# Cartouche

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

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

*Cartouche est publié trimestriellement par l'Association canadienne de cartographie. N'hesitez pas à soumettre des articles que vous désirez publier dans le bulletin. Les artricles et annonces soumis pour parution sont sujets à l'approbation de la rédaction. Veuillez les adresser à l'éditeur. Selon la politique en vigueur, l'editeur publier en français et en anglais, l'editorial ainsi que la description du processus de publication du bulletin. Le reste des articles paraîtront dans la langue dans laquelle its ont été écrits. Bien que beaucoup d'efforts sont déployés en vue d'eviter de tels problèmes, l'editeur ne seront pas tenus responsables des erreurs de compilation ou de la perte d'articles que leur seront soumis. Les opinions exprimées dans le cadre des éditoriaux, des articles et des lettres publiées dans le bulletin ne reflètent pas nécessasirement celles de l'Association canadienne de cartographie. L'association canadienne de cartographie remercie vivement le Conseil de recherches en sciences humaines du Canada pour son apport financier.*

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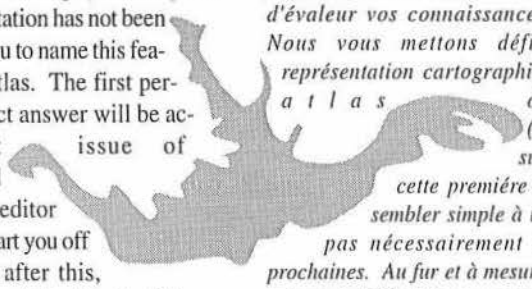
***15 fevrier 1995***

# Rorschack's Map

What does this cartographic "blot" look like to you? The feature can be either physical or political. The shape and orientation has not been altered. We challenge you to name this feature without using an atlas. The first person to give us the correct answer will be acknowledged in the next issue of *Cartouche*. Please send your responses to the editor (address above). We'll start you off with an easy one, but after this, watch out! The identity of this "blot" will be revealed in the next issue.



# *Carte de Rorschack*

*À compter de ce numéro de Cartouche, nous vous propsosons un jeu d'habileté qui vous permettra d'évaleur vos connaissances cartographiques. Nous vous mettons défi d'identifier une représentation cartographique sans utiliser un atlas ouvrage de référence (nous vous croyons sur parole!). Bien que cette premiére éniqme pourra vous sembler simple à identifier, il n'en sera pas nécessairement de même avec les prochaines. Au fur et à mesure de nos publication, le taux de difficulté augmentera. Alors, retournez à vos bouquins pour réviser rapidement vos notions de base en matiére de projection cartographique! Que vous rappelle la représentation graphique ci-dessous? Elle peut être physique, politique, naturelle ou fait à la main. Sa forme et son orientation ne sont pas altêrê. La réponse et le nom de la première personne qui aura trouvé la bonne réponse seront publiés dans le prochain numéro. Vous faites parvenir vos réponses à l'adresse.*

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**Pass the grits, eh?**
The southernmost parts of Canada are only a mere 220 km from the Mason-Dixon Line, the cultural border of the American South. In fact, Atlanta, Georgia is closer to Windsor, Ontario (960 km) than it is to Miami, Florida (975 km)!

# Membership File / *filière du membres*

**by / *par* Monika Rieger**

CCA Membership Secretary /
*secrétaire d'inscription de l'ACC*

The CCA would like to welcome the following new members:

| | |
|---|---|
| Gavin Adcock | Lawrencetown, NS |
| Grant Buhay | Winnipeg, MB |
| Martin Bunch | Waterloo, ON |
| Robert Cocking | Surrey, BC |
| Ken R. Hakes | Edmonton, AB |
| W. J. Jurens | Winnipeg, MB |
| Des Kappel | Winnipeg, MB |
| Mary-Jo Lye | Guelph, ON |
| Michael Mask | Brantford, ON |
| Elisabeth Nelson | Columbia,S.C., U.S.A. |
| Dave Patterson | Brampton, ON |
| Mahmood Randeree | Winnipeg, MB |
| Robert Shulz | Victoria, BC |
| MacKimmie Library | U of Calgary, Calgary, AB |
| Serials Library | Brock University, St. Catharines, ON |

**Renewals for 1995**

I will soon be mailing out the renewal notices for 1995. However, if any members would like to renew early, I would appreciate it very much as this would decrease the work load in January. The membership dues remain at last year's prices. Your payment can be made by cheque (payable to CCA) or by VISA or Mastercard (please include number, expiry date and signature). Please send payment to me at:

Monika Rieger
Department of Geography
University of Calgary
Calgary, Alberta
CANADA T2N 1N4

# The Editor's File / *filière du éditeur*

*Let the great world spin for ever down the ringing grooves of change.*
-Tennyson (*Locksley Hall*)

Cartographers are used to change. Whether it has been for political or physical reasons, maps have been constantly changing (oxymoron?) since the beginning of recorded history. With this justification in mind, and as your new editor, *Cartouche* gets a new look.

After unwittingly accepting the position of editor, I had a plethora of mixed emotions. At first I felt apprehensive about taking on a large reponsibility such as a newsletter for a national organization. My experience in these matters was confined to the department level at the University of Winnipeg. To leap from this level to a national plane boggled my mind. On the other hand, I had a rush of excitement to take on a challenge of this magnitude. It would, and has, opened new doors for me within the CCA. It has given me the opportunity to interact with people of similar interests from across the continent, and to make new friends in the process.

The changes to *Cartouche* are rather apparent. As difficult as it was for me to improve on a high quality newsletter left by my predecessor, I think the addition of more graphics and a stylized masthead is a step in the right direction. A new feature I am adding is "Rorschack's Map", used to test your geographic knowledge, as well as a gauge for membership participation and response to the newsletter. You will notice the use of quotations and trivia used mainly as fillers, but also for entetainment value. As I get more comfortable in the production of *Cartouche*, more changes could be forthcoming. Because this is my first newsletter, there are bound to be some inconsistencies and errors. Accustomed as I am to criticism, I am more than happy to listen to any comments you may have regarding these changes, or any suggestions you have to offer. Afterall, this is your newsletter.

Production of any publication involves a lot of hard work and usually the help and guidance of others. I would like to thank Warren Shuetz and Kelly Emslie of the University of Winnipeg Printing Services for their advice on layout and design of this newsletter. James Britton for his help with the smooth transition of reponsibilities. Michel Fournier for his offer to help with the translation, merci beaucoup. Special thanks goes to Marcia Faurer for her confidence in my ability to produce this newsletter, and her patience for the countless times I showed her a prototype and said "What do you think of this?"

1995 will mark the 20th anniversary of the Canadian Cartographic Association. To help celebrate this milestone, I intend to devote a couple of pages in each 1995 issue of *Cartouche* to the printing of stories, memorabilia, etc. from the past 20 years. I invite all members to rummage through their memories and experiences with the CCA and share them with the rest of us through *Cartouche* (Jan Mersey sent me a good one!).

In an attempt to get "caught up", this is a spceial issue of *Cartouche* combining numbers 15 and 16. It is unfortunate that the newsletter has been behind schedule, but there is no alternative if the membership does not respond with their submissions. The continued success of *Cartouche* depends primarily on the contributions of the membership in the form of high quality articles and cartography related stories. I look forward to the opportunities and challenges that *Cartouche* will offer, and the chance to work closely with the membership.

This issue of *Cartouche* will be the first one not edited by Jim Britton. Jim assumed the position of newsletter editor in 1990 and has been editor/(CCA 'secretary') since the renaming of the newsletter to *Cartouche* commencing in 1991. Those of us who are 'surviving' newsletter editors probably were all (pleasantly) surprised when Jim agreed to a second term in 1992. The position can be very rewarding, but also very taxing particularly if submissions are not forthcoming. His duties were further extended by the relative isolation of Lindsay with longer printing turn around times etc..

Jim is currently MIA somewhere in Auld Scotland, apparently pursuing a graduate degree in GIS. We missed the opportunity to thank him for his double term and contribution to the CCA at the AGM in August, but do so now wherever he may be. I will think of him with some envy as I sit down to my meagre Sunday beef roast, while he is able to dine on haggis and chips, washed doon wi' a pint o' Tartan special.

If you are reading this Jim, please gi' us a call on e-mail,

Roger Wheate

# President's Message / *mot du président*

## by Marcia Faurer

Welcome to a new look for *Cartouche*! I am happy to be greeting you as President for the first time in this particular issue as it's new editor is a well respected friend and colleague of mine. I think he has some interesting ideas for Cartouche in terms of its appearance and contents, and I hope that you will feel free to send in contributions so that this will truly be a members' forum.

I would like to take this opportunity to thank James Britton, the former editor of Cartouche for his hard work at a job that can often be consuming. I am always amazed by the amount of work people are willing to put into an association on a purely voluntary basis. It is only because of people who contribute their time, effort, and expertise that we have an association at all. Thank you, Jim for your time and dedication.

I would also like to thank Alun Hughes, my predecessor, for his hard work as president, and for his help and advice which I am sure I will continue to require.

It is easy to be a passive member of an association. I spent many years as just such a member while I was a student; happy just to receive my *Cartographica* and *Cartouche*. I felt removed from the people whose names I saw in these publications and thought that there was nothing that I could possibly offer. It seems I was wrong. One meeting was all it took to find out that the CCA is comprised of friendly, approachable people who are interested in what you have to say and offer. One of the major concerns of the executive and of the membership at large is, and should be, how to generate new members. However, I also feel that it is equally important to keep those members that we do have, and what is more, to make them feel that they are wanted, valued, and have an active role to play in the success of the association. This, then is a call, first to those of you who are active, to encourage one other member or prospective member to contribute either to *Cartouche* or *Cartographica*. It is also a call to new and silent members to participate at any level. Do not assume that just because you see the same names again and again in this publication that it is because these are the only people allowed to contribute, instead it is only because they DO contribute.

Now is a perfect time to start, because we have an important issue that was raised at the Annual General Meeting in Ottawa that concerns a change to our constitution (please see the enclosed minutes, item number 12. Constitutional Changes). In *Cartouche* Number 13, Spring, 1994, Alun Hughes presented the proposed changes to the structure of the executive of the CCA. As you see in the minutes, an objection was raised to one of the proposed changes namely the removal of the Automation Interest Group. This involves a change to Bylaw IX of our Constitution. Below is a listing of the ***OLD*** and ***PROPOSED*** Interest Groups.

*OLD*:
Automated Cartography
Cartographic Education
Cartographic Technology
History of Cartography
Map Use and Design

*NEW:*
Education
Technology
History of Cartography
Map Use and Design

The main rationale for changing the structure is to streamline the executive and to reflect and accommodate changes in the field. These changes must be approved by the membership and will be decided at the next Annual General Meeting in Calgary, but it is important that all members who have an opinion on this topic should be heard. The CCA does not maintain separate member lists for each Interest Group, nor does it charge a fee for an affiliation with these groups. By joining the CCA, you are automatically a member of all Interest Groups. To a large extent, these groups give direction to the Association and inform prospective members about our interests. Therefore while streamlining is important (I am sure we would all agree that we do not want an inflated executive), it is more important that the membership feels that it is accurately and adequately represented. This can only be assured if we hear your thoughts on this matter. Since *Cartouche* is to be a newsletter of and for the members, this is the most appropriate forum for this debate leading up to the vote in Calgary. I am aware that many people cannot always attend the AGM and this open forum would help in the decision making process. Please write to the editor concerning this, and indicate that you are submitting comments regarding the change in interest groups.

Thank you, and I hope we hear from you soon.

# Cartographic Technology / *technologie cartographique*

## by / *par* Patricia Chalk

For those of you who were not able to attend the annual meeting and conference in August this issue's column provides an overview of the material presented by participants in the ***Map Projection Programs Under Inspection: Cartographers Discuss Their Latitudes*** session.

Individuals who made presentations at the session were, in order of presentation:

- ❑ David Mercer, The University of Western Ontario (Commentary on the Practical Use of Map Projection Software)
- ❑ Alun Hughes, Brock University (Review of WizATLAS)
- ❑ Daniel Strebe, Author of Geocart (Review of Geocart);
- ❑ Paul Anderson, Illinois State University (Review of MicroCAM).

I organized and chaired the session.

David Mercer set the context for the session with his commentary on map projection programs. Examples of practical uses for map projection programs were cited as well as software requirements from cartographic and designing perspectives. Two of the key themes are provided below:

1) Map projection programs provide the means to develop maps of world regions which are not generally available on published map sheets. Currently, one of the primary uses for the map projection program used in the Cartographic Lab at Western is to develop custom maps for courses in political geography - maps which provide a unique cartographic perspective for the study of population distribution, resources, national power struggles and international conflicts unique to particular regions on the planet.

2) For cartographers using map projection programs in the development of high-resolution published maps, the files should be easily exported as postscript files into such drawing packages as Illustrator or Freehand. In the professional drawing packages the maps may then be designed, annotated and output to high-resolution imagesetting devices.

David Mercer may be contacted on internet at Mercer@sscl.uwo.ca.

The table below includes excerpts from the reviews of the map projection programs. To conserve space the complete listing of all map projections available in the programs has not been provided - just the total number of projections. Should you wish further details please contact the reviewers or me directly.

| | **WizATLAS** (version 2.0) | **GeoCart** (version 2.0) | **MicroCAM** (version 4.0) |
|---|---|---|---|
| **Date of Assessment** | July/August, 1994 | July 22, 1994 | July 18, 1994 |
| **Price** | 215 pounds sterling (550 pounds sterling with WhizMap and Whizsurf) | $499 (U.S.) | Free non-commercial copying; $2 (U.S.) each for originals and interface; $12 (U.S.) for documentation |
| **Platform** | Macintosh with minimum 1 Mb RAM, math co-processor supported | Macintosh, floating-point required (mathco-processor);Power Macintosh version under development | DOS with minimum 640 K RAM and 4Mb on hard drive |
| **Importing Capabilities** (File Formats) | PICT files (for display only); text or binary files containing geographical or rectangular coordinates (for making map projections and thematic maps) | GeoCart binary data base; Mapmaker text and binary lat/long files; MicroCAM binary data bases | World Data Bank 2 (included); World Data Bank 2 for PC; DLG (graphic; 1:2million); and user-generated "point-to-point" command line files. |
| **Exporting Capabilities** (File Formats) | Clipboard (bitmaps only); PICT files | GeoCart native document; Macintosh PICT (vector or bitmap); EPS; Adobe Illustrator | DXF; Drafix ASCII; HPGL; MicroCAM Exchange Format(for use with included POSTPLOT Software); Adobe Illustrator 1.1 |
| **Date of Last Political Boundary File Update** | pre 1991 | February, 1994 | 1992 |
| **Projections** | 13 provided | 111 provided | 27 provided |
| **Technical Support** | No information | No on-line assistance; fax preferred, not fast but very thorough | User-to-user assistance, with limited support from the reviewer; no on-line assistance |

| | WizATLAS (version 2.0) | GeoCart (version 2.0) | MicroCAM (version 4.0) |
|---|---|---|---|
| **Comment on Manipulation Capabilities** | Aspect: any aspect for azimuthals, normal aspect only for remainder<br>Central Meridian: any meridians<br>Extent: standard parallels - conicals only; azimuthals - whole earth or hemisphere, or circular subset; cylindricals and conicals - whole earth or rectangular subset; pseudo-cylindricals and others - whole earth | Projection parameters, if any, are fully manipulable; pseudocylindrical and some others are interruptable; nine interruption schemes; WNES extents of map is specifyable; aspect of boundaries can be specified independently of aspect of map; all projections are available through parametric latitude (5 varieties); 11 standard ellipsoidal models are preconfigured; custom ellipsoids specifyable (eg: planetary mapping); speed/accuracy priorty specyfyable | Specification of Earth radius and semi-major and semi-minor axis on geoid; any centerpoint |
| **Scale/Size** | Scale may be determined by:<br>1. explicitly by typing numerical scale (conicals only)<br>2. implicity by specifying drawing area and plotting map to fit | Specifiable by: ratio (1:xxx); km/cm; mi/in; pixels/degrees; radius of base globe. Can be scaled to window or printable area | Total control from absurdly small scale (1:10 billioin) to absurdly large scale (1:100). |
| **Graticule** | Any resolution possible, specified independently for meridians and parallels; converging meridians may be terminated at chosen latitude; border labelling of meridians and parallels optional for cylindricals, automatic for special versions of polar equidistant/ orthographic, unavailable for rest. | Latitude and longitude resolution separately specifyable; pruning of meridians around poles; line characteristics fully specifyable | User-specified to as small as 0.1 degrees; ticks or six basic line types; eight colors; nine line weights |
| **Other Information** | Thematic Mapping: point symbols can be accompanied by up to two numeric or text labels; proportional symbols can have up to 10 classes, automatic legend; polygon fills can be assigned uniformly, randomly, or individually<br>Design: maps displayed/printed in color or b/w. User control over line weights and colors; point symbol shape, size and color; fill patterns and colors; type style , size and color; caption optional, editable, draggable; multiple captions up to 10 lines each, provide annotation capability<br>Coordinate Conversion: rectangular to geographical coordinate available for several projections and ellipsoids toallow plotting of data provided in X,Y form<br>Time Savers: use of low resolution coastline data for test plots; separate plotting of individual components; extraction of small-area point/line/polygon files from world files | Raster maps from any projection can be reprojected to any other projection; lat/long coordinate of any point of any projection can be obtained; distortion characteristics at clicked point available; distortion isocols can be drawn; indicatrix can be drawn; great circles, rhumb lines supported; line categories each possess independent line characteristics; no jaggies or smudging because detail level is automatically accounted for; lines are initialized for perfection; maps can be overlayed and rearranged within a single page; detail can be specific at print or export time to match the need; any number of data bases can be registered; any number of documents can be open at one time; runs in background; menu, dialog, and scrolling commands work even while drawing; graphic interface is very easy to use; pictures can be displayed as a background | MicroCAM is modeled after the multi-million dollar USA-CIA mainframe CAM software; manuals are available in English, French, Portuguese, and Spanish; strong features for choropleth, graduated circle and other thematic mapping |

# Automated Cartography / *cartographie automatisée*

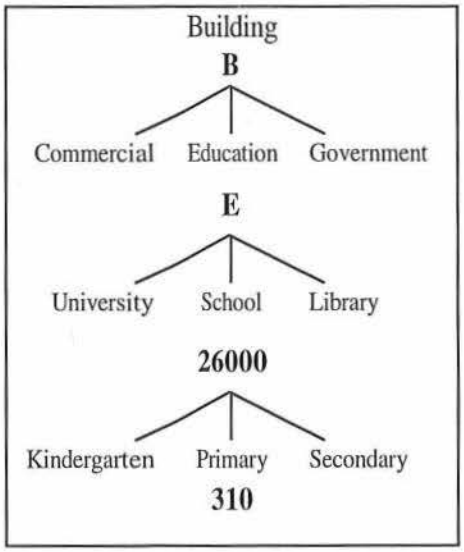
## Do We Still Need Feature Codes?

by / *par* YC Lee

Tracing the evolution of the major GISs will likely lead to origins well over 20 years old. This is not necessarily bad, because a mature product takes time to develop. I would not call the GIS technology as mature yet, but the fundamental structures of most GISs today were quite developed by early 1970. We owe much of this to the developments of, just to name a few, the DIME structure by the U.S. Census Bureau, the Odyssey software by the Harvard Laboratory for Computer Graphics , and the Canada Geographic Information System (CGIS) by Environment Canada in the 1960s.

During those early days of GIS, the concept of database management systems (DBMSs) as we know it today was not very popular. In fact, the relational data model, which forms the basis of all modern day DBMSs, was not developed by Codd until 1970. It was not until the 80s that commercial relational DBMSs became popular.

As a result, those early day GISs, some of them remain as major systems today, placed more emphasis on handling spatial data than on non-spatial attributes. A make-shift solution, called a feature code, was invented to meet the needs for attribute data. In principle, a feature code is the encoding of some attributes of a feature in a compressed form. For example, feature code "HWY2LHT" tells us that the feature is a highway of two lanes with a hard top.




The feature codes, therefore, has became the poor men's database for attributes. Many GIS retrieval were, and still are, based on these feature codes. This has partially lead to the practice of designing hierarchical codes such as those defined in the Canadian Council of Geomatics (CCOG) standard which codes all topographic featurse using four levels of classification (see diagram). At the top level, an alphabet from "A" to "Z" is used to identify 26 broad classes of features, and the letter "B" is used to represent buildings. The second level, also represented by an alphabet, would further classify buildings into commercial, education (represented by the letter "E"), and government. The next level down uses five digits, with "26000" representing a school under educational buildings. The last level uses three digits with "310" representing primary schools under school buildings.

In this system, the code "BE26000310" would represent a primary school building. Using such a hierarchical code, it becomes easier to isolate all buildings because their feature codes all start with the letter "B". To get all educational buildings, just select all features with feature codes starting with "BE" and so on.

The feature codes worked Ok during those days when the number of attributes associated with a feature were fixed and small in number, and the retrievals performed on them were not very complicated. However, it was soon discovered that a proper database is required to handle the growing need for geographical data. We need the flexibility of defining different schemas to suit different applications, and we need the power of a proper query language to handle retrievals that could be quite complex. Thus triggered the adaptation of DBMS technology into GISs. Nowadays, a GIS is not complete without a database.

But what about the feature codes which served as mini databases for so long ? Well they remain as a legacy and continue to be an important element of a GIS although the information they contain are duplicated in, or could be replaced by those in the databases. We have gotten accustomed to the feature codes, and their use has propagated to other applications such as data exchange between GISs.

Unless the database concept is fully embraced by GISs, the use of feature codes in the system cannot yet be replaced. For instance, feature codes are still effective ways of controlling symbology during data display. Using feature codes, which basically represent different types of features, a symbology can be assigned to a class of features automatically through the use of a translation table. For instance, a black colour fill can be assigned to all building features (those starting with "B" in their feature codes).

Yes, the database can be consulted instead of the feature codes to derive the feature classes for the purpose of symbolization, but the systems are already too dependent on the feature codes to change now.

In a database environment, there is a need to create data dictionaries to describe the contents and organziatons of the databases. An important component of this is a description of all feature classes being supported in the database. As feature classes are described by their attributes, feature codes are concise means of serving this purpose.

It is debatable, however, if the feature codes need to be hierarchical. Although hierarchical codes look more organized and are easier for retrieval, they do not make everybody happy. The forming of a hierarchy is subjective and could change from one application to another. For instance, one application may regard a highway to be subdivided according to the number of lanes and then according to the surface type. Hence the feature code "HWY2LHT" for two-lane hard-top highways. Another application may regard the surface type to be more important and uses the hierarchical code "HWYHT2L" instead. Although both codes represent the same attributes and hence the same feature type, inconsistencies of the coding systems due to different interpretations of the hierarchy have created problems. Some of the current feature coding schemes, such as the one used in the National Topographic Data Base (NTDB) of Natural Resources Canada, are not as hierarchical. In NTDB, a numeric code, such as "161" is used to represent school buildings.

In summary, feature codes will remain as an important component of spatial data although they sometimes contain redundant information. With the increasing popularity of databases, the use of feature codes to store attribute data will be reduced. Instead, the feature codes are effective means of representing feature classes using a concise code. Other than the use of these codes for map symbolization, they are useful in data dictionaries describing the contents of a geographic database in an unambiguous manner. For this purpose, these codes only need to be well defined and there is little need for hierarchical orderings.

# History of Cartography/ *histoire de la cartographie*

## by/*par* Carol Marley

Quote for the Quarter

*"Whether in our minds, or printed on paper, maps are powerful talismans that add form to our individual and social reality. They are models of the world- icons if you wish- for what our senses "see" through the filters of environment, culture, and experience. When the fundamental importance of perceiving real and imagined space is compared to what passes for most mapping today, a huge separation is apparent. In our consumer society, mapping has become an activity primarily reserved for those in power, used to delineate the "property" of nation states and multinational companies. The making of maps has become dominated by specialists who wield satellites and other complex machinery. The result is that although we have great access to maps, we have lost the ability ourselves to conceptualize, make and use images of places- skills which our ancestors honed over thousand of years."* ***Boundaries of Home: Mapping for Local Empowerment***, edited by Doug Aberly, Gabriola Island, B.C., New Society Publishers, 1993. $19.95 CAN (pbk) + $2.50 postage. The publisher's address is P.O. Box 189, Gariola Island, B.C. V0R 1X0.

### Review of Recent Works and Events in the History of Cartography

Eila Campbell died this year in London. She contributed both to research in the history of cartography as well as to historical cartography and worked on the Domesday Geography project. She served as an editor for the Hakluyt Society, also as Executive Editor of Imago Mundi from 1974-1994.

A new listserv has been established by David Cobb, Harvard Map Collection. ***MapHist*** is open to all who are interested in the history of cartography. This listserv is a timely way to share information between conferences and the publication of journals. It is also a quick way to obtain an up-to-date list of e-mail codes of fellow enthusiasts. For more information, e-mail David at david_cobb@harvard.edu.

Recipients of the first J.B. Harley Research Fellowships in the History of Cartography received 400 pounds sterling each for conducting research in cartographic collections in the London area. Dr. Mead T. Cain, New York, will be working on the maps of the Society for the Diffusion of Useful Knowledge. Dr. Claire Lemoine-Isabau, Musee Royal de l'Armee, Brussels, will investigate the history of Belgian cartography. Roger Starling, University of Toronto, will be working on the topic, ***Cartography and Power: English Renaissance Drama and the Production of Space 1580-1640***.

The British Library and the National Archives of Canada are engaged in a joint project to film, in microfiche format in both color and black and white, the Charles Goad plans of Canadian towns. For information about the project, write to the Visual and Sound Archives, National Archives of Canada, 395 Wellington Street, Ottawa, Ont. K1A 0N3.

Many of us had the opportunity, at the joint meeting of CCA/NACIS in Ottawa during August, 1994, to view a new technology, an interactive compact disc on the topic of history of cartography. ***Charting a New World: Maps of Discovery***, a selection of early maps of the European discovery of North America, was produced in cooperation with the David M. Stewart Museum and the Canadian Heritage Network. To view the CDI, you will need a compact interactive disc player, a mouse and a TV. $29.95 US For more information contact On/Q Corporation in Montreal at 800-463-3425 or 514-393-3500.

An excellent television program was recently shown as part of the Nova series on ETV, ***Taller than Everest***. The one hour program traces the triangulation of India up to the Himalayas, describes twentieth century scientific expeditions and the scaling of the mountain, and recounts the mapping of Everest, which culminated in the beautiful map, ***Mount Everest***, published by the National Geographic Society in 1988. Along the way we learn about new technologies and the continuing value of older surveying techniques. The program is available on video from: Films for the Humanities and Sciences, 800-828-9424. It costs $89.95 US +$10 mailing.

### Recent Publications

***Ancient Maps of China,*** vol.1 Beijing Institute for the History of Natural Science, 1990. $195 S ISBN 7-5010-0304-1 Available from the Milwaukee Map Service, 959 Mayfair Road, Milwaukee, WI 53226.

***Atlas historique de Montréal***. Jean-Claude Robert. Montréal: Art Global and Libre Expression, 1994. $59.95 CAN ISBN 2-89111-525-2.

***La cartographie au Québec***, 1760-1840. Claude Boudreau. Sainte Foy, Quebéc: Les Presses de l'université Laval, 1994. $39 CAN ISBN 2-7637-7350-8.

***Columbia Journals***. By David Thompson, ed. Barbara Belyea. Montreal and Kingston: McGill-Queen's University Press, 1994. $49.95 CAN ISBN 0-7735-0989-5.

Forma Urbis Romae: Maps of Rome and Ancient Italy. Rodolfo Lanciano. Oxford: Oxford University Press, 1993. $70 US ISBN 8807097-013-2.

***From Maps to Metaphors: the Pacific World of George Vancouver***. Robin Fisher and Hugh Jonston, eds. Vancouver: UBC Press, 1993. $39.95 CAN ISBN 0-7748-0470-x.

***Historical Atlas of East Central Europe***. Paul Robert Magocsi. Geoffrey Matthews, cartog. Toronto: University of Toronto Press, 1993. $85 CAN ISBN 0-8020-0607-8.

***Mapping It Out: Expository Cartography for the Humanities and Social Sciences***. Mark Monmonier. Chicago: University of Chicago Press, 1993. ISBN 0-226-53416-2.

***Cartes anciennes: cartes originales ou reproduites***. Pierre Lepine. Montréal: Bibliothèque national du Québec, 1994.$40 CAN plus $2.80 PST ISBN 2-551-13274-6.

### Meetings, Conferences, Exhibitions

***Reading the World: Historic and Contemporary Perspectives on Maps***, a scholarly conference, was held at the Un. of So. Maine, Portland, Oct.14-16,1994. The conference coincided with the official opening of the Osher Map Library and Smith Center for Cartographic Education. Among the speakers were John Noble Wilford, author of The Mapmakers, David Woodward, University of Wisconsin, Madison, Denis Wood, North Carolina State University and Anne Godlewska, Queen's University.

***Charting the Scottish Seas 1500-2000***, a symposium organized by the National Library of Scotland and the Royal Society of Edinburgh, will take place in Edinburgh, Feb.18, 1995. A tribute to early surveyors, chartmakers and navigators, also commemorating the foundation of the Hydrographic Office, the symposium will explore the charting of Scottish waters from 1500, as well as give an overview of current developments in hydrography and oceanography. Information and application form are available from: Diana Webster, Map Library Manager, National Library of Scotland, 33 Salisbury Place, Edinburgh, Scotland EH9 1SL e-mail d.webster@admin.nis.uk.

# Map Use & Design / *conception et utilization des cartes*

**by/*par* Morrie Portnoff**

WELCOME!

As Chairperson of the Map Use and Design Interest Group, I would like to invite all members of the CCA to participate in this forum. Over the next two years I will attempt to raise timely and relevant issues in the field of map use and design, namely some of the newer cartographic products which have recently entered the digital cartographic scene.

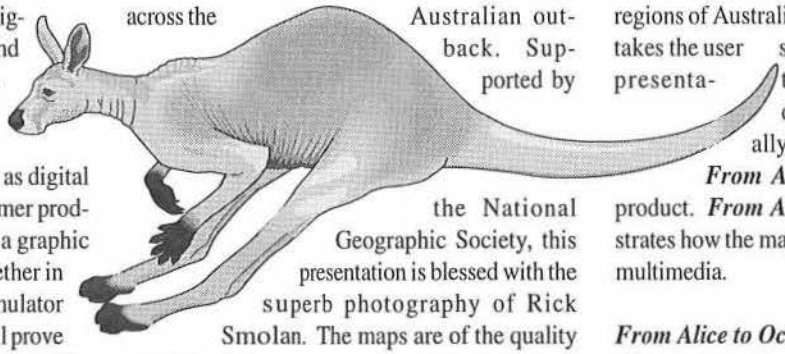
Over the last few years, the role of digital cartography has grown by leaps and bounds. As cartographers, we have to deal with this change at the various levels of map production, interpretation, and use. New cartographic output such as digital atlases have become mainstream consumer products. Further more, the use of maps as a graphic medium is becoming quite popular, whether in the form of a travelogue, or a flight simulator game. It will be these products which will prove to be the new cartographic challenge of the future. Our medium is changing, or rather expanding, from a two-dimensional sheet of paper, to a multi-dimensional video screen. It is imperative that we continue to grow with the changing technologies and challenges it brings.

As a cartographer from the "private sector", I invite everyone to enter into a regular dialogue on the changing role of map use and design in the various sectors. It is important that this dialogue be formed between the various sectors, as the development of these new technologies pose numerous challenges which can only be met by addressing them as a group. The active participation of members from the private sector is long overdue, and I urge such members of the CCA to seriously consider their roles in the profession and join in this dialogue.

### From Alice to Ocean

In the field of multimedia presentations, the use of maps is an ideal platform. Maps come alive in animating geographical concepts as shown in the CD-ROM presentation of ***From Alice to Ocean*** (©1992, Against All Odds Production).

***From Alice to Ocean*** is a multimedia presentation based on the book "From Alice to Ocean: Alone Across the Outback", which is a chronicle of Robyn Davidson's expedition across the Australian outback. Supported by the National Geographic Society, this presentation is blessed with the superb photography of Rick Smolan. The maps are of the quality which befits the Society.



The maps in this case become more than just locational referencing tools, they become the navigational engine of the presentation. From a technical standpoint, the production of the presentation is simple. A mixture of visually stimulating photographs, quicktime movies, and maps supported by a clean sound track of voice overs and music. One should note that ***From Alice to Ocean*** was one of the first commercial adaptations of a printed book to a multi-media presentation. The production was developed with Macromind® Director, in conjunction with Adobe Photoshop® and Kodak Photo CD (TM).

From the very beginning the user is confronted with a "navigational" map to follow Davidson's journey. Initially, a map of Australia is presented with an animated line highlighting the route. This flows into a secondary map of regions which control the sections of the presentation. As with most multimedia presentations, many elements on the screen act as buttons which allows users to choose their path through the presentation. Boxes which outline the various regions serve this function, as do the place symbols. Once the user advances into a specific region of Australia, the map scale increases to show more detail. This sequence of moving from the various sections continues until the presentation is completed to the user's satisfaction.

If the user does not wish to choose specific regions of Australia, the multimedia presentation takes the user sequentially through the entire presentation. It is this mixture of exquisite photographs and visually pleasing maps which makes ***From Alice to Ocean*** an interesting product. ***From Alice to Ocean*** clearly demonstrates how the map can come alive in the field of multimedia.

***From Alice to Ocean***
**Distributor:** Claris Clear Choice
**List Price:** $69 (US)*
* "From Alice to Ocean" is included with many of Apple's CD-ROM drives. The retail version of "From Alice to Ocean" is packaged with the original coffee-table book.
**System Requirements:** MacIntosh LC or faster, System 7.0 or 6.0.7, Apple CD-ROM drive or equivalent, Quicktime system extension installed, 4 MB RAM.

# Cartographic Education / *éducation cartographique*

## Who Should Teach GIS and How Should they Do It?

by / *par* Nigel Waters

Some time ago a student came to my office door at the University of Calgary asking if he could audit the advanced GIS course which I teach. I said sure and I explained that in the lectures we covered the second half of the NCGIA Core Curriculum and that in the labs we used Arc/Info. I also explained to him that the University regulations forbade anyone who was auditing a credit course from taking the lab component. He then replied in a rather insulting fashion that if he could not do the labs there would be no point in his auditing the course.

It was insulting because he was essentially implying that the 26 one-and-a-half hour lectures which I gave were a waste of time. Never being one to back away from an argument my reaction was equally forthright: I told him that it appeared that he was interested in little more than button pushing and that learning to operate programs was knowledge that could be picked up in a night course at the local technical college and that the real challenge within GIS lay in learning the concepts behind the operations which the GIS packages performed.

In a way, our argument mirrored the division within GIS between those that wish to teach concepts and those that wish to teach people to use computer programs. To some extent it seems that this division has been deepened by the teaching emphases which have become prominent in universities and technical colleges. I have been concerned about these differences in approach for some time but it was only recently that I became aware of the large body of literature which exists in mathematics dealing with these very issues. Similar literature exists in other disciplines but mathematics is especially pertinent. First, many of the most fundamental GIS procedures embody mathematical operations. Second, in both mathematics and GIS a conceptual grasp of the fundamental principles and the ability to apply this knowledge in solving real world problems are both essential for the demonstration of true expertise.

Those who have studied this problem in mathematics generally refer to the two types of knowledge as conceptual and procedural (Hiebert, 1986). In a review of the two types of knowledge Hiebert and Lefevre (1986) note that other terms have also been used: Piaget used conceptual understanding and successful action; Tulving used semantic memory and episodic memory and Anderson, following computer science terminology used declarative and procedural knowledge (references cited in Hiebert and Lefevre, 1986).

Two issues seem to be important in the published research. One is the age of the student. If one adheres to Piagetian concepts of child development it may be impossible for very young children to grasp key concepts and to learn from those concepts. So if we are to push the teaching of GIS down into the grade schools then at the very earliest grades it may be better to learn these concepts by actually carrying out the operations: a procedural based, button pushing type of learning. However, this induction based approach to learning (see below) may be just too slow and inefficient to provide the deep understanding of the huge array of GIS-related concepts which need to be learned at the post secondary level. At that level, it may be assumed that a much greater part of the teaching will have to rely on conceptual rather than procedural approaches.

The second issue is the type of knowledge to be learned. Some operations are inherently difficult to describe. Perhaps the best known example frequently cited by critics of artificial intelligence is that of riding a bicycle. As has been noted by these critics, it would be extremely difficult to write a computer program to teach a robot to ride a bicycle and it would be equally difficult to write down for a child or indeed anyone else what is involved in riding a bicycle. You simply have to get on the bike and do it. You can criticize their performance once they are on and tell them what they are doing wrong and hold the saddle and run along side of them to prevent the more severe consequences of this procedure based approach. But actually describing the concepts of balance is probably not going to be of much use.

From VanLehn's (1986) research it would appear that learning the process of subtraction is somewhat like riding a bicycle: it is hard to describe and can only be learned, at least by small children, through induction. Whether this is due entirely to the nature of the knowledge or to the child's lack of intellectual development (see point one above) is hard to say since the research cited by VanLehn is based on students in grades 2 through 5. VanLehn uses the so-called "buggy" studies based on the seminal work of Brown and Burton with their Debuggy computer program (1978) to evaluate three hypothesized learning styles: learning-by-being told; learning-by-analogy and learning-by-induction (essentially generalizing from specific examples). The Debuggy computer program is used to categorize mistakes made by the grade school students in carrying out subtraction. These mistakes are then compared to those that would be predicted by the various competing theories of how the child learns and VanLehn concludes that learning-by-induction has the highest bug prediction rate and is able to account for all but the most esoteric of bugs.

Despite VanLehn's empirical support for the procedural approach the fact that his work is limited to a particular domain of knowledge and to very young children means that it is unlikely to generalize to GIS instruction for post-secondary students. However, programs similar to Debuggy may prove to be extremely useful in diagnosing mistakes made by students learning GIS procedures. They might also prove useful in resolving the way in which such students learn GIS. A finding which would have major implications on how we should teach GIS and just who should be doing it.

### References

Brown, J. S. and Burton, R. B. 1978 ***Diagnostic Models for Procedural Bugs in Basic Mathematical Skills. Cognitive Science***, vol. 2, pp. 155-192.

Hiebert, J. 1986 ***Conceptual and Procedural Knowledge: The Case of Mathematics. Lawrence Erlbaum Associates***, Hillsdale, New Jersey.

Hiebert, J. and Lefevre, P. 1986 ***Conceptual and Procedural Knowledge in Mathematics: An Introductory Analysis***. Pp. 1-27 in Hiebert, J., op. cit.

VanLehn, K. 1986 ***Arithmetic Procedures are Induced from Examples***. Pp. 133-179 in Hiebert, J., op. cit.

# Call For Nominations

## CCA Executive Committee

Nominations are sought for the following executive positions to be filled at the Annual General Meeting in Calgary in June, 1995:

Vice President (1 year term)
Secretary-Treasurer (2 years)
Chair, Automated Cartography Interest Group (2 years)
Chair, Cartographic Education
Interest Group (2 years)
Chair, Cartographic Technology Interest Group (2 years)

The quality of the Executive Committee is crucial to the success of the association. Please give some thought to the kind of person you would like to see serving you. If you know of someone who would fit the bill, submit their name for consideration by the Nominating Committee (Diana Hocking, Alun Hughes and Claudette LeBlanc). Or, if you feel that you yourself have a role to play, feel free to forward your own name.

Please send your suggestions for candidates by January 15 to:

Alun Hughes, Chair, Nominating Committee,
Department of Geography, Brock University,
St. Catharines, Ontario, L2S 3A1
Tel: (905) 688-5550, ext 3489
Fax: (905) 688-6369
E-mail: ahughes@spartan.ac.brocku.ca

## Awards of Distinction

The CCA Awards of Distinction recognize individuals who have made major contributions to the association or the profession, and we invite nominations for the 1995 awards. Names are sought in three categories:

1. award for exceptional professional contributions to the practice of Cartography
2. award for exceptional scholarly contributions to Cartography
3. award for exceptional contributions to the Canadian Carto graphic Association

In 1994, the inaugural year of the Awards program, the recipients were respectively Lou Skoda, the Historical Atlas of Canada team, and Fraser Taylor. There remain many other worthy candidates for recognition, and we urge you to submit names for consideration by the Awards Committee (Patricia Chalk, Alun Hughes, and Janet Mersey). Please note that up to two awards may be made in each category.

Please forward names, together with a brief justification for each, by January 15 to:

Alun Hughes, Chair, Awards Committee
Department of Geography, Brock University
St. Catherines, Ontario, L2S 3A1
Tel: (905) 688-5550, ext 3489 Fax: (905) 688-6369
E-mail: ahughes@spartan.ac.brocku.ca

# Coming Soon to a Library Near You ...

**by / par Jan Mersey**
Vice-President / *Vice-président*

In their role as collectors and managers of a tremendous variety of maps and atlases, university research libraries provide valuable resources in support of education and research. Today most government agencies produce and market georeferenced map information directly in digital, rather than hardcopy, form. Libraries are faced with the challenge of incorporating these digital products into their collections in a manner that makes the information easily accessible and usable.

Two independent recent initiatives, by Natural Resources Canada and the Association of Research Libraries (ARL), share the common goal of providing easy user access to digital map information in a microcomputer environment.

The ***National Atlas of Canada on the Internet***, developed by the Geomatics branch of Natural Resources Canada, allows users to browse, display, and transfer National Atlas maps from a site on the World Wide Web (URL address: **http://www-nais.ccm.emr.ca/**). Using the Windows based Mosaic interfacing program, users can select and view over 100 scanned thematic maps of Canada, query the Canadian Geographical Names Data Base, or create their own maps using the NAISMap option.

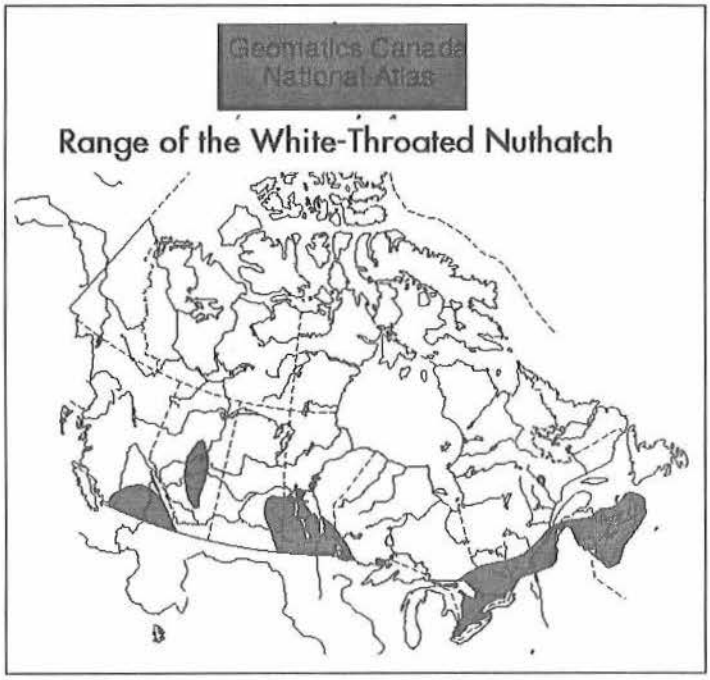
NAISMap allows users to choose the information they with to be displayed on a map from a list of layers describing standard reference features (coasts, political boundaries, roads, etc.) along with boundaries representing geological, hydrological and environmental zones. Either the entire country or individual provinces or territories can be mapped. Thematic information is limited at this time to the species distribution ranges of about twenty endangered birds, mammals, and reptiles. The bitmaps created are immediately viewable on the screen and they can be printed or saved to disk (as GIF or JPG files). Graphic manipulation of the images is limited although text can be added, and the outline and fill colours of each layer modified. The absence of any legend information is especially problematic on multi-category layers such as wetlands and forests.

A second initiative, more specifically aimed at the needs of map librarians, is the ARL GIS Literacy Project. The goal of this project is to educate and equip librarians with skills and software required to provide access to spatially referenced digital data. With sponsorship from ESRI, this project has been successfully launched in the United States, and plans are well underway to extend it to Canadian research libraries. Library users will be able to explore and display a variety of reference and thematic maps using the PC-based ArcView2 mapping program and Arc/Info data files stored on CD-ROM.

Although this project has been slowed by the delayed release of ArcView2 and by complications relating to the acquisition of essential Canadian data, plans are to begin training librarians in early 1995. The following data bases have been identified as desirable components of the Canadian phase:

Statistics Canada, Digital Cartographic Files (1991)
Statistics Canada, Digital Boundary Files (1991)
Statistics Canada, Street Network Files
Digital Chart of the World
NTS maps at 1:250,000 and 1:50,000, sample tiles
The National Atlas of Canada, sample thematic maps
Agriculture Canada, Soil Landscapes of Canada

Both these projects, while facing constraints inevitable in any new technological foray, are welcome additions to our university library resources. Map librarians will play a key role in their successful implementation, as users will rely on their expertise more than ever to retrieve specific information of interest in an increasingly sophisticated automated environment.




This NAISMap example displays five layers: coasts, lakes, rivers, political boundaries, and the species range boundaries.

*"Paper maps are not going to disappear just because computers have come along. On the contrary, computers as cartographic tools will improve the usefullness of maps."*

- Donald F. Cooke

# Cartographic and GIS Education in Winnipeg: Cradle to ...

**by Marcia Faurer**

In *Cartouche* #9 (Spring 1993), there was a column on the **Advanced Diploma Program in GIS** at Red River Community College. This program began in 1992, and last May, the first class graduated. From the beginning of this program, the Geography Department at the University of Winnipeg was involved in two ways. The first is that I had the opportunity to co-chair the advisory committee for the program. An advisory committee, comprised of members of the business, government and educational communities, is required for all programs of the College. The function is to monitor the development of the program to ensure that it is current and serves the needs of the communities represented. Secondly, the department cooperated with the Civil Engineering Technology Department (CET) at the College to develop an articulation agreement that will allow their graduates from either the CET program or the Advanced GIS diploma to complete a BSc degree in Geography in one less year. Similarly, our students who graduate with a BSc in Geography will be able to complete the Advanced GIS Diploma in one, instead of two years. We have structured this agreement so as to eliminate as much redundancy as possible and to maximize the particular strengths of each institution.

While we were working on this agreement, I was contacted by Bill Jurens, an instructor at another local educational institution, the South Winnipeg Technical Centre (SWTC). The SWTC was formed to serve as a technical training facility for three Winnipeg School Divisions in order to provide technical training to high school students as well as to adults who want to add to, or upgrade their skills. Mr. Jurens was interested in incorporating a civil and cartographic drafting component in their general technical drafting program and asked if I would serve on their advisory committee, which has a similar function to that at Red River College. We saw the potential for forming an alliance with SWTC similar to Red River, with the exception that the SWTC would be our "farming team". The Geography Department at the University of Winnipeg saw a very strong benefit to this type of alliance. With university enrolments increasing to the bursting point, our problem is not recruitment of students as much as improving the quality of the incoming students. Between the Advanced Diploma graduates from Red River College and the Civil/ Cartographic Drafting graduates from SWTC, we believe that our department will be strengthened and that students who specialize in spatial information processing courses such as cartography and GIS by moving from SWTC to the University of Winnipeg Geography Department and then to Red River College will receive a thorough education in this area.

Another benefit to the University will be the opportunity to begin to move into the coop education system in which, as a part of their program, students spend time in the working world learning how to put their course work into practice. Universities do not incorporate this mode of teaching the way technical schools do. In fact, in the Red River Agreement, students in the CET program are able to extend their two co-op sessions to three by enroling at the University of Winnipeg in Geography upon graduation from Red River. Hopefully a similar agreement will develop with the SWTC.

So, what we have here in Winnipeg, is the early stages of cooperation among three very different educational institutions in an effort to exploit our own strengths to provide an education in cartographic sciences, geography, and GIS so that students will have strengths in the technical, theoretical, and applications areas. Over the years to come we hope that this cooperation will become more formally integrated and we will develop one cohesive program. Today, when money is tight and each school and program is suffering with strong competition for scarce resources in other areas, it can only help to pool the resources from a variety of training centres in order to maximize the effectiveness of the training that we provide.

For this approach to succeed, it is very important that the business and government communities provide their expertise, input, and support. It is also necessary for educational institutions to stop seeing themselves as separate entities, but rather as unique parts of a continuum. This is particularly true at a time when rapid advancements in technology and information access require that a person's formal education does not stop with their first pay cheque but is an ongoing process. This also creates substantial challenges for employers and educators. Employers need to see the importance of providing ongoing training to their employees, and educators need to be willing and able to offer specialized courses to those in the work force. On the business side this requires investments of time and money, on the education side it requires constant updating and a willingness to alter the mode of course delivery.

## South Winnipeg Technical Introduces Civil /Cartographic Drafting Component

**by Bill Jurens**

The Technical Drafting department at South Winnipeg Technical Centre commenced delivery of several enrichment modules in **Civil and Cartographic Drafting** in December of 1993. The introduction of these new areas meets a long-standing demand for instruction to supplement existing components in architectural and machine drafting.

The program, based on a very successful curriculum developed and delivered at Sturgeon Creek Regional Secondary School during the 1970s, is designed to support both secondary (high-school) students who wish to take the program for exploration or to prepare for further studies at university, and post-secondary (adult) students who are retraining for new careers or planning to re-enter the geographic sciences after some time out of the workforce. A pre-screening process ensures that students have the previous experience, education, and/ or natural talent to succeed.

Discussions are now taking place towards integrating the curriculum all the way up from the high school to university, so that students in the secondary schools stream will be able to experience an unbroken chain of coordinated instruction.

The program has been heavily supported by industry and educational representatives throughout the province. The Civil/ Cartographic Advisory Committee is made up of nearly forty individuals from education, industry, and government, and is growing day-by-day as more and more people express interest in assisting in course development.

For more information on the program, please contact:

Bill Jurens
Technical Drafting Instructor,
South Winnipeg Technical Centre,
130 Henlow Bay,
Winnipeg, Manitoba, R3T 1A5
(204) 989-6553

# Another America: An Exhibit Of Native American Maps

*We would have the Boundaries fixed all round, agreeable to the Draught we gave you, that we may not be pressed on any side, but have a Certain Country fixed for our use and the use of our Children forever.*

Teedyuscung, a chief of the Delaware, 1757

Presenting rare and seldom seen Native American maps, ***Another America*** opens a new perspective on the cultures and societies which evolved in North America. The exhibition brings together outstanding examples of little known American Indian and Inuit maps, many of which have never been reproduced before, and makes them available to the public in a visually attractive and intellectually stimulating display.

Native American maps, as visual documents from oral cultures, are a unique record of North America's indigenous societies. They are a visual testimony to the cultures and histories of the people who inhabited this continent for thousands of years before the arrival of western history. They open a window on the North American landscape as it was perceived and experienced by the continent's indigenous people. They document the extensive trade, social, and political networks in which Ameican Indians lived and the historic events, cultural traditions, and spiritual beliefs that gave meaning to the landscape. As part of living traditions, these maps offer a new perspective on the histories and experiences which have shaped contemporary American society.

## Themes of the Exhibition

❑ **Geography and the indegenous landscape.**
The maps as testimony to the ways in which Native Americans' flourished, traded, and communicated across great areas of the continent. The maps as graphic representations of the history, mythology, tribal knowledge and beliefs which helped to shape the indigenous landscape.

❑ **Native American maps as cultural documents.**
Like all maps, Native American maps are products of the technologies, spatial experience, graphic traditions, and values of the societies which produced them. They reflect the predominance of oral traditions and the unique technologies which Native Americans developed throughout the continent.

❑ **Native American maps as historical documents.**
Native American maps can be read as both American Indian and traditional American history. They document the assistance native peoples gave to foreign explorers, surveyors, and scholars as western society expanded on this continent. At the same time, these maps are witnesses from the 'other side' of American history; recording the Native American experience of invasion, conflict, dislocation, and survival.

❑ **Maps as the stories of individuals and people.**
Though often anonymous, the authors of many of the maps are known. Their personal and tribal histories, as presented on the maps, are a mirror of the broader Native American experience. From a powerful chief's map of the immense area over which his tribe had knowledge, to the lone survivor's maps of her people's extinction; these maps portray individual experience. They are a reflection of both what is unique about being a Native American and of the uniquely human urge to record existence.

## Scheduled Showings

Tours of ***Another America: An Exhibition of Native American Maps*** are scheduled to begin in the spring of 1995. The currently scheduled showings are listed below. Reservations are being accepted for showings through 1997. For further information, please contact:

Mark Warhus
4071 N. Stowell Avenue
Milwaukee, Wisconsin USA 53211
tel: (414) 229-2844 or (414) 963-0821
e-mail: markw@csd.uwm.edu

### Current Schedule:

March 27 - April 23, 1995 (tentative)
Johnson Museum, Cornell University
Ithaca, New York USA

May 1 - May 31, 1995
Museum of Anthropology, UBC
Vancouver, British Columbia CANADA

September 7 - October 7, 1995
St. Cloud State University
St. Cloud, Minnesota USA

mid Oct. - Nov., 1995
Tennessee Humanities Council
Nashville, Tennessee USA

# Chromostereoscopic Maps

by J. Ronald Eyton

In an article published in *Cartographica* (Eyton, 1990), I described procedures for creating maps that exhibit depth based on a phenomenon known as the color stereoscopic effect. Maps of digital elevation models (DEMs) that have been transformed into a spectral sequence of colors so that the shorter wavelength colors represent the lower elevations and the longer wavelengths represent the higher elevations will exhibit depth. The blue, aqua and cyan colors will appear further away (lower) and the yellow, orange and red colors will appear closer (higher) to the viewer. Viewing glasses consisting of two sets of two prisms (each with a different index of retraction) for both the left eye and right eye have been patented by Steenblik (1987) and considerably enhance the depth effect. The unwieldy prism-based glasses have been replaced by holographic films fitted to cardboard frames (ChromaDepth™ Lenses) and are licensed from and manufactured by Chromatek, Inc.

Several manufacturers involved with visual displays have issued new products utilizing the ChromaDepth™ Lenses. Two products that are available in Canada and include the holographic glasses are:

1. The ***Valiant Vision*** starter kit from *Valiant* comics.
2. ***Jumping Colours***™ from *Crayola*.

The glasses accompanying these products can also be used to view computer generated maps of DEMs that have been encoded and displayed as a spectral sequence of colors. The National Geophysical Data Center in Boulder, Colorado, has published a 31 in x 43 in full color map generated from digital data of land and sea-floor elevations on a 5-minute latitude/longitude grid (***Surface of the Earth*** color relief-map poster - product number 930A01003). The map colors are shown as a spectral sequence ranging from a dark blue in the ocean deeps to oranges and reds for the higher land elevations and when viewed through ChromaDepth™ Lenses, a considerable depth effect is realized. The highest elevations (Himalayas), unfortunately, are displayed as gray tones and are perceived as a trough instead of high mountains. This is the only discrepancy in a map which was not meant to be viewed with the ChromaDepth™ Lenses but does, unintentionally, provide an excellent demonstration of chromostereopsis (Bender, 1993) applied to mapping.

The *Crayola* Jumping Colours™ (product number 8107) includes a set of seven "markers with 3-D effect glasses". This inexpensive kit provides a unique means for conveying the principles of contouring to any age group. Students can create their own free-form landscape or trace contours from a topographic map to produce a real-world topographic facsimile. The ordering of colors from "low to high" (as I see them) is given in Table 1; this sequence is obviously not a spectral sequence and appears to be ordered in part by the brightness of the marker colors. For some individuals the depth spacing between adjacent colored contour lines can be increased by combining two sets of the glasses so that the viewer is looking through two layers of holographic film with each eye.

Computer displays of DEMs encoded as a true spectral sequence of colors produce the most dramatic displays of relief using the ChromaDepth™ Lenses. These glasses produce a strong depth effect for elevation values displayed as cool or warm colors (see Table 2). Pixels dominated by green tones (turquoise, green, lime) are seen with less relief compared to the cool or warm colored pixels. Further research is needed in order to determine a transformed spectral sequence of colors that is perceived as a linear scale of depth.

**TABLE 1**
**Ordering of *Crayola* Jumping Colors™**

| Order | Color | Comments |
|---|---|---|
| low | yellow | well below pink |
| | pink | slightly below red |
| | red | these colors |
| | purple | are clearly |
| | black | separated and |
| | blue | evenly spaced |
| high | green | slightly higher than blue |

**TABLE 2**
**Palette for a Simple Spectral Sequence of Colors**

| | Gray Level Values* | | |
|---|---|---|---|
| Color | Red | Green | Blue |
| Blue | 0 | 0 | 255 |
| Aqua | 0 | 127 | 255 |
| Cyan | 0 | 255 | 255 |
| Turquoise | 0 | 255 | 127 |
| Green | 0 | 255 | 0 |
| Lime | 127 | 255 | 0 |
| Yellow | 255 | 255 | 0 |
| Orange | 255 | 127 | 0 |
| Red | 255 | 0 | 0 |

* The graphic video display guns for the additive primary colors (red, green, blue) are fully turned on for a gray level value of 255 and fully turned off for a gray level value of 0. A gray level value of 127 indicates a 50% setting of the gun intensity.

## References

Burder, D., 1993. **Bending colors into 3D planes**. *Stereo World* 20:34-36.

Eyton, J.R., 1990. **Color stereoscopic effect cartography**. *Cartographica* 27:20-29.

Steenblik, R.A., 1987. **The chromostereoscopic process: a novel single image stereoscopic process**. *True Three-Dimensional Imaging Techniques and Display Technologies*, SPIE Proceedings 761:27-34.

*"All colours will agree in the dark."* - Francis Bacon

# News From ICA

## Canadian National Committee for the International Cartographic Association

### by Normand Drummond

The annual meeting of the CNC was held, with an expanded number of participants, on August 12, 1994 in Ottawa. Plans for Canadian participation at the 10th ICA General Assembly and 17th Conference in Barcelona in September 3-9, 1995, were developed. There are two committees involved: A) the Canadian National Committee for ICA for the "regular" business and national participation and B) the special "Bid for 1999" committee. They are separate but related.

**A)** The regular CNC: Norman Drummond, with help from many colleagues, is coordinating and preparing to lead the "regular" delegation whose work includes:

i) The Quadrennial Report on Canadian Cartographic Activities 1991-1995, to be published in Geomatica, the journal of the Canadian Institute of Geomatics.

ii) The encouragement of the presentation of technical papers at Barcelona.

iii) The Canadian Map Exhibit; already in hand through the National Atlas and the National Archives.

iv) The General ICA business; election of officers, and commission chairs.

v) The Nomination of Canadians as members of commissions and working groups.

vi) The support for the formation of Canadian led Commissions; e.g. on Gender, Cartography for Children, etc.

This work is ongoing, and eventually, perhaps under a modified structure, will lead to the next conference, map exhibit, technical papers, etc., in Sweden in 1997.

**B)** The bid committee to host the ICA in Ottawa in 1999. This is chaired by Hugh O'Donnell, Assistant Deputy Minister of Geomatics Canada who plans to make the main presentation/proposal in Barcelona. He has many preparations underway including input from the Ottawa Tourist and Convention Authority. His planning committee will include the Director for the 1999 Conference. Work must be done this fall in order to meet March/April 1995 deadlines.

If the bid is successful a new committee or corporation to run the Conference for 1999 will be set up under the Conference Director together with Geomatics Canada and a widely based supporting group.

### Conference Director for 1999

Following a call by the CNC for nominations and/or volunteers for the position, the executive of the Canadian Institute of Geomatics named David Carney to be Conference Director for the ICA Conference and General Assembly that Canada is proposing to host in Ottawa in 1999. Mr. Carney is Director of the Canada Centre for Mapping in Geomatics Canada, for the federal Department of Natural Resources. In addition to his wide cartographic experience with military and government services Mr. Carney brings with him to the position of Conference Director the extensive support of Geomatics Canada. Members of the Canadian cartographic community will want to offer their support to Mr. Carney in his challenging and exciting role.

Individuals who expect to be in Barcelona in September 1995, in whatever capacity, are asked to advise Norman Drummond, well in advance, so that they may be included in the activities planned as part of the Canadian delegations' program.

Norman Drummond, Chair
CNC for ICA
Department of Geography
McGill University
805 Sherbrooke Street West
Montreal, QC H3A 2K6

### Childrens World Map Competition

***REMINDER***

The last issue of *Cartouche* contained a flyer with all the details of the ICA's Barbara Petchenik Prize for the World Map Competition for students under 16 years of age. The map can be on any topic and is to reflect your ideas of the world in the 1990's. Preferably in colour, no larger than 42 cm x 29.7 cm, and not drawn by computer; the five best Canadian entries will receive a $25 prize each and be sent to Barcelona in September 1995 for the International Competition. The world's best will be submitted to UNICEF for consideration as greeting cards. Print your map's title, your name, age, and complete school address on the back of your map and mail it to arrive by 15 April 1995, to:

**Map of the World Contest**
c/o Prof. J. Anderson
Dept. of Geography
Concordia University
1455 de Maisonneuve Blvd. West
Montreal, QC, H3G 1M8

Inquiries phone (514) 848-2052, Fax (514) 848-2057. Teachers, librarians and youth leaders are invited to encourage interested young map makers to participate.

### Theoretical Issues in Cartography

An important report on the Main Theoretical Issues in Cartography was published in *Cartographica* Vol. 30, No. 4, Winter 1993. The authors of the report, a working group of the ICA chaired by Dr. T. Kanakubo of Japan, are anxious to get feedback as soon as possible from interested cartographers. To speed the response process, please read the article and complete the following questionnaire. (*editor's note*: questionnaire is attached as an insert in this issue of *Cartouche*) Send it direct to Japan with a copy to Norman Drummond at McGill University.

# Notes Re: Cartographica

**by Michael Coulson**
Editor, *Cartographica*

I am pleased to report to you for the first time as Editor of *Cartographica*. I shall not guarantee that there will be something in each issue of *Cartouche*, but I do plan to keep you up to date on what is happening with our scholarly journal.

As many of you know, Bernard Gutsell relinquished his role of Editor, 10th August, 1994 and I accepted an appointment as Editor for a two year term at the invitation of The University of Toronto Press, who own the journal. It is impossible to state in a few words the debt we owe to Bernard and his wife Barbara in the development of the journal. A tribute from the annual general meeting is included elsewhere in this issue . I am very much in their debt and take it as a given that under my stewardship, the journal will continue to provide an outlet for scholarly publication from as broad a spectrum of cartographic researchers as are willing to submit manuscripts.

Most of the changes in *Cartographica* will be noticeable only to those who read the masthead and to the contributors. We are moving to a small Editorial Advisory Board who will meet regularly to provide input to both the editor and The Press. Membership will ensure close liaison with the C.C.A. and it will be essentially Canada-based. Contributing Editors will be recruited on a global scale, from whom we shall expect solicitation of manuscripts and local publicity for the journal. Membership of both boards will be with definite terms for their service which, over time, should allow a balance of continuity and change in assistance to the Editor. Shelley Laskin has accepted the position of Assistant Editor, Helen Clarke, the position of Review Editor (Atlases and Maps) and Hans-Georg Schlichtmann the responsibility for translation of abstracts into German. Three have accepted positions on the Editorial Advisory Board (as of early November), being Marcia Faurer, Henry Castner, and Peter Keller. I much appreciate the willingness of Janet Mersey to continue as Review Editor (Books) and Denis Genest and Jaume Miranda-Canals to continue to translate abstracts into French and Spanish respectively.

I have been much encouraged in my new venture by The Press, particularly George Meadows, the President and Anne-Marie Corrigan, the Journals Manager. They express much interest and confidence in *Cartographica* and willingness to take a more active role in the production process as well as supporting the boards and maintaining a close liaison with the C.C.A.. Among the changes has been a decision to appoint a professional copy editor (Bernard and Barbara Gutsell included this task in their regular work for the journal).

The future of the journal, its content, production schedule and balance of monograph to article issues will depend upon the flow of submitted manuscripts. Following arrival, each manuscript is submitted to at least two referees and invariably returns to the author for revisions, minor or major. In this process I am dependent upon the good will of specialists willing to review each manuscript and provide guidance to me on possible publication as well as constructive criticism to the author(s). This must all happen in as short a time span as possible. Upon receipt of a revised manuscript it is initially reviewed by me, although I may seek other opinions. I encourage authors to provide me with notes on their reactions to the referees' comments, rather than feeling any obligation to accept all suggestions. This seems to be working well and to cover situations where there may have been some misunderstanding. There may be a second round of revisions required. Only when a manuscript is acceptable for publication can it be assigned to a potential issue and even then publication is some months away, given typesetting, proofing and printing. I plan to increase the number of steps in this process by providing authors with galley proofs. This should give them more confidence in the appearance of their contribution and if they return them promptly should not really slow the process. In the coming months we expect to develop "Guidelines for Contributors" which will both deal with the basic needs in a manuscript and also incorporate technological changes that should help speed-up the publication process.

When will you see the next issue? In a sense, we have slowed down to speed up. The selection of a copy editor began in August and has inevitably slowed down publication of issue #2, 1994. This is a monograph, ***An Intensive Comparison of Triangulated Networks and Gridded Digital Elevation Models***, by Mark Kumler (University of Colorado). This drew very favourable comments from the referees and we anticipate strong sales beyond our regular members and subscribers.

I interrupted the putting together of issue three to write this. In fact, I will generalize and say that issues three and four should include:

***P.D.A. Harvey and Medieval Mapping: an Essay Review***, by Dennis Wood

***The Power of Disembodied Imagination: Perspective's Role in Cartography***, by Ken Hillis

***Least Cost Path in GIS Using an Accumulated Cost Surface and Slope Lines***, by David Douglas

***Recall Memory for Topographic Maps and Natural Terrain: Effects of Experience and Task Performance***, by Daniel Montello, Catherine Sullivan and Herbert Pick

***A Conceptual Model of GIS-based Spatial Analysis***, by Alberto Giordano, Howard Veregin, Edward Borak and David Lanter

Several other items are not quite far along to list at this time. Plus of course the usual collection of reviews.

Looking to 1995 issues, I must be very general. There is a collection of papers revised from sessions held at the 1994 meetings on ***Orienting Ourselves in Space Implications for the School Curriculum***, organized by Henry Castner and Jacqueline Anderson. Beyond this, I am in correspondence regarding several other possible monograph issues. Hopefully more details will be available for the first issue of *Cartouche*, 1995. Cartographers are not prolific writers, but an increase in submitted manuscripts would be most welcome and result in more timely information about forthcoming issues. Both The Press and I are very conscious of the journal being behind schedule and wish to eliminate this problem. I am very hopeful that we shall be on schedule before the end of 1995.


***Something on your mind?***

Your comments are always welcome, and we appreciate your feedback. Please send your suggestions to the editor (address on page 2).

## Calendar / *calendrier*

February 22-23 février, 1995
**The Remote Sensing and Cartography Summit for Brussels**
Brussels, Belgium

February/février 27 - March/mars 1, 1995
**Auto-Carte Twelve**
Charlotte, North Carolina USA

March 14-18 *mars*, 1995
**American Association of Geographers**
Chicago, Illinois USA

May 22-26 mai, 1995
**ESRI 15th Annual User Conference**
Palm Springs, California USA

May 24-28 *mai*, 1995
**Canadian Cartographic Association / *Association canadienne de cartographie***
Calgary, Alberta

May/*mai* 31- June/*juin* 4, 1995
**Canadian Association of Geographers / *Association canadienne des géographes***
Montréal, PQ

June 13-15 *juin*, 1995
**7th International Conference on Geomatics / *La 7e Conférence internationale sur la géomatique***
Ottawa, Ontario

September 3-9 *septembre*, 1995
**17th International Cartographic Conference**
**10th General Assembly of IGA /**
***17e Conférence cartographique internationale***
***10e Assemblée générale de l'ACI***
Barcelona, Spain

# CCA Conference and Annual Meeting
# May 24 - 28, 1995

The members at Calgary are pleased to invite you to Calgary for the 1995 Annual Meeting. Plans are well under way to provide a stimulating and enjoyable conference, with workshops, technical visits and a field excursion, as well the annual general meeting and paper sessions. As always, however, the academic content of the programme is up to you and we encourage you not only to participate, but to let us know of your plans as soon as possible.

**JANUARY 15, 1995, A DATE TO REMEMBER**

Please help us in ensuring that the conference planning and advertising run smoothly and provide sufficient information early, to encourage members and friends to come. If you plan to participate in any way, please make sure that we know in advance of **January 15, 1995**. We can then have a preliminary programme for you in the next issue of Cartouche.

**Workshops:** We invite proposals for half, or full day workshops. Organizers should express their interest as soon as possible and in any event before **January 15, 1995**. Proposals should be as complete as possible re. objectives, requirements, etc., but anticipate discussion with the conference organizers re. details.

**Special Sessions:** We invite proposals for special sessions, which may take the form of traditional paper presentations on a theme, or other formats including discussions, round-table, panels, etc. Please send as complete a proposal as possible, while anticipating discussion on details with the organizers. In any event such proposals should reach us before **January 15, 1995**.

**Exhibits:** We are planning for both commercial and non-commercial exhibits. Since space must be allowed, an early indication of intent is requested.

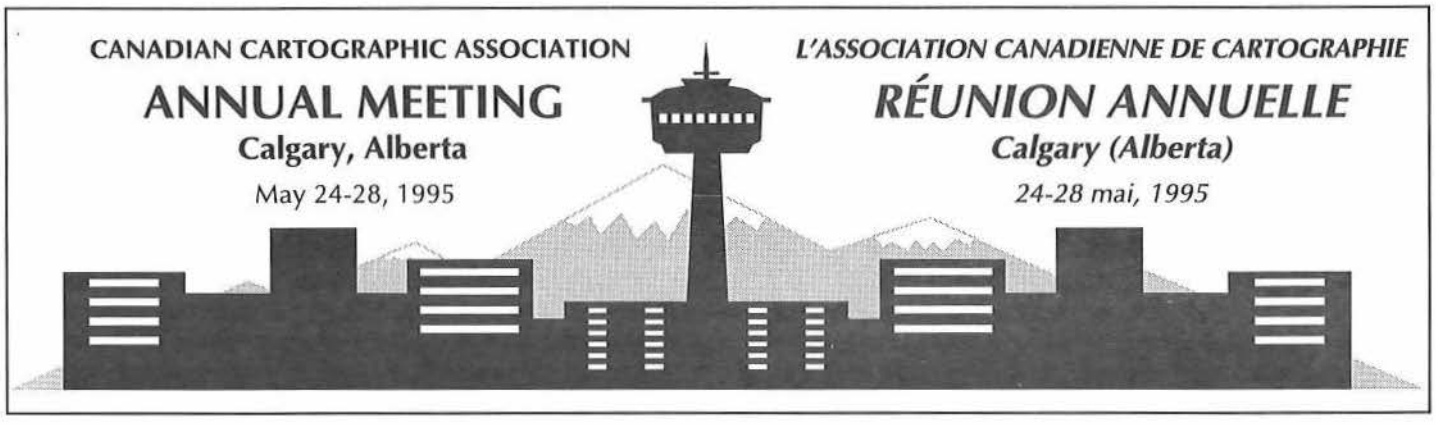
**Submitted Papers:** Please advise of your intent to present a paper, with a provisional title and general topic by **January 15, 1995**. Preference in programme planning will be given to those who meet this deadline.

**Abstracts:** We are willing to receive abstracts on paper, disk, or by e-mail. In the case of disks or e-mail, please send them in ASCII with an absolute minimum of format controls. The length should never exceed 300 words and, include Title, Author(s), and address. The deadline for Abstracts is **March 31, 1995**. Such a date is possible based on the organizers knowing the programme content in January

Please address all inquiries, in the first instance, to: Michael R.C. Coulson, Department of Geography, The University of Calgary, Calgary, Alberta, T2N 1N4.
Phone: (403) 220-5584 Fax: (403) 282-6561. e-mail: coulson@acs.ucalgary.ca

The dates of the conference are somewhat earlier than we had hoped, but avoid conflicts with four other cognate societies that are meeting in this general period.

WE LOOK FORWARD TO MEETING WITH YOU IN CALGARY



# ESRI Bundles Extensive Geographic Data With ArcView Version 2

Environmental Systems Research Institute, Inc. (ESRI), of Redlands, California is bundling extensive up-to-date data with ArcView Version 2, the company's desktop GIS visualizationand analysis tool. "We are providing the data to help users get started quickly with their GIS," said Rich Turner, ArcView product manager.

The data can be used to help new users learn the software, or it can be explored as a multiscaled basemap in itself. Financial institutions, insurance companies, sales and marketing firms, real estate firms, communications organizations, retailers, and many others will benefit immediately by combining the bundled data with their own data to define sales territories, map customers and sales leads by ZIP Codes, and much more.

"With the data included, ArcView Version2 is more than just a camera - ESRI is also providing the film, the batteries, and the flash so that users can be productive immediately with ArcView right out of the Box," Turner said.

Data were provided from more than 20 participants in ESRI's ArcData program including:

- ❑ State and County Data - Data is provided for states, counties, and more than 3,000 major cities of the United States with a population of more than 10,000, including state capitals.
- ❑ Census Bureau Data - ESRI has provided detailed data on population, race, ethnicity, marital status, household composition, and housing units along with locations for states, cities, and counties. This information can be used for a variety of tasks such as customer profiling or site planning.
- ❑ ZIP Code Centroids and Boundaries - Five-digit ZIP Code areas and points for the entire United States. Users can combine this with their own data for geocoding functions, address matching, and other needs.
- ❑ International Data - ESRI provides the most current country and territory boundaries for 1994 as well as boundaries for 1992, before the breakup of the Soviet Union and other countries. Additional detail, such as state and provincial boundaries, is provided for Mexico and Canada.

Complete, on-line documentation of the data is provided. The documentation describes the data, contains definitions of the attribute fields and technical information, and shows screen shots of maps created with each data set.

Additional data from hundreds of providers that participate in the ArcData Publishing Program are available through the program to complement, supplement, or extend the data bundled with ArcView Ver 2.

# Digital Chart of the World in ASCII File Format

The Digital Chart of the World (WCW) was a cooperative production by the defense mapping agencies of Canada, the United States, Australia and the United Kingdom. The source charts used for the DCW were at a scale of 1:1,000,000. Using the DCW as the data source, Ph.D. Associates Inc. has constructed simple-structured files in ASCII format which maintain the original resolution and classifications of the DCW. All the line and point features have been maintained and consist of the following classes:

**Line Features:**
-roads
-political and ocean lines
-utility lines
-transportation structure lines
-railroads
-physiography lines
-ocean feature lines
-cultural landmark lines
-populated places
-hypsography lines
-drainage lines

**Point Features:**
-aeronautical points (with names)
-drainage points
-ocean features
-transportation structures
-political and ocean points (with country codes)
-cultural landmarks (with brief description)
-populated place points (with names)
-hypsography points (with elevation reading)

All of the above classifications are broken down further by subclassifications as organized in the DCW. For example, dual lane highways are separate from secondary roads. Each subclassification is provided in ASCII format as its own unique file. Users can easily combine these smaller files into one larger file for each classification if desirable.

Two types of file structures are provided: Lat/Lon/Pen (LLP) and Lat/Lon/Text (LLT). The LLP file record consists of the geographic latitude and longitude, pen up/down code and status. The geographic coordinates are provided in units of degrees to an accuracy of six decimal places, which is consistent with the original DCW data. The LLT file record consists of the geographic latitude and longitude, and text. The text field is as stated in the DCW data base. The coordinates can also be converted to the UTM reference system to provide the zone, northing and easting values. The data are arranged on a tile basis where a tile is a defined area of 5 degrees latitude by 5 degrees longitude, and can be obtained as individual tiles on diskette, or as the full world set on CD-ROM.

With these straightforward file structures, users of various GIS and mapping software can access the rich detail of the DCW data and, if necesssary, easily make any file alterations required for direct input to their systems. These data provide high detail for geographic base maps in GIS systems for mapping presentation software. Furthermore, Ph.D. Associates Inc. has made available conversion software which will read these flat ASCII files and create the required ASCII file structures for subsequent direct input to the IDRISI, MapInfo™ or AutoCAD® systems.

# Minutes of The CCA Annual General Meeting
## Ottawa, 11 August 1994

**EXECUTIVE MEMBERS**

Present: Alun Hughes, Majella Gauthier, Marcia Faurer, Shelley Laskin (recording), Paricia Chalk, Iain Taylor
Absent: Christine Earl, James Britton, Nigel Waters, YC Lee
Guests: Michael Coulson, Norman Drummond, Monika Rieger

**Total Number of CCA Members in Attendance - 25** (constitues Quorum)

Welcoming remarks from the President, Alun Hughes (Shelley Laskin agreed to take the Minutes in James Britton's absence)

**1. Minutes of Winnipeg AGM**

The minutes from the 18th Annual General Meeting of the CCA held in Winnipeg in June of 1993 were distributed to the membership at large in *Cartouche #11*. AH asked for errors or omissions. Majella Gauthier clarified the names on the Nominating Committee - it was himself, not Gary McManus as written (in addition to Bob Bruce and Gordon Shields). It was also noted that the last question under the President's Report was made by Jacqueline Anderson, not Janet Mersey.

**.Motion - To accept the minutes as amended.** Norman Drummond, seconded by John Belbin. **Carried**

**2. Matters Arising**

Nothing mentioned.

**3. President's Report - Hughes**

- Alun Huges (AH) reported that the Memorandum of Understanding between the CCA and the CIG had been renewed without term.
-The matter of Executive Restructuring (which would be discussed later under Item 12) was mentioned. Some of those changes are already in place: the Manager's position (originally held by Cliff Wood and later by Roger Wheate) had been deemed redundant and the job split between the Membership Secretary (Monika Rieger) and the President; the job of Newsletter Editor has been removed from the position of Secretary and a Newsletter Editor appointed by the Executive (Weldon Hiebert will take over from James Britton after the next issue of *Cartouche*); as a result, it is proposed that the remaining duties of the Secretary would be combined with the position of Treasurer. The amendments to the Constitution would be discussed in detail later in the Agenda.
- A Sub-Commitee had been formed to revamp the President's Prize Competition criteria (Nigel Waters, Christine Earl, Henry Castner, Marcia Faurer and AH); the French criteria needs to be revised to mirror the English.
- The new Awards of Distinction had been created for outstanding contributions in 3 categories - professional, scholarly, and service to the CCA. A committee chaired by Majella Gauthier had made the choices (they were ratified by the CCA Executive) and the presentations would be made by AH at the AGM Banquet.
- AH congratulated David Douglas and the Organizers of the CCA/NACIS Joint Conference for a job well done.
- AH reported that the Executive would continue to inform the general membership of the actions resulting from the Executive Meetings in *Cartouche*.
- The booklet on ***Careers in Cartography*** was awaiting some further photographs and that those would be coming shortly. The publication of the booklet by OISE (published at no cost to the CCA) should be scheduled for the late fall. Copies will be automatically sent to all academic institutions (including high schools) and we will be provided with copies for the membership.
- AH thanked all the retiring members of the CCA Executive for their service and support to the organization.

**.Motion - To formerly thank Past-President Majella Gauthier for his years of service on the CCA Executive.** Shelley Laskin, seconded by Norman Drummond. **Carried.**

.Motion - **Moved a vote of thanks to Christine Earl, Iain Taylor, and YC Lee, retiring Interest Group Chairs.** Michael Coulson, seconded by Janet Mersey. Carried.

**4. Vice-President's Report - Faurer**

- Marcia Faurer (MF) reported that her major job is to actively promote the Association.
- MF is working closely with the new Cartouche Editor on a Brochure/Membership Form. When the design is finalized, copies will go out with a recent copy of Cartouche to target groups and/or lapsed members. This would be timed once *Cartouche* and *Cartographica* are back on a regular schedule.
- MF reported that the CCA will design a page to join the "World-Wide Web" as a means of promotion.

**5. Past-President's Report - Gauthier**

-Majella Gauthier (MG) reported on the winners of the Awards of Distinction - for Professional Contributions, Lou Skoda; for Scholarly Contributions, the Historical Atlas of Canada Project and for Contributions to the CCA, Fraser Taylor. All winners were contacted and asked to attend the Banquet where the awards would be presented. MG thanked Gary McManus for preparing the Certificates and thanked the fellow members of the Committee, Michael Coulson and Claudette LeBlanc.

- AH offered his sincere appreciation to MG for his contributions to the Executive Committee over the past 3 years.

**6. Secretary's Report - Britton**

- It was reported by AH that James Britton was accepted for graduate work at the University of Edinbourough.

**.Motion - Moved a vote of thanks to James Britton in appreciation for his efforts over the past 4 years.** Marcia Faurer, seconded by Iain Taylor. **Carried.**

**7. Treasurer's Report - Laskin**

- Shelley Laskin (SL) presented the Annual Report with an explanation that over the past year we remained status quo, with a bank balance of just over $30,000.00. She warned the Membership that once *Cartographica* was operating on schedule, a large chunk of this money would be depleted.
- Claudette LeBlanc inquired that due to this, should membership fees be increased for next year? After discussion, it was decided to see what transpired with *Cartographica* (now under new leadership) during this next year and reassess the situation next year. Monika Rieger responded that many lapsed members of the Association site costs as the major reason they do not renew.
- SL mentioned that there was no applications to the Norman Nicholson Scholarship again this year, and that she would investigate changing the status of the scholarship to a Charitable Foundation.
- She also mentioned that there were very few applications for Travel Assistance to the AGM this year, especially by students.
- SL circulated a card and sent a basket of plants to Christine Earl in hospital with all our best wishes.

**.Motion - To accept the Annual Treasurer's Report.** Shelley Laskin, seconded by Michael Coulson. **Carried.**

**8. Membership Secretary's Report - Rieger**

- Monica Rieger (MR) reported that as of July 31, 1994 we had 385 total members (237 Regular, 35 Associate, and 47 Student). This was down 108 members from 1993. It was noted, however, that the bulge in Membership is 1993 was due to 83 Associate Members from the OICC (only 28 have maintained their membership in the CCA). She reported that the decline in membership is par for the course for all Organizations during these tough economic circumstances.
- MR suggested fees be maintained as they are because cost is the main issue why people do not renew.
- She did, however, suggest the need to approach other organiztions to increase our membership.

**9. Interest Group Reports**

**Automation Chair - Lee**

Although not present at the meeting, YC Lee reported during the Executive Meeting that his duties included writing for *Cartouche* and setting up papers for this Conference. He also suggested the need for a complete list of Internet information for our membership and sent regrets for the rest of the Executive Meetings at the Conference.

**Design/Use - Earl**

As Christine was in hospital there was no report. AH did add, however, our sincere thanks for her excellent reports in *Cartouche* , and in particular, for her work in organizing the Paper Sessions of this Conference.

**Education - Waters**

No report was submitted.

**History Chair - Taylor**

Iain Taylor reported general frustration at the lack of feedback from the articles submitted for the last *Cartouche* and the lack of submissions of papers for this Conference. AH added his appreciation to IT for his work on the Executive Committee.

**Technology Chair - Chalk**

PC reported that her interest group encourages interaction of members with complimentary technological interests through the Technical column of *Cartouche*, responses to enquiries prompted by the column, and the organization of a session and preparation of a detailed technical summary of the contributor's map projection software review for the AGM. She plans to continue to promote dialogue amongst users.

**10. Publications Committee Report - Coulson**

Michael Coulson (MC) officially announced his retirement as Chair of the Publications Committee since he has accepted the position of Editor of *Cartographica* for a 2 year term.

- MC reported that Bernard Gutsell (BG) relinquished editorship of *Cartographica* on August 8, 1994 at which point, and at the request of U of T Press, he took over.
- MC is very encouraged by the support of both George Meadows, President of U of T Press and Anne-Marie Corrigan, Journals Editor. He will meet both on August 15, along with BG to begin the transition process.
- MC stated that his immediate role was to bring the Journal back on schedule. In July of 1994 we received 1993 #4; 1994 #1 is currently in page proof;

1994 #2 is Mark Kulmer's Monograph, currently in galley proof; and 1994 #3 is his immediate responsibility as most papers are in revision. 1994 #4 and 1995 #1 are more questionable. The Journal is not overly swamped with papers and he encourages the Cartographic Community to support *Cartographica* by submitting papers to it.

- Janet Mersey will continue as Book Review Editor. Currently they are looking for a Map Editor and an Assistant Editor and will reconstitute an active Editorial Board (all with set terms) in the near future.
- MC expressed our sincere thanks to Ed Dahl, who resigned in December of 1993 as Assistant Editor of *Cartographica* for 13 years. The sentiment was echoed by AH.
- MC then paid tribute to Bernard Gutsell, founder and Editor of our Journal, *Cartographica* for the past 30 years and his wife Barbara Gutsell who assisted Bernard for all those years in a number of capacities. BG played a major role in raising the image of Canada on the international scene as a leader in Cartography. He created one of the earliest specialist Cartographic Journals, and by doing so, played a significant role in advancing the careers of many Cartographers. For more than 10 years he alone carried the financial burden of the Journal before it was passed on to the U of T Press. Although the Press owned the Journal, BG continued to be involved and concerned in every aspect of production. For 30 years every word of every issue was proofread by BG. In many ways, MC said, "the CCA is a child of the Journal". The CCA honoured BG and Lou Sebert's profound contribution to the CCA with Honourary Lifetime Memberships in the Association. MC suggested that the Association organize an event in the future to honour BG's tremendous contributions.

**.Motion - MC stated "it is my sincere pleasure and privilege to move a vote of our thanks to Bernard and Barbara Gutsell for their lifelong service to Canadian Cartography and to the Association...".** Seconded by Claudette LeBlanc. **Unanimously carried with thunderous applause.**

- AH then extended his thanks as President of the CCA to Bernard and Barbara Gutsell and wished them well. He noted that this was indeed, a turning point for *Cartographica*, but he was rest assured the future was in good hands.
- Norman Drummond suggested the full text of MC's tribute to BG be published.

**11. Canadian National Committee Report - Drummond**

- Norman Drummond (ND) reported that under the Memorandum of Understanding between the CCA and the CIG that he acts as Chair of the Canadian National Committee for ICA. On this committee, there are reps from 6 associations. The CIG holds the Canadian membership for Canada which is paid for by Natural Resources Canada.
- A report on Canadian Cartography over the past 4 years would be presented in September 1995 at the ICA meetings in Barcelona. Canadians currently chair 3 of the 18 Interest Groups of the ICA and there are Canadian delegates on all 18 Interest Groups.
- There are 2 major projects underway. In Barcelona, Canada would present a Proposal (along with Brazil) for the institution of a new ICA Interest Group "Cartography for Children". Jacki Anderson is also currently working on the guidelines for Canadian Students to enter the Map content for UNICEF in memory of Barbara Petchenik.
- ND reported that the Map Display for the ICA was on display in Camsel Hall. He thanked Claire Gosson, Iain Taylor and Dianne Mann for their help in putting together the Map Display.
- Preliminary abstracts for technical papers to be presented at the ICA in 1995 are due November 5, 1994. Forms are available.
- Of great importance is the Canadian bid to host the ICA in 1999 proposed by Hugh O'Donnell. Tentatively the meetings are planned for late summer, early fall. There will be extensive lobbying both before and during the Barcelona ICA Meetings.
- ND mentioned that there are more and more requests for money at the international level.
- He will resign at the AGM of the CIG. Lastly, he strongly suggested that the structure of Canadian Cartography continue to be reviewed and assessed.
- AH thanked ND for his dedication to the Committee on our behalf.

**12. Constitutional Changes - Hughes**

- AH noted that the approach to making changes to the Constitution, were, in effect, to reduce the size of the Executive by amalgamating the position of Secretary/Treasurer (it was felt by appointing a separate Newsletter Editor and Membership Secretary, that the Secretary, was left with only the function of doing the Minutes), by removing the position of Manager (duties split by the President and the Membership Secretary), dropping the Interest Group on Automated Cartography (now felt to be redundant ie. computers covered by the Technology Interest Group) and by changing the reporting process (in order that not all members would necesssarily need to attend all Executive meetings); the end result of these proposed changes would be to reduce total operating costs of the Association.
- David Douglas asked for a point of order. Discussion ensued as to whether or not all changes to the Constitution whould be dealt with in one motion.

**.Motion - That all changes to the Constitution except changes to By-Law IX (Interest Groups) be approved.** Diana Hocking, seconded by David Douglas. No discussion. **Carried.**

**.Motion - That we approve changes to By-Law IX as proposed (remove Automated Cartography Interest Group).** Michael Coulson, seconded by Lynne Elliot. Discussion.

- David Douglas (DD) expressed his concerns that the CCA had always been a fine home for research and because of that, research cartographers. He feared that if one cut off the Automation Interest Group, that one would cut off research.
- Patricia Chalk (PC), Chair of the Technology Interest Group, expressed her feeling that the two (Automation and Technology) were not mutually exclusive.
- DD reiterated that the spirit was different.
- Iain Taylor (IT) supported what DD expressed, but felt it was more a question of the terminology of the Interest Groups; that research goes into all aspects

there was demonstrable support for keeping two separate interest groups.
- Jan Mersey also supported DD's recommendation for keeping two separate interest groups. She sited "Technology" as the production side and felt one needed another Interest Group directed towards research
- PC brought up additional issues including to put the 2 Interest Groups (Automation and Technology) together under a new title.
- SL supported this idea, the benefit to dropping one of the Interest Groups as cost saving (if, of course, it made sense).
- John Belbin suggested "Applications and Research" as a title for a joint group.
- It was then suggested by Michael Coulson that the Motion be tabled for further discussion between now and the next AGM.
**.Motion - To table the motion that we approve changes to By-Law IX as proposed.** David Douglas, seconded by John Belbin. **Carried** (23 in favour, 1 opposed, 1 abstention).

**13. Results of Elections to Executive Committee - Gauthier**
- Committee consisted of Majella Gauthier (Chair), Bob Bruce, and Gordon Shields. Nominations were published in *Cartouche #13*. No further nominations were received.
- Results - President (1 year term), Marcia Faurer; Vice-President (1 year), Jan Mersey; Secretary (1 year), James Britton; Automation Interest Group Chair (1 year), YC Lee; History of Cartography Interest Group Chair (2 years), Carol Marley; Map Use and Design Interest Group Chair (2 years), Morrie Portnoff.
- MG congratulated all the winners and thanked all those who forwarded their names for the CCA Executive.

**14. Election of Members of Nominating and Awards Committees - Hughes**
- Past Presidient along with 2 others.
- **Nominated, Diana Hocking**. David Douglas, seconded by Majella Gauthier. **Nominated, Claudette LeBlanc**. Majella Gauthier, seconded by Michael Coulson. **Acclaimed** *(Note:* These positions are for the Nominating Committee)

**15. Venues for Future Conferences - Hughes**
- AH began by formally thanking David Douglas and the Organizing Committee for the 19th AGM in Ottawa.
- DD expressed his appreciation to all members of the Committee - Christine Earl, Henry Castner, Claire Gosson, Iain Taylor, Betty Kidd and Heather Stevens.
- MC invited the Membership to reconvene in Calgary for the 20th AGM in 1995. Several dates were mentioned in and around the Victoria Day holiday in May. The date would be decided after consultation with other organizations and proposed to the Executive at the January Executive Meeting.
- 1996 - Byron Moldofsky is looking into hosting the Conference at the University of Toronto; SL offered to help with the organizing in Toronto.
- 1997 - Gary McManus has tentatively offered Memorial University of Newfoundland in conjunction with the 500th Anniversary year of Cabot's discovery.
- It was mentioned that the AGM has never been held in Saskatchewan or PEI.
- Due to the success of this joint meeting with NACIS, it was suggested that we meet with NACIS again in the future.

**16. Other Business**
- MC extended a formal vote of thanks to Alun Hughes, retiring President of the Association.
- Majella Gauthier noted that this would be his last meeting as a member of the Executive over the past 3 years and thanked the people he served with especially Claudette LeBlanc, Peter Keller, Alun Hughes, and Marcia Faurer. He noted that the CCA is strong and that he is proud to be a supporter of the Organization and hoped to serve again.
**.Motion - There being no further business, a motion was made to adjourn.** Diana Hocking, seconded by Claudette LeBlanc. **Carried.**

# The Canadian Cartographic Association
# *L'Association canadienne de cartographie*

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