CARTOUCHE

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CARTOUCHE

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In this issue/ Dans ce numéro .....

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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.

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Les dates limites pour l'envoi d'articles ou de documents sont les suivantes: 10 janvier, 31 mars, 30 juin, 30 septembre (*voir la dernière page*). 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..

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Our Cover: Detail of ACMLA facsimile map #108, *Carte des Nouvelles Découvertes au Nord de la Mer du Sud*, by Mr. Del'Isle, 1750.

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The Membership File/ filière du membres

by/par
Monika Rieger

New Members/membres nouveaux

Charlotte Bell	Victoria, BC
Peter Demask	Grimsby, ON
Ted Finch-Field	Victoria, BC
Gregory Johnston	Stoney Creek, ON
Kathy Mak	Hoofddorp, Netherlands
Joanne Oliver	Victoria, BC
Jason Racher	Welland, ON
Darren Stanger	Brandon, MB

Membership

This year, we have held our membership level at approximately 460 members which is slightly lower than last year. Each year some drop out and new members join, primarily new student members. Many of the student members later become regular members and we are very pleased to have them and offer them a special rate. Faculty members, please encourage your students to join.

This is the last issue for 1993 so it is time for renewal for 1994. It would greatly decrease my workload if members renew early. The easiest way to do this is to e-mail me (`mkrieger@acs.ucalgary.ca`) your VISA or Mastercard number and any change of address, phone numbers, etc. or membership category. Membership dues are payable in Canadian dollars. For members who live in the United States or overseas, a charge card payment is often the easiest way to handle the currency exchange problem. You can send a cheque made out to "Canadian Cartographic Association" or "CCA" and mail it to me at the address on page 2.

If you would like to give someone a CCA membership, please contact me by e-mail or by regular mail and I will arrange it.

GOING, GOING .....

Your last chance to buy at reduced cost:

"Mapping the Planets" slide set. *$20.00*
A 40-slide set with guide book giving an overview of the history and current status of efforts to map the Moon and planets.
Originally distributed for $50.00.

"The Riel Rebellions: A cartographic history"
Cartographica Monograph No. 21-22, compiled by William A. Oppen. *$5.00*

"Explorations in the History of Canadian Mapping: A collection of Essays" Edited by Barbara Farrell, and Aileen Desbarats. *$10.00*

Order from: Roger Wheate, c/o University of Calgary, Geography Dept. (`wheate@acs.ucalgary.ca`)

Elections '94

Preliminary Nominations for the 1994/95 Executive are:

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John Belbin, College of Geographic Sciences
Janet Mersey, University of Guelph

Secretary/secrétaire
James Britton, Sir Sandford Fleming College

Chair, Computer Mapping/GIS Interest Group
Directeur, Groupe d'intérêt sur la cartographie par ordinateur et les SIG
Y. C. Lee, University of New Brunswick

Chair, History of Cartography Interest Group
Directeur, Groupe d'intérêt sur l'hitoire de la cartographie
Carol Marley, McGill University
George States, Simon Fraser Unversity

Chair, Map Use and Design Interest Group
Directeur, Groupe d'intérêt sur l'utilisation et la conception des cartes
Morrie Portnoff, Montréal
Hans-Georg Schlichmann, University of Regina

Further nominations may be made by full CCA members up until April 30, 1994. Please send your nominations of candidates to the chair of the Nominating Committee, Prof. Majella-J. Gauthier (*address on page 3*).

N'importe quel ACC membre régulier peut faire des nominations jusqu'ou le 30 avril 1994. Les membres ayant des suggestions pour les mises en nomination sont invites a communiquer avec Professeur Majella-J. Gauthier (*pour l'addresse, voir page 3*).

President's message/ mot du président

by/par
Alun Hughes

Lament for the Old Days

I write this with the start of term less than 24 hours away, and I have never felt less prepared. It doesn't help one bit that the software I need for a year three course hasn't arrived, nor that half the computers in my year four lab are out of action, but lack of readiness seems all too common these days anyway. It didn't used to be thus, and I can't help musing somewhat wistfully on the way things used to be when I started university teaching 25 years ago.

The topics that I teach – cartography, surveying, remote sensing and geographical information systems (what I collectively call the cartographic sciences) – have changed immeasureably in the last quarter century. At one time there was just cartography, surveying and aerial photography, all with well-established ways of doing things. Since then we have seen a computer-based revolution in cartography, radical changes in surveying, the transformation of aerial photography into remote sensing and the emergence of a completely new discipline in geographical information systems.

The consequences for both myself and my students have been far-reaching. Not so long ago all we had to worry about in terms of equipment were things like pens and stereoscopes. Today's tools of the trade are light years removed in sophistication (not to mention cost). Furthermore, the amount of knowledge necessary for proficiency in the cartographic sciences, whether practical or theoretical, has increased greatly, and acquiring that knowledge poses a growing challenge. The modern student must understand topics as diverse as computer data structures, principles of design, the physics of electromagmetic energy, boolean algebra and theories of cognition—as well as a host of real-world applications that were previously unimagined. It must be much harder to be a student today than it was in the past.

It is certainly much harder to be an instructor. The mere fact that for my third year courses alone I have to know over a dozen computer programs running on four operating systems is evidence of this. A decade ago I was using none of these, and it is no exaggeration to say that my teaching has been turned upside-down over that period. Whereas previously my use of computers in teaching extended little beyond SYMAP on the mainframe, I now teach four courses almost entirely on the computer, and have significant computer components in three others.

No, I don't teach all seven courses every year. I have a normal teaching load of five courses, but these days it certainly seems like seven. The computer is a wonderful tool and I wouldn't be without it for anything, but it does have its downside.

If I were to choose one word that sums up my situation, it would be 'pressure,' pressure brought about by the extraordinary and unrelenting pace of change and the imperative to keep up. Just keeping track of what is happening is hard enough, but every term it seems I find myself making major changes in my courses, changes in response to new software or software upgrades, or new datasets, or new equipment, or something. If the changes could always be implemented smoothly it would help, but all too often the programs won't install, or the peripherals won't cooperate, or the technical support can't make it till next week, or, like this term, orders arrive late and something breaks down. Something is *always* breaking down. I never had these problems with technical pens.

One of the first things people learn through playing video games is that standing still will get them killed quicker than anything else. So says **Ted Nanz**, President of the SPOT Corporation in the latest issue of *SPOTLight*. Video games are his metaphor for the cartographic sciences, and I know what he's getting at. That's just the problem. I am growing tired of trying to dodge the bullets, but do I dare run the risk of standing still?

Dans le bon vieux temps...

J'écris ceci juste 24 heures après le début de la session académique et je ne me suis jamais aussi senti peu prêt. Ça n'aide pas beaucoup quand le logiciel dont j'ai besoin pour mon cours de 3ième année n'est pas arrivé et que la moitié des ordinateurs dans le labo de 4ième année me fonctionnent pas, mais, le fait que les choses ne soient pas prêtes semble de toute façon usuelle ces temps-ci. Ce n'est pas normal que ce soit comme cela et je ne puis m'empêcher de penser avec nostalgie aux façons avec lesquelles les choses se passaient quand j'ai commencé à enseigner il y a 25 ans.

Les matières que j'enseigne – cartographie, relevés, télédétection et systèmes d'information géographique (SIG) – ont changé considérablement au cours du dernier quart de siècle. À un certain moment, il n'y

avait que la cartographie, les relevés et les photographies aériennes, toutes des matières bien établies. Depuis ce temps nous avons vu apparaître la révolution informatique dans la cartographie, des changements radicaux dans le relevé, la transformation de la photographie aérienne en télédétection et l'émergence d'un champ d'application tout à fait nouveau, soit les SIG.

Les conséquences pour moi-même et mes étudiants ont été marquantes, plus qu'on l'imaginait. Il n'y a pas si longtemps, tous nous n'avions pas à nous soucier des équipements comme les plumes et les stéréoscopes. Les outils du métier d'aujourd'hui changent vite et sont de plus en plus sophistiqués (sans parler des coûts). De plus, le bagage de connaissances nécessaires pour demeurer compétent dans les sciences cartographiques, que ce soit du côté pratique ou théorique, a crû beaucoup, et l'acquisition de ces connaissances pose un défi de plus en plus grand. L'étudiant moderne doit assimiler des notions et comprendre des matières aussi diverses que les structures de données en informatique, les principes de la conception graphique, les bases du spectre électromagnétique, l'algèbre boléenne et les théories de la cognition, aussi bien que toute la ribambelle des applications qu'on aurait jamais pu s'imaginer il y quelque temps. C'est plus dur d'être étudiant aujourd'hui que dans le passé; et ce n'est pas plus facile pour le professeur. Le simple fait que pour mon cours de troisième année j'aie à moi seul à connaître plus d'une douzaine de programmes informatiques fonctionnant sur quatre systèmes d'exploitation différents est une évidence de tout cela. Il y a dix ans, je n'utilisais rien de cela et ce n'est pas exagéré de dire que mon enseignement a été bouleversé durant cette période. Au début, l'utilisation des ordinateurs se limitait au programme de cartographie SYMAP sur ordinateur central, maintenant j'enseigne quatre cours qui sont essentiellement basés sur l'utilisation des ordinateurs et je fais appel aux techniques informatiques dans trois autres cours.

Heureusement, je n'assure pas tous ces sept cours chaque année. J'ai une tâche normale de cinq cours par année, mais ces jours-ci cela me paraît comme si j'en avais sept. L'ordinateur est un merveilleux outil et je ne voudrais pour rien au monde m'en départir, cependant il a son envers.

Si j'avais un mot pour résumer ma situation, ce serait «pression», pression exercée par l'extraordinaire et continue marche vers le changement et par le besoin impériaux de se tenir au courant de tout cela. Seulement suivre les progrès sur ce qui se passe exige passablement d'effort, mais à chaque session, je me vois en train d'effectuer des changements importants dans mes cours, changements liés aux nouveaux logiciels ou à la mise à jour des logiciels, ou de nouvelles bases de données, ou de nouveaux équipements, ou quelque chose d'autre. Si les changements avaient toujours été introduits en douceur, cela aurait pu m'aider, mais trop souvent on a de la difficulté à installer les programmes, ou l'équipement périphérique ne veut pas coopérer, ou l'aide technique n'est disponible que dans une semaine, ou -comme pour cette session-ci -les commandes arrivent en retard et il y a quelque chose qui brise. Il y a toujours quelque chose qui brise. Je n'avais jamais ces problèmes avec mes plumes à dessin.

L'une des premières choses que les gens apprennent à travers les jeux vidéo c'est que si tu ne bouges pas tu es le premier à te faire descendre. C'est ce que dit **Ted Nanz**, président de SPOT Corporation dans le dernier numéro de *Spotlight*. Les jeux vidéo sont une métaphore pour les sciences cartographiques, et je sais ce qu'il me reste à faire. C'est justement ça le problème. Je commence à être fatigué d'éviter les boulets, mais je ne peux pas prendre le risque de ne pas bouger.

ICA NEWS

Call for submissions for the four-year Report, Cartographic Activities Canada 1991-1995 for ICA Barcelona, Sept. 3-9, 1995

Canada's Four Year Report will be published in a special issue of *Geomatica*, the journal of the Canadian Institute of Geomatics (CIG). As well as technical papers being coordinatedby Peter Keller and Claudette Leblanc, there will be sections on education, private industry and government. Expect to receive requests for information from Michel Rheault, **Ed Kennedy, David Douglas** and **Norman Drummond**.

The call is out for submission of maps and atlases for the *Canadian Map Exhibit* at ICA Barcelona 1995. *All map producers* are invited to send entries to **Claire Gosson**, Sect., Canadian Map Exhibits, Geographical Services,EMR, 615 Booth Street, Ottawa, Ont.,K1A 0E9. Phone for details *(613) 992- 4134*. The entries will be on display and the final judging will take place during the August 1994 meetings of NACIS/CCA in Ottawa. The map exhibit will also be sent to the International Geographical Union Congress in the Netherlands in 1996.

Vice-president's message/ mot du vice-président

by/par
Marcia Faurer

I recently received a copy of *Geomatics Industry Review* published by Industry, Science and Technology Canada (ISTC), the object of which was to: "...assess the status of the geomatics industry in Canada, evaluate the issues affecting the competitive position of the industry and develop a strategy for strengthening it."

This review was based on the results of earlier studies conducted by the private sector and provincial governments, and also incorporated the results of interviews with"selected representatives from the private and public sectors". Perhaps some of our members were among those representatives and can offer information regarding the interviews.

In general I thought that the tone of the review was optimistic and that it made some very important suggestions and observations that I have selected to discuss here.

Certain themes ran through the review that on first reading caused me some concern, but which I came to realize reflect the government's position in the current economic context. Of course their first priority is to examine each industry by determining how it can be developed so that it benefits the nation, and in two ways this is clearly revealed in this document. The first is to develop and expand foreign markets, and the second is to encourage increased financial support for research and development from the private sector. It may seem ludicrous to suggest that the geomatics industry could make a significant dent in the nation's trade deficit, but if we think of it as one of many similar industries that the Canadian government has reviewed and on which they have made recommendations, then it does make sense to encourage each to consider exporting their products and services. The second recommendation is one that we have heard in several contexts for some time now and will probably continue to hear from the federal government: we support you and want to encourage development in your industry, but get funding from the private sector or from the province. Throughout this review, at almost every opportunity, is a call for industry support from the private sector. Although this was somewhat disappointing, it was certainly not a surprise.

Another theme which attracted my attention was "Human Resource Development" (read: education). While there were no commitments of increased funding as this was not the purpose of the review (and would not matter anyhow as it was published by the previous administration), I found this to be the most encouraging segment of the document. It has already been of use to me, and will in the future continue to help in the development of training and degree programs in 'geomatics' courses. From a number of earlier studies of this industry, ISTC offered the following list of observations and issues that I will reproduce here as it is given on page 37 of the Review:

- The changing technological environment in geomatics is becoming more and more demanding, this will require increased efforts in continuing education to maintain a highly skilled work force and these programs will increasingly be characterized by private sector involvement, distance education, and the use of multimedia technologies.

- Traditionally, the industry focused on technical skills, but there is a rapidly increasing need to balance the technology perspective with marketing and management skills.

- Greater emphasis must be given to the growing need to acquire an interdisciplinary perspective and an increased knowledge of applications, versus the traditional narrow focus on surveying, mapping and technology.

-Increasing need for graduates to acquire postgraduate studies to obtain the degree of specialized skills and knowledge the industry requires.

- Growing need for the educational system (universities and technical schools) to be more responsive to industry needs.

- Growing need for industry to take greater responsibility for providing opportunities for continuing education and apprenticeship programs for employees, as well as industry experience for academic faculty and staff.

It is particularly encouraging for me as I am involved in working toward a cooperative GIS program between Red River Community College and the University of Winnipeg Geography Department. The issue of interdisciplinary approaches is one of the factors that lead to this joint program. The College and the University realize that they each have certain areas of expertise that the other does not, while a well trained and educated graduate must have this broad back-

ground. My experience is primarily with universities, and I can see this document helping to support my contention that many universities need to reexamine their vision of themselves and become more responsive to industry, and by doing so they will also be providing a more meaningful service for their students.

The final theme that I would like to focus on is of concern to the CCA as an association of people who are certainly involved in some way with at least one component of the geomatics industry. This is the question of defining the membership of the geomatics industry and who is represented by the industry associations. This is briefly discussed but the point is an important one and needs to be considered by the CCA. In this section, the authors focused on the Geomatics Industry Association of Canada (GIAC) and point out that while it, and other associations (no, we are not mentioned) are very important to the growth and well being of the industry, relatively few professionals are members of an industry association. They credit associations as having "...played an important role in helping to raise the profile of the industry within governments, in building alliances, in opening new opportunities, in addressing critical issues, and in fostering communication." Two reasons for low memberships were that the membership dues relative to the perceived benefits were too high (GIAC), and "...GIAC and other associations evolved from the surveying and mapping professions and therefore may not be attractive to others involved in geomatics" (!!) They actually said that; it is a direct quote from page 49 of the review. Once I calmed down however, I asked myself why this was cited as a "problem" by the survey respondents. Perhaps we could take some of the blame. If we do, we could work toward changing not the fact but the attitude to, and perception of, mapping, and it can give us a way to focus and direct our activities in promoting the CCA.

The reference for the Geomatics Industry Review is: Ministry of Supply and Services 1993 Cat. No. C2-213/1993 ISBN 0-662-59627-7 CG PU 0043-92-03

Reminder! / attention!

The President's Prize, 1994
Le concours pour le prix du président. 1994

For information, see *Cartouche #11*, pages 22-23
Pour renseignement, voir *Cartouche #11*, pages 22-23

Technology/ technologie

by/par
Patricia Chalk

Map Projection Programs Under Inspection: Cartographers Discuss Their Latitudes

One of my responsibilities as Chair of the Technical Special Interest Group is to arrange a timely and informative technical session for our annual conference. I expect that the technical sessions will be particularly strong this year as our regular program will be broadened by the contributions of NACIS members. Both the CCA and NACIS have included specialized technical sessions in their programs during the last few years with successful results. Since the specialized session format provides such an excellent environment for the exchange of information, I propose a session entitled *Map Projection Programs Under Inspection: Cartographers Discuss Their Latitudes* for our August conference.

During this technical session, cartographers who have a good deal of experience using a particular map projection program will discuss the degree of latitude the program has for particular operations. Contributors need not necessarily be well-versed in all aspects of the projection program they use — a narrowly-focussed review is also informative. I will prepare a summary of the session highlights for publication in *Cartouche*.

In preparation, consider the following:

Scenario 1. I use a map projection program and may be interested in providing information on my experience with particular aspects of the program. Please contact me right away to indicate your interest. No firm commitment is needed yet but I need an indication of interest in the session.

Scenario 2. I do not currently use a map projection program but it might be useful in my operations - I would appreciate the opportunity to pose a few questions on this subject. Forward your specific enquiries concerning map projection programs. We will do our best to address these enquiries during the session. Members unable to attend the conference may also forward their enquiries.

If you have suggestions for an alternate or additional technical session, please let me know. All ideas are welcome!

Map Design and Use/ conception et utilisation des cartes

by/par
Christine Earl

THE PATHFINDER'S ADVENTURE KIT

A recently-published activity kit for children aged 8 and up is *The Pathfinder's Adventure Kit* comprising a Handbook, a compass with lanyard, a waterproof map case, and a folded colour map of a fictional town for practicing map-reading tasks. The map also appears in the Handbook where it is excerpted to illustrate how to read its signs and symbols, and how to use it to navigate and to perform simple measurements. It's a nicely produced package: the book is well-written and interesting with a style neither patronizing nor excessively technical, the illustrations are excellent, and the activities seem to provide some challenges without being too complicated. My only criticisms of the book are of the sections on theory of projections, and of contour representation. These are difficult concepts to encapsulate and the authors are only partly successful, I believe, in simplifying these theories for children.

The authors, Kennedy, Smith, and Hancock, describe the Mercator projection quite well, but clearly imply that it is the only projection system in existence. It is true that the Mercator projection is so widely used that it is the one most likely to be familiar to children, but to give the impression that it is the only way of showing the round earth on a flat map is, in my opinion, an unfortunate oversimplification. As well, the Mercator map shown as illustration for this chapter is poorly produced — the continental outlines are too crude given the neatness of the grid, and the grid itself does not adequately illustrate the distortion by spacing the parallels obviously further apart as they progress towards the poles.

The chapter on interpreting relief from contour representation is pleasantly contextualized in the selection of a cycling route to a friend's house from two alternatives which traverse different topography. The views of the terrain have the contour lines sketched on them but the text does not explain that the lines join points of equal elevation, and I think this is a point which it is important to make explicit. Instead, the authors adopt the idea that the land is layered in sections of equal thickness, a useful concept but one which needs a bit more elaboration as, for example, it is not very clear what the contour lines are.

Despite these criticisms, I liked the kit a lot as I found it fun to read and appealingly designed. Sections include, amoung others, scale, using the map grid, navigating with the compass, making your own map, and planning a cross-country hike. Each section or chapter fits on two facing pages. This allows the reader to move quickly through the topics or sample the book randomly. There is a contents list at the front of the Handbook for easy reference.

As a child I used to take my school atlas into the garden and lie in the shade of a spirea bush where I would turn the pages slowly, delighting in the colours and shapes, intrigued by the names. Sometimes I could persuade my sister to play an atlas game with me whereby one of us would choose a place or feature name and the other had to find it. I enjoyed this more than she did although she has since become a landscape designer and produces plans too (though she is inclined to scorn spirea, I don't know why). I feel certain that I would have loved "The Pathfinder's Adventure Kit" if it had existed when I was ten, and even as a slightly jaded, grown-up professional mapmaker I found it entertaining and colourful and a good introduction to the sport of orienteering.

The Pathfinder's Adventure Kit by Christine Kennedy, Mark Smith and Pat Hancock $15.95 Somerville House Publishing, Toronto, May 1993.

That Ontario Attitude again...

as seen by Bill Barrow (G0391@VMCMS.CSUOHIO.EDU) and posted on MAPS-L listserver.

For all Map Mavens concerned about the state of American geographic knowledge (or proofreading skills) I submit as exhibit one the November 8th (1993) issue of Business Week (p 28A), wherein *Lake Ontario* is labeled *Lake Superior*. Smallest and lowest, yet "Superior" nevertheless, I guess.

CCA-ACC-NACIS '94

August 9-13, août 9-13
University of Ottawa

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Update information can be found in supplement insert in this issue of *Cartouche*.

Automation/ automation

by/par
Y. C. Lee and David J. Coleman

Internet; a World of Free Information. Part 1

This is a two-part article on Internet. Part 1 introduces the Internet, and Part 2 describes how to access GIS-related information on the net.

Introduction

The computer network has expanded our horizon to reach information sources at remote sites. The Internet is a collection of more than 5000 inter-connected networks at campus, local, provincial, national and corporate levels to form a truly international network, allowing data to be passed between sites at very high speed. The early 1990's will be remembered as the period during which the interest in "internetworking" really exploded, with the number of Internet users already growing at a rate of over 10% per month.

Internet applications have rarefied names like "Telnet", "FTP", "Gopher" and many others. (Internet enthusiasts use these terms as both nouns and verbs — sometimes in the same sentence. Curious...) People still living in the rest of the world, though, should see the Internet as providing three valuable services to its customers (from [Maloff, 1993]):

1. Fast communication within and between organizations,

2. Access to information on a wide variety of technical and social subjects, and

3. Access to scarce or uncommon resources.

First, through the use of electronic mail, remote login and file transfer applications, organizations have a desktop alternative to the telephone and fax machine. Graphics, text, image and even sound files may be transferred easily from site to site as simple "file attachments" to a routine e-mail message. Specialists separated by thousands of miles may exchange copies of the same file to complete a project, presentation or proposal on schedule. Communications capabilities possessed by only a few major institutions and the largest "Fortune 500" corporations five years ago are now available to any small business, school, household or even individual traveller with a direct Internet connection or a modem in their PC. Second, the Internet provides access to on-line databases, file servers, libraries, news groups and bulletin-board discussion lists around the world. Network navigation tools like "Gopher", "Archie", "Veronica" and WAIS, among others, are making it easier to extract timely and relevant information from the thousands of data sources now available on the Internet. The information provided through such services — as well as background "user accounting" data on who actually reads and participates in these bulletin boards and discussion groups — can be valuable to researchers, end-users and even target marketing organizations.

Finally, an Internet connection allows end-users to share access to specialized devices which are too expensive or cumbersome to be located at every site. One of the original reasons for Internet development was to provide remote research centres with access to sueprcomputing facilities in a few select locations. While this is still a bona fide example, new applications also give remote end-users access to medical scanning systems, high-volume copiers, printing and imaging services, field sensors and optical disk reproduction systems, among other facilities. This concept has now moved from big government and universities into even the small business arena. For example, to increase market share and competitive advantage, some businesses are now offering on-line Internet access to their printing, reproduction and database facilities.

Decoding Internet Addresses

Internet uses a common addressing scheme for all sites. To uniquely identify a site, an Internet number (or IP address) such as 132.206.2.3 is used. This number is translated to an alphanumeric code called FQDN (for Fully Qualified Domain Name). The FQDN for Internet number 132.206.2.3 is archie.mcgill.ca showing more clearly that the site is located at the McGill University (the mcgill part) in Canada (the ca part). When addressing a site on Internet, both its FQDN or Internet number can be used, although most people prefer the FQDN because it is easier to remember. However, the Internet number might come in handy sometimes if the translation, which happens behind the scene, fails for some reason. Some use the convention of placing the Internet number within brackets after the FQDN.

To send a message to a user on an Internet site, we need to know his or her e-mail address. The Internet form is based on an extension of the FQDN. For instance, the user `SOMEONE` using the `archie.mcgill.ca` system could be given the address

SOMEONE@archie.mcgill.ca.
It should be noted that e-mail addresses as well as FQDN's are not case sensitive. Other than allowing the sending of e-mail messages, the Internet computer network connects to a huge collection of free information and software. Most computers in educational institutions are already connected to the Internet, and they offer e-mail, file transfer, and interactive access services to other sites. All you have to do is to ask for an an e-mail address and an account to allow you to use these services.

Accessing Information on the Internet

You can obtain information concerning network services in a variety of ways. New Internet voyagers familiar with e-mail should send a letter to mail-server@rtfm.mit.edu with the message: send usenet/news.answers/internet-services/faq . Within minutes, this request will return pages and pages of useful information on Internet news information retrieval, mail services and much more. The following free books on the network are particularly useful for an introduction to the Internet:

1. *The Big Dummy's Guide to the Internet* by Shari Steele,

2. *Zen and the Art of the Internet - A Beginner's Guide to the Internet* by Brendan P. Kehoe, and

3. *The Hitchhikers Guide to the Internet* by E. Krol.

The first thing you might want to do is to locate the sites containing these publications. This can be done by sending an e-mail message to a query system called archie created by a group of people at McGill University. There are now serveral sites containing the archie database, and we have used the site archie@sura.net in Maryland, USA to find the book *Big Dummy's Guide to the Internet* as an illustration. To find out all locations having files with any part of their name containing the string "dummy", send an e-mail message to archie@sura.net with Prog dummy in the "Subject:" line. A reply will come back to you as an e-mail message. One of the entries in it might appear like this:

```
Host seq1.loc.gov (140.147.3.12) Last updated
10:14 25 Oct 1993
Location: /pub/IUG
FILE rwrr 361840 bytes 10:48 25 Sep 1993
big-dummys-guide.txt
```

It indicates that a text file of the book resides in directory /pub/IUG of host seq1.loc.gov, which is probably a government computer somewhere in the US. To obtain the file, use the FTP (File Transfer Protocol) or similar facilities on your computer. An session on a Sun Workstation might appear like this:

```
SunUnix: ftp seq1.loc.gov
Connected to seq1.loc.gov.
220 seq1 FTP server
    ($Header: ftpd.c 2.5 89/12/15 $) ready.
Name (seq1.loc.gov:yclee): anonymous
331 Guest login ok, send ident as password.
Password: (enter your e-mail address here)
230 Guest login ok, access restrictions
apply.
ftp> cd /pub/IUG
250 CWD command successful.
ftp> get big-dummys-guide.txt
200 PORT command successful.
150 Opening data connection for big-dummys-
guide.txt (ascii mode) (361840 bytes).
226 Transfer complete.
local: big-dummys-guide.txt
remote: big-dummys-guide.txt
369296 bytes received in 1.3e+02 seconds (2.9
Kbytes/s)
ftp> quit
221 Goodbye.
```

This is called an anonymous FTP because you login using "anonymous" as your name and your email address as the password. A list of all anonymous ftp sites around the world is contained in pub/ftp-list/ftp.list at site pilot.njin.net (128.6.7.38). The file sites.location in the same directory contains a list of the archie sites. A good place to look for information about the Internet is at site nic.merit.edu (35.1.1.48) in the directory /documents/fyi . The file fyi_20.txt is about Internet, and fyi_04.txt contains some useful tips for new Internet users. You might want to first get the file INDEX.fyi which contains an index of the documents. There are published books about Internet that you can buy. The one by Fraase (1993) is a good start for Mac users. The file fyi_19.txt at site nic.merit.edu has a list of other books and articles that might be of interest.

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Education/ éducation

by/par
Nigel Waters

Maps and GIS: Never too Young to Learn?

At the university level the appropriate level for introducing GIS is a contentious subject. Goodchild (1985), for example, has argued for pushing GIS instruction down to the very introductory levels in the university geography curriculum. He sees it as fundamental to any further work in geography: *It follows that GIS belongs at the root of the spatial analysis curriculum as an organizing principle from which both statistical methods and cartography can be derived.* **Micha Pazner, Chris Kirby** and **Nancy Thies** developed the MAP II package on the Macintosh platform to provide users with a simple entry into the world of GIS – an entry which took full advantage of the highly intuitive, graphical user interface of the Macintosh. More recently Pazner (personal communication) has argued for extending the use of GIS down into the high schools and both the IDRISI and NCGIA organizations (at Clark University and the University of California at Santa Barbara, respectively) are already promoting the use of GIS in schools.

We should ask ourselves "should we extend GIS all the way down the school curriculum?". I mean right down to Grade 1 or even kindergarten. Two distinct streams of research suggest that Yes, we should. Indeed not only do they suggest that we should but they imply that we must.

GIS: The Knowledge Machine

The first of these streams of research emanates from the work of **Seymour Papert**. In 1980 Papert regaled us with the iconoclastic, blockbuster of a book *Mindstorms* which introduced the graphical language, Logo, to non-computer science audiences. Papert argued forcefully for replacing BASIC with Logo as the child's first introduction to computer language. He showed that Logo would allow them to do something useful immediately without having to know all the arcane details of input and output and data manipulation. Recently he has published a new book (Papert, 1993) which takes his thesis much further. He argues that children learn easily and almost joyfully through the use of computers, that they have an enormous capacity for generating theories (see also de Bono, 1972) but that they lack information and are dependent upon adults to provide this for them. Thus the introduction of a Knowledge Machine (perhaps a.k.a. a knowledge-based GIS) will provide them with access to the information which will allow them to determine which of their competing theories will work, which best fits the data.

Papert criticizes the tendency of schools to have too few computers (only one to every 50 students, on average, throughout North America) and the practice of putting them all in a separate computer lab. Such practice, he argues, means that the computer which started out as *as a subversive instrument of change was neutralized by the system and converted into an instrument of consolidation*. (Papert, 1993, p. 39). A colleague of mine in the Faculty of Education at the University of Calgary (Lorelei Rogers, personal communication) has argued this same point to little avail for almost a decade.

If we agree with Papert that computers can be and must be introduced to the very youngest of our students and if we agree with Balchin (1976; also Boardman, 1983) that graphicacy is as an important skill (the fourth ace in the pack) which should be taught alongside the skills of numeracy, literacy and articulacy then introducing our elementary school children to GIS seems like a much more reasonable idea.

Maps, Maps, Maps

Jay Ingram, host of CBC Radio's program *Quirks and Quarks*, recently published the book *Talk, Talk, Talk* (Ingram, 1993). One of the most disturbing stories that Ingram recounts revolves around Genie, a young girl who was physically abused and beaten for thirteen years whenever she tried to talk. Like other children who have been deprived of communication she never achieved a full command of English grammar. The argument is that you should learn language as early as possible or you may never achieve full fluency. Perhaps the same is true of electronic languages and perhaps it is also true of graphicacy and GIS. The cognitive abilities of children were for many years underestimated and held in thrall by Piaget's theory of intellectual development (Piaget and Inhelder, 1956) but more recent research has shown children's capabilities to be much greater than originally supposed (see especially the work of Margaret Donaldson, 1978; and in geography Blaut and Stea, 1971).

Conclusion

So there would seem to be no reason not to and many compelling reasons for introducing students to the joys of GIS at a very early age. There may only be one

cautionary note and that is this: if we teach our students to think in one particular manner, they may find it hard to think in any other fashion, so other skills may be lost. Genie, you see, could recognize patterns on standard tests better than any one else has ever done. We should be wary of such lost abilities just as **Mark Twain** (1980, reprint) warned us when discussing his new found skills as a Mississippi pilot: *Now when I had mastered the language of this water and had come to know .... the great river as familiarly as I knew the letters of the alphabet, I had made a valuable acquisition. But I had lost something, too .... All the grace the beauty, the poetry had gone out of the majestic river!*

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Retirement dinner for Geoff Matthews

Submitted by
Byron Moldofsky

On October 1 an event was held to honour **Geoffrey Matthews**, Chief Cartographer at the University of Toronto since 1963, who is retired last autumn. Some eighty friends and associates gathered to toast Geoff and thank him for his long and productive service at U of T.

In a career bracketed by two major projects, the *Economic Atlas of Ontario* (1969) and the *Historical Atlas of Canada* (the final volume of which is in bookstores now), Geoff has designed and produced some 24 atlases and hundreds of published maps. Many of these have won kudos from reviewers and awards from geographical societies, and publishing associations, around the world. Geoff received a special award for service to the profession of geography from the Canadian Association of Geographers in 1988 for his work.

Several of his colleagues spoke in tribute to Geoff: **Don Measner**, who hired Geoff for his first job in Toronto; **Bill Dean**, Director of the Historical Atlas and collaborator at U of T since 1963; and **Byron Moldofsky**, who has worked with Geoff since 1980 and will take on the position of Manager of the Cartographic Office at U of T. **Alun Hughes** and the Canadian Cartographic Association sent a telegram of appreciation as well.

Geoff himself spoke nostalgically of his years at the University, spanning the reigns of seven chairmen of the Department. He thanked his many co-workers, especially **Jane Davie**, who has worked in the Cartography Office for 26 years. His plans for the immediate future are to "sit back and relax" for a time, and eventually to build a house to live in, on a plot of land in Queensland, Australia. His friends and co-workers all wish Geoff and his family the best in his well-deserved retirement.

Wanted!

Content for up-coming issies of *Cartouche*. We need cover artwork, news clippings, commentary, new about events, and anything that might be of interest to Cartographers. Contact the Editor (see page 2) if you want to contribute!

Cartographica

by/par
Bernard Gutsell

The current year has been a productive year for *Cartographica* as readers will now have received Volume 29/2 Summer 1992, Volume 29/3 & 4 Autumn & Winter 1992 and Volume 30/1 Spring 1993. The current issue, Volume 30/ 2 & 3 Summer & Autumn 1993 is now in page proof and should be in your hands by Christmas. Work is progressing well on the final number of the year, Volume 30/4 Winter 1993, and we are hoping that winter won't be too long a season!

In his detailed report for the Spring 1993 edition of *Cartouche*, **Ed Dahl** wrote that we were planning a second monograph to follow the splendid one edited by **Robert Rundstrom** and entitled *Introducing Cultural and Social Cartography*. Incidentally, it was suggested recently that as this monograph is such a fine work it should be reprinted as a textbook. Now that would be exciting! The second monograph reported above stalled for a long period and finally reached here last August. It's a good piece of work and will prove of value and interest to the readership. However, it was not of sufficient length to stand on its own as a monograph. Accordingly, I have designed it as a Collection of Papers within a standard, double-number journal of 128 pages. It's a sort of mini-monograph and is entitled *Mapping Data Quality*. There are five papers that introduce impediments to the representation of data quality by addressing individual research problems. The first paper is by **Barbara Buttenfield**, Guest Editor, and entitled *Representing Data Quality*. The other papers are: A *Cartographic View of Spatial Data Quality* (Matthew McGranaghan), *Visualizing Uncertainty in Soil Maps by Animation* (Peter F. Fisher), *Exploring the Quality of Enumeration-Area Data with Graphic Scripts* (Mark Monmonier), and *Visual Access to Data Quality in Geographic Information Systems* (Kate Beard & William Mackaness). The second part of this double-number includes six papers, 2 review articles, the section Recent Cartographic Literature and more than 20 reviews. The first, by **D.R. Fraser Taylor**, ICA President, is the paper he presented to the 1993 Annual Meeting of the Canadian Association of Geographers – *Geography, GIS and the Modern Mapping Sciences: Convergence or Divergence?* This is a thought-provoking piece. The other papers are as follows: *Cartography without 'Progress': Reinterpreting the Nature and Historical Development of Mapmaking* (Matthew Edney), *Consensus or Confusion: Cartographers' Knowledge of Generalization* (Monika K. Rieger and Michael R.C. Coulson), *What Makes a Map a Map?* (Denis Wood), *Thematic Maps and Text: An Analysis of 'What Happened There?* (K.A. Rittschof et al.), *Map Use in Regional Newspapers in the Midwestern United States 1930-1985* (Robert B. Kent and James M. Sanders). The review articles are quite noteworthy. The first is **Barbara Belyea**'s review of **Christian Jacob**'s *L'Empire des Cartes: Approche Théorique de la Cartographie à travers 1'Histoire*, the author of which is associated with the Centre Louis Gernet in Paris. Then in the second review article, **Christian Jacob** reviews The *History of Cartography*, vol. 2 bk.1, subtitled *Cartography in the Traditional Islamic and South Asian Societies*.

We are now working on the Winter number (Volume 30/4 1993), a journal issue that will include publication of the ICA Report *The Selected Main Theoretical Issues Facing Cartography* prepared by the ICA Working Group that was established at the Bournemouth Conference to define these issues. The Report was printed in May 1993 for limited circulation within the Association. It is an important work and it was decided that we should provide it with a wider distribution and, hopefully, receive comments and criticisms for later publication either in the *ICA Newsletter* or in *Cartographica*. Five main theoretical issues were selected by the Working Group and each item was allotted to members according to their favourite subject: *Map Functions* (Ulrich Freitag), *Spatial Processes* (Christopher Board), *Social Context* (Zsolt Török), *Processing Digital Data:Digitalized Image and Map Processing* (Sylvie Rimbert), and *Map Language* (Ján Pravda). You may recall that we printed a lengthy outline of this report in *ICA Newsletter* No. 20, October 1992. Other papers for the number are now out for refereeing; they cover subjects such as interpolation of contour lines, GIS-based analysis, structuring access to geographic information, and map design.

We've really tried to make better progress with the publications this year and expect to maintain the momentum with the continuing assistance of **Ed Dahl, Mike Coulson, Jan Mersey** and the many referees who have worked so diligently.

Postscript...

Just before going to press, I found out that **Ed Dahl**, longtime Associate Editor, was intending to resign from his post. Ed has been an integral part of the team behind *Cartographica* for many years. When I began working on *Cartouche*, Ed provided all kinds of brilliant insight and assistance. From this experience alone, I know how much he will be missed. Look for more information in the next issue. *Editor*

Cartography, Geomatics, Cartographica, and Geomatica

by
Roger Wheate,
University of Calgary

My four-year tenure as CCA Manager (1989-93) coincided with a period of soul-searching for cartographers and the field of cartography — defining their place relative to the ever-expanding scope of Geographical Information Systems (GIS). Over that time, the CCA and like-minded associations have experienced a diminishing membership against an increasing number involved in GIS. In these four years, our average membership dropped about 6% annually, but was temporarily counterbalanced by new members in the associate category.

As manager, I received many interesting observations from members, including the following comments from three past- presidents of the 1970's, 80's and 90's:

> "Cartography is finished; it is now merely a subset of GIS"
>
> "While WE know how cartography has developed with GIS, when I try to get people to join the CCA, they consider cartography as dealing with historical matters. Perhaps (the journal) Cartographica should be renamed Geomatica."
>
> "The GIS development boom is now over; all that is left are soft applications".

I would like to consider these comments, one-by-one, in the context of the GIS explosion of the last decade.

"Cartography Is Now Finished; It Is Merely A Subset Of Gis"

Although 'GIS' has never been properly defined, its practitioners understand the central concept to involve data *analysis* , with database management and display as secondary, though vital, components. Indeed, some argued unsuccessfully that the field should really be GAS -A for analysis, or GIP -P for processing, to distinguish the field from a vendor system. Herein lies the distinction between GIS and computer mapping. The final step of map production was an afterthought for some GIS's and the practitioner, often no cartographer, was left with limited design options.

As CCA manager in 1991, I was invited to give the opening presentation in a GIS colloquium. The next speaker expressed some temerity at following a cartographer, as his opening line was "Maps are bad!". While there was little chance of persuading such a fellow to join the CCA, his sentiments were shared, vis. that the main work in GIS is data management and manipulation and not the printed by-product. GIS-produced maps often are bad, because they can be turned out so easily. My favourite example is the buffer. These latter-day "hairy caterpillars" have adorned vendor advertisements and demonstrations, but without combination with additional layers, they simply create a fattened road or corridor. They epitomise what I refer to as the "fridge phenomenon". Computer experts and neophytes alike display computer graphics regardless of their artistic and scientific merit, with the same blind pride as a parent affixing their child's latest scribbling to the fridge. They imply "Anything drawn by a computer must be good", although computer-phobics may feel the opposite. At a recent meeting of Canadian geographers, a "traditional" geographer described GIS as "high-tech trivial pursuit" much to the delight of the audience which was like-minded. Though he may be ivory-towered, he had a point: the technology is much abused.

Early GIS and computer mapping products could be associated, usually negatively, with the system that had been used to create them, in the same way that hand-drawn maps using Leroy lettering had a distinct look. One might draw an analogy with sporting events where it is acknowledged that referees have done their job well if they are unnoticed, by not leaving an unwarranted mark on the game. Similarly, the finished map should not bear the signature of the system used to create it.

The separation of data analysis and map production has now been recognised by many vendors in a variety of ways. Some have produced a new mapping module for map production; others have merged with more cartographically oriented programs or facilitated data transfer into a graphics design package. The final map product is no longer an apologetic appendage on the back-end of a GIS and forms a separate or dual process.

"...They Consider Cartography As Dealing With Historic Matters, Perhaps *Cartographica* Should Be Renamed *Geomatica*."

Automation has re-written cartographic methods over the last two decades but while many thousands are now practising GIS, there may be only a limited number of hundreds sufficiently interested in the potpourri of cartography to join an association such as

the CCA. However, no-one needs a national GIS society since the main reasons people join such groups is to be informed on their field. This is adequately served in GIS by numerous meetings, trade journals, vendor services and technical support hot-lines.

Some organisations have changed their name and/or journal to appeal to a potentially greater audience: the *American Cartographer* is now the *Cartography and GIS Journal*, the *Canadian Institute of Surveying and Mapping*, has recently become the *Canadian Institute of Geomatics* renaming its journal to *Geomatica*. This might be regarded as more of a philosophical statement. By doing so, this says " We cover several things, one of which is making maps", while our (CCA) statement remains, "We are cartographers, and our common interest is making maps, which we can do in a variety of ways".

"The Gis Development Boom Is Now Over; All That Is Left Are Soft Applications"

Now that GIS technology is decidedly here, the development curve does appear to be flattening out. Conferences are filled with interesting GIS applications encompassing a wider range of disciplines, but fewer original designs. Fraser Taylor in his opening address to the 1986 CCA conference (reprinted in the CCA Newsletter, 13,1, 1987), summarized Canada's experience in computer mapping/GIS in successive stages through the 1960's, 70's, and 80's into modes of "gee whiz", "My God", "Let's try again", "Oh oh" and "We've made it". In 1994, one of Canada's largest GIS conferences has as its theme "So, now what?". I suggest in response that the phrase for the 1990's might be "Just do it!".

The CCA is considering, among other restructuring issues, the merging of the GIS interest group with the technology IG. This does not infer a lessening of interest in GIS, merely the recognition that GIS is just one of several technologies used to produce maps. Over my years as manager, there was a very strong correlation between members who indicated a high interest in GIS and in technology. Over the last ten years, the overlap of these two interest groups has led more than one elected chair to ask: what is the difference?

Final Thoughts

There is little doubt that GIS continues to draw the crowds in a way cartography does not, yet the field of cartography has hardly been more active. In the educational milieu, the perception by administration that cartography is not as important as GIS combined with reduced budgets may eliminate cartography as a stream in many university departments. Cartography remains strong only if the GIS people are also cartographers. Several colleges already appear to have focused on GIS training, without the cartography component (using their non-renewed membership in the CCA as an indicator). Bill Loy as President of the Cartography Specialty Group of the AAG (Fall 1993 newsletter), recommends that teachers rename their courses to something like *Cartographic GIS* in parallel with *Analytical GIS* in order to appeal to the masses.

Having assimilated the effects of the GIS explosion it now may be the time to re-examine map design which has been overwhelmed by technology over the last two decades. In this sense, the upcoming Symposium on Cartographic Design and Research (adjacent to the CCA annual meeting in Ottawa this August) is most timely, since the last was held in 1970 (see Cartographica Monograph #2: Map Design and the Map User). Over that period, computer generated output has passed from a level of quality unacceptable manually, to maps that draw comments that "they look too good to be drawn by computer". Perhaps the era of bad maps is drawing to a close and we can anticipate at least a mini-renaissance in cartography. Cartography is very much alive, but cartographers who ignore the technologies of cartography, including GIS, will cease to be.

Clippings

A collection of items clipped from various newspapers that are of interest to cartographers. More submissions are welcome and should include all reference or citation infomation.

Carto-philatelic Controversy

–Submitted by Claudette LeBlanc

The following letters appeared in the *Halifax Chronicle-Herald* late in 1992. They discuss apparent map distortions found on a particular stamp and the potential impact of such distortions. The stamp is a hologram stamp, so reproduction in *Cartouche* is not possible. Seeing the stamp is not mandatory to understand the first writer's concerns; however, readers may want to find a copy of the stamp to resolve the apparent conflict between the two letters. I am sure most readers will have some observations to make on the response.

Dear Editor:

Canada Post has issued a beautiful stamp about Canada and space. It is a hologram showing a map of Canada, superimposed by a grid of meridians and parallels and with a spaceship in orbit. The stamp can be best appreciated when it is held in sunlight or other extensive light.

However, on closer examination, one has to come to the conclusion that the artist who designed the stamp allowed himself quite some latitude in using his privilege to apply artistic licence. Not only are the parallels curving in the wrong direction, but the map of Canada is rather distorted.

The parallels start at the border between the Prairie provinces and the US, thus at the 49th parallel. The distance between the parallels is approximately five degrees. When observing the stamp, one can notice that northern New Brunswick is placed on the 54th parallel, and the remainder of the Maritime provinces are more northerly than the 51st latitude.

The Maritimes are, in fact, located between the 43.5 and 48th parallels. Thus, Canada Post has pushed the Maritimes about 800 kilometres towards the North Pole. Foreigners who receive the stamps will think we Maritimers are even worse off, freezing in the dark, than those living in the Prairie provinces.

Weather maps of Canada shown on TV often have the same dislocation of the Maritimes. Thus, Canada Post is not the only culprit that shoves the Maritimes around.

Con Desplanque
Amherst

Con's letter prompted this reply from Canada Post.

Dear Editor:

I would like to thank your reader Con Desplanque for his interest in our "beautiful stamp about Canada and space".

North America's first hologram stamp is something we at Canada Post Corporation are extremely proud of; however, I would like to clear up an apparent misconception on the part of your reader, concerning the grid of meridians and parallels being superimposed on the globe. Your reader suggests the Maritimes have been mistakenly pushed 800 kilometres northward in relation to the Maritime's actual position.

The grid does not represent meridians and parallels. Rather, it symbolizes satellite mapping grids, such as the Universal Transverse Mercator grid, used in sophisticated map-making.

I think you will agree that Canada Post has not "shoved the Maritimes around", but rather has produced a first-rate postage stamp that all Canadians can be proud of.

Jim Phillips
National Media Relations, Canada Post.

Other CCA members may have encountered similar stamp-related cartographic issues. The editor would be happy to compile these into a column for future publication.

Mapping Cracks

–Submitted by Jeffrey Murray.

From the *Ottawa Citizen*, Tuesday, February 16, 1993, page D12.

Rain or shine cartographers trundle around the city looking for cracks. They're paid by lawyers whose clients trip on flawed sidewalks. But in one of the wackiest of legal ironies, the cracks are mapped before people hurt themselves.

It's a tort twist only lawyers could love and dates back to 1979 when New York enacted a law to let the city off the legal hook unless it could be shown that it knew about the specific blemish that caused someone to fall. To keep the city in the line of fire, the lawyers got together and formed a company that satisfies the prior notification by tracing the cracks.

Typically, Big Apple Pothole & Sidewalk Protection Co. of Manhattan sent the city 3,290 maps last year, allegedly showing 750,000 sidewalk defects.

Big Apple keeps copies and charges lawyers a fee to check whether a certain crack has been registered with the city.

For its purposes, the Department of Transportation considers the maps impossibly flawed and tosses them into storage with hardly a glance. For the record, the 10-year accumulation totals about 80,000 maps, marking millions of cracks.

New York spends nearly $30 million a year paying people who trip on flawed sidewalks.

Nouvel atlas!

-Soumis par Yves Tessier

Vachon, Bernard et al.
Atlas De L'évolution Démographique Des Municipalités Locales Et Des Municipalités Régionales De Comte Du Quebec, De 1951 A 1991

Sainte-Foy, Union des municipalités régionales et des municipalités locales du Quebec, 1993. 244 p. 50 $C plus taxes

Commandes:
UMRCQ
a/s de Danielle Joyale
2954 Boul. Laurier, bureau 560
Sainte-Foy, QC G1V 4T2

Introduction: " La géographie municipale du Quebec: du morcellement au regroupement, 1855 a nos jours"

Pour chacune des 96 MRC (municipalités régionales de comte qui englobent 1450 municipalités locales):
- carte de l'évolution des populations municipales 1961-1991
- structure par age 1991 (pyramide d'age)
- tableau statistique
  - population par municipalité 1951-1991
  - pourcentage de variation
- courbes démographiques
  - total du Quebec
  - région administrative
  - MRC
- texte explicatif (1 p. par MRC)
  - les grands traits de l'évolution démographique
  - tendances récentes
  - répartition de la population
  - la structure par age

" Voila un document qui permettra de saisir d'un seul coup d'oeil les tendances démographiques des municipalités et de documenter avec précision une réalité qui a des incidences fondamentales sur la formulation des politiques d'aménagement et de développement du territoire"

extrait de la Présentation

Une cartographie (monochrome) simple et facile a comprendre. Un recueil très commode de statistiques démographiques. Un atlas sobre et sans prétention mais ESSENTIEL pour comprendre l'évolution démographique récente du Quebec.

Corporate News

CORPORATE MEMBERS

J. M. Ellis,	Metcalfe, ON
ESRI Canada	Don Mills, ON
Idrisi Project,	Worcester, MA
Intergraph Canada,	Calgary, AB
Intergraph Corp.,	Huntsville, AL
Map Art,	Etobicoke, ON
Ph.D. Associates Inc	North York, ON
Projections Mapping Group,	Calgary, AB
Stentor Resources,	Toronto, ON
Universal Systems Ltd.,	Fredericton, NB
John Wiley and Sons,	Toronto, ON

ESRI Announces ARC/INFO Rev. 7.0

Environmental Systems Research Institute, Inc. (ESRI), of Redlands, California, has announced the development of ARC/INFO© Rev. 7.0, the next generation geographic information system (GIS). ARC/INFO Rev. 7.0 builds on the highly successful ARC/INFO system architecture. Rev. 7.0 further evolves the popular ARC/INFO software system through enhancements to the system architecture, data model, and functionality.

The Arc Storage Manager. ArcStorm™ is a new and powerful data management technology for GIS. ArcStorm can be closely integrated with relational database systems supported by ARC/INFO's DATABASE INTEGRATOR™. ArcStorm uses a client/server architecture that allows it to be embedded in all ESRI applications and to serve as the unified data store for all of them. ArcStorm features include a continuous map database, feature object-level locking, feature-based transaction management, piecewise projections, full historical archive of database contents, full implementation of client/server architecture, implicit tiles, unified transaction method, and integrated relational database support.

Enhanced User Interface. ArcTools™ is a collection of forms and menus that supplement and, in many cases, replace the use of the command line interface for ARC/INFO software. In Rev. 7.0, new ArcTools are provided for editing, query/browse, map composition, network modeling, surface modeling, and raster modeling. These are provided in ARC Macro Language (AML)™ source form and can be used off the shelf or can be adapted or extended for use in customized applications.

Overlapping Polygons. In Rev. 7.0, the ARC/INFO data model has been extended to support a generalized feature class for area features called regions. Regions are similar to the "route" concept ARC/INFO uses to group lines, but regions can be used to group areas. Regions allow the straightforward modeling of overlapping polygons and of multiple area feature classes constructed from the same shared geometry.

Scanning Data Entry. The ARCEDIT™ environment is being extended in Rev. 7.0 with functionality to support scanning data entry. The ArcScan™ extensions provide a suite of software tools for incremental raster-to-vector conversion (line following) and raster editing within the ARC/INFO environment. As the ARC/INFO-based solution for scanner-oriented data entry, ArcScan includes capabilities to perform interactive raster editing, raster geometric correction and noise removal, and interactive raster-to-vector conversion. These capabilities make ArcScan a strong alternative to traditional table digitizing, one that, in many cases, can produce higher quality data at a lower cost.

Spatial Modeling Capabilities. ARC/INFO Rev. 7.0 will add or extend a number of spatial modeling capabilities. In the ARC/INFO GRID™ extensions, support will be added for Gaussian dispersion functions, multivariate statistical analysis of grids, and spatial sampling. In addition, GRID's topographic analysis functions will be extended. Sophisticated location/allocation modeling capabilities will also be available in the ARC/INFO NETWORK™ extensions.

Enhanced Editing Functions. ARCEDIT™ has been extended in a number of ways with Rev. 7.0. Enhancements include direct editing of polygons and regions; improved route editing tools; direct visual feedback with dynamic cursor tracking; and the ability to edit groups of features in a single operation. These extensions will improve the ease of use and increase productivity for users of ARCEDIT.

Cartographic Publishing Capabilities. A number of enhancements have been made to improve the suitability of ARC/INFO for publishing cartographic-quality maps. These include improved symbology, knock-outs around text and markers, automatic placement of point text, the ability to import CGM files, and the automatic generation of neatlines and graticules.

New Data Translators. New GIS vector data formats will be supported, including VPF, DFAD, CGM, AMS, SDTS, SLF, and ADS. A number of additional raster formats will be supported in the IMAGE INTEGRATOR™ environment and GRID extensions to ARC/INFO, including DTED, ADRG, MOSS, NTIF, ERDAS 8.0, and BSQ.

ARC/INFO Rev. 7.0 will be optimized to further reduce program size and improve execution of applications. Documentation will be available through an on-line documentation viewer.

Calendar/Calendrier

1994, May/mai 09 - 10
Fourth International GPS/GIS Conference
Washington, DC
Info: Carol Fischer
GeoResearch
115 North Broadway
Billings, MT 59101
(406) 248-6771 *FAX: (406)6770*

1994, Aug/août 07 - 11
Urisa '94
Milwaukee, Wisconsin
Info: URISA
900 Second St., NE Suite 304
Washington, DC 20002
(202) 289-1685 *FAX: (202) 842-1850*

1994, Sept/sept 26 - 28
Federal Geographic Technology Conference
Washington, DC
Info: GIS World, Inc.
155 E. Boardwalk Drive
Fort Collins, CO 80525
(303) 223-4848 *FAX: (303) 223-5700*

1994, Oct/oct 23 - 24
GIS/LIS '94
Pheonix, Arizona
Info: 5410 Grosvenor Lane, Ste. 100
Bethesda, MD 20814
(301)493-0200, *FAX: (310)493-8245*

And finally...

Ordnance Survey, the United Kingdom's national mapping establishment, is claiming royalties from the producers of a pornography film, *Suburban Housewives II*, because the video cover features one of their maps. An employee spotted one of the organization's 1:50,000 scale maps on the cover box in a newsagent's shop and reported the apparent piracy. Nothing was mentioned about the Survey having second thoughts about profiting from the systemic abuse of women.

Canadian National Committee for Cartography Meeting. June 4, 1993. Winnipeg, Manitoba

Present: Norman Drummond (chair, CIG), David Douglas (OICC), Alan Hughes (CCA) for Claudette Leblanc, Michel Rheault (Carto-Québec) for Gilles Grégoire, Peter Keller (PICS). Association of Map Librarians not represented.

1. Approval of agenda.

2. Drummond tables report summarizing the committee's activities for the year. A motion is approved (Rheault/Hughes) to endorse the slate of Canada representatives on ICA commissions. Some uncertainty appears to exist concerning Canadian representatives on Commission 5. (Latour/Sondheim) given that Latour is in Mexico and Sondheim appears to have difficulties securing financial support to attend ICA meetings. Names are suggested for Working Group 13, including Chris Gold, Hans-George Schlichtman, and Jean Raveneau. However, given uncertainty concerning continuance of this working group, a decision is taken not to act at this stage.

Reporting on CNC activities, Drummond summarises handling of the Ellis Award, the Intergraph Award, and the organisation of Canada's submissions made for the 1993 ICA public school map contest. It is moved that Drummond approach Jacqueline Anderson to chair a sub-committee of the CNC to run a Canadian public school map contest to solicit submissions for the 1995 ICA meeting in Barcelona, and that the CIG office be approached to give Jacqueline logistical and administrative support.

3. Drummond and Cliff Wood are to report to the CIG on the Cologne 1993 ICA meeting. Numerous delegates to the Cologne meeting had expressed dissatisfaction that the meeting had been too expensive, in some aspects too lavish, and that not enough attention had been paid to ensure a smooth academic program; notably, there was a failure to organise "stand-ins" for "no-shows." Drummond to convey these concerns to the CIG to ensure that future ICA meetings would not repeat these problems. In specific, Drummond to report that excessive costs do deter practising cartographers, academic cartographers and delegates from the developing world from attending.

3b. Drummond to contact Neil Grant to reach agreement on format and publication deadlines etc. concerning the 1995 Canadian Cartography Report. Grant to be approached with the following proposal:

a) Drummond to take responsibility for overall report coordination and for writing the introductory section;
b) Grant to take responsibility for production of report as an issue in "Geomatica";
c) Douglas to take responsibility for coordination of section on Provincial and Federal Mapping Agencies;
d) GIAC to be approached about writing the section on industry and private sector;
e) Rheault to coordinate section on University and Colleges/Education and Training;
f) Keller to coordinate articles in consultation with Grant;
g) Sebert to coordinate review article focusing on Canadian content;
h) ACMLA to be involved after discussion with L. Cardinal or R. Pinnell.

Drummond to inform the above names of the go-ahead after consultation with Grant.

Agrrement that Keller should be in touch with Barcelona committee to establish mechanism for paper submission for the 1995 meeting, and to coordinate a call for, and vetting of paper submissions if required.

The map exhibit to be prepared by Claire Gosson of EMR and Heather Stevens of National Archives, the same exhibit to go to the 1996 IGU meeting. Input from ACMLA is expected.

3c. All Canadian members of ICA commissions should be actively encouraged to write up their commissions' activities, and to make these reports available to Canadian newsletters and journals with an interest in cartography.

4. The above activities and reports are part of the "regular" Canadian four-year report to ICA for Barcelona. They are separate from, but parallel to, the steering committee for 1999 preparations chaired by Cliff Wood.

5. Next meeting of CNC tentatively set for CCA annual meeting in Ottawa. A "partial" get-together may be held at the January, 1994 excom of CCA.

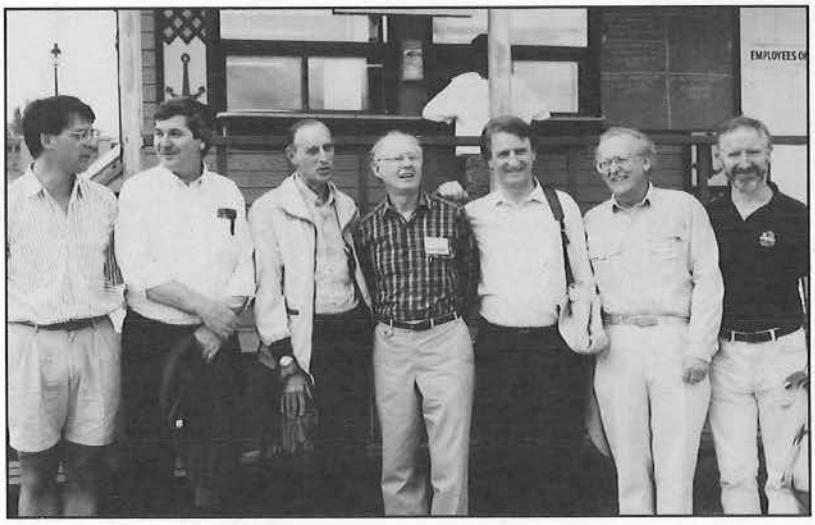
6. Moved to adjourn.

Peter Keller Secretary

Pixs from "the 'peg".

Images from the 1993 AGM and Conference,

Right.
Hardworking Conference Organizers, Marcia Faurer and Danny Blair manage a smile...



Left.
A pride of presidents both past and present pause for posterity!

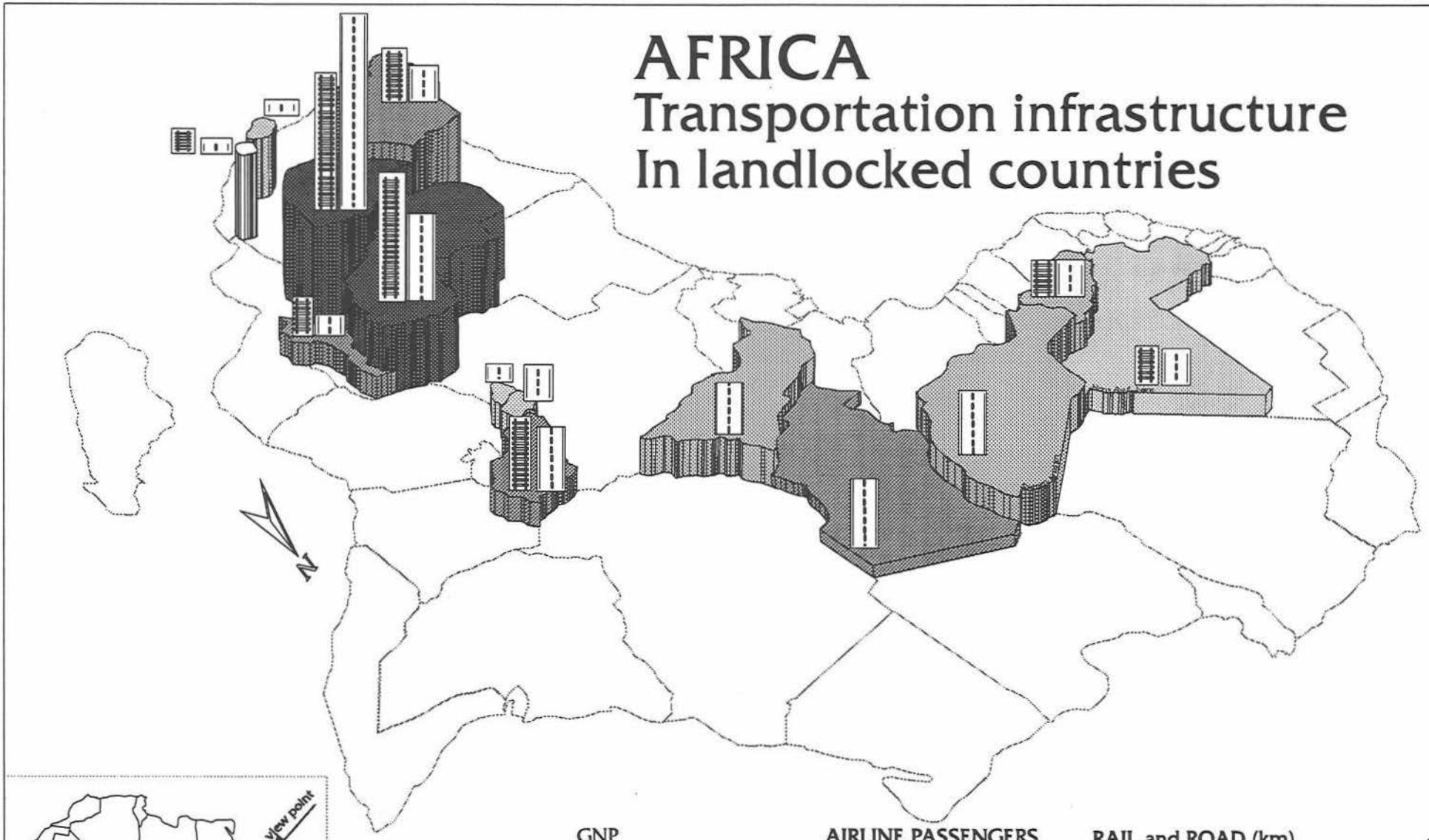
From left to right: Peter Keller, Michel Rheault, Henry Castner, Norman Drummond, Majella Gauthier, Michael Coulson, and Alun Hughes.

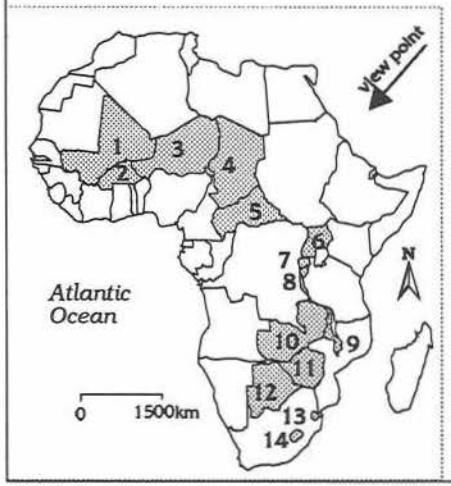
Right
"I'm sure the program brochure indicated that the next session was right on this sunny beer patio!"

Brian Klinkenberg, Peter Keller, Janet Mersey (standing), and Marcia Faurer not attending a paper session.

On the following pages. 1993 President's Prize winning maps. *Africa, Transportation Infrastructure in Landlocked Countries*, by Hans Beurskens and Steve Molsin, Unversity of Victoria (Monochrome, introductory course). *Canada's Exports, 1989*, by Trevor Leeney, Sir Sandford Fleming College (Monochrome).

AFRICA
Transportation infrastructure
In landlocked countries





1 MALI
2 BURKINA FASO
3 NIGER
4 CHAD
5 CENTRAL AFRICAN REPUBLIC
6 UGANDA
7 RWANDA
8 BURUNDI
9 MALAWI
10 ZAMBIA
11 ZIMBABWE
12 BOTSWANA
13 SWAZILAND
14 LESOTHO

GNP
per capita US$

1000
500
0

AIRLINE PASSENGERS

- 0 - 99 999
- 100 000 - 199 999
- 200 000 - 400 000
- more than 400 000
- no data

RAIL and ROAD (km)

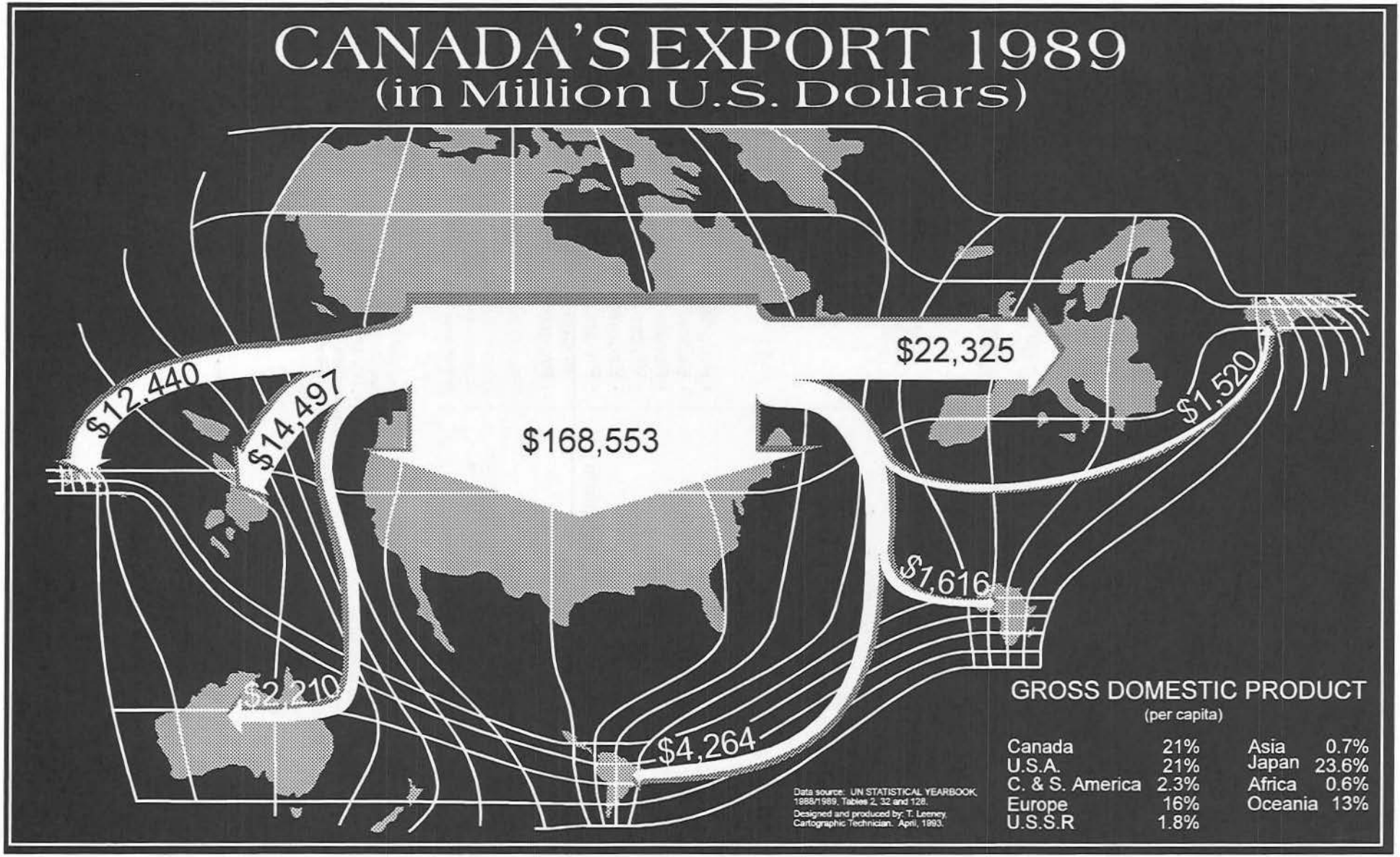
3000
2000
1000
0

100 000
75 000
50 000
25 000
0

Data Source: An Atlas of African Affairs, 1983 and Africa, South of the Sahara, 1993

Map Source: Africa, South of the Sahara, 1993

CANADA'S EXPORT 1989
(in Million U.S. Dollars)



Data source: UN STATISTICAL YEARBOOK, 1988/1989, Tables 2, 32 and 128.

Designed and produced by: T. Leeney, Cartographic Technician. April, 1993.

GROSS DOMESTIC PRODUCT
(per capita)

Canada	21%	Asia	0.7%
U.S.A.	21%	Japan	23.6%
C. & S. America	2.3%	Africa	0.6%
Europe	16%	Oceania	13%
U.S.S.R	1.8%		

Conference: June 6-10, 1994
Conférence : Du 6 au 10 juin 1994

Workshops: June 4-5, 1994
Ateliers : les 4 et 5 juin 1994

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For more information, contact:
***Dr. Mosaad Allam*, Chairman**
GIS 1994 Conference and
ISPRS II Symposium
615 Booth St., Room 700
Ottawa, Ontario
Canada K1A 0E9

Pour plus de renseignements, veuillez communiquer avec :
***Monsieur Mosaad Allam*, Président**
Conférence SIG 1994 et Colloque
de la Commission II de l'ISPRS
615, rue Booth, pièce 700
Ottawa (Ontario)
Canada K1A 0E9

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Le Secteur des levés, de la cartographie et de la télédétection

and/et

The International Society for Photogrammetry and Remote Sensing

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