we teach the next generation of production cartographers? The latter task is made painfully difficult by the financial difficulties associated with the ongoing recession. It's obviously difficult to upgrade a cartographic program in the absence of financial support. Should we abandon manual production cartography. By consensus, cartographers I've discussed this with who are proficient in the traditional and the new technologies agree that the traditional skills are still valuable for understanding the capabilities and shortcomings of the computer graphics software. In addition, a strong case can be made for increasing students understanding of the total printing process. Although graphic arts PostScript driven software obviates most or even all of the prepress steps in preparing maps additional responsibilities arise as a result of preparing final plate ready negatives. Our students must become proficient in the new technologies and must understand printer's terminology in order to effectively specify each printing job and ensure that practical standards are agreed upon for the successful completion of each printed piece. We must learn and master these new skills otherwise cartography will be taken over by graphic artists devoid of basic cartographic skills but proficient with DTP programs.

The Map Production Technology session at the upcoming annual meetings in Montreal will focus on PostScript generated cartographic products. I invite you to submit examples of PostScript produced maps for general display. I am currently organizing a session to bring together users of this technology and software and hardware vendors to explore the role of PostScript generated cartography. Please contact me at the UN (FAX:212-750-0956) for additional information or if you'd like to participate.

THE CCA LOGO

by
Henry W. Castner

Many members have asked about the CCA logo. At various times, executive members, the editor of Cartouche, different special interest group chairs, Bernie Gutsell, and a host of other CCA pundits have been quizzed about the source, the form, and the meaning of the Logo. Well now you have the definitive response. From his North Carolina home, Henry has sent North this great insight into that most illustrious and enigmentic visual device: the CCA/ACC logo.

Physically, the CCA logo is made up of a regular icosahedron, a solid figure consisting of twenty equilateral triangles of the same size, within a regular dodecahedron, a solid comprised of twelve equal pentagons. These are two of the five possible regular polyhedrons having congruent faces of facets, each a regular polygon, which meet at equal angles. The five regular polyhedrons are also known as the Platonic solids although they were known to the Greeks even before the time of Plato. The other three which are less reminiscent of a globe, are the tetrahedron (with four equilateral triangles), the cube (bounded by six squares), and the octahedron (with eight equilateral triangles. The icosahedron carries the initials of the Association. Depending upon the orientation of the logo, one is able to read them clockwise from the upper left in the order "CCA" (Canadian Cartographic Association) or "ACC" (l'Association canadienne de cartographie). When the logos are displayed as a pair, both orientations should be used!

The most direct cartographic connection is, of course, with map projections - the representation of the sphere on the some kind of developed plane surface. The most obvious examples of this are Tissot's Indicatrix (which can be imagined as a solid before transformation made up of an infinite number of small circular facets) and

Buckminster Fuller's Dymaxion Air-Ocean Map - a developed or unfolded icosahedron. Both examples speak to the inexact nature of our science: the former being used as a measure of transformation error; the latter necessarily interrupts the earth's surface. But Fuller's map was based on the positive idea that the twenty triangles could be positioned in various contiguous arrangements so as to reveal different global relationships. For example, the triangles can be arranged to show the universal world ocean even though this means that the land masses will be interrupted or placed on the periphery of the map - things we don't normally do. The triangles can also be aligned along a great circle to depict some trans-world communication route or relationship. In other words, his map by its very nature, can be used in any number of valid ways to reveal something about the earth.

Nowadays, the facets also remind us of the various polygons and pixels in data banks that carry thematic information of all kinds. Mapping, then, is much more than merely accounting elements of the physical landscape and major cultural features within it.

Less obviously, the icosahedron suggests the many facets of cartography, some of which are practised and represented by the Interest Groups of the Canadian Cartographic Association. Collectively, the facets define our cartographic "world". The reference to the Fuller Map suggests an organization which is open to experimentation and change, and one which takes a flexible and open approach to the development of ideas about cartography. Placing the icosahedron within the dodechedron reminds us that while we are a "world" of our own, we also operate within other "worlds". The two solids are complete because cartography, in one way or another, impinges on all other areas of intellectual inquiry. Thus there are potential interactions between aspects of cartographic theory and practice and those of other groups whose words are defined buy different intellectual pursuits, practical activities, or hierarchical regions of geographic operation.

I particularly liked the comment about the use of the logo inverted for the French version. This subtle variation has confused many people, including a printer's strip-up worker who had to do a hasty repair on a newsletter job that lost part of the cover-page artwork in the supplied folder (Vol.16. No. 4!).

-Ed.

People

Bryan Monette Appointed Head of NSDB

Bryan Monette has recently been appointed supervisor of the newly created National Soils Data Base (NSDB) Unit of agriculture Canada. Recently the manual cartography unit was reorganized from one into two separate units: one representing a digital cartography unit and the other sticking to paper map products. There are approximately 25 cartographers involved. The NSDB is an outgrowth of the CANSIS system which was a pioneer in the use of digital methods to manage soils data. The NSDB has three data base files: a soil map file, a soil names file, and a soil layer file. The data bases operate at three scales (used to describe the coverage and resolution). The National map covers the whole country and has soil regions generalized into approximately 3000 polygons. Regional data bases represent the provices, and there are larger scale detailed soil survey maps that might range from a letter sized page for a small region to a large map that contains from 2,000 to 4,000 polygons. The main software system is ARC/INFO runing on a network of VAX workstations. The National Soils Data Base expands the capability over the old CANSIS system to include information on problems of blight, insect infestations, etc. It is also used to manage soils and agricultural statistics. Bryan Monette is the secretary of the OICC and is an associate member of the CCA. Further information on the NSDB may be obtained from:

Dr. Bruce McDonald
Agriculture Canada
K.W. Neatby Bldg.
Central Experimental Farm
Ottawa, Ont. K1A-0C6

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ISBN 1-55036-000-0. $ 30.00

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Corporate News

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Stanley Associates Engineering Ltd., Calgary
John Wiley and Sons, Toronto

Intergraph, MapInfo form new Strategic Alliance.

In what has been described by Douglas Gerull, executive vice president of Intergraph's Mapping Sciences Division, as a "strategic alliance of two inherently complementary companies and product lines", Intergraph of Huntsville, Alabama, and MapInfo of Troy, New York, announced an exclusive alliance to develop and market desktop mapping products worldwide.

Gerull says his company's products and MapInfo's will be tightly integrated and available on PC and Unix platforms. "What's important here," he indicates, "is the easy access our customers will now have to low-cost desktop mapping tools — not only as standalone PCs, but as integrated parts of a shared network."

The alliance calls for Intergraph to integrate MapInfo's desktop mapping software into its geographic information systems and to market MapInfo software and data products as part of its line. MapInfo will develop a version of its software for Intergraph's family of Unix-based InterPro workstations.

Conservation Authorities Acquire SPANS

28 Conservations Authorities (CAs) in Ontario have acquired SPANS geographic information systems for use in managing the Great Lakes Shoreline. The Conservation Authorities, in conjunction with Ontario Ministry of Natural Resources (OMNR) district offices, are responsible for assessing the potential effects of development activities on the shoreline environment and reviewing tens of thousands of development applications each year.

The CAs acquired the OS/2 version of SPANS to generate maps that examine an area specific to a landowner's application, display the databases used and the options evaluated that led to a decision, and communicate to the public in a more efficient and effective manner. The purchase of the SPANS system province-wide for the CAs should provide consistency in interpretation and implementation of the shoreline management program. CA operations will be standardized in terms of data gathering and use in decision-making processes, which is particularly crucial to gaining public awareness, understanding, and support of the program.

ESRI Introduces the *GIS Concepts Kit.*

A new educational product that runs with PC ARC/INFO Rev.3.4D has been introduced by ESRI. The *GIS Concepts Kit* is designed to support GIS education within universities, private industry, and government agencies. It is based on ESRI's software and illustrates vector GIS concepts and principles.

The Kit which is separated into two parts, the *GIS Laboratory* and the *Lab Developers Guide*, can be used by itself or integrated easily into other instructional materials. A tiered approach to the different modules allows the user to examine quick tours through to advanced work with SML tools.

Cost of the kit is $150 ($US) which includes a student workbook. Universities and Colleges may purchase one copy of the kit per lab or department and copy the workbook for instructional purposes only. To run the labs, users must have PC ARC/INFO Rev. 3.4D installed on their system.

PAMAP Version 3.0 Enhancements

The latest version of PAMAP GIS, *3.0*, by PAMAP Technologies of Victoria, B.C. has been in distribution since late January. The new version of the PC-based system has many enhancements and new features that are sure to please existing clients and new users alike. .

There are many improvements, notably a direct link to external databases, which provides dynamic link functionality for joining to an external database without copying the data. Install procedures have been streamlined with included proprietary file compression software. The User Command Subsystem has been enhanced to allow condition branching to different locations within a user command file based on the status of the last user puck input. Detailed error messages have been added to assist the user with command lines. There have improvements and added capability in the utility, plotting, and analyzer routines for the system as well.

LA GESTION DES RISQUES ENVIRONNEMENTAUX PAR LA GÉOMATIQUE

(Environmental risk management by geomatics)

par
Majella-J. Gauthier et Réal Beauregard
Université du Québec à Chicoutimi G7H 2B1

Le Laboratoire de Géomatique du Module de géographie vient de faire paraître un rapport sur ce que deviendra la gestion des risques environnementaux particulièrement pour planifier les mesures d'urgence lors d'accidents, de catastrophes et de sinistres.

Les chercheurs ont mis au point un modèle informatisé et cartographique pour non seulement localiser les sources de risques mais aussi pour simuler des situations au cours desquelles l'environnement biophysique et les populations seraient affectés.

L'étude a été subventionnée à parts égales par le Conseil régional de concertation et de développement (CRCD-02) du Saguenay-Lac-Saint-Jean et par la Fondation de l'Université du Québec à Chicoutimi. Elle fournit les bases conceptuelles d'un instrument de gestion et d'analyse de même que des solutions pratiques pouvant être utilisées par les intervenants comme les pompiers, la police, les municipalités, les Départements de santé communautaires et les officiers des ministères de la Sécurité civile et de l'Environnement.

Le territoire sur lequel porte la recherche est constitué des deux villes de Chicoutimi et de Jonquière. On y présente 10 cartes sur la localisation des lieux où se trouvent les produits dangereux: explosifs, gaz inflamables, produits pétroliers, produits à inflammation spontanée, matières comburantes, matières toxiques, matières radioactives, matières corrosives et matières peu dangereuses. On constate que les produits se retrouvent partout dans le territoire et, ce qui est encore plus inquiétant, ils sont souvent concentrés dans des sites qui en rassemblent une grande variété.

Également, neuf cartes illustrent notamment les liens que peuvent avoir les sites dangereux avec les écosystèmes et avec les populations qui vivent aux alentours. Les chercheurs ont fait appel à un système d'information géographique (SIG) pour simuler des situations dans lesquelles il est nécessaire de déterminer quelles aires et quelles populations seraient touchées par des émanations de gaz ou de fumée provenant d'industries. Il a été possible aussi de déterminer par modélisation combien de gens seraient affectées par des gaz, des liquides, des fumées s'échappant de wagon le long de chemin de fer.

L'originalité de l'étude réside également dans le fait que les futurs utilisateurs pourront construire eux mêmes, sur écran et d'une manière interactive, aussi bien les divers scénarios de prévision d'événements malheureux que les moyens à mettre en oeuvre pour en diminuer les conséquences fâcheuses.

Il est opportun de dire que l'utilité de bien gérer les risques environnementaux s'impose. Rappelons simplement que si l'on veut garantir un avenir économique certain aux régions et améliorer la qualité de vie des gens, il faudra trouver les moyens pour non seulement connaître leurs aspirations mais aussi décrire la complexité des paramètres environnementaux dans lesquels elles évoluent. Et, c'est plus fréquemment qu'autrefois que des individus, des collectivités et des administrateurs de tout niveau, croient qu'est venu le temps de préciser particulièrement la nécessité de mieux organiser l'information relative aux risques environnementaux.

Au Québec, tant à l'échelle municipale que régionale, il est facile de se convaincre de l'utilité de la gestion cartographique et de l'analyse géographique dans les questions de risques environnementaux et de vulnérabilité du territoire aux sinistres industriels et aux cataclysmes naturels. Plusieurs régions, et certaines plus que d'autres, constituent des espaces où les risques catastrophiques mettent en péril la sécurité et la santé de la population. Ne mentionnons que: la présence de plusieurs grands barrages de retenue d'eau, la présence de grandes industries comme la métallurgie et les pâtes et papiers, les nombreux sites d'utilisation et d'entreposage de produits toxiques, les noeuds et les voies de transport de produits dangereux, les fortes concentrations géographiques de ces matières, sans négliger les dangers réels de glissement de terrain, de séisme, d'innondation, etc. Le péril est d'autant plus grand que la plupart des habitants sont souvent concentrés près des lieux où les dangers semblent les plus imminents.

Le projet se poursuit au Lac-Saint-Jean et plus précisément sur l'espace desservi par le Département de santé communautaire de Roberval et il mettra l'accent sur la STRES (Surveillance Territoriale des Risques Environnementaux à la Santé).

Nous sommes convaincus qu'un tel instrument sera implanté définitivement au cours des prochaines années et qu'il servira la cause de ceux qui désire améliorer la qualité de vie. Si l'aménagement du territoire a été la préoccupation majeure des années '80, d'ici l'an 2000, ce sera celle de l'environnement.

Note bibliographique:
La gestion des risques environnementaux en Sagamie à l'aide de la géomatique: étude de faisabilité, par Majella-J. Gauthier et Réal Beauregard, Laboratoire de Géomatique, Université du Québec à Chicoutimi, 1991, 57 p. (19 cartes en couleur). L'ouvrage est disponible au coût de 50,00$.

GIS'92 Vancouver

by/par
Peter Keller.

GIS'92 "WORKING SMARTER" February 10-13, 1992, Vancouver, British Columbia..... In case you did not make it, let me tell you about GIS'92, the sixth annual GIS Symposium held on the westcoast of Canada. Running under the theme of "Working Smarter", this year's conference attracted a record number of 1,500 participants. This, in conjunction with a notable growth in the number of vendors exhibiting on the trade floor, surprised many of us who expected a drop in attendance given the prevailing economic climate, and given the number of competing GIS conferences out there these days.

The roster of speakers confirmed the international flavour of this conference, with speakers coming from both, the northern and southern hemisphere. This year's conference was organized into four content streams, each with a closing plenary. Streams included "The Corporate Database", Applications of GIS in Forestry Management", "Environmental Applications of GIS", and "GIS Implementation and Techniques". The conference was opened by the Honourable Frank Oberle, Minister of Forestry, and Stephen Owen, the newly appointed British Columbia Commissioner for Resources and the Environment. Plenary presentations were by John Keene, Hans Schreier, Jospeh Berry, Jack Dangermond, Ellsworth LeDrew, David Goodenough, Michael Goodchild and Stephen Guptill.

The program was complemented by a human resource working group and other technical workshops. Papers presented at this year's conference emphasised the need for corporate data, for integrated implementation strategies, for management of uncertainty and error, and for improved interfaces and visual communication. Talk on the floor was that GIS'92 exceeded most delegates expectations, something helped by a few days of warm and sunny Vancouver weather. Take out your diary and mark February 15-18 1993 - we would love to see you at GIS'93.

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Content Deadlines are: January 31, April 30, July 30, October 31.
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