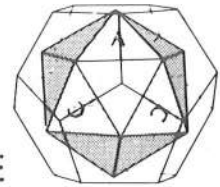


CANADIAN CARTOGRAPHIC ASSOCIATION
ASSOCIATION CANADIENNE DE CARTOGRAPHIE



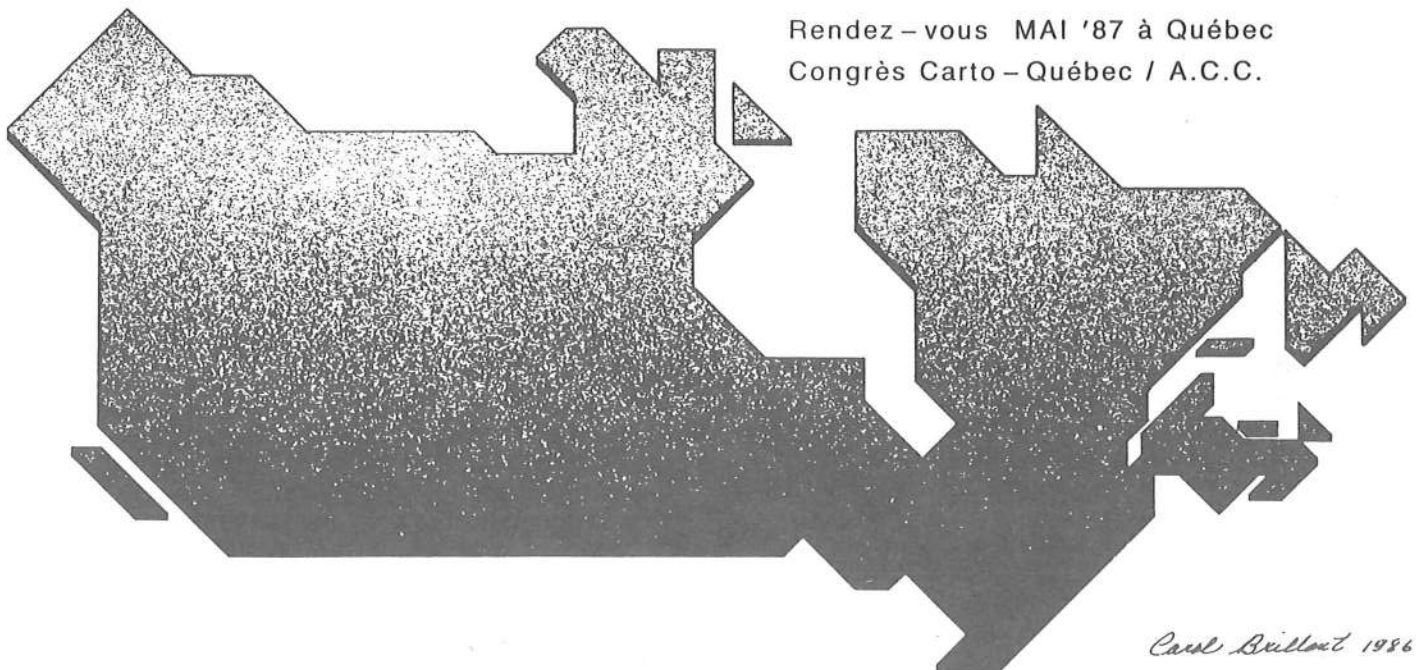
Volume 12 Number 4 December 1986

NEWSLETTER

Published quarterly in March, June, September and December

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Rendez-vous MAI '87 à Québec
Congrès Carto - Québec / A.C.C.

Carol Brillant 1986

NEWSLETTER EDITOR: Roger Wheate,
Department of Geography, University of Calgary, Calgary,
Alberta, T2N 1N4. (403-220-4892) Electronic mail:
Wheate@UNCA-MULTICS.MAILNET

CCA EXECUTIVE:

President: Malcolm Brown
Vice-President: Chris Gold
Past-President: Cliff Wood
Treasurer: Louis Cardinal
Secretary: Roger Wheate
Cartographica: Bernard Gutsell

Interest group chairpersons

Automation: Margaret Sommerville
Education: Janet Mersey
History of Cartography: Gordon Shields
Map use: Robert Packer
Map design: Claudette LeBlanc
Technology: Dawn Rogal

CORPORATE MEMBERS:

Alberta Energy and Natural Resources, Edmonton.
GeoVision Inc., Ottawa, Ont.
GIMMS, South Orange, N.J. & Edinburgh.
Intergraph Systems Ltd., Calgary, Alberta.
J.M.Ellis., Metcalfe, Ont.
Maritime Resource Management Service, Amherst, N.S.
Metropole Litho Inc., Anjou, Quebec.
Metric Mapping Ltd, Calgary, Alberta.
PAMAP Graphics Ltd., Victoria, B.C..
SPAD Systems Ltd., East Amherst, NY, & Santa
Barbara, CA.
Statistics Canada, Ottawa, Ont.

NEW MEMBERS

Welcome to the following new members who have recently joined the CCA:

Graeme Behn, Como, Western Australia;
Heather Campbell, London, Ont;
M.Pierre Daoust, Sherbrooke, Quebec.
Gregoire Gagne, Calgary, Alberta;
Mazlan Hashim, Fredericton, N.B.;
Moira Macleod, Antigonish, N.S.;
Cathy McMullin, Albert Lea, Minnesota;
Bryan Monette, Nepean, Ontario;
Barry Silic, Lakewood, Colorado;
Elmer Starchuck, Richmond, Ontario;

The Canadian Cartographic Association gratefully acknowledges the financial support given by the Social Sciences and Humanities Research Council of Canada.
L'Association Canadienne de Cartographie remercie vivement le conseil de recherches en sciences humaines du Canada pour son apport financier.

From the editor's desk.

This newsletter completes the issues for 1986 (slightly into 1987 !); however, the next issue WILL be published in March with details of the Annual Meeting in Quebec City. In order to avoid delays in receiving this issue, members should be sure to renew their membership for 1987 using the form that was enclosed inside the Fall newsletter. If this has been mislaid, use the handy form on page 4 (and mark it as a renewal).

The May meeting in conjunction with Carto-Quebec promises some excellent sessions and events in a most attractive location. Prospective participants who have yet to visit this beautiful city may wish to read the well-illustrated article on Quebec's capital in the Jan/Feb issue of the Canadian Geographical Magazine .

Potential speakers should note that abstracts are due by MARCH 1 and will be printed in the newsletter, that being less than 2 months before the meeting. CCA members who present papers at the conference are eligible for travel cost reimbursement. Members are also encouraged to submit or solicit entries for the President's Prize to be awarded at the conference (see details on pages 6-7).

An extensive questionnaire will also appear in the March newsletter in order to gather information on members' activities and what they would like to see in the newsletter. I propose regular sections on topics such as GIS, Interest group and corporate members' activities, Technical Notes and Queries, etc.. A section for readers' letters and communications would be particularly desirable but of course that can't happen unless you send me some. I'm eagerly waiting !

Note: Since the annual meeting is in early May, it is essential for the organisers that paper abstracts are submitted ON TIME !!!!

Correction

The deadline for President's Prize submissions was incorrectly given as May 15 in the last newsletter and should have read April 15.

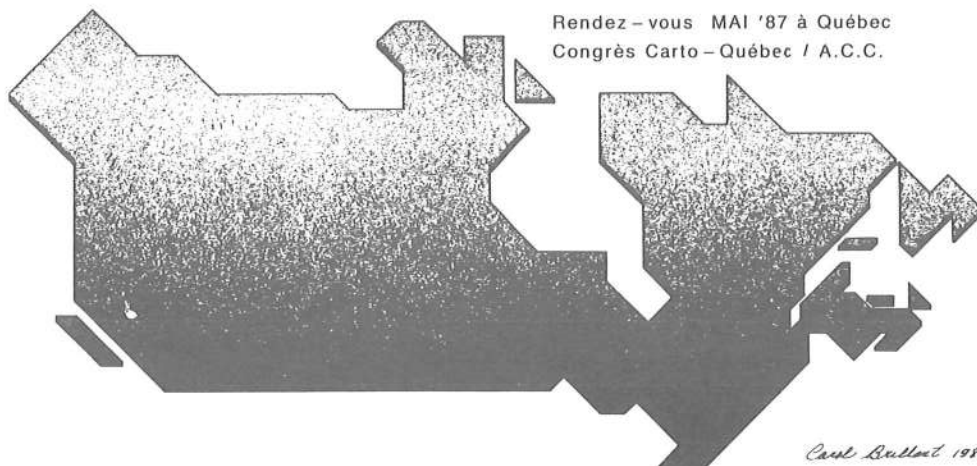
PRESIDENT'S PRIZE: NEW CATEGORY

CCA members who 'spot' innovative or exciting map designs in their local or national publications should encourage the publication editor to enter the cartographer's work in the "Best map design in the Media" category of the President's Prize. If there are more than 30 Canadian entries, the prize money will be doubled from US\$50 to \$100. (The prize was generously donated by Mr. Paul Pugliese, of Time Magazine).

CALL FOR PAPERS

'DEMANDE DE COMMUNICATIONS'

ANNUAL MEETING / *CONGRÈS CONJOINT: CCA/CARTO-
QUEBEC/ACC*
QUEBEC, MAY/ Mai 4 - 8, 1987



Paper sessions according to CCA interest groups : automation, education, history of Cartography, Map design, Map use and Technology plus special theme: Computer-assisted Cartography - Urban Geographic data, GIS and Spatial and Urban Information Systems./ *le theme retenu: Cartographie assistée par ordinateur: BGU, SIG, SIURS.*

Provisional schedule / *Programme préliminaire:*

May / Mai 4:	Guided tours	/	<i>Visites guidées</i>
May / Mai 5:	Workshops	/	<i>Ateliers</i>
May / Mai 6:	Paper sessions	/	<i>Conférence</i>
May / Mai 7:	Paper sessions	/	<i>Conférence</i>
May / Mai 8:	Paper sessions	/	<i>Conférence</i>

Submit abstracts by March 1 to: Mr. M. Rheault,
/Soumission des résumés à : Département de Géographie,
Université de Sherbrooke,
Sherbrooke,
Québec, J1K 2R1.

Abstracts will be printed in the March Newsletter (200-300 words)/
Les résumés seront publiés dans notre Newsletter de mars (200-300 mots):

Simultaneous translation will be provided for papers in english and french /
Une interprétation simultanée des versions anglaises et francaises sera procurée;

Accommodation will be available at Laval University for \$28 per person /
L'hébergement sera disponible a l'Université de Laval pour \$28 par personne.

CALL FOR STUDENT PAPERS

Annual meeting of the CCA/CARTO-QUEBEC
Quebec City, May 4-8, 1987

Did you know the CCA has almost 100 student members ? Although the individuals are constantly changing, the CCA recognises the great importance of its student members and is concerned with meeting their needs. This year at the Annual meeting in Quebec City, a special session of student papers is being planned. All students who are currently carrying out or have recently completed a research or production project related to any branch of cartography are urged to share their ideas by presenting a paper in this special session. Not only is this an excellent way to find out what other students in cartography are doing, it represents a valuable opportunity to practice presentation skills before an interested audience. In addition, a prize will be awarded to the best student paper.

If a trip to beautiful Quebec City in the spring would be a welcome break, please take the time to prepare an abstract now. You do not have to be a member of the CCA to present a paper. Reasonably priced accomodation will be available at Laval University, and members of the CCA are eligible for reimbursement of travel costs (student membership costs only \$20 per year).

Abstracts and papers may be in either english or french (simultaneous translation will be available). Speakers will have 15 minutes to present, and 5 minutes to respond to questions. Submit abstracts (200-300 words) with name, address, title and advisor, preferably by March 1, to:

Dr. Janet E. Mersey, Education Interest Group
Chairperson, Department of Geography, University of
Guelph, Guelph, Ontario, N1G 2W1.

A special note to faculty members:

If you are advising any research/production projects in cartography, please make sure your students are aware of this special session, and strongly encourage them to participate. Advisors as well as students will be recognised in the session.

Lost sheep : Where did they go ?

Newsletters were recently returned by the Post Office from the following members who have apparently moved without supplying new addresses. If you have been witness to their spatial relocation, please inform the Newsletter Secretary:

Darrin Heisler (Nepean)
Mike Shasko (Victoria)
Gary Wagner (Calgary)

OOPS ! (Retired members bite the dust !)

Due to an oversight, the CCA membership renewal forms enclosed with the Fall 1986 Newsletter, did not include a box for retired members. Members who fit in this category are requested to add this category to their form in the appropriate place and check it accordingly. Membership fee for retired members is \$20.

CANADIAN CARTOGRAPHIC ASSOCIATION

MEMBERSHIP/ADHESION

APPLICATION FOR MEMBERSHIP INSCRIPTION

—	\$ 40.00	Regular/régulier
—	\$ 20.00	Student/étudiant ¹
—	\$ 50.00	Institutional/institution ²
—	\$ 125.00	Corporate/corporation ³
—	\$ 55.00	Family/familial
—	\$ 20.00	Retired/à la retraite

¹Student members are requested to name their educational institution.

Les étudiants sont priés d'inscrire le nom de leur maison d'enseignement.

²Institutional members may be libraries, government agencies, etc.

Les membres institutionnels peuvent être les bibliothèques, cartothèques agences gouvernementales, etc.

³Corporate members may name two representatives who will be given full membership privileges.

Les organismes peuvent nommer deux délégués qui recevront tous les privilèges dont bénéficient les membres titulaires.

Name/Nom _____

Address/Adresse _____

_____ Code _____

Enclosed/ci-joint \$ _____

Signed/signature _____

Please return to/S.V.P. retourner à:

Canadian Cartographic Association
c/o Department of Geography
University of Ottawa
Ottawa, Ontario, Canada
K1N 6N5

NORMAN L. NICHOLSON MEMORIAL SCHOLARSHIP IN CARTOGRAPHY

The Executive Committee of the Canadian Cartographic Association is pleased to announce the establishment of the Norman L. Nicholson Memorial Scholarship in Cartography.

This scholarship, worth \$500*, which the C.C.A. proposes to award annually, will recognize exceptional student achievement and ability in any aspect of cartography. To qualify, you must be:

- a) a Canadian citizen or landed immigrant,
- b) a student who proposes to continue full time studies in cartography in one of the following situations:
 1. entering the 3rd year of community college or C.E.G.E.P. program.
 2. entering the final year of an undergraduate honours program.
 3. accepted into the first year of a graduate program.

To apply, you must submit the following:

- a) a completed application form,
- b) an official transcript of all college or university courses completed and grades received,
- c) letters of recommendation from two faculty members who are familiar with your work and capabilities. Letters of Recommendation are to be sent by faculty members **directly** to the Award Committee at the address listed at the bottom of this notice, and
- d) a one-page typed statement outlining your goals for continuing education in cartography.

All four items listed above are to be received by the Award Committee no later than March 15, 1987.

The scholarship winner will be notified on or before April 16, 1987. The result of the competition will be formally announced by the President of the C.C.A. at the banquet of the association, held on May 7, 1987 during the Annual Conference at Université Laval.

Persons considering an application for this scholarship are advised to write to the Award Committee and request an application form.

Please address your enquiries to:
Award Committee
Canadian Cartographic Association
c/o Dept. of Geography
University of Ottawa
Ottawa, Ontario
K1N 6N5

BOURSE COMMEMORATIVE EN CARTOGRAPHIE NORMAN L. NICHOLSON

Le Comité directeur de l'Association Canadienne de Cartographie est heureuse d'annoncer la création de la Bourse commémorative en cartographie Norman L. Nicholson.

Cette bourse d'une valeur de \$500* que L'A.C.C. se propose de décerner chaque année, sera attribuée à un(e) étudiant(e) aux qualités et aux capacités exceptionnelles dans tout aspect de la cartographie. Pour se qualifier, le(la) candidat(e) doit être

- a) un(e) citoyen(ne) canadien(ne) ou un(e) émigrant(e) reçu(e)
- b) un(e) étudiant(e) qui se propose de poursuivre des études à plein temps en cartographie dans un des cas suivants:
 1. entrer en troisième année d'un Collège communautaire ou de C.E.G.E.P.
 2. entrer dans l'année terminale d'un programme honneur de premier cycle
 3. avoir été accepté en première année d'un programme d'Etudes Supérieures.

Pour postuler, il faut soumettre les documents suivants:

- a) un formulaire de demande dûment complété.
- b) un relevé de notes officiel de tous les cours terminés dans une université ou dans collège avec les notes reçues.
- c) des lettres de recommandation de deux membres du corps enseignant qui connaissent bien le travail et les qualités de l'étudiant(e). Les lettres de recommandation doivent être expédiées **directement** par les enseignants au Comité de Sélection à l'adresse sous-indiquée.
- d) un exposé d'un page dactylographiée indiquant vos buts dans le cadre d'études avancées en cartographie.

Les quatre items cités doivent parvenir au Comité de Sélection le 15 mars 1987 au plus tard.

On notifiera le(la) lauréat(e) le 16 avril 1987 au plus tard. Les résultats de la compétition seront annoncés officiellement par le Président de l'A.C.C. lors du banquet de l'Association qui se tiendra le 7 mai, 1987 durant le Congrès annuel à l'Université Laval.

Les personnes susceptibles de soumettre une demande pour cette bourse sont priés de s'adresser au Comité de Sélection et de demander des formulaires de demande.

Veillez vous adresser pour toute information à:
Comité de Sélection
Association Canadienne de Cartographie
c/o Département de Géographie
Université d'Ottawa
Ottawa, Ontario
K1N 6N5

*For the first year; it is hoped that the sum will be increased (with donations) to \$1000 in subsequent years.

*Pour 1987 seulement; nous espérons que la somme sera augmenté (avec donations) à \$1000 dans années postérieurs.



CANADIAN CARTOGRAPHIC ASSOCIATION

PRESIDENT'S PRIZE

COMPETITION

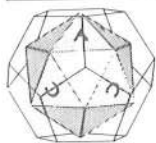
1986-87

Submissions are invited for the 1986-87 President's Prize competition. The competition is open to students of post-secondary institutions, and to persons occupying junior positions in places of employment where maps are made or used. The competition this year will be for awards in four general categories, each with a small monetary component, (i.e. in the order of \$50.00 each), and certificates which will be presented at the Quebec City Annual meeting. In the Monochromatic and Colour Map categories, awards will be given both to the best submission from a technical institution and to the best submission from a degree-granting university.

The categories of award are:

1. Monochromatic Map (Formal or journalistic style): A printed map in black and white suitable as an accompaniment with a submission to a learned academic journal, with a brief written description (i.e. less than 500 words) stating the purpose of the map. Emphasis in this category will be placed on innovation with respect to subject selection and interpretation, symbolization and graphic design.
2. Printed Map in Colour (or taken to the proof stage): submitted with a brief written description (i.e. less than 500 words) stating the design objectives of the map. Emphasis in this category will be placed on excellence of execution and fulfillment of stated design objectives.
3. Formal Written Paper: on any theoretical, administrative or practical topic related to cartography. The paper of approximately 2000 words should be submitted in the style and format required by CARTOGRAPHICA.
4. Computer Algorithm (specific to a cartographic problem): submitted in code form in any language along a brief description and evidence of operation.
5. Best map design in the media (prize will be raised from US \$50 to \$100 if there are more than 30 Canadian entries); should be accompanied by a brief written description (maximum 500 words) stating the purpose of the map.

Submissions must reach Malcolm H. Brown, President, CCA, Dept. of Survey Engineering, University of New Brunswick, Fredericton, N.B., by 15 April 1987. Membership in the CCA is not required.



ASSOCIATION CANADIENNE DE CARTOGRAPHIE

CONCOURS

POUR LE PRIX DU PRÉSIDENT

1986-87

Vous êtes invités à soumettre votre projet au concours du "Prix du président 1986-87". Ce concours est ouvert aux étudiants de niveau post-secondaire ainsi qu'aux personnes venant d'accéder au marché du travail et occupant depuis peu un emploi dans un organisme fabriquant ou utilisant des cartes. Le concours, cette année, comprend des prix répartis dans cinq catégories. Ces prix consistent en un montant d'argent de l'ordre de 50,00 \$ et un certificat. Les prix seront décernés lors de la réunion annuelle de l'ACC qui se tiendra cette année à Québec.

Les cinq catégories comprennent:

1. Une carte monochrome (conventionnelle ou de type journalistique): une carte imprimée en noir et blanc, de niveau acceptable en tant que document d'accompagnement pour un article soumis à une revue scientifique. Celle-ci devrait être accompagnée d'une brève description (maximum 500 mots) indiquant le but de la carte. L'évaluation pour cette catégorie, portera sur l'innovation en regard du sujet choisi, de son interprétation, de sa symbolisation et de la qualité graphique.
2. Une carte imprimée couleur (ou à l'étape de l'épreuve couleur): soumise avec une brève description (maximum 500 mots) indiquant le but de la carte. L'évaluation portera sur la qualité de l'exécution.
3. Un texte écrit conventionnel: portant sur des sujets cartographiques d'ordre théorique, administratif ou pratique. L'article d'environ 2000 mots devrait être soumis dans le style et le format exigé par la revue CARTOGRAPHICA.
4. Un algorithme d'ordinateur (spécifique à résoudre un problème cartographique): soumis sous forme de code, de quelque langage que ce soit, accompagné d'une brève description et d'une preuve qu'il fonctionne.
5. Le mieux dessain cartographique pour les medias: les récompenses augmenteront de U.S.\$50 a \$100 s'il y a plus de 30 participants canadiens. Celle-ci devrait être accompagnée d'une brève description (maximum 500 mots) indiquant le but de la carte.

Les candidatures au concours doivent parvenir à Malcolm H. Brown, President, CCA, Department of Survey Engineering, University of New Brunswick, Fredericton, N.B., E3B 5A3, au plus tard le 15 Avril 1987. Il n'est pas nécessaire d'être membre de l'ACC pour participer au concours.

ANNOUNCEMENT: GIS COMMITTEE

The Canadian Cartographic Association has recently initiated a Working Committee in Geographic Information Systems and Automated Cartography. The objectives of this Committee are various. The motivations are simple. Automation is becoming more and more a fact of life in the production of maps by industrial and government agencies.

The recent explosive growth in Geographic Information Systems - both in the number of operational systems available and in the number of agencies purchasing them - requires the academic community to respond. Firstly, jobs are becoming available in the business, and students need to be trained. Secondly, research and system development is rapidly becoming an exclusively commercial venture, with the result that the usual academic pursuit of improved methodology and objectives is often short-circuited as there is no commercial impetus to publish what might be valuable techniques. Thirdly, the academic teaching of spatial analysis techniques is limited by the non-availability of published methodologies - it is somewhat unfortunate to have to teach only the use of Brand X systems because the appropriate algorithms are not known. This is especially true for the handling of spatial data on computers, where it is not at all clear that the questions, let alone the answers, are appropriate.

In order to counteract this problem, some approaches are obvious. Most academic computer programs are incomplete, unprofessionally programmed and documented, and are not part of any long-term system or design. The desired end-product is publication, not software development. Some level of cooperation between researchers and universities is needed, in order to know what tools are already available. This has already been started by Dr. Jean-Claude Muller, and the results published in a previous newsletter. Desirable subsequent activities could include cooperation on making available various software components developed at particular establishments, agreement on programming and documentation standards for programs to be made available, discussion of appropriate data structures and data bases, along with graphical output and other utility functions required to allow academic institutions to develop, rather than re-invent, new tools for research and education purposes.

The list could continue. All individuals interested in the development, use and dissemination of spatial data handling software and techniques - whether in Geography, Computing Science or other disciplines - please contact the CCA Working Committee, and we will see what can be done.

Contact:

Dr. Christopher M Gold,
College of Geographic Sciences,
P.O. Box 10, Lawrencetown, N.S. B0S 1M0.
(BITNET address: COGS@ACADIA)

In the last newsletter I spoke about the CCA Annual General Meeting and the other activities that happened on the West Coast last summer. This time I am sitting at home base here in Nova Scotia, so the best thing I could think of to talk about was the somewhat unique organization I work for.

The College of Geographic Sciences, situated in the middle of the beautiful Annapolis valley, home of Canada's first permanent settlement and miles from anywhere, is unlike any other institution of higher (we hope) learning than any other I have heard of. Initially started as a school to teach surveying, in the last few years we have actively moved into the computer age, and now boast the highest computer-power-per-unit-population of anywhere (I think). Certainly the availability of computers (two primes and a VAX), terminals (not quite one per student in the Computing Department) and graphics input and output facilities (tektronics workstations, CAD and image analysis systems, two plotters, six (I think) digitizers,...) makes us different. So do the kind of programs we offer. VERY heavily geared to market requirements, we have departments of Surveying, Computing and Cartography. The Cartography Department is run by John Belbin, editor of CCA's Technical Notes and Queries for many years.

The Computing and Cartography programs are very intensive, one or two-year courses. The Computing programs (in which I am involved) are 50-week courses covering Scientific Computer Programming, Computer Graphics, Geographic Information Systems Programming and Remote Sensing. While I teach introductory maths to the first three groups, and have responsibilities to the S.C.P. program, most of my activity is with the G.I.S. program. Introductory Maths covers remedial maths, matrix algebra, statistics and vector algebra - two hours a day, for the first four months! I hear it is referred to as the chapter-a-day club. The second term course in G.I.S. is Return of Maths and the third term, inevitably, Revenge of Maths.

The G.I.S. program in particular is of considerable interest. Some of our students have no previous academic background, although most have a previous degree in an appropriate discipline such as geology or forestry. Fifty weeks later jobs seem readily available - some as far afield as California. Clearly the market is expanding rapidly, and there is real need for our graduates. Experience in programming (Fortran + some C), applications (ARC-INFO, Geobased, Aries etc.), significant co-operative projects with industry and, of course my maths (data structures, graph theory, computer graphics, computational geometry and lots more) seems to produce marketable graduates. However, since we are the only game in town (or, more correctly, village) we expect, and seem to get, rather long hours from them.

Nevertheless, we feel that we produce a very valuable service. We are very proud of our employment record, and are currently trying to deal with one of the deficiencies we know about - not many people seem to know about us.

Hence this note. Keep us in mind!

- Chris Gold (CCA Vice-president).

GIS

International Journal of GEOGRAPHICAL INFORMATION SYSTEMS

The aim of the journal is to provide a forum for the exchange of ideas, techniques, approaches and experiences in the rapidly growing field of geographical information systems (GIS). It is intended to interest those who design and implement such systems and those who use them for planning and making and monitoring policies. Its basic philosophy is that all can benefit from the experience of others in a field in which the potential ability to relate and analyse large quantities of spatially referenced data has often not been fully realized, whether because the needs of users have not been properly understood by those designing such systems; because appropriate software has not existed; because analyses of large data sets have been difficult or costly to undertake; or because the expected demand from users has failed to materialize.

The journal is interdisciplinary and international. It is directed at those with skills in designing systems, database management, computer graphics and analysis of spatial data, as well as at those in planning and decision-making. Applications of GIS have already spread to most of the field sciences, the applied sciences and the social sciences (notably in urban planning and utility design) and the range is likely to widen.

To Taylor & Francis Ltd, Rankine Road, Basingstoke, RG20 0PR, UK.

- Please send me a sample copy of the *International Journal of Geographical Information Systems*
- Please send me further information on Taylor & Francis publications in remote sensing
- Please enter my subscription to *International Journal of Geographical Information Systems* starting with Volume 1 (1987) £50 \$90 DM200 Quarterly
- I enclose my personal cheque/money order
- Please invoice me
- Please bill my credit card: Access/Mastercard/Eurocard/Visa/AmEx

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(if paying by credit card, please use billing address)

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Signature Date

Dollar rates apply to the USA, Canada and Mexico; Deutschmark rates to FR Germany; Sterling rates apply to the UK and all other areas. All subscriptions are payable in advance and all rates include postage. Journals are sent by air to the USA, Canada and Mexico, India and Australasia. Subscriptions are entered on an annual basis, i.e. January to December. Payment may be made by sterling cheque, dollar cheque, international money order, credit card or National Giro. Prices are subject to change without notice.

Addresses for manuscripts

The publishers can accept no responsibility for manuscripts lost in the post, so authors should keep a spare copy. Papers should be sent to:

North America

Dr E. K. Anderson,
Chief, Eastern Mapping
Center,
US Geological Survey,
567 National Center,
Reston,
Virginia 22092, USA

Rest of the World

Professor J. T. Coppock,
Department of Geography,
University of Edinburgh,
Drummond Street,
Edinburgh EH8 9XP,
UK.

GIS WORKSHOP Winnipeg, Feb. 17-19

A 3 day GIS workshop has been organised by the Prairie Provinces Forestry Services, to be held at the Delta Winnipeg. This is intended for all groups in government and industry interested in acquiring GIS skills and equipment. The workshop will consist of @ days of presentations and one day of system demonstrations including PAMAP, ESRI, TYDAC and NW DIGITAL.

The speakers include:

Dana Tomlin, Harvard University
Jack Dangermond, ESRI, California
Roger Tomlinson, Ottawa
John Harrower, REAP, Edmonton
Frank Hegyi, B.C. Forestries

Registration is only \$25, but there is a capacity of 225 participants. Hotel reservations are available at the Delta Winnipeg: 1-800-268-1133.

For more information contact: Steve Price, Canadian Forestry Service, Northern Forestry Centre, 5320-122 St., Edmonton, Alta., T6H 3S5. Tel: 403-435-7210. (Future meetings (1988,1989) will be held in Saskatoon and Edmonton)

GIS textbook now available

Filling a previous void, a new book entitled "Principles of Geographical Information Systems for Land Resources Assessment" by P.A. Burrough, should interest instructors and students in GIS. The publication is part of the "Monographs on soil and resources survey" series, no 12 (1986), and is priced at \$55. Apparently this has recently been reduced to \$44, owing to its popular demand and large sales.

The book includes chapters on data structures, digital elevation models, data input, storage and output, methods of spatial modelling, data quality, classification methods, spatial interpolation, and choosing a geographical information system. It is available from Oxford University Press and will be reviewed in an upcoming edition of *Cartographica*.



GeoVision awarded New Zealand Mapping Contract

GeoVision Corporation of Ottawa, and Progeni Systems Limited of Wellington, N.Z., have been awarded a \$NZ 5.9 million (CDN\$4.5m) computer systems contract by the N.Z. Department of Lands and Survey. Under the contract, GeoVision will provide specialized equipment and software to automate cadastral (land parcel) mapping throughout the country.

Currently, cadastral records are maintained on 18,200 paper maps dating back to 1840, with 50,000 changes posted manually each year. The new system, to be installed beginning early in 1987, will enable the Department to capture and maintain the boundaries and characteristics of over 2 million privately and crown-held properties in a nation-wide "electronic map", to be known as the Digital Cadastral Data Base, or DCDB.

While the initial benefit of the system will be improved efficiency in mapping and record-keeping, the DCDB will also allow the Department to respond to a variety of requests from the general public and land planners, developers and managers for information about the geographic location, shape, area and appellation of land parcels. When the DCDB is complete, the Department will be able to generate, on demand, graphic displays showing this information for any geographic area. Traditional paper maps with user-chosen content and scale, will also be available from the system. Even more importantly, the DCDB will form the primary geographic reference base for New Zealand's Land Information System (LINZ), a downstream program currently budgeted at NZ\$18 million.

The very latest in hardware and software technology for mapping will be incorporated by GeoVision into the system. Over 40 color graphics workstations manufactured by Digital Equipment Corporation will be installed in the Department's 12 District Offices throughout New Zealand, each running GeoVision's Advanced Mapping System (AMS) software package. At the Central Mapping Unit, the national headquarters in Wellington, GeoVision's Geographic Information System software package, operating on a Digital VAX 8300, together with six additional AMS workstations, will be used to manage a consolidated, country-wide version of the DCDB. The GIS package will support a regional DCDB in each district office, and GeoVision software will also be used for related applications such as Aeronautical Charting, a 70,000 entry national street/place name and electoral index, and related applications.

"To our knowledge, the contract is the largest and most technically advanced ever awarded in parcel database applications," said Doug Seaborn, President of GeoVision. "Once this DCDB is linked to the land title and valuation information, LINZ could easily become the most comprehensive and sophisticated Land Information System in the world by the early 1990's".

GeoVision, an Ottawa-based software company specializing in geographic information processing, has installed approximately 40 similar systems in six countries since 1974. GeoVision formed a joint venture with Progeni Systems Ltd., a leading Wellington-based software development and information systems company, to provide local project implementation and support services for the DCDB project. GeoVision will also transfer geoprocessing expertise and equipment to Progeni as part of the implementation, and users will receive local support through Progeni-GeoVision's new Land Information Systems Support Center in Wellington.

For further information:

Department of Lands:	Warren Hawkey 04-735-022
GeoVision Ottawa:	Anita Stewart 613-722-9518
GeoVision Sydney:	Brian O'Neill 02-959-3310
Progeni Systems:	Dr. Terry Marks 04-666-014

GEOGRAPHIC INFORMATION SYSTEMS

GeoVision has an international reputation for leading-edge solutions in Automated Mapping (AM) and Geographic Information Systems (GIS). We have installed systems for utilities, municipal governments, engineering firms, hydrographic and natural resource agencies, and survey and mapping firms in seven countries.

The market for our turnkey AM/GIS systems business is expanding rapidly, and so are we. We currently have several openings in our Operations group. If the opportunity to contribute to our success, and to generate results in this exciting and demanding application interests you, read on.

CUSTOMER SUPPORT MANAGER

Success in this job means proactive support of our products, and building long-term working relationships with our customers to maximize the benefits and results they achieve. Responsibilities include scheduling and supervising teams as well as interfacing with technical and marketing groups to define product improvement and release timing.

REQUIREMENTS: Extensive management experience. Experience supporting sophisticated applications software products. Minimum 3 years EDP experience. Automated mapping/geoprocessing experience. UNIX and VMS familiarity would be advantageous.

APPLICATION SPECIALISTS

The job entails on-site software installation and training, assisting our clients with problem-solving and application techniques, software testing and quality assurance on several software products, preparing digital maps/databases for demonstrations, benchmarks, and trade shows.

REQUIREMENTS: A strong technical background in the digital mapping and/or geoprocessing fields. Familiarity with UNIX, VMS, or HP-RTS. Knowledge of municipal cadastral methods and/or land survey techniques will be of additional benefit.

TECHNICAL WRITER

This job consists of the writing, updating and editing of user documentation and related materials.

REQUIREMENTS: Proven experience in technical writing including the ability to write clearly, concisely, and accurately. Ability to comprehend complex application software packages. Previous experience working within a computer environment. Familiarity with GIS or related computer graphics systems will be advantageous.

SENIOR PROJECT MANAGER

This senior position involves the management of projects — from the preparation of technical proposals, to the installation of large product-based GIS systems, to the cultivation of effective partnerships with our suppliers, associates, and clients worldwide. You will also contribute to product planning and general business development of the company.

REQUIREMENTS: Proven experience in successfully completing large, multi-vendor turnkey installations. Skill in detailed requirements analysis, interpersonal communications, and balancing the needs of development, marketing, vendor, and client groups.

PROJECT ASSISTANT

You will monitor and coordinate deliveries from suppliers and to customers and manage other project sub-tasks.

REQUIREMENTS: A working knowledge of detailed configurations of mini-computer systems and networks (hardware, communications, and system software components). Strong organization, and communications skills. A self-starter.

GeoVision offers a stimulating and challenging working environment. If working with an expanding, results-oriented company in the National Capital Region appeals to you, send your resume and the position for which you are applying to:

1600 Carling Ave., Ottawa, K1Z 8R7

GIS/CORPORATE MEMBERS



PAMAP Geographic Information Systems

PAMAP Graphics Ltd. is a Victoria based company developing software for geographic information information processing in resource and engineering applications. The company also provides support and consulting services to CIDA, CCRS and to several B.C. Ministries in the areas of geographic data processing.

PAMAP has developed an integrated suite of digital mapping and geographic information processing systems that are collectively referred to as the PAMAP GIS. A topographic modelling capability has been recently added to the system, and the design for the integration of remotely sensed image data has been completed.

Data from external systems may be imported/exported to the PAMAP GIS via standard exchange formats such as DLG (supported by ESRI) or Intergraph Graphic Design Files. A standard raster format is also supported so that gridded elevation data, digital imagery or other forms of rasterized data may be exchanged. In the case of exchange formats such as DLG, attributes (e.g. feature codes) can be exchanged as well.

The PAMAP GIS can be configured under the DEC VMS operating systems and is transportable to IBM PC XT/AT or compatibles, and the WANG VS series of minicomputers. A variety of input and output devices are supported, both on mainframe and PC systems.

The PAMAP GIS consists of five principal subsystems:

MAPPER - digital mapping and attribute linkage
 ANALYZER - detailed geographic analyses
 PLANNER - interactive analyses
 TOPOGRAPHER - topographic studies
 INTERPRETER - remote sensing interface

For more information, please contact:

Peter H. Sallaway or Peter D. Archibald

PAMAP Graphics Ltd.,
 301-3440 Douglas Street,
 Victoria, B.C.,
 V8Z 3L5
 Phone: (604) 381-3838

MAPPER

The MAPPER system provides flexible and operationally efficient digital mapping capabilities. Spatial data capture using MAPPER organizes data so that non-graphic data (i.e. attribute data) may be linked to graphics elements and analyzed. Information of varying geographic nature is assigned to information layers so that, for example, forest cover, roads, water bodies and land ownership may all be stored on separate layers. This system was built in response to the British Columbia Ministry of Forests and Lands, which required a low cost, distributed processing system that provided high quality cartographic mapping with geographic data linkage. The system has also satisfied the Ministry's need for a user-friendly system with very high throughput.

ANALYZER

The ANALYZER system was developed to assign topology to digital map files and to subsequently enable geographic analyses to be performed. Distance and area calculations, thematic manipulation and overlaying are among the available analytical functions. The ANALYZER uses a gridding approach that was originally developed by PAMAP for users of Intergraph Systems. ANALYZER also provides a link between the database created using MAPPER and analytical subsystems such as PLANNER and TOPOGRAPHER.

PLANNER

PLANNER provides you with the ability to interactively query the geographic database by providing online area-statistics reports. You can interactively delimit a detailed planning area and produce online reports of affected areas and associated scaled attribute values (e.g. timber harvest volumes within a planned cutblock).

TOPOGRAPHER

The latest addition is the TOPOGRAPHER subsystem which provides you with flexibility in importing elevation data from numerous surface data structures, including contour traces. The system also generates derivative surfaces such as slope and aspect, which along with elevation, may be classified according to user defined thresholds. The system can output slope/aspect/elevation thematic displays and is currently being enhanced to generate contours and perspective views. Topographic polygons can be overlaid with other information layers using ANALYZER to create digital terrain elevation models.

INTERPRETER

INTERPRETER is a unique interface to digital image analysis systems that optimizes the extraction of information from remote sensing data. PAMAP has conducted numerous research projects investigating the utility of such an interface and has designed this new system with a superior understanding of the applications that an interface must address. One more example of PAMAP's philosophy of continuing system development in response to our client's needs.

CCA EXECUTIVE MEETING OTTAWA, OCT 18, 1986

1. President's report.

Malcolm Brown has approached the ICA president to request the ICA to develop internationally accepted definitions of GIS and related terms; he also contacted OICC about the prospects of a joint annual meeting in Ontario in 1988. Any Ontario members interested in assisting with such a meeting should contact any CCA executive member. Increased student activity in the CCA is being encouraged by a committee headed by Steve Pattison, a student in the Geography Department at Simon Fraser University.

In January 1987, we need to apply to SSHRC for continued financial support over the next 3 years for meeting and travel assistance. The report to SSHRC would contain such items as the CCA's constitution, objectives, financial statements and activities from 1984-87.

2. Vice-President's report.

Chris Gold stressed the need for ever-increasing activity within the CCA in the GIS area. A motion was approved to form a working committee on GIS to be chaired by the V.P, and would concern such topics as co-operation on software and relevant sessions at the annual meeting. Members should see the GIS section in this newsletter for more details.

3. Past-President's report.

Cliff Wood reports a near-full slate of candidates for the CCA elections this year, and to date 5 Canadian papers have been submitted for the ICA meeting in Mexico this summer.

Following a generous donation by Mrs. Nicholson, it will now be possible for the Norman L. Nicholson scholarship to be offered for 1987-88, initially at \$500 for the year. Further donations may boost this figure; (details of the scholarship and donation forms were included in the last newsletter, and application procedures in this one).

The possibility of acquiring a partially salaried office manager was also proposed with further discussion slated for the next executive meeting.

4. Secretary's report.

As the ex-editor heads to tropical climes, and all newsletter materials are now in the hands of the Secretary, Roger Wheate hopes to have the newsletter on its old deadlines by the March 1987 issue, which will contain program and reservation information about the annual meeting in Quebec City in May. It is expected that the issue will also contain a questionnaire to ascertain what the members would like to see in the newsletter.

5. Treasurer's report.

Louis Cardinal reported a healthy bank balance which will enable a reasonable contribution to the Nicholson Scholarship fund. The executive voted to immediately contribute \$2000 to the fund; this was later increased to \$5000 to match the contribution made by Mrs. Nicholson. The balance will further be reduced shortly due to costs involving Cartographica, the newsletter and the executive meeting.

6. Publications report.

Bernard Gutsell suggested that the supply of papers for publication appears to be drying up due to the appeal of conference proceedings; however possible future editions of Cartographica may include proceedings from the School Atlas conference at Calgary in May 1986 and the panel discussion and papers on Journalistic Cartography at the annual meeting in Burnaby in July.

7. Membership co-ordinator's report.

The executive has approved the purchase of a copy of DBase III+ for Lorraine Fleming to maintain the membership list.

8. Interest groups.

See the section on interest groups in this issue for the groups' reports.

CANADIAN NATIONAL REPORT TO THE ICA

The CCA is responsible for compiling information for academic activities in cartography in the past four years for inclusion in the CANADIAN NATIONAL REPORT to the INTERNATIONAL CARTOGRAPHIC ASSOCIATION. ALL related academic Departments, in Colleges or Universities, are strongly requested to submit information on their past, present and future plans and achievements. WE WOULD LIKE THE REPORT TO COVER AS WIDE A FIELD AS POSSIBLE, so activity in Cartography, Geology, Automated Cartography, Geographic Information Systems, Environmental studies, planning, spatial methodologies in Computing Science, Geography, data structures, etc., are MORE THAN WELCOME.

Information may be submitted in any desired formal or informal method - if you haven't much time a note will do. This opportunity only occurs every four years, and here in Canada we would all benefit very much from the opportunity to find out what everyone else is doing. Research activity and educational curricula are both needed. If you know anyone in another discipline who is involved in map production or related topics (surveyors, for example) please get them to drop us a note as well. IF WE GET NO REPLIES THE CANADIAN REPORT WILL BE IN DIFFICULTY!

Please send any communications to:

Dr. Christopher M. Gold,
College of Geographic Sciences,
P.O. Box 10, Lawrencetown, N.S. B0S 1M0.
(BITNET address: COGS@ACADIA)
(Tel: (902) 584-2226)

CAGONT '86

HOAX VICTIM (Bob Packer)

While the CCA executive worked through the busy agenda at the National Library, a short hop across the city, CAGONT '86 (the annual fall meeting of the Ontario division of the CAG) was being conducted at Carleton University.

It was a most interesting program of three time slots of up to five parallel sessions, a heavy schedule even for the CAG. Of special interest to CCA members were three sessions in sequence organized by Joel Yan and David Douglas. These drew upon the considerable expertise accessible through the National Capital Geomatics Group (this represents a slight name change from the former National Capital Geographic Information Processing Group). The group decided, in contrast to former practice, to conduct this meeting in conjunction with geographers. Except for the fact that the room for the geomatics sessions was in a separate building, isolated from the others, it seemed a successful effort to integrate those whose 'do' geography with those who process geographic information.

The first geomatics session presented an opportunity for Ottawa entrepreneurs to introduce the latest developments offered by their corporations. Julio Maffini, Bob Madill and Tim Lehan discussed in as much detail as time would allow, the systems of Tydac Technology, GeoVision and Roy Ball Associates, respectively.

The second session, chaired by Joel Yan, dealt with the increasingly complex problems of data standardisation and exchange. Hal Moellering travelled from Ohio State to update us on the activities and details of the U.S. committee for Digital Cartographic Data Standards. Joe Galacci of the Surveys and Mapping branch discussed the developing information model and transfer format of data which will soon be distributed from the Topographic Survey. Tim Evangelatos of the Canadian Hydrographic Service presented some considerations regarding the MACDIF format for online exchange of map and chart data, while Gordon Plunket of CCRS reviewed the standard data transfer format for Landsat data.

Papers introducing research initiatives in geographic data handling were presented in the last session, chaired by David Douglas. Joel Yan, Roger Defoe, David Armstrong, Eva Siekierska, Mike Comeau, Robert Parenteau, Richard Nodwodny and Larry Li, ably covered developments at the Surveys and Mapping branch, the Lands Directorate and the Geocartographics section, at the end of a beautiful Saturday (rare this summer) which would have been unbearable were it not for the expertise and enthusiasm exuded by the speakers. The event was followed by a brief social in the Carleton Students Union Club.

(Contributed by David Douglas)

On October 18 1986, I was the victim of a hoax! I was attending the CCA executive meeting in the National Archives in Ottawa at the same time that the Ontario division of the Canadian Association of Geographers was holding its annual meeting at Carleton University. At about noon, Cliff Wood left the meeting temporarily and on his return said he had received a telephone call from Len Guelke, CAGONT President, to the effect that they needed me at the meeting in a discussion of the Operational Geographer. This was the perfect bait since 1) I have not missed contributing to one issue of T.O.G. and 2) the costs and advisability of T.O.G. seem to recur at meetings.

I left the executive meeting to call a cab, which arrived, moving gently over the speed bumps in front of the library. The road outside is divided by a median, the sign said no left turn, the next sign said no U turn - we were on our way across the Ottawa to Hull!

Returning from Quebec, the Arts Tower came into sight, but the Carleton Ravens were playing the Ottawa Gee Gees in the Panda bowl at Lansdowne Park. Every last Carleton undergraduate was walking in a gigantic crocodile across the four lane road. Complete with barricades, liquid containers and painted faces, the 11,451 students blocked traffic for over 20 minutes.

Eventually I arrived at the Geography Department to find it empty - a sign said registration in the lobby - a note there directed me to the adjoining building - there I was told to follow the intricate path, stairways, and passageways to the Pepperpot Lounge. Only Hans Hosse was there. I needed that Blue! People started to come in for the sessions, said hello and then avoided me. It is true that I had not registered and had no name tag - but I wondered if they knew about the proposed discussion and did not wish to take sides.

Since, long ago, I had written the constitution of CAGONT, I knew there should be no formal agenda. It was modelled on the Friends of the Pleistocene: no membership or dues, no secretary or treasurer, no minutes, no financial statement. Len Guelke called the group to silence and called upon me to accept an award for service to Geography in Ontario. I was almost speechless but not quite.

Ironically the certificate was prepared by Gordon Shields in our Geography Department, signed by Graham Smith, also in our department. It was a brilliant hoax, even if I was the 'unwilling' victim!

CCA / CARTO-QUEBEC ANNUAL MEETING, QUEBEC, MAY 4-8, 1987. (See ad. in this newsletter). Further details including registration information will appear in the next newsletter.

INTEREST GROUP NEWS

History of Cartography (Gordon Shields)

I am proposing a half-day session of papers broadly dealing with the history of cartography, in keeping with one of the stated themes of our upcoming annual meeting at Universite Laval in May.

At present, I can foresee a range of possible themes for the session, including early fire insurance plans, perspective views of Canadian cities and towns and the history of the city map trade. I would also like to arrange a display of maps relating to the above themes as an accompaniment to the papers presented.

An evening session at our past annual meeting was held under the auspices of the interest group. Mr. Ron Scobie, a collector of early surveying and mapping pieces, brought numerous examples from his collection to illustrate a talk on the development of his collection.

I am presently compiling a listing of Canadians interested in the history of cartography as well as persons outside of Canada who are researching themes in Canadian cartography. I expect that such a listing will prove useful to subsequent chairpersons of the interest group.

Education (Jan Mersey)

The Education interest group sponsored the presentation of two films at the annual meeting in Vancouver. These were intended to familiarize those involved in teaching cartography with some of the valuable teaching aids available. Special thanks go to Norman Avery, of EMR, for supplying the film "The contour connection" and accompanying exercise books; and to Gary Brannon, of the University of Waterloo, for supplying his film "Straight lines and curved spaces, which deals with map production techniques.

I am interested in maintaining a list of relevant teaching aids in cartography (films, slide sets, exercise packages, etc.) and would appreciate hearing from any members regarding any educational materials they use in cartographic courses, or know of. Sharing this information at our annual meetings and through the newsletter will benefit all those concerned with education, and bring to light relevant items that are often available from somewhat obscure sources.

The CCA has long recognised the importance of its student members. It was recently decided that to better meet the needs of this group, and to encourage greater student participation in CCA activities, a student representative would be appointed. Steve Pattison, a student at Simon Fraser University, has accepted this position and will report to the executive through the Education interest group chairperson. Steve and I have recently discussed several possible projects, including a student-designed poster advertising CCA activities and membership information, and the encouragement of student contributions to the newsletter.

A special student paper session is being proposed for the annual meeting in Quebec City. The CCA conferences have always provided a stimulating and receptive environment in which students may discuss their work both informally and at the podium. Invitations to our student members will go out shortly, but non-members are also eligible to submit papers. Faculty, please encourage your students to take advantage of this forum to present their term projects or thesis work !

Map Use (R.W.Packer)

"The Ralph Naders of map making"

It is quite obvious that all members of the CCA have the experience of being a "map user" to some extent. Some spend all their time using maps for illustration, teaching and explication; some are involved in the production process and often depend on existing maps as a source; some are involved in the analysis of maps and the perception of permanent and ephemeral displays of data. Why, then, does the association need a separate group ?

If we are group of professionals, it is incumbent upon us to police ourselves as other professionals do. One function of the "map users" group should be to establish standards in published maps. This is not to involve subjective evaluation but to examine those map components which can be assessed objectively. Perhaps the interest group could prepare yet another manual listing such things as minimum line widths, minimum print size, use of graphic and not numerical scales, limitation of the number of different screens. All of us have been subjected to the overhead display of originally typewritten material which is illegible past the third row of the lecture theatre. This happens at the CCA annual meetings as well as in classrooms.

A second function should be to maintain ethical standards - not just those things controlled by copyright law, but obvious plagiarism without credit in which the original contributions of the cartographer are subsumed by agencies and authors.

Thirdly, we should see ourselves as the watchdogs or the Ralph Naders of map making. At the moment anyone who puts ink on paper or directs someone else to do so considers him/herself as a cartographer. The final product may be uninformative, poorly designed and lacking in essential message. Attention of the profession should be drawn to Edward R. Tufte's effective criticism of chart junk and data ink maximisation. This is particularly important for computer drawn maps and graphs where line and dot screen patterns are available and thus both get used on the same graph or map. We, as cartographers, owe the general public protection from the mistakes that are known to us. We are aware that in three dimensional representation unless the shadows fall to the right and to the bottom of the page, they produce an equivocal figure. Why then do we permit the Land Use in Canada Series to use a wrong technique on its covers ?

INTEREST GROUP NEWS

The fourth duty that the CCA "Map Users" could perform is to undertake reviews of the graphics in books separately from the academic and interest content. Usually reviewers make a general statement that the book is well illustrated or poorly illustrated without detailed praise or condemnation.

A fifth responsibility that could be pursued should be increased liaison between the CCA and the Association of Canadian Map Librarians (ACML). There is much overlap in both interests and members but no overlap in meetings. With the increasing cost of meetings and greater demands on time, mutual sessions would seem to be advantageous. If this is not possible at least a report to each others meetings would improve communication and stress the interdependence.

In order to carry out these functions the map use group needs the willing assistance of all members who would divide up the activities into manageable pieces.

Map design (C. LeBlanc)

"Tourism/Highway map survey"

During my tenure as chairperson of the Map Design interest group, I am looking forward to contributing to the growing awareness of the importance of map design within the larger framework of cartography. To that end, I am in the preliminary stages of planning a survey regarding the status of tourism/ highway mapping design in Canada. The following is a brief description of this survey, the rationale behind its conception, and its purpose:

Rationale

Tourism/highway maps are published, often on a regular basis, by various government departments and private enterprises throughout Canada and the world. These maps range from relatively simple reproductions to artistic and elaborate multi-colour representations. They are distributed to millions of map users, resulting in tourism/highway maps being the second most common form of mapping in use by the public, the first being weather forecast mapping.

Although map publishers, as a rule, request and receive comments from map users regarding their products, to my knowledge, a comprehensive survey has not been undertaken in Canada to evaluate the end user's requirements and preferences in relation to the design of these maps.

Purpose

The purpose of this survey is to analyze the tourism/highway mapping situation in Canada and to evaluate, in general, developing design trends. The analysis and evaluation would be based on survey information obtained from four categories of map users:

- i) the general public;
- ii) persons with a cartographic background

iii) tourism department officials;

iv) transportation/highway department officials.

Thus further analysis and evaluation can be carried out based on the different requirements and preferences, if any, of the above four groups of individuals.

Survey Design

Although the survey is still in the preliminary design stage, the major phases in its design and execution will be as follows:

i) the contacting by identified CCA members of selected government officials and private industry representatives responsible for tourism/highway map publishing in each province. Following a description of their intended use and based on their availability in large numbers, tourism/highway map samples would be requested from these personnel. A selection of individual maps would be made from the samples obtained on the basis of map design. Each of the selected maps would then be acquired in sufficient quantities for inclusion with a questionnaire, the number of which is yet to be determined;

ii) the formulating of a scientifically valid questionnaire with input from CCA members, the general public, government officials, private industry and professional survey-takers and statisticians. Questions would relate to design considerations such as style, format, colours, scale, size, folding, type styles and symbology;

iii) the distribution, again with the assistance of CCA members, of survey packages (each containing a questionnaire and copies of each selected map) to individuals from each of the four categories referred to previously under "Purpose;"

iv) the computerized analysis and subsequent evaluation of the collected information based on established criteria;

v) the presentation of the survey results in the form of a technical paper and/or working session to be presented at the annual CCA conference in 1988. The results would also be made available to the participating tourism/highway map publishers throughout Canada.

Conclusion

It is hoped that, in the future, the analysis and evaluation of the information obtained from this survey will result in more effective tourism/highway map design to better meet the needs of the map user. The assistance of CCA members is required to carry out the survey described above. Members interested in participating are asked to contact Claudette LeBlanc, Maritime Resources Management Services, Box 310, Amherst, N.S.

TECHNICAL NOTES AND QUERIES

Stripping film for Laser printers (typesetting).

Macintosh/PC (and mainframe) users with access to a Laser printer should be aware that it is now possible to produce typesetting on stripping film using a Letraset film "Letracopy PF".

This configuration avoids the expense of size specific disks of some typesetting systems and more importantly in these budget cut days, removes the need to purchase a task specific typesetter.

The Apple Laser Writer Plus, for example, currently supports 11 typefaces including Greek letter notations and a symbol selection (ITC Dingbats). Each typeface allows several styles such as italic, bold, outline, shadow, and hollow with virtually limitless point sizes.

Letracopy PF costs about \$1 per letter size sheet, (well under most stripping films) although it was not developed specifically for this purpose (therefore when attempting to order, specify the product name, a request for "stripping film for a laser printer may receive a less than helpful reply !).

More typesetting!

How many Morisawa users are still out there ? TN + Q would be interested in locating existing Morisawa units and comparing maintenance notes- perhaps a Preservation group ? Problems encountered by some users include:

1. Shutter sticking (solved by frequent lube !);
2. Uneven spacing;
3. Gear settings no longer equivalent to tabulated point size settings;
4. Non-alignment of upper case and lower case letters.

Epson HI-80 Plotters

Has anyone out there succeeded (or would like to) in using an Epson HI-80 plotter with any mapping software ? This inexpensive piece of hardware seems of little value to the field without compatibility !

TN + Q comments, problems, replies, submissions should be sent to the Newsletter Editor (Roger Wheate, Geography Department, University of Calgary, Calgary, Alberta, T2N 1N4) or use the Electronic Mailnet address (page 2).

CCA MEMBERS 1986

Distribution of CCA members as of December 1986 (by province, state and country, with inclusion of cities with over 5 members).

CANADA (265)			
Yukon	1	Victoria	12
B.C.	24	Vancouver	12
Alberta	42	Edmonton	22
Saskatchewan	7	Calgary	18
Manitoba	5	Toronto	25
Ontario	91	Ottawa	30
Quebec	71	London	7
Nova Scotia	7	Montreal	32
New Brunswick	7	Quebec City	11
Newfoundland	10	Sherbrooke	10
(P.E.I. and N.W.T. 0)			

U.S.A. (94)	
13	Virginia
8	New York, Illinois
6	California, Maryland
5	Michigan
4	Minnesota, Massachusetts, Ohio, Pennsylvania, Wisconsin
3	Colorado, Kansas
2	Kentucky, New Jersey, Oregon, Texas, South Carolina, Washington, Wash. D.C.
1	Alabama, Connecticut, Hawaii, Indiana, Iowa, New Mexico, Rhode Is. S. Dakota

OVERSEAS (27)	
6	U.K., Hong Kong
2	Australia, Japan
1	Belgium, Iceland, Iraq, Italy, Kenya, Netherlands, Saudi-Arabia, Spain, Sweden, Switzerland, West Germany

BREAKDOWN BY ACTIVITY

University Professor / Researcher	25%
Government Researcher / Practitioner	23%
Private Researcher / Practitioner	20%
Student	17%
University Practitioner	8%
Unknown	4%
Other (retired, etc.)	3%



Morisawa on a bad day !

POSITIONS AVAILABLE

Limited-term Faculty Position; University of Western Ontario. GIS/Automated Cartography or Urban Geography. Up to 3 years, Assistant Professor, Ph.D. required; to teach two undergraduate courses, conduct research, undergraduate and graduate student supervision. Starting date; July 1, 1987; application deadline: Feb 28, 1987. Send application, with C.V. and three referees to Dr. R.W. Butler, Chairman, Department of Geography, University of Western Ontario, London, Ontario N6A 5C2.

Tenure track position. Memorial University of Newfoundland. GIS/Computer Cartography; with additional interests in remote sensing or photogrammetry and surveying. Will join two other full-time academics in a well established undergraduate and developing graduate programme in Cartography/Remote sensing. Ph.D by Sept. 1987 preferred; rank/salary commensurate with qualifications/experience. Commence: Sept. 1 1987; application deadline: March 31 1987. Send applications with C.V. and three referees to: Dr. R.J. Rogerson, Head, Department of Geography, Memorial University of Newfoundland, Elizabeth Avenue, St. John's, Newfoundland, A1B 3X9.

Tenure track position. Assistant Professor. University of Missouri-Kansas City. Cartography / Computer Graphics / GIS. Candidates must have or anticipate a Ph.D. in Geography. Course load: about 18 credit hours per nine month academic year; research and publication expected; salary commensurate with credentials. Commences Fall 1987; review of applicants begins March 10 1987. Send applications with transcripts, teaching experience grantsmanship, resumes and three letters of reference to: Professor Edwin D. Goebel, Chair, Department of Geosciences, University of Missouri-Kansas City, 5100 Rockhill Road, MO 64110-2499. Tel: (816) 276-2983.

Tenure track position: Assistant Professor. California State University, Chico. Cartography. Recent Ph.D. in Geography required; additional skills in Map and Air photo interpretation, Computer applications in Geography, regional Planning or Human Geography are desirable. Evidence of superior teaching and participation in professional activities required. Appointment commences Aug. 22 1987; Application deadline Feb. 16 1987. Send applications, with C.V. evidence of superior teaching and three letters of reference to: Dr. Edward L. Myles, Chair, department of Geography, California State University, Chico, CA 95929-0425 Tel: (916) 895-5285.

NEW ATLASES

Goode's World Atlas, 17th edition, Rand McNally, 1986; U.S. \$16.96 (hard) \$13.28 (pb).

Images of the World, an Atlas of Satellite Imagery and Maps, Collins, Glasgow, Scotland 1984, pp 175, U.K. 12.95.

Historical Atlas of Africa, J.F. Ade Ajayi/Michael Crowder, University of Cambridge Press, N.Y., 1985, pp159, U.S. \$75.00.

Canada and the World: an Atlas Resource, Geoffrey J. Matthews/ Robert Morrow Jnr., Prentice-Hall, Scarborough, Ont., 1985, pp201, Cdn. \$29.95.

Ukraine, a Historical Atlas, R. Maqocsi/G.J. Matthews, University of Toronto Press, 1985, Cdn. \$35.00(Hard), \$16.95 (Pb).

South and Southeast Wind Atlas, Dean de Harpporte, Van Nostrand Reinhold, N.Y., 1984, Cdn. \$33.54.

The Atlas of Central America and the Caribbean, The Diagram Group, Macmillan, N.Y., 1985, pp144, U.S. \$50.00.

Namibia, Dept. of Conference Services, U.N. Headquarters, U.N.O., N.Y., 1986 (2 sheets).

ICA COMMISSION II: Map Production Technology.

The results of the questionnaire below will form the basis of a report to the ICA in Morelia in 1987. The purpose is to cover conventional processes/techniques, new equipment and materials which have been developed or introduced into map production during the period 1984-87. Any individuals or groups in the CCA who would like to participate, please return the completed questionnaire as soon as possible (requested date was Jan 31 1987) to: Neil Grant, Energy, Mines and Resources, Surveys and Mapping Branch, 615 Booth Street, Ottawa, Ontario, K1A 0E9.

QUESTIONNAIRE

Innovations in Map Production Technology, 1984-87.
Mapping Organization Information
Name:

Address:

Contact person:

Technical Innovation description:

1. New process/technique
2. New equipment
3. New material

Please supply a detailed description of the innovation. Include any references to published articles or papers describing the innovation and its application to mapping in your country.

UPCOMING EVENTS

30 Mar - Apr 2 1987, Baltimore, Maryland, AUTO CARTO 8 New Foundations. Contact: Nicholas Chrisman, 3809 Nakoma Rd., Madison, WI 53711, USA.

29 March - 3 Apr 1987, Baltimore, Maryland, ASPRS/ACSM Annual meeting (includes AUTO CARTO 8). Contact: Mary Clawson, 115 St. Andrews Rd., Severna Park, MD 21146. Includes 200 technical presentations, and student program on Tues. 31 March. Student activities contact: John Gundy, 202-227-2294.

5 - 9 Oct 1987, San Jose, Costa Rica, First Latin American Conference on Computers in Geography. Contact: Dr. Duane Marble, Dept. of Geography, SUNY at Buffalo, Amherst, NY 14260, USA. Tel: 716-688-4281.

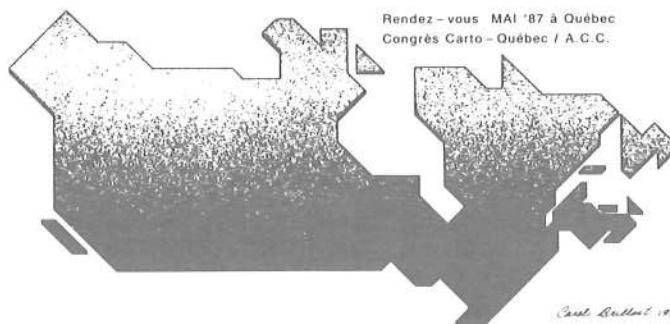
12 - 21 Oct 1987 Morelia, Mexico, Association Cartographique Internationale, 8e Assemblee Generale et 13e Conference Internationale. Contact: 13 I.C.A. Conference, Apdo. Post. 25-549 C.P.03400, Mexique D.F., Mexique.

**First Latin American Conference on Computers in Geography.
San Jose, Costa Rica, Oct 5-9, 1987.**

The conference, organised by the Commission on geographical Data Sensing and Processing of the International Geographical Union in cooperation with the International Cartographic Association and local organizations within Costa Rica, is intended to provide a medium for communication and exchange of experience among those handling spatial data with computers. Topics of interest include computer-based modelling of spatial processes, digital cartography, remote sensing and geographic information systems. The languages of the Conference will be Spanish and English. The dates of the Conference, Oct. 5-9, immediately precede the main ICA meetings in Mexico and airline service is available from San Jose to Mexico City on a regular basis.

You are invited to present a paper on your current research, stressing the computer applications aspect of your work and its importance for developing nations. Submissions of four (4) copies of abstracts, not to exceed 800 words, should be made available to the Program Committee before April 10, 1987, through either:

Dr. Duane Marble, Dept. of Geography, SUNY at Buffalo, Amherst, NY 14260, USA; Tel: 716-688-4281, telex: 650-218-4975 MCI; or
Dip.- Geogr. Merrill Lyew, Escuela de Geografia, Universidad Nacional, Apartado 86, Heredia 3000, Costa Rica (for conference registration; fees: US\$50, \$75 after July 1).



**CANADIAN CARTOGRAPHIC ASSOCIATION/
CARTO-QUEBEC
Annual meeting, Quebec City,
May 4-8, 1987**

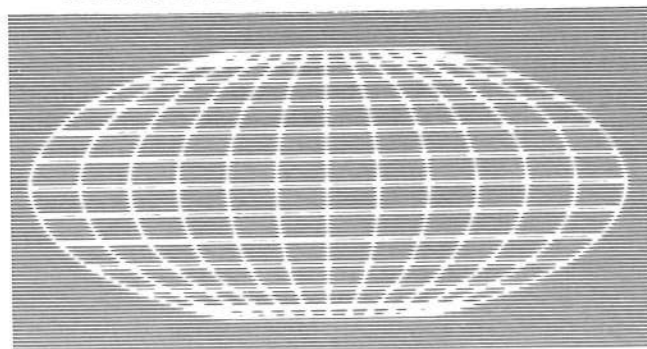
Sessions include: Map use/design, history of cartography, education, technology, automation; special theme: automated cartography/ GIS.

Contact: Jean-Luc Emond, 3460 La Perade, Ste-Foy, Québec, G1X 3Y5.
418-643-5380

Papers: Michel Rheault,
Departement de Géographie,
Université de Sherbrooke,
Sherbrooke, Québec, J1K 2R1.

O.I.C.C.

CARTOTECHNIQUES VII 'CARTOGRAPHY IN NATURAL RESOURCE DEVELOPMENT'




May 27-28, 1987

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Lindsay, Ontario**

for further information contact:
Bryan Monette, C.C.
Agriculture Canada
Land Resource Research Centre
K.W. Neatby Bldg., Room B-83
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(613) 995-5011

UPCOMING EVENTS

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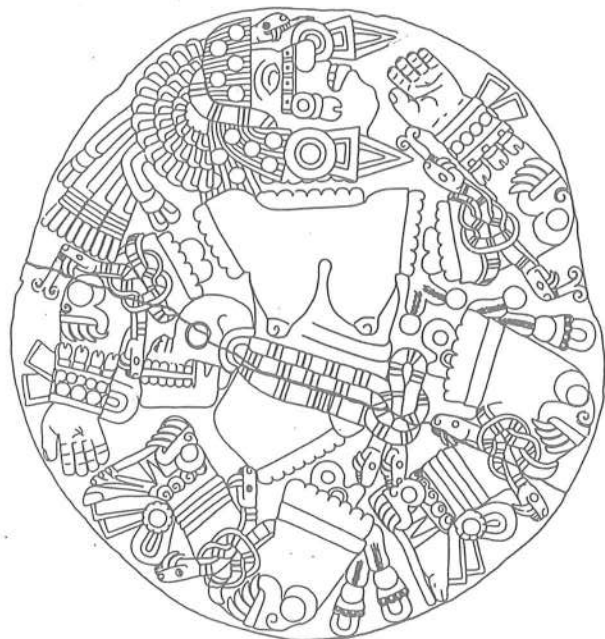
Registration:
Jack Matches
(604) 663-4575

Exhibits:
Andy Taylor
(604) 683-3282

Submit papers to:
ANCSM Meeting, Chairman,
Mary Everett
B.C. Hydros
2nd Floor, 1080 Hornby St.,
Vancouver, B.C. Canada
V6Z 1V6
(604) 663-4574



ASSOCIATION CARTOGRAPHIQUE INTERNATIONALE



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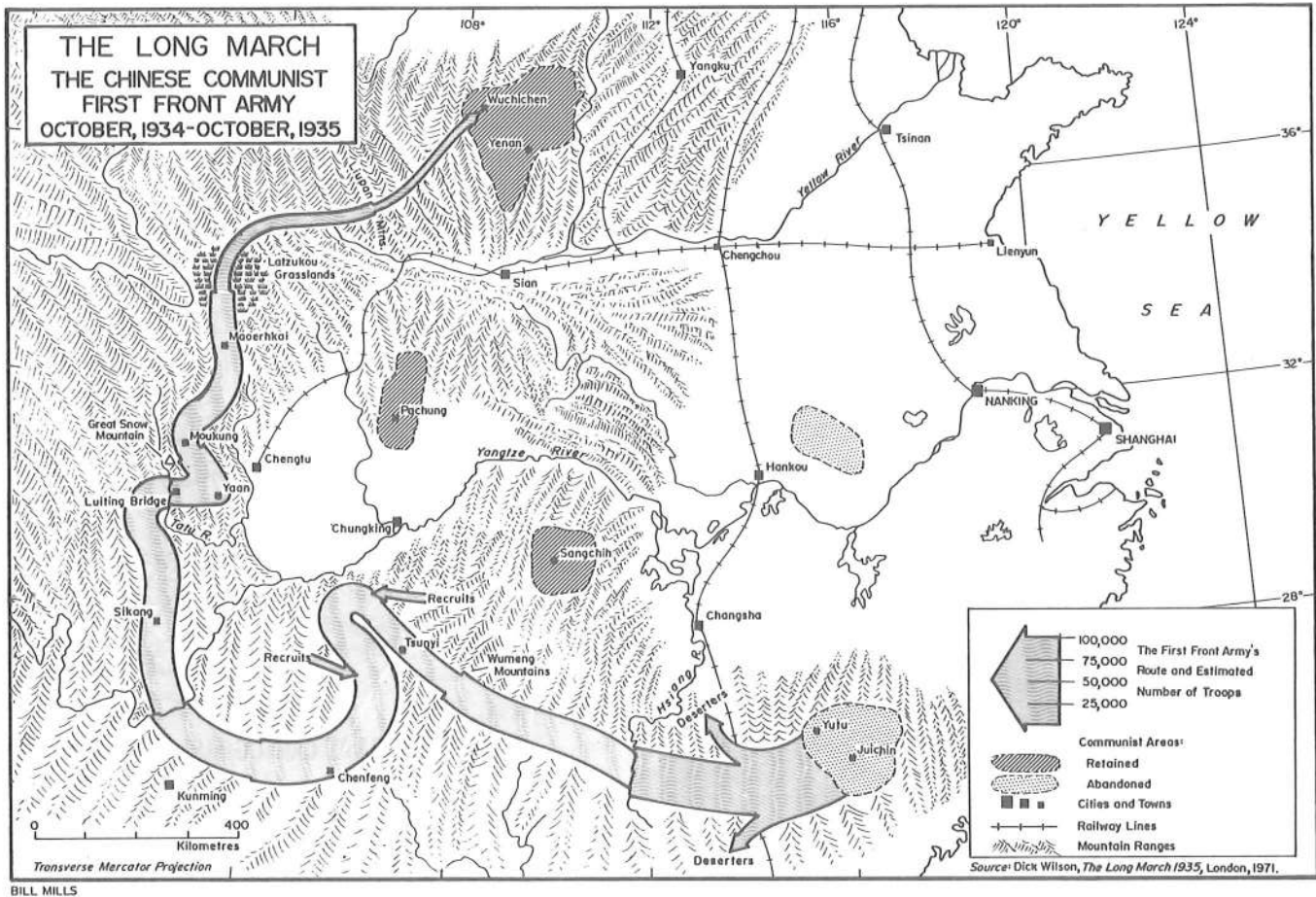
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BILL MILLS

COVER: 1986 was officially recognised by China as the 50th anniversary of the "Long March" in which Mao Tse Tung's communist followers were pursued by the Nationalist forces. This map utilises the same graduated line technique used so effectively in the nineteenth century to depict the decimation of Napoleon's army during the retreat from Moscow. The cartographer here is **Bill Mills**, a University of Calgary, Geography undergraduate at the time of drafting, now a graduate student in history at the University of Alberta. (Note that while the 1st Army completed its march in October 1935, other armies did not reach the northern base until 1936)

THOUGHT FOR 1987:

There are two types of cartographers: those who divide cartographers into two types and those who don't!