ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES /
ASSOCIATION DES CARTOTHÈQUES ET ARCHIVES CARTOGRAPHIQUES DU CANADA

MEMBERSHIP in the Association of Canadian Map Libraries and Archives is open to both individuals and institutions having an interest in maps and the aims and objectives of the Association. Membership dues are for the calendar year and are as follows:

Full (Canadian map field)... $45.00
Associate (anyone interested)... $45.00 ($35 US)
Institutional... $65.00 ($50 US)
Student... $20.00

Members receive the ACMLA *Bulletin*, the official journal of the Association, which is published three times a year.

Officers of the Association for 2003/2004 are:

Peuvent devenir MEMBRES de l'Association des cartothèques et archives cartographiques du Canada tout individu et toute institutions qui s'intéressent aux cartes ainsi qu'aux objectifs de l'Association. La cotisation annuelle est la suivante:

Membres actifs(cartothécaires canadiens à plein temps)... 45$
Membres associés (tout les intéressées)... 45,00$
Institutions... 65,00$
Étudiant... 20,00$

Le *Bulletin* de l'ACACC sera envoye aux membres trois fois par annee.

Les MEMBRES DU BUREAU de l'Association pour l'anne 2003/2004 sont:

President / Président
Marcel Fortin
Data, Map & Government Information Services
Robarts Library
University of Toronto
130 St. George Street
Toronto, Ontario M5S 1A5
tel: (416) 978-1958
fax: (416) 978-1608
marcel.fortin@utoronto.ca

2nd Vice President / 2e Vice-Président
Colleen Beard
University Map Library
Brock University
St. Catharines, Ontario L2S 3A1
tel: (905) 688-5550 x 3468
fax: (905) 682-9020
cbeard@brocku.ca

Secretary / Secrétaire
Andrew Nicholson
GIS/Data Librarian, Library
University of Toronto at Mississauga
3359 Mississauga Road North
Mississauga, Ontario L5L 1C6
tel: (905) 828-3886
fax: (905) 569-4320
anichols@utm.utoronto.ca

1st Vice President / 1er Vice-Président
David Jones
William C. Wonders Map Collection
Cameron SciTech Library
University of Alberta
Edmonton, Alberta T6G 2J8
tel: (780) 492-3433
fax: (780) 492-2721
david.jones@ualberta.ca

Past President / Président sortant
Grace Welch
University of Ottawa Map Library
Morisset Library
65 University Street
Ottawa, Ontario K1N 9A5
tel: (613) 562-5211
fax: (613) 562-5133
gwelch@uottawa.ca

Treasurer / Trésorier
Pat McIntyre
Researchers Services Division/
Division des services aux chercheurs
National Archives of Canada/
Archives nationales du Canada
395, rue Wellington Street
Ottawa, Ontario K1A 0N3
tel: (613) 996-7605
fax: (613) 995-4451
pmcintyre@archives.ca

ACMLA MAILING ADDRESS / ACACC ADRESSE D'AFFAIRES

Bulletin Staff / Collaborateurs

Editor:
Cathy Moulder
Lloyd Reeds Map Collection
McMaster University
Hamilton, Ontario L8S 4L6
tel: (905) 525-9140 x 24745
fax: (905) 546-0625
email: moulder@mcmaster.ca

New Books and Atlases Editor:
Eva Dodsworth
University Map and Design Library
University of Waterloo
Waterloo, Ontario N2L 3G1
tel: (519) 888-4567 x 6931
fax: (519) 888-4320
email: edodswor@library.uwaterloo.ca

New Maps Editor:
Dan Duda
Collections Librarian,
Queen Elizabeth II Library
Memorial University
St. John's, Newfoundland A1B 3Y1
tel: (709) 737-8196
fax: (709) 737-2153
email: dduda@mun.ca

Reviews Editor:
Tim Ross
Map Library
University of British Columbia
1956 Main Mall
Vancouver, British Columbia V6T 1Z1
tel: (604) 822-6191
fax: (604) 822-5366
email: timross@interchange.ubc.ca

Regional News Editor:
Andrew Nicholson
GIS/Data Librarian, Library
University of Toronto at Mississauga
3359 Mississauga Road North
Mississauga, Ontario L5L 1C6
tel: (905)828-3886
fax: (905)569-4320
email: anichols@utm.utoronto.ca

Geospatial Data Reviews Editor:
Richard Pinnell
University Map and Design Library
University of Waterloo
Waterloo, Ontario N2L 3G1
tel: (519) 888-4567 x 3412
fax: (519) 888-4320
email: rhpinnel@library.uwaterloo.ca

Table of Contents

ON THE COVER...

Gilles Robert de Vaugondy, *Partie de L'Amerique Septent. qui comprend La Nouvelle France ou le Canada...*, 1755. Reproduced from an original in the National Map Collection, National Archives of Canada, as ACML Facsimile Map Series No. 73 (ISSN 0827-8024).

Gilles Robert de Vaugondy, *Partie de L'Amerique Septent. qui comprend La Nouvelle France ou le Canada...*, 1755. Reproduit a partir d'un original de la Collection nationale de cartes et plans, Archives nationales du Canada, dans la Série de cartes fac-similés de l'ACC, carte No. 73 (ISSN 0827-8024).

ACMLA HONORARY MEMBERSHIPS AWARDED 2004

The Association of Canadian Map Libraries and Archives has awarded three Honorary Memberships this year, to three very deserving individuals.

Selection Guidelines - ACMLA Honorary Memberships

The ACMLA bestows an honorary life membership on a member who has made an outstanding contribution to map libraries or cartographic archives in Canada through his or her work within the Association. This award is presented on an irregular basis.

Criteria

—To be eligible for the Honorary Life Membership in the ACMLA, a candidate must have previously received the Honours Award and have demonstrated distinguished service to the Association through participation in ACMLA governance or committee work.

—Nominee's contributions demonstrate long term commitment to the profession that is of lasting significance in the field of cartographic information in Canada. The contribution may be for service of various kinds, ranging from local projects to those of national scope and may cover any type of activity relating to map librarian or cartographic archival science.

— Other factors to be considered include the research/publication record of the individual, innovation or leadership in the field of map librarianship, service to map related associations and enthusiasm, commitment and dedication to the profession.

Personal members of the ACMLA, or former members who have retired, are eligible for the award.

Existing ACMLA Bylaws

4.3.4 Honorary members shall possess the following rights and privileges:-
a) the right to receive the official journal of the Association without charge;
b) such other benefits and services as the Association may establish;
c) the right to vote.

Honorary Members: Background Information

Joan Winearls

Joan started working at University of Toronto in 1964 as a librarian for the Department of Geography and moved to the Robarts Library in 1973 when the Map Library became part of the U of T library system. She is a founding member of the Association of Canadian Map Libraries and Archives and has taught map librarianship, lectured widely, prepared exhibitions for the Royal Ontario Museum

Joan Winearls at the ACMLA Conference in Peterborough, 1988. (Photo by Alberta Auringer Wood)

and published on map librarianship and early cartography. Her most recent book *Mapping Upper Canada, 1780-1867: An Annotated Bibliography of Manuscript and Printed Maps,* published in 1991, is a remarkable text.

Joan was the first chairperson of the National Union Cataloguing Committee. Joan was the ACMLA's first official delegate to an International Federation of Library Associations (IFLA) conference which took place in Moscow. In 1969, she and Yves Tessier completed the first Directory of Canadian Map Libraries for ACMLA. Joan has also served as editor of the early Association proceedings, newsletter and review editor for the *Bulletin*. She has contributed numerous articles and reports to the *Bulletin* and other articles in the *Canadian Cartographer* and *Dictionary of Canadian Biography*. In 1970-71, Joan was elected 1st Vice President of ACMLA and in 1972-73 was elected President. She was a member and chair of the Anglo-American Cataloguing Committee for cartographic materials from 1979 to 1982, which published *Cartographic Materials: A Manual of Interpretation for AACR2*. Joan received the ACMLA Honours Award in 1987. Joan received the Librarians' Association of the University of Toronto award of Merit in May of 1988. Joan was awarded the Marie Tremaine Medal in 1993, a prestigious award presented by the Bibliographical Society of Canada for outstanding service to Canadian bibliography for distinguished publication in that field. Those of us who have experienced Joan's sing-along leadership at many conferences can attest to her vocal abilities. Joan retired from the University of Toronto in 1998.

Serge Sauer

Serge started working as chief technician for the Department of Geography at the University of Western Ontario in 1966. He was responsible for the creation and development of the map library and later, its move to the Social Science Centre in 1973.

Serge joined ACMLA in 1967. He was a member of Special Libraries Association (SLA) and represented ACMLA on its board in the 1970s. The 10th anniversary conference of ACMLA was at UWO in London in 1976, and Serge took great pleasure in the planning and hosting. Serge received Honours awards for outstanding achievement from ACMLA on three different occasions – 1975, 1982 and 1985.

Serge Sauer at the ACMLA conference in Kingston, 1986. (Photo by Barbara Farrell)

His publication in 1975, *Folios of Plans of University Map Libraries* assisted many collections in North America to organize and design their floor plans. The awards in 1982 and 1985 were in recognition for his work (finding sponsors and originals, preparing for printing, sales) on the historical maps facsimile program which became a financial success for ACMLA with worldwide sales. By 1982, 100 different maps had been printed in the series to complete portfolios I and II. Serge resigned as Chairman of the Historical Maps Committee in 1984 after 8 years. Although *Explorations in the History of Canadian Mapping: A Collection of Essays* was not published until 1988, Serge played an important part in the initiation of that project with Norman Nicholson in the early 1980s. Serge retired from the University of Western Ontario in 1991. The map library was renamed the Serge A. Sauer Map Library in a commemorative event with Serge, faculty, staff, special friends and students in 1992. He was also presented with an "Outstanding Service Award" from the Ontario Division of the Canadian Association of Geographers.

Barbara Farrell

Barbara Farrell has been a member of the Association for over 30 years during which time she served in a number of capacities. She served as

Vice President from 1974-75, President from 1975-76. She edited issues 16-18 of the ACMLA *Bulletin* and served as chair of the National Union Catalogue Committee, Nominations Committee and Honours Award Committee. She represented the Association on the National Commission for Cartography. She co-authored both editions of one of the Association's most successful publication, *Guide to a Small Map Collection*. This book became a standard reference for all map librarians in North America and beyond. In 1988, she co-edited a compilation of readings entitled *Explorations in the History of Canadian Mapping: A Collection of Essays*. Her diagrams were an integral part of the 1st edition of *Cartographic Materials: A Manual of Interpretation* and were re-used in the revised edition. Her reputation as one of the leading map librarians resulted in her being asked to contribute an article on map evaluation for the 1987 publication *World Mapping Today*. Barbara's contribution to the Association was recognized by an Honours' Award in 1989.

Barbara founded the Map Library at Carleton University, building it over 26 years into a strong, well-respected collection. Her dedication to excellence and leadership among her staff and colleagues at Carleton were exemplary. As one of the leading Canadian map librarians, Barbara was a model for new and aspiring map librarians, demonstrating how a map collection should be developed and managed.

Barbara was also active as a long-standing member of the Canadian Geographic Permanent Committee on Geographic Names, representing academia and the general public. Barbara provided a voice on the development of publications and databases related to geographic names. There is no doubt that Barbara's contribution to map librarianship and the Association should be recognized by Honorary Membership.

Barbara Farrell at the ACMLA Conference in London, 1976. (Photo supplied by Cheryl Woods)

Two New ACMLA Bird's Eye Views Available

Calgary [1910]
Ottawa [1893]

See inside back cover for more information

ONLINE GIS:
SOLUTIONS FOR DISSEMINATION OF GEOSPATIAL DATA
IN A LIBRARY SETTING

Marcel Fortin
Data, Map and Government Information Services, Robarts Library
University of Toronto

*Paper presented at the Joint ACMLA and CAPDU Conference, Congress 2004,
Winnipeg, Manitoba, on June 1, 2004.*

In the 1990s, when Geographic Information Systems (GIS) made their first appearance in Canadian libraries, data management was not a significant issue in map librarianship since there was little data available to manage. Since about 2001-2002, numerous data initiatives such as DMTI Spatial's SMART program and several government data programs have changed the landscape of GIS in libraries. In fact, one of the biggest issues in dealing with GIS in libraries has become the management and the efficient dissemination of large amounts of data. This paper will present a wide range of solutions available to libraries to help in the tasks of data management and dissemination. In the process, some traditional tools will be compared with newer more technologically advanced methods. A special focus of this paper will deal with online tools for data management and dissemination. Finally, this paper will also attempt to recommend what steps we, as a community of map and GIS libraries, should take to ensure that we are not duplicating efforts across the country in our attempts to meet the challenge of providing efficient methods of data access for our clients.

Canadian Map Library Situation

The Canadian map and GIS library community is currently experiencing a boom in data collections. Governments and private companies alike have started delivering to us a great deal of data. In 1999, when I started as the map librarian at the University of Toronto, there were few datasets available to my community of users. I inherited at that time a digital air photo set of the city of Toronto and one of the Golden Horseshoe, along with a few general-type, low resolution vector datasets such as ArcCanada and the "Digital Chart of the World" from ESRI. The

Marcel Fortin presents this paper at the Congress 2004, Winnipeg. (Photo Alberta Auringer Wood)

total amount of disk space was the equivalent of a few dozen CD-ROMs. In 2004, this digital collection has ballooned to countless gigabytes of data located on a web server, an ftp server, an intranet and a countless number of CD-ROMs. While this is definitely a positive development for our discipline and especially for our users, the difficulties of

managing these data and disseminating them efficiently to our clients have grown proportionally with the size of our collections.

Data Management and Dissemination Problems

For most institutions, the number one concern of managing large collections of geospatial data begins with storage space, but other issues are developing as we become more involved in this new world of geospatial data management. The archiving of data is also clearly important to us and our users. Since there is no guarantee that any of our data producers are going to archive their data, we are obliged to find ways to ensure that our users have access to temporal datasets if they require them. Although there is now a new law in Canada requiring that geospatial data be archived through the new institution, the Library and Archives Canada, the reality of legal deposit is probably still many years away.

At this juncture, it may be helpful to explain why geospatial data collections are difficult to manage. Firstly, in Canada, the data culture that surrounds us is currently one of passive thankfulness -- thankful to be able to access data at all compared to just a few years ago and passive for fear of upsetting the crucial relationships we have managed to foster over the years with governments. As a result of our passiveness, we as users and custodians of data are not prepared, as our counterparts in the United States are, to demand that the sources or the metadata for the data we do receive be rich and full. As a result, in Canada we are left with growing collections of data with no descriptive metadata. This lack of metadata simply adds to the difficulties of data management and dissemination. Without metadata, it is extremely difficult to relay to our users the extents of our data collections. The lack of metadata also limits our options for using software to properly display descriptions of our data collections on the web.

Secondly, geospatial data is complex and there are a variety of areas of GIS data that need to be understood to realize the difficult task of managing and disseminating data efficiently. Four aspects must first be understood about geospatial data in order to understand the difficulties with managing collections of this type. GIS data comes in a variety of *formats* for a variety of software needs, ranging

from the very common to the very obscure. These can include "Shapefile" format, "Coverage" format, "Mapinfo" format, etc. GIS data can also vary in their *Datum*. Datum is the mathematical surface on which a mapping and coordinate system is based. In our context, this most often means that the data you receive is in NAD 83, NAD 27, WGS, etc. Data can also arrive on your doorstep with a specific *projection* such as UTM, MTM, or simply geographic projection with longitudes and latitudes. Projection is the mathematical calculation transforming the three dimensional surface of the earth to a two-dimension plane. GIS data can also be of a few *types*. The data could be an image (Raster) or databases (Vector) or text (ASCII). Data can also come in different *scales*, that is different resolution depending on the body who created the data and the extent of detail that body wanted to analyze the geography covered.

The difficulties of managing and disseminating geospatial data are also furthered by other factors such as institutional demands. At most libraries, at least academic ones, the new "Digital Library" has created a demand for resources to be available 24 hours a day and seven days a week and data must be made available to any desktop requesting it. Campus populations are getting larger and our GIS user population is increasing with the popularity of GIS. Distance Education GIS courses are now available. Many universities also have multi-campuses (the University of Toronto has three large campuses).

Finally, another impediment to properly disseminating geospatial data in a library setting is the restrictive licensing of some of our datasets. DMTI Spatial licensing allows for the distribution of data through Intranet, or secure web locations. Most governments, however, are not allowing us the option of this tremendous solution. Instead, they require us to manage the data on a user by user basis, registering a signature or an identification of every usage. As a result of the disparity between various data products, the dissemination of data is quite difficult and frustrating to users who wonder why all our datasets are not made available online.

Media Solutions

What then are some of the solutions for data management given all these impediments, difficulties and restrictions? Some of the most

obvious and easy solutions to our data management needs are CD-ROMs, DVDs, Universal Serial Bus (USB) keys, internal and external hard drives, diskettes. The advantage of simple solutions such as these is cost. Even a large external hard drive is quite affordable and can help you store a few hundred gigabytes of data for very little money. Little effort is required for storing the data locally, but unfortunately the disadvantage is in the management and dissemination of data once stored on the devices. How does one keep track of thousands of CD-ROMs? How often will you end up having to transfer your data from a too small hard drive onto another bigger one? This is not to mention the millions of diskettes one would have to use to store data on if we were still using them. Another major issue with using local media such as these is that of course, the compatibility and probable deterioration of these devices as an important consideration. Will the CD-ROMs we use today be compatible with readers in the future? How long will CD-ROMs last; no one knows for sure. We have seen media disappear before -- one need only think of the 5.25 inch floppy diskette.

Local Solutions

Intranets and networked drives are local solutions that can be quite beneficial to geospatial data management in the library. These are secure; economical; they can easily be backed up; they can be migrated easily; and data collections can be stored in their entirety in one location. Data storage is made extremely easy, but data management must be approached cautiously. With large collections of data, one can easily get slowed down in trying to find data by the directory structure librarians might create. Another disadvantage of the Intranet is that of course data dissemination can only be done at the very local level. Users are required to come into the library for access. Access is therefore limited.

Web-Based Solutions

Older methods of data dissemination and management are still also very useful in the library setting such as File Transfer Protocol (FTP) servers. FTP sites are similar to web sites, but the purpose of them is for file transfer only, as opposed to Hypertext Transfer Protocol (HTTP) which is meant for file viewing. As well, FTP requires a login, either an anonymous or secure one.

The advantage of FTP is that it is a fast and secure method of data dissemination through the World Wide Web. FTP servers can be set up on a multitude of computer platforms; they can be accessed via a variety of software; the setup is easy and the cost is minimal to an institution. The disadvantage of FTP is that file organization and management can be difficult and cumbersome. FTP sites also lack the versatility of file transfer found on HTTP servers.

Other advantages of HTTP server data dissemination through the World Wide Web are the simplicity of set-up and maintenance, the minimal cost of the hardware and free software, the multi-platform compatibility and capacity, and the integration of files and image and text display. The negative aspects of the HTTP server are the time-consuming work of coding the HTML to describe resources on the server. Server security is not fool-proof and is difficult to implement. As well, the management of resource files remains as difficult as on an FTP server or an Intranet.

HTTP file management functionality can be added by using applications such as Cold Fusion by Macromedia. Cold Fusion is a web authoring tool with an online front-end to one or multiple databases and works with simple or complex databases ranging from MS Access to Oracle. Cold Fusion can be used as a front-end to a file management system for your geospatial data, allowing the querying and display of search results.

The main advantage of Cold Fusion is its ease of use. Cold Fusion code is very similar to HTML, but allows for the inclusion of Standard Query Language (SQL) commands for querying databases. Cold Fusion can be used on a variety of platforms and requires a minimum of system requirements. However, the big disadvantage of this software is its prohibitive cost. As well, while file management with Cold Fusion is aided, the querying of the data is still done at a superficial character string (text or numeric) level, and cannot be used for spatial querying of data collections.

Similar to Cold Fusion is Common Gateway Interface (CGI) programming. CGI is a cross-platform scripting/programming language that allows for the creation of user or query-driven web pages. CGI can be used as a database management tool similar to Cold Fusion and can be programmed

using a variety of languages such as Perl, PHP, C, etc.

CGI can be used to query anything from simple flat databases to complex databases such as Oracle and other high-end databases with relational model capabilities, using a CGI module called the Database Interface (DBI). CGI usually works with a web HTML form which passes SQL command queries through form variables to a script which interprets the query and requests the information from the database table(s). The script then returns to the web server a temporary HTML display of the results from the database.

The advantage of CGI/DBI is that the scripting is cross- and multi-platform. That is, scripts can be written and can work on a variety of platforms at any given time. Scripts can be found for free on the web; there is no compiler needed for the scripts; data encryption is possible; it works hand-in-hand with HTML and SQL; and it can work with non-proprietary, or open-source high-end databases such as MySQL. Therefore, one can achieve the same results as with Cold Fusion, or better, in managing files in an inexpensive and efficient manner with CGI, but for free.

The disadvantages of CGI/DBI are the difficulty of learning a programming language if one does not already program in any of the CGI languages. As well, as with Cold Fusion, the management and querying of geospatial files is done at a superficial character string or at a descriptive level and not at a spatial level. While spatial querying can be programmed into CGI scripts, the time and effort are probably not worth it when other solutions are available.

Web-Based GIS Solutions

In the last few years, ESRI, the best known GIS software vendor in the world, has managed to create server-side web GIS tools. At the forefront of their products are now ArcIMS and ArcSDE which together can manage and help display GIS data from Internet and Intranet servers.

The main difference between ArcSDE/ArcIMS and the above HTTP solution for geospatial data management and dissemination is that it is built for more complex querying of the data using the spatial components of the data itself, as opposed to the superficial character string queries. To accomplish this, this type of server software requires rich metadata, the purchase of the server-side software, robust hardware, GIS and programming expertise, and a lot of time to develop the required tools.

Why is this type of tool used more and more on the web? Well, commercial GIS web software allows for a common data format. It implicitly manages geospatial data. That is, it is not only its main function, it is the only reason it knows how to deal with the data and different versions of it. Therefore, it is also a data archiving tool. Furthermore, ESRI's web solutions allow for direct access to the data on a web server through desktop GIS software. That is, ESRI's GIS desktop can talk to the server and any GIS server the user has access to and uses the data directly without downloading it, uncompressing it or converting it first.

ArcSDE is the application that allows for the creation of an interface to geospatial databases. It is the translation and querying system of GIS data on a server. Results to queries going through it are translated back to the web server as viewable (download) results or visualized (map rendering) through ArcIMS.

While ESRI is the main vendor of this type of software, there are many other commercial server-side GIS products available. These include Oracle Spatial, Locator with MapViewer, FME Spatial Data Server, Autodesk GIS Design Server, and Mapinfo Spatialware and MapXtreme to name a few.

Commercial server-side GIS software is a very promising solution for map library data dissemination. Unfortunately the disadvantages of these are presently still numerous. Firstly, the cost of the software is very prohibitive for many institutions. The setup and maintenance of these systems requires time and staff, as these are complex systems that involve things such as data conversion and data transformation in order to allow for every aspect of all datasets to be used together. The interoperability of these systems is also lacking since they are commercial products. This means that not very many of these software packages can communicate with each other, making the investment into one of these systems

limited in scope and breadth. As well, these systems were created, not with library settings in mind, but instead with a corporation or data creator in mind. The ultimate purpose of these applications is for archiving and storage of data from an institutional standpoint. Disparate datasets from around the world, therefore, may not be handled as efficiently as if they were related datasets such as those which are usually found in an institution's corporate repository of data.

Open GIS Consortium & Geography Markup Language

Beyond these types of commercial GIS web applications is a new non-commercial concept of GIS which has helped foster new and free types of web-based GIS applications. This new concept or philosophy that is changing much of the landscape of Web-based GIS is the *Open GIS Consortium (OGC)*. The OGC is a non-profit, international, voluntary consensus standard organization. It is the leader in the development of standards for geospatial services. The OGC works with governments, private industry and academia to create open and extensible software application programming interfaces for GIS. According to many, the main problem with web GIS applications is the lack of standards and mechanisms for exchange between different Web GIS (Shekhar, et al., 2001). Open GIS's mission is to try to eliminate this problem.

One of the major initiatives of the OGC is *Geography Markup Language (GML)*. GML is XML encoding for the transport and storage of geographic information. It enables the sharing and linking of geospatial data and allows for the interoperability between OGC standard compliant systems.

Why is interoperability so important to web-based GIS systems? With interoperable systems, there is no need for the software the data provider and the end-user utilizes to be the same. Interoperable systems allow for a variety of types of tools to be used by end-users. There is an ease of integration of various and disparate data types. And finally, interoperable GIS allow the seamless combination of all data from one or several locations to be used together.

What does GML do that makes it so important? GML allows for simplicity when integrating geospatial data into web content. Without GML, GIS server software, even commercial products, would not exist, or at the very least would have no future in the networked GIS world.

To understand GML, one can think of it as HTML for describing GIS datasets. On the web, moving from one HTML page to another is easy because of the common language used for hyper-linking and grouping things together from various locations. GML, in the same way, enables the development of a "geospatial Internet" of linked GIS features which are not necessarily in the same location (http://gislounge.com/ucon/ucgml4.shtml). See the diagram below:
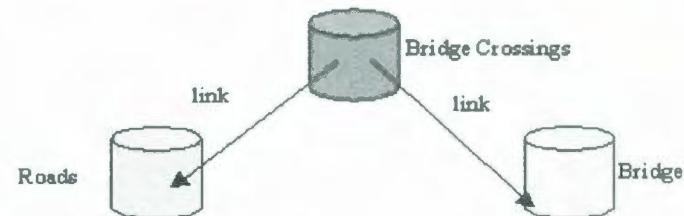
GML 2.0 supports distributed feature relationships. (Source: Geography Markup Language http:// gislounge.com/ucon/ucgml4.shtml)

Along with GML, the Open Source GIS phenomenon has also spurred the creation of important Open Source and free GIS software. Among the many products are crucial web-GIS applications such as MapServer, OrthoMIT and PostGIS, to name but a few. For a comprehensive listing of Open Source and free GIS software, please see www.opengis.org and www.freegis.org.

Not only are most of these software packages free, but most are supported by the producers and by their community of users through listservs and discussion boards on the web. Because of this type of support and because users are allowed to use the source of the software to modify packages, many believe that open source software is more reliable, performs better, and is overall a superior alternative to commercial GIS software (Anderson and Moreno-Sanchez, 2003; Wheeler, 2002).

The structure of various Open Source GIS software is often the same and can often have the same functions as their commercial software counterparts. As an example, MapServer software from the University of Minnesota (http://mapserver.gis.umn.edu/), one of the most

Mapserver Module	Function
Web Map Service (WMS)	Web cartography
Web Feature Service (WFS)	Access to vector data
Web Coverage Service (WCS)	Access to raster geo-data, that can be delivered in several image formats (e.g. TIFF, GIF, JPEG, BMP, PNM)
Web Catalog Service (WCAS)	Web-based catalog service for administration and querying of metadata
Web Gazetteer Service (WFS-G)	Service allowing geo-referencing of geographic entities based on textual identifiers (e.g. place names)
Web Terrain Service (WTS)	Creation of views out of 3D-data
Web Coordinate Transformation Service (WCTS)	Web-based transformation of geographic coordinates from one coordinate reference system into another

Table adapted from: http://deegree.sourceforge.net/

The advantages of utilizing Open Source online GIS applications include:
• The software is free
• Users can modify the software however they wish
• The management of geospatial data is done implicitly through the free Spatial Extension called postGIS
• Geospatial querying and scripting of datasets is built-in to the product
• The scripting languages used to modify the applications are also well-known open source scripting languages such as PHP or Perl or JavaScript, etc.
• Open GIS software is easier to set up than commercial packages because they conform to the standards set forth by the OGC
• Since the software is based on OGC standards, disparate data are made to communicate and interoperate implicitly through standards of operation and through the use of GML

important Web-GIS applications available, has the following architecture (see the chart above).

You will notice that MapServer has basically the same number of functions, and in some cases more, than most commercial online-GIS software packages. To view some of the dozens of sites now using MapServer software, please visit mapserver.gis.umn.edu/gallery.html. Users include the National Atlas of Canada and the Gulf of Maine Project, among many others.

Other bodies utilizing non-commercial web-based GIS development tools include the United States Geological Survey's GEODE web site (http://dss1.er.usgs.gov/) which uses PostGIS, and the Cornell/State of New York site (cugir.mannlib.cornell.edu/index.jsp) which utilizes a combination of the PostGreSQL database with ArcIMS. In Canada, some of the web services available that use Open GIS products include the National Air Photo Library's (NAPL) application NAPL Online (http://airphotos.nrcan.gc.ca/), along with the National Atlas of Canada (http://atlas.gc.ca/site/english/index.html) which is using Open GIS Consortium's Web Mapping Service (WMS) standards. The National Atlas of Canada with DM Solutions' adapted MapServer software and the NAPL, Cubewerx, which is a commercial package using Open GIS Standards.

In many Canadian universities, commercial GIS vendors have negotiated site license agreements which have made the decision of going the commercial route over the Open Source route a bit easier when trying to develop online GIS applications. But for the many institutions who have either chosen not to obtain a full license for all commercial products, or who have chosen not to license any software, the Open Source route is a good option. Not only can the software save institutions thousands of dollars but in many cases the Open Source GIS software is considered better software to work with.

Since data and software are no longer barriers to the Canadian map library community developing online-GIS tools, what is stopping us? Some of the barriers may lie in the disadvantages of using OGC compliant and free web-based GIS software.

Disadvantages:
•Still need the staff to install and maintain software and hardware
•The hardware costs that plague the commercial applications remain even with the free software
•Even with free software, we still need access to good metadata that simply is not coming our way

Solutions to These Barriers

What are the solutions for us in Canada to building these types of web-based GIS applications? Since we purchase data through consortial agreements, we should strive for our tools for data dissemination to be developed in the same manner. That is, a consortium application for disseminating data across the country would be ideal. There are a few examples of consortia in Canada which are worth mentioning. These include the *Sherlock* project, the Cooperative Data Access System for Quebec University Libraries, which is planning on including GIS data, and the Ontario Council of University Libraries (OCUL)'s *Scholars Portal* which will this year include some licensed Ontario Government geospatial data. The problem with both of these projects is that they are too local (restricted by province). As these projects develop to include the numerous datasets available to all Ontario or Quebec universities, this leaves the rest of the country out in the cold. This is not to mention the problem of duplicating effort and money to develop these systems. Until we begin thinking of national consortia for data sharing, we will continue to duplicate efforts and still end up not serving our communities of users properly.

Metadata is also one of the most important barriers to achieving our goals. Until we get proper metadata for our datasets, we cannot begin to develop any of these systems properly. Again, the solution probably lies in two areas. We must lobby our data providers to provide appropriate metadata. While this is important, we must be realistic and understand that we will either not get this metadata anytime soon or we will have to create the metadata ourselves. By choosing the latter option, we are again opening ourselves up for duplicating efforts. A repository of metadata would probably be the best solution with either scenario. If a data producer can provide us with metadata, we could add it to this national repository of metadata for all to use. If the producer cannot provide the metadata but one of our participating institutions creates it for them and

submits it to the repository, it is then available to the entire community.

The TriUniversity Group of Libraries (TUG) Metadata Project is a good example of what can be accomplished as a group when it comes to metadata creation. According to their web page, the goal of this project is to provide faculty, staff and students at the universities of Guelph, Wilfrid Laurier and Waterloo with access to metadata records documenting the geospatial data holdings of these three institutions. Their online project can be found at http://www.fesspatial.uwaterloo.ca/library/.

Conclusion

In conclusion, I would like to expand on how we as a community can make some of these necessary changes in order to provide ourselves with the proper infrastructure for managing and disseminating data efficiently to our users. Personally, I feel that the ACMLA community should widen our approach to how we perform our data management. We should be striving for partnerships instead of duplicating efforts across the country.

In terms of metadata, we need to look at consortia to solve some of our problems. This does not mean giving up on our data providers furnishing us with the appropriate levels of metadata. On the contrary, I believe this can be achieved through ACMLA initiatives through our cataloguing and other committees. But at the same time, we should also consider developing, along similar lines as our National Union Catalogue of Maps, a National Repository for metadata.

None of these solutions comes for free. As a result, we as a community are going to have to find funds for these initiatives. Our institutions are prepared for consortia as can be seen through projects such as the *Scholars Portal* in Ontario and *Sherlock* in Quebec. But we will probably require more than our institutions are prepared or able to provide. Other funding sources will need to be uncovered. Funding partnerships through government (Canadian Geospatial Data Infrastructure (CGDI), Canada Foundation for Innovation (CFI), Social Sciences and Humanities Research Council (SSHRC), etc.) or corporate sponsorships will need to be brokered to secure adequate funding to develop the tools we require.

In our ongoing negotiations for data with various governments, it will also be crucial for us to

negotiate, as part of our licensing agreements for data, less stringent rules governing these agreements. Governments will need to trust us to develop secure network environments where their data is managed with a watchful eye. As libraries, we are used to keeping track of material and the lending of material. In terms of data, we can apply similar systems and let governments know of our commitment to the secure management of their data. Otherwise, we could be developing the best online-GIS tools available and they could be worth nothing if we cannot include data into these systems.

How do we position ourselves to aim for such lofty goals? The ACMLA cannot, most likely, achieve these on its own. Finding partners is at the top of our priority list. The most obvious of partnerships would be with the Canadian Association of Public Data Users (CAPDU). CAPDU has been dealing for years with some of the same issues we are currently facing and we can benefit not only from their experience, but from an added number of members pressuring data providers to listen to our needs. I am encouraged by the new joint data committee that was just struck in Winnipeg between the two Associations. With this committee, I am confident that some of our goals of liberating more data will be realized, and hopefully our message about metadata heard by our government and commercial data providers.

Another important partnership we should investigate is with the Open GIS Consortium groups. Our involvement with them would be a step in ensuring that our needs are recognized, or at least heard, by international bodies. The government of Canada is one of the most active members of the Open GIS Consortium through Natural Resources Canada. As a member of Open GIS, the government of Canada is sending a message of openness. If we become involved with them and other groups at the international level, I think a future of partnerships, collaboration and understanding is guaranteed.

References

Anderson, Geoffrey and Rafael Moreno-Sanchez. "Building Web-Based Spatial Information Solutions around Open Specifications and Open Source Software." *Transactions in GIS* 7 #4, 2003: 447-466.

Shekhar, Shashi Vatsavai et. al. "WMS and GML based interoperable web mapping system." in *Proceedings of the Ninth ACM International Symposium on Advances in Geographic Information Systems*, Atlanta, Georgia. New York: ACM Press, 2001. 106-111.

Wheeler, D.A. "Why Open Source Software / Free Software (OSS/FS)? Look at the Numbers!" 2002. <http://www.dwheeler.com/oss_fs_why.html>

Group photo from Congress 2004 in Winnipeg. For full conference report and more photos, see page 15.

THE WILLIAM C. WONDERS MAP COLLECTION

Linda M. McClure
SciTech and Health Libraries, Cameron Library
University of Alberta

*Prepared as part of a class project for Master of Library and Information Studies,
University of Alberta, June 2003.*

The William C. Wonders Map Collection at the University of Alberta was originally known as the University Map Collection; it was formed in 1966 by merging the collections held by the University Library and the Department of Geography (Whistance-Smith, 1993). Due to the generosity of a number of private and government institutions, the collection grew rapidly throughout the 1970s and 1980s until it became a nationally and internationally recognized resource. Also during these early times, thanks in large part to the overseas efforts of the first curator, Hugo L.P. Stibbe, a solid foundation was laid in the area of historical, rare and facsimile maps from around the world. One of Stibbe's more remarkable acquisitions, in the late 1960s, was an 8-sheet map of South America, dated 1775, which was specially printed for the University Map Collection by the curator of the Spanish Archives in Madrid using the original copper plates. In 1987, the Department of Geography recommended that the University Map Collection be renamed the William C. Wonders Map Collection on the occasion of William Wonders' retirement (Burwash, 1993). In 1993, the Collection was moved from the Department of Geography to the basement of the Cameron Library and then to the main floor of the Science and Technology Library where it currently resides.

"While the emphasis of the collection is North American, it contains maps for all parts of the world and has strengths in the following areas: Western Canada, Northern Canada, Poland, Germany, France, and archival collections for Ukraine, British Isles, and Eastern Europe" (University of Alberta Libraries, 2002). Whereas these areas of strength are actively maintained, other areas of the collection are maintained more passively through exchanges and donations, with the occasional purchase of selected resources if user demand warrants the expenditure, or as special research projects are initiated. As Jones (2003) states, "The existing collection has many areas of strength which have been built up over the past 2 decades into one of Canada's major cartographic research collections. Continued growth at this level may not be maintained and future growth is directed primarily at the more immediate needs of the collection's primary clientele. Existing collections outside the primary focus will be augmented where possible through selective purchasing and donations etc."

The William C. Wonders Map Collection is primarily aimed at serving the University of Alberta community, and secondarily is designed to serve as a resource for the cartographic needs of Edmonton and Northern Alberta; it also supports other map collections nationwide through such avenues as interlibrary loans. Some of the areas of strength are maintained in conjunction with other specialized collections within the University of Alberta Library, such as the Canadian Circumpolar Library and the Data Library. The Departments of Earth & Atmospheric Sciences, Engineering, History and Anthropology, to name a few, make extensive use of the Collection in preparation for field research. The Collection is also widely used by the general public and local businesses to "plan holidays, research communication and/or aerial survey work in foreign countries, to do genealogical research, private historical research, and a host of other topics" (Whistance-Smith, 1993).

Resource materials in the Collection exist in a wide variety of formats, including monographic and serial maps, atlases, aerial photography, remote sensing information, microform, slides, globes, and most recently, geo-referenced

databases and digital spatial data. The Collection has access to Geographic Information System (GIS) software, and has recently been able to significantly increase its collection of digital data through a licensing agreement with the Government of Canada. A donation of 700,000 historical Alberta airphotos has also dramatically added to the depth of the collection in the area of remote sensing. Most recently, the Collection has benefited enormously from a donation willed to it by the late Ron Whistance-Smith. While his generosity is greatly appreciated, Ron himself is sorely missed.

The Collection is primarily in English, although it does include a number of maps and atlases in other languages, usually obtained when an English version of the information was unavailable. According to Jones (2003), "Cartographic materials for all parts of the world are acquired at a general or reference level. However, emphasis is placed on Canada, particularly Alberta, the Northern Territories, and geographic areas of current interest to the University's researchers. Other historic strengths which have been collected extensively are: United Kingdom, Northern and Eastern Europe (including Austro-Hungary, the Ukraine and western Russia)." While the active collecting focus of the Collection is on current materials, older maps and atlases have been obtained through exchange programs or as gifts; facsimile maps, globes and atlases are also purchased to support the Collection's strong historical component. One of the most recent historically significant acquisitions was of a replica of the Behaim Globe, originally created in 1492, which is believed to be "one of the first modern terrestrial globes, and it may, indeed, be said of his "Erdapfel", as he called it, that it is the oldest terrestrial globe extant." (Siebold, 1998).

The Collection can be divided into 4 broad categories: general information, in-depth information in areas of focus, items that address more specialized research needs, and textual documents that provide support and interpretation of the variety of materials present in the Collection. Whereas all four areas are developed passively through donations and exchange programs, the areas of in-depth focus and specialized research materials receive the majority of active collection efforts, with textual support running a close second.

References

Burwash, R.. "Bill and Lillian Wonders - Geographers, educators and map makers." *The Friends of the University of Alberta Museums Newsletter* 4, Winter 1993.

Jones, D. *William C. Wonders Map Collection: Planning documents (drafts)*. Edmonton: William C. Wonders Map Collection, 2003.

Siebold, J. *Slide #258 Monograph*. Retrieved August 14, 2003 <http://www.henry-davis.com/MAPS/LMwebpages/258mono.html>.

University of Alberta Libraries. *William C. Wonders Map Collection*. Retrieved 2003 <http://www.library.ualberta.ca/subject/maps/index.cfm>.

Whistance-Smith, R. "The Willian [*sic*] C. Wonders Map Collection." *The Friends of the University of Alberta Museums Newsletter* 1-3, Winter 1993.

Welcome!
New ACMLA Members

Eva Dodsworth (Full member)
UMD Library
University of Waterloo
628 Munich Circle
Waterloo, Ontario
N2V 2L6
edodswor@library.uwaterloo.ca

De Beers Canada Exploration Inc.
(Institutional member)
c/o Lynn Mason
Information Centre Manager
1 William Drive
Toronto, Ontario
M4H 1N6
lynn.mason@ca.debeersgroup.com

JOINT ACMLA AND CAPDU CONFERENCE AT CONGRESS 2004
MAY 30 - JUNE 4, WINNIPEG
CONFERENCE REPORT

Prepared by Alberta Auringer Wood

Based on conference abstracts and reports by
Colleen Beard (CB), Diane Boyd (DB), Amy Chan (AC), Danial Duda (DD),
Elizabeth Hamilton (EH), Shirley Harmer (SH), David Jones (DJ), Cathy Moulder (CM),
Richard Pinnell (RP), Maxine Tedesco (MT) and Grace Welch (GW)

Sunday May 30

The conference website contains the outline of activities at the meeting. It may still be found at http://www.umanitoba.ca/libraries/units/datalib/acmla-capdu.html. The very first session of the conference, bright and early on Sunday morning, was a CAPDU workshop on Historical Census Data (aggregate statistics), organized by Laine Ruus, University of Toronto, and Chuck Humphrey, University of Alberta. Laine did an excellent job organizing fugitive information about changes over time to census products, methods of data collection, units of observation, file organization and census geography. Some of the slides in her PowerPoint presentation (http://www.chass.utoronto.ca/datalib/misc/capdu/2004/hist_census.ppt) are jewels of reference information and well worth keeping for future reference. Laine had also prepared a hands-on exercise (a 24 page handout - http://www.chass.utoronto.ca/datalib/misc/capdu/2004/hist_censex1.doc) to expose workshop participants to the difficulties of following a census variable through time. Using an example of ethnic origin at the census tract level in Vancouver for the 1961, 1971 and 1981 censuses, Chuck led us through this: locating and identifying the census tract numbers for each year, downloading data into SPSS, and selecting the desired variables from the tables. For the really hard-core SPSS users, Chuck also introduced the computation of an index of diversity. For most of us, the exercise was sufficiently valuable without this enhancement — in identifying the many pitfalls to the researcher who may attempt to compare census variables and geography over time. (CM)

Laine Ruus and Chuck Humphrey conduct the hands-on workshop on Historical Census Data. (Photo Alberta Auringer Wood)

In the afternoon, the CAPDU annual business meeting took place. This will be reported in full via the CAPDU web pages. Decisions were taken to have the 2005 meeting in Kingston and the 2006 meeting in London. Ernie Boyko, whom many in ACMLA have known for his work with making Statistics Canada products, including digital cartographic files, more accessible to us, announced his retirement as of June 18.

Some of CAPDU's stalwarts (left to right): Jeff Moon, Wendy Watkins, Chuck Humphrey, Bo Wandschneider. (Photo Alberta Auringer Wood)

Monday May 31

On May 31st, there was a CAPDU panel session on "An RDC in Our Back Yard". The speakers were Chuck Humphrey, University of Alberta; Bo Wandschneider, University of Guelph; and Wendy Watkins, Carleton University, who related positive and negative aspects of having a Research Data Centre (RDC) at their universities. These centres are locations at which researchers may have access to confidential Statistics Canada data following the rules of the Statistics Act. There are a number of these centres scattered across the country to save time and costs of university researchers to travel to Ottawa by having access in their local area. Due to access restrictions of Statistics Canada, however, even in Ottawa one is being established jointly by Carleton University and University of Ottawa.

In the afternoon, there was a "Micro-data Interfaces Fair" with presentations and demonstrations from several people. Mary Luebbe of University of British Columbia spoke about ISLAND (Integrated System for the Manipulation and Analysis of Numeric Data). This provides access for current students, staff and faculty of the University of British Columbia (for academic, non-commercial purposes only) to web data extraction for several DLI related files: Census PUMFs, Survey of Consumer Finances,

Survey of Family Expenditure, and Household Internet Use Survey for 1997-2002. Sharon Neary of the University of Calgary spoke about their LANDRU (Local Access to Networked Data Retrieval Utility) system to which a number of other institutions also have access. It takes at least a week to get information into the system and costs about $1,000. Vince Gray, University of Western Ontario, presented the IDLS (Internet Data Library System) and reported that it takes time to load the files, being labour intensive and value-added work. Bo Wandschneider of the University of Guelph mentioned DDI (Data Documentation Initiative) and Nesstar Publisher. Nesstar is a virtual data library. Jeff Moon, Queen's University, gave a demonstration of QWIFS (Queen's Web Interface for SPSS) which provides access to numerous files available via the DLI (Data Liberation Initiative) from Statistics Canada. The information files are accessible to anyone, but the data is restricted by Queen's University user ID and password. It is possible to use QWIFS to generate frequencies, cross-tabulations, etc., and to extract a subset of data for analysis elsewhere, but this access is also restricted. Richard Boily, Université du Québèc à Rimouski, showed how Sherlock, a shared infrastructure for bilingual access to and use of numerical data, worked. It is a project of the Library Subcommittee of the Conference of Rectors and Principals of Quebec Universities (CREPUQ). The last, but not least, presentation, was by Laine Ruus, University of Toronto, on how to use SDA (Survey

Document and Analysis) developed at the University of California (Berkeley) to analyse and extract data from the Canadian Election Survey 1997.

The ACMLA Board met all day to discuss Association business. In the evening, there was an icebreaker event, held in St. John's College due to the cold rain which washed out the outdoor venue.

Tuesday June 1

June 1st was a joint ACMLA/CAPDU day with presentations of interest to members of both groups. There was a welcome by Carolyn Presser, Director of the University of Manitoba Libraries, as well as ones by Marcel Fortin, ACMLA President, and Laine Ruus, CAPDU President.

The first session was on "Data Advances in Manitoba". There are several initiatives underway in provinces across Canada to provide geospatial data via the Internet. The presentation by Kip Tyler and Alan Dakin on the "Manitoba Land Initiative" (MLI) clearly demonstrated that Manitoba is at the forefront. Manitoba has taken a rare departure from the norm by providing free online access to geospatial data. The key to Manitoba's success was getting senior government people on side. In 1999, a mandate was given by a committee of Deputy Ministers of departments involved to develop a government-wide framework to manage land-related information. The result was "The Manitoba Land Initiative" (http://mli.gov.mb.ca), a web portal developed for GIS users and non-users to access geospatial data and metadata online. Registration is necessary, but there is no charge. This includes access to the "Core Maps - Data Warehouse" which provides a set of provincial base map products that meet a broad range of digital mapping and GIS needs. Included are topographic data, base maps, soils maps, land use mapping, cadastral data, forest inventory, digital imagery, geology maps, community base maps, all administrative boundaries, quarter section grids, geographical names, water resource mapping and road maps. The "Interactive Maps" option provides access to a number of IMS (Intranet/Internet Map Servers) and larger seamless datasets. The MLI metadata subgroup is working on the inventory (Data Catalogue) of all land-related data from the provincial government and its agencies. They started with defining the Core Data and will follow

with the cataloguing of all departments' data by using FGDC (Federal Geographic Data Committee) metadata standards. In future, data providers (custodian departments) will be responsible for managing and maintaining the metadata about their products. This site has won awards for its web design and ease of access. It is one of the easiest sites for data searching and downloading. With only a few clicks of the mouse, one can view an image (gif) and the metadata for a cadastral map and download it in either dxf or shp format. Manitoba hopes to add more datasets such as the NRCan topographic maps (1:50,000) for Manitoba, and initiate partnerships for other data such as forestry from the National Forest Information System (NFIS). Other provinces should take a look at what Manitoba has done for the Canadian geospatial community and follow their lead. (DB)

The second paper in this session was entitled "A Confluence of Geospatial Data: The East Side of Lake Winnipeg Planning Initiative" and was a very interesting one indeed. Larry Laliberte, who works for an environmental NGO (non-governmental organization), as well as part-time for the University of Manitoba Libraries, presented an informative and entertaining talk about different methods used
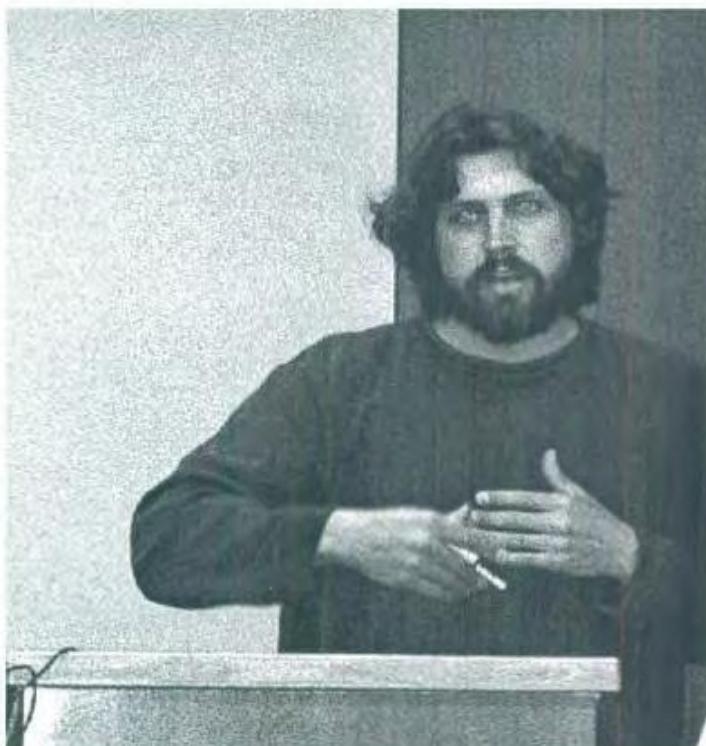
Larry Laliberte delivers a paper on the East Side of Lake Winnipeg Planning Initiative. (Photo Alberta Auginger Wood)

to obtain spatial data that will help with future decisions dealing with the area bordering the east coast of Lake Winnipeg. Local communities, First Nations, industry, government and environmental organizations all have a stake in this region. Larry described how he and his colleagues have used web sites like the Manitoba Land Initiative and satellite data for the project. He also talked about the negotiations with First Nations groups to get data on Cree trap lines, and forestry groups to get their relevant data. The bottom line was to try and get these groups together to "parley" and then some real action and results can be achieved. In the middle of his presentation, Larry used this particularly striking quotation from Albert Einstein: "The restriction of knowledge to an elite group destroys the spirit of the society and leads to its intellectual impoverishment." The East Side of Lake Winnipeg Planning Initiative will hopefully be a successful example that future programs can turn to for guidance. (DD)

The first presentation during the second morning session entitled "Data Reference and Dissemination" was interesting and informative, and a reminder about how difficult it is to create better services for our users. The first paper was given by Rosa Orlandini of McGill University. In "Data Education at McGill", she outlined "data outreach" initiatives by the Government Information, Maps, and Electronic Data Centre at McGill. Although

Rosa Orlandini gives an overview of "Data Education at McGill". (Photo Alberta Auringer Wood)

administratively one unit, it resides in three geographic locations. The goal of the Centre is to promote geo-literacy, numeracy and information literacy through three approaches: presentations to introductory courses, data reserve and presentations to specialized courses, and lastly, long-term research support for individual researchers and multi-disciplinary research projects. They want to prevent crisis intervention through these proactive approaches. Their data support program involves considerable consultation with faculty and researchers. If they do not have a needed dataset, they will purchase or negotiate access to data on behalf of their researchers. Their focus is very much on collaboration and follow-up, including keeping clients informed of updates and providing technical support for the data. Rosa was able to show the participants examples of products created using their datasets. She also talked about the difficulties in winning over some of her clientele, namely the architects; but when she did, "their eyes were opened" to steal a phrase.

Marcel Fortin of University of Toronto gave the second presentation and focussed on "Online GIS: Web Solutions for Geospatial Data Dissemination" in a library setting, comparing and assessing traditional tools for data dissemination, for web dissemination, and new products now available through the Open GIS Consortium. He outlined the problems inherent in geospatial data management such as complexities related to different formats, datums, projections and data types (not to mention scales!). Data management is also complicated by the lack of metadata, as well as diverse licensing and access restrictions. He presented the pros and cons of various organization/access models ranging from simple ftp directories, html accessible tables and databases through to commercial solutions such as ArcSDE and ArcIMS. Although commercial GIS solutions have strong data management capabilities, they generally are complex, expensive and have inoperability restrictions. Two open source solutions that are now available through the Open GIS Consortium (OGC) have considerable potential as long-term solutions for data access and management in map/GIS libraries: GML (geography markup language) and WMS (Web Map Server). These open source solutions are free, easier to set up than commercial solutions, and support inter-operability. Marcel concluded by identifying current Canadian data

Panelists in the session "How Much is Too Much?" (left to right): Andrew Nicholson (convenor), Alberta Auringer Wood, Suzette Giles, Jeff Moon, Colleen Beard. (Photo Cathy Moulder)

management initiatives and promoting the idea of partnerships to promote management and access to Canadian geospatial data. (GW & DD)

After an excellently presented and delicious luncheon at the University Club sponsored by Carolyn Presser, Director of the University of Manitoba Libraries, there was a panel session "How Much is Too Much: Offering GIS and Data Services to the Untrained User" convened by Andrew Nicholson, University of Toronto at Mississauga. The theme was on service to the non-trained user of GIS and data, and how we manage these increasing requests. It was an informal session with panel members Colleen Beard, Map Librarian, Brock University; Suzette Giles, GIS and Data Librarian, Ryerson University; Jeff Moon, Data Librarian, Queens University; and Alberta Wood, Map Librarian, Memorial University. Each addressed the same questions:

1) Do you find that your services are attracting new users with little or no knowledge of statistical or GIS data and software, and how have these impacted your current services?
2) Do you believe that we should provide 'full' service to new/untrained users, in terms of providing data and working with the relevant software so they can get the results. Where do you draw the 'line'? Do you have a 'line'? Do you have written policies outlining what you will/will not do to help the untrained user?
3) This trend of untrained users requesting GIS and Data services will likely continue into the foreseeable

future. Have you any ideas/plans about managing such demands? More/Less outreach, class instruction, training guides?
4) Has your institution recognized the dynamic of this problem? Is extra support available? There was time for some discussion, as well.

After a short break, the Census 2006 Consultation was the last session of the day. This session marked the third census consultation held with the CAPDU membership, but it was a first for ACMLA members. Daniel Dufour (Census Marketing Division, STC) illustrated that the main changes for the 2006 Census would be operational. These changes include the production of a register of all mailable addresses in Canada so that questionnaires can be mailed to at least two thirds of households (the remainder will be hand-delivered), the option of completing the census questionnaire via the Internet, and the automation of many of the processing tasks. A census test was undertaken in May 2004 to ensure that all new mechanisms added to the process work well and will be seamlessly integrated with the rest of the operations. In addition, it serves as a final test of census content. The priority for Census 2006 content is to maintain historical comparability while ensuring the quality of the data. Building on the success of the 2001 Census Geography product and services line, Robert Parenteau (Geography Division, STC) indicated that only a few changes would be made for the 2006 Census. One change reflects the addition of six new CMAs due to changes to the CMA entry threshold

Paul Schwets and Mary-Lynne Reid, Census Operations Division, Statistics Canada, talk about Census 2006. (Photo Alberta Auringer Wood)

in response to users' requests for a more inclusive approach to defining CMAs. Another welcome change ensures representative points will fall on land in 2006. Members were asked to comment on current Geography products and the outline of proposed directions. Mary-Lynne Reid and Paul Schwets from the Census Operations Division of Statistics Canada provided a summary of feedback received to date and asked members to comment on such things as the mechanisms for release information, reference products, standard data products and specialty Internet products. Members suggested such things as a "toggle" between Level 1 and Level 2 access (to assist with referencing those individuals with only Level 1 access) and the addition of explicit dates to regularly updated Internet-based reference products. Finally, the continued issues and future plans for the concepts of "private dwellings" and "collective dwellings" were explored. More detailed information on the 2006 Census, including html and pdf versions of the *Consultation Guide: 2001 Census of Population Dissemination and Proposed Directions for 2006 Geography* can be obtained online at: http://www12.statcan.ca/english/census06/index.cfm. (MT)

The evening saw a reception sponsored by Dr Emöke J. E. Szathmáry, President and Vice-Chancellor of the University of Manitoba, from 5-7 after which

everyone was on their own. Some of us enjoyed a Beer and Bison Burger dinner accompanied by Jazz musician entertainment in one of the outdoor tents, despite the not-so-nice weather. The weather did improve through the week.

Wednesday June 2

As the Congress presents an opportunity for many cognate disciplines to meet together, June 2nd was designated a "Research Community Day", dedicated to interdisciplinary programming. Many ACMLA and CAPDU members attended the day-long forum on access and preservation of research, sponsored by the Canadian Association of Research Libraries (CARL) headlined as "Here Today, Gone Tomorrow?" Though the speakers were top-notch, the audience was, once again, composed of those from the research library community, not from the broader research community as had been hoped. The keynote speaker, Clifford Lynch of the Coalition for Networked Information, rose to his usual high standard and provided a context for the day-long session. Examining the ownership of the problem and the shifts in the traditional paradigm of access/ preservation, Lynch emphasized that digital information suffers tremendous loss under the current conditions of benign neglect. In an inverse of our previous preservation challenges, the acquisition of research materials is not necessarily the biggest part of the cost; maintaining the collection is now demanding significant investments of time, talent and money. Access and preservation solutions, Lynch emphasized, depend on the question being asked by the researcher and

Jazz in the Tent: Good music on very wet ground. (Photo Alberta Auringer Wood)

research institutions. It is no surprise that we are seeing various models emerging, from institutional repositories providing a form of access, rather than preservation, to small projects on a local level intended to preserve a small slice of the broader activity involved in research process. The challenges are many, though the technological ones may not be as daunting as the socio-political environment in which digital preservation is emerging as a problem requiring solution. The solution for research may involve "bit-storage services", but those are not yet in most of our neighbourhoods. (EH)

The overview of the preservation challenge put to the audience by Lynch was followed by an excellent presentation on the hows and whys of preservation by Brian Lavoie, from OCLC. Lavoie spoke as well of the dangers of our current "bit-rot" environment, wherein the combination of fragile digital storage media and speed of technological obsolescence puts the tremendous volume of digital information created each year at risk. Lavoie defined digital preservation as ensuring that the information endures into the future in a form compatible with contemporary technology. Lavoie presented cases of several digital preservation projects such as the rescue of the Domesday materials (http://www.si.umich.edu/CAMILEON). He noted as well the blueprint for digital archiving embedded in OAIS (Open Archival Information System) (http://ssdo.gsfc.nasa.gov/nost/wwwclassic/documents/pdf/CCSDS-650.0-B-1.pdf) and the work being done by OCLC on preservation metadata (http://www.oclc.org/resarch/projects/premis). The challenges of preservation are not simply technological; indeed, those problems are being worked on actively. Some of the greater challenges lie in legal issues, such as copyright, custody, and the right to preserve materials. The Internet archive is one project which is

currently harvesting and storing sites for future access, but is doing so without many of the permissions in place. Economic issues are also a challenge: the ability to sustain archiving efforts over time is a significant concern. There is a need for organization on a large scale with common objectives and standards, rather than fragmented efforts such as have predominated the preservation landscape at the moment. Lavoie ended his presentation with several URLs for those wishing to obtain more information on current efforts:

* http://www.oclc.org/research/projects/digipres/incentives-dp.pdf http://www.clir.org/pubs/reports/pub126/pub126.pdf
* http://www.dpconline.org/graphics/index.html
* http://www.nla.gov.au/padi
* http://www.collectionscanada.ca/cidl/pres-preserv-e.html

The final speaker before the mid-day break was Bruce Walton, of the Library and Archives of Canada. Bruce used his time to discuss the organization and mandate of the Electronic Records Development Division and outlined aspects of the new legislation that promises a more integrated approach to digital access and preservation by the Library and Archives of Canada. (EH)

The afternoon sessions began with Luciana Duranti, Project Director for the InterPARES 2 Project, a

Assembling for a guided tour of the Hudson Bay Company Archives at the Archives of Manitoba. (Photo David Jones)

multinational collaborative project to investigate problems associated with digital archiving. Chuck Humphrey, of the University of Alberta and a member of the National Data Archiving Consultation (NDAC), spoke next about the results of survey work conducted by NDAC revealing evidence of extensive data loss in projects funded in previous years by the Social Science and Humanities Research Council (SSHRC). Humphrey underscored the need for a commitment to action and a concomitant cultural change needed in the research community towards data access and preservation. David Moorman of the SSHRC, wrapped up the session on the future of Canadian data archiving by outlining the current status of NDAC, presently entering the second phase of its work. The final sessions of the program focussed on two CARL research projects: the CARL Institutional Repositories (IR) Project, presented by Kathleen Shearer and Mark Jordan, and the CARL Knowledge Dissemination Project, presented by Kathleen Shearer and Jean-Claude Guedon. The CARL IR Project focuses on providing ongoing access to an institution's scholarly output, including articles, data sets and presentations. The IR Project is, as its name suggests, institution-based, managed by libraries and communities within institutions, and relies on inter-operability through the use of standards. The IR Project, Shearer reminded the audience, is not an archiving initiative, though it may help to preserve scholarship, but it definitely increases access to the output of scholarly activities. IR services must be accompanied by sensible preservation strategies. Shearer pointed to a number of existing IR projects, noting that the CARL Project has six participating operational IRs, 7 institutions engaged in pilot projects, and 8 institutions that are at planning stages. The range of materials in the CARL IR project is diverse and the search engine uses a common front-end to search the content from all contributing IRs. The CARL site can be viewed at http://carl-abrc-oai.lib.sfu.ca. The report on the CARL Knowledge Dissemination Project provided an update on this three-year project. A product of discussions on the major issues facing scholarly knowledge dissemination in the future, the CARL Knowledge Dissemination Project is intended to provide information on how knowledge dissemination is being transformed and how the CARL community should respond to the impact of the driving forces of this change. The project has two stages:

Archivist shows the earliest native map of Manitoba, the famous map by Blackfoot chief Ac ko mok ki, at the Hudson's Bay Company Archives. (Photo Cathy Moulder)

information collection and consultation, followed by a consensus panel conference. The results of the initial consultations are anticipated in the Fall of 2004. Further information on the project can be viewed at http://www.kdstudy.ca. (EH)

The day-long session was summarized by comments from both John Teskey, who organized and chaired the session, and from Clifford Lynch on future prospects for access and preservation. Without a doubt, access is the easier problem to address, and we can anticipate a cultural shift in the dissemination habits of researchers; the application of preservation standards and best practices to scholarly content; a more sophisticated link between the content in institutional repositories; the development of disciplinary harvesters; and a further growth in the number and size of institutional repositories. Regrettably, we will see little, if any, resources added for sustainability of any archiving initiatives. The session wrapped up with discussion from the audience. The sense of the audience was that initiatives on access are promising, but there was a rather more discouraging answer to the question of whether research output will, indeed, be gone tomorrow. (EH)

In competition with "Here Today, Gone Tomorrow?" were the following:

1) Literacy and Numeracy - Gateways to Innovation: The International Adult Literacy Survey (IALS) is the first multi-country and multi-language assessment of adult literacy. Yvan Clermont, Statistics Canada, the International Coordinator of the Adult Literacy and Lifeskills Survey (ALL), gave an overview of the frameworks for assessing literacy and life skills for adults; talked about policy implications and questions; discussed IALS past results; and showed how to access adult literacy and life skills data. It was co-sponsored by the Data Liberation Initiative and the Research Data Centres - Partners in Research. This was a morning session.

2) All Day: A Journey Through Data - The Riches of the Research Data Centres: This all-day symposium focussed on the major longitudinal data sets available in the Research Data Centres. Participants learned about the analytical potential of these data and about various methodological issues that needed to be considered when analysing them. The symposium was useful to quantitative social scientists and applied statisticians interested in the dynamic aspects of social processes.

3) A morning tour to the Provincial Archives of Manitoba and the Hudson's Bay Company Archives, located in the same building, was enjoyed by all who attended it. The large group was divided up into three smaller groups to be shown around both facilities. Historic maps of Manitoba, Winnipeg, and the Prairies were laid out for display and resulted in "ohs" and "ahs" throughout. Seeing an original Peter Fiddler manuscript map or one of the original Indian maps on animal skin was a powerful reminder of the attractions of the wonderful world of cartography. Some of the other highlights were a grandfather clock from London that is now in the middle of the research area, along with a beautiful quilted wall hanging, and the transformation of an old theatre house into a state of the art archival facility. It

really was an enjoyable morning. (DD)

4) An afternoon guided tour of a Hutterite Colony. We did not get a first hand account from someone who went on it, but enjoyed visiting the next day with people who did go on it. For someone who grew up in a farming community in Northern Alberta, many of the school field trips were to Hutterite colonies in the region. Some of the people who went on this tour described many things that resonated with memories - how the Hutterite children are schooled, the different workshops they saw (e.g. the workshop where the furniture for the colony is made), the different machinery used to be successful farmers - everything that is needed to be a self-contained society. The central focus of this society is God and religion is very important in this community. What was striking about these conversations was that nothing has changed in thirty years except some of the tools or machinery have been updated. It truly is an isolated culture within the larger Canadian culture and has very little contact with the outside world except for some business aspects and getting supplies for the community. (DD)

Thursday June 3

The Cataloguing Workshop on "*Cartographic Materials: 2nd Edition*: Overview" on June 3rd

Coffee break in the kitchen at the Hutterite colony - fresh bread and homemade jam and cheese while the girls sang hymns. (Photo Cathy Moulder)

was presented by Velma Parker from the National Archives of Canada, and Frank Williams from the University of Ottawa. Highlights of the information that they presented included these: The second edition published in 2003 is in loose leaf binder format for updating purposes. Ideally, the general material designation (GMD) "cartographic material" should be used for all cartographic material regardless of the form or medium, including maps, atlases, globes, digital maps and other cartographic items, as well as manuscript cartographic material. The form or medium should be expressed in physical description as the specific material designation (SMD). For example GMD "cartographic material" should be used for geospatial data but not "electronic resource". However, we should follow the individual institution's practice. In order to reflect the fact that increasingly products are in digital form, the additional information for mathematical and other material specific details area in Area 3 and physical description extent of item in Area 5 are added. The new appendices for the second edition including early cartographic material, cartographic electronic resources, remote-sensing images, cartographic serials and integrating resources have been added to explain characteristics, differences and functions. (AC)

After a break, the second part of this overview commenced. Velma and Frank provided an overview of the new additions to the *Cartographic Materials: A Manual of Interpretation for AACR2*, 2002 revision (published in 2003) focussing on several of the rules from Area 7 NOTES, especially for electronic cartographic resources applications. Only significant points of interest are mentioned in this report. Rule 7B1 Nature and Scope of the item: In regards to *system requirements* for electronic resources, it was suggested that due to the different versions of software being used on local systems, such as ArcView and Acrobat Reader, tag 538 be used for adding a local access statement. An example may be, "minimum hardware system requirements are dependent on software/GIS being used". It was also suggested that the *mode of access* statement be made as generic as possible to avoid frequent updating. Free language may be used in this area, such as "www" for world wide web, or "online" for access from a dedicated terminal. The *data quality assessment* application, that indicates horizontal accuracy or attribute accuracy, etc., should be included if known. It is also noteworthy that tag 856 can be used for linking to a full metadata record that may include this same information. Rule 7B3 Source of Title Proper should always be included as well for electronic resources. It is recommended that the chief source of title be that which appears on the title screen, if available. Rule 7B7 Edition and History, Application 3 for electronic resources, was pointed out as useful to add in tag 520. There is a good example of this in the *Core Level Cataloguing for Non-Serial Cartographic Materials* document on the ACMLA website at http://www.ssc.uwo.ca/assoc/acml/bcc/bcc5.pdf . Rule 7B8 Mathematical: It was advised that when the information is too complicated to add in Area 3, a note in Area 7 can be used. It was emphasized, however, that projection, grid co-ordinate system, horizontal datum, resolution,

Frank Williams and Velma Parker present a workshop on cataloguing using the new edition of Cartographic Materials. (Photo Alberta Auringer Wood)

etc. is important to include in tag 342. Refer to the file mentioned above, or the *Manual* for examples. Discussion emerged around Rule 7B10 Application 2 regarding compressed files. It was pointed out that information about expanded file sizes may be useful to include. Rule 7B14 Audience, Application for electronic resources, includes very useful information about the "intended user", skill level, license restrictions, etc. This information is included in a 540 tag. Rule 7B17 is used only if the title is not sufficient. A brief summary of the item is given in tag 520. (There are some good examples in the *Manual*.) Other additions to look for in the 2nd edition are: more tables in Appendix B, such as conversion between metric and British systems; Appendix G now includes a rule for rounding scales; and Appendices H (Electronic Resources), J (Remote-Sensing Images), and K (Serials). Velma and Frank also touched on some of the MARC issues. In brief, guidelines for using code "e" and code "m" in the leader tag 006 for electronic resources were provided. It is recommended that the following document be referred to for guidance, *Guidelines for Coding Electronic Resources in Leader/06* at http://www.loc.gov/marc/ldr06guide.html. It was emphasized that tag 007 not be ignored! The physical description of the item is necessary when contributing records to the union catalogue. Frank clarified the use of the term "databases" in tag 650/651 $v for electronic resources. The term should only be used for geo-referenced files. For example, jpg files or electronic atlases are not geo-referenced and should instead be given the term "maps". Also refer to the Library of Congress documents at http://www.loc.gov/marc/bibliographic/ for additional guidance. Velma invited readers to forward any suggestions for rules that require further review, explanation, or interpretation to her at velma.parker@lac-bac.gc.ca. (CB)

After a lunch break during which the Bibliographic Control Committee held its meeting, the afternoon was consumed by the ACMLA General Meeting, the minutes and actions from which will be reported in a later *Bulletin*. In the evening, there was the joint ACMLA/CAPDU banquet. This was a very pleasant event held at St. John's College with delicious food and congenial company. Some members of the group adjourned to a student lounge across the hall to watch the Stanley Cup hockey finals.
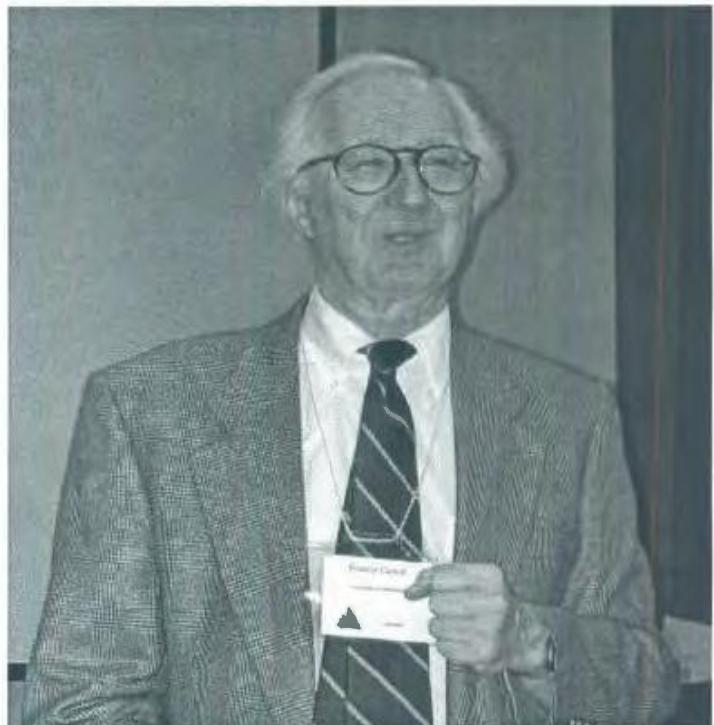
Francis Carroll presents a paper on the eastern Canadian-American border. (Photo Alberta Auringer Wood)

Friday June 4

On the morning of June 4th was a session on "Place Names and Boundaries". Francis Carroll, Professor Emeritus, Department of History, University of Manitoba, spoke on "Lost in the Mists of Time: Maps of the Eastern Canadian-American Boundary, 1783-1842". He noted maps used in boundary deliberations and showed illustrations of them. Particularly important in this region was Mitchell's 1755 large map in several panels. There was a boundary commission survey in 1794 to indicate the St. Croix River which was one of the important rivers in the official boundary description. Three other boundary commissions were noted.

The other presentation in this session was by Dan Duda, Memorial University of Newfoundland, who spoke on "Sense of Place: Newfoundland Diaspora Seen Through Toponymy". He gave a brief history of the town of Fort McMurray, Alberta, from its settlement through its growth due to the establishment of Suncor in 1964 which had considerable impact. He noted that unlike most of the street-patterns of prairie towns, this one had mostly circuitous streets rather than a grid. From statistics that he has been able to obtain, between 25% and 40% of the residents are from Newfoundland. He was curious as to the impact of

Dan Duda gives an interesting and entertaining paper on Newfoundland placenames in Fort McMurray. (Photo Alberta Auringer Wood)

the Newfoundlanders on the naming of streets. He found that there were 3,725 names on a map of Fort McMurray produced around 2000. Of these names, 91 are the same as those found in Newfoundland, mostly in St. John's. However, he was only able to determine one definite connection, that of the use of the name Smallwood. He indicated that further research is planned.

After the break on Friday, there was a Panel Discussion on "Data Consortium and Local Data Discussion" that was moderated by Richard Pinnell, University of Waterloo, in the absence of the organizer, James Boxall. This session consisted of presentations from a number of regions across the country, sharing information about spatial data resources available to their clients, and efforts to increase access to provincial and local data. **British Columbia** — Lori Sugden noted that a new comprehensive portal was opened this spring, Land Information BC. This will help provide one-stop access to information distributed across many ministries and branches. British Columbia university libraries are not acquiring provincial topographic data, even for free, because of the application process. It is being done by departments which have a Landdata BC account, for their faculty and graduate students. **Alberta** — Laurie Schretlen described the Alberta scene. The contract for GEODE, which provides academic access to some provincial data, is up for renewal. The agency

distributing this data has introduced a web based request/delivery interface which could facilitate data utilization if a suitable license arrangement can be negotiated. **Quebec** — Rosa Orlandini and Lucie Gendron presented an update on the situation in Quebec. Again, more data is becoming available through government agencies, but pricing and bureaucratic hurdles inhibit effective access for both students and researchers. **New Brunswick/Nova Scotia** — Elizabeth Hamilton reported on New Brunswick and, with notes from James Boxall, on Nova Scotia. In New Brunswick there is a good working relationship between the campus data users and the provincial government departments which can provide spatial data - Services New Brunswick and the Dept. of Natural Resources and Energy. Elizabeth commented that good communication, timing and patience are required to work through licensing agreements. Nova Scotia has used the New Brunswick example to work out a similar arrangement for academic institutions in that province as well. **Newfoundland and Labrador** — Alberta Auringer Wood reported on activities in this province. The university library is trying to acquire access to provincial and local geodata files. The Provincial Government is slowly developing a spatial data site, MapsNL. On the civic side, print maps are made available, but not digital files. St. John's has developed a public web site with much orthophoto, cadastral, and other information that can be visualized. (DJ)

After lunch, Christine Cullingworth, University of Saskatchewan, gave an overview of the technical aspects of remote sensing. She defined remote sensing and discussed electromagnetic energy and its spectrum since remote sensors collect emitted and reflected electromagnetic energy of the earth's features. She described the two types of remote sensing systems - active and passive. An active system is one which supplies its own source of energy of illumination while passive systems respond to energy emitted and reflected from ambient sources. A multi-spectral scanner is a passive system which can sense multiple spectral bands of a broad range of the electromagnetic spectrum. Two types of multi-spectral sensors are thermal and hyper-spectral which sense in particular parts of the electromagnetic spectrum. She gave the characteristics of earth observation satellites and elaborated on various satellites, both moderate resolution systems such as IRS (India),

"Data Consortium and Local Data" panel participants (left to right): Richard Pinnell (convenor), Alberta Auringer Wood, Lori Sugden, Elizabeth Hamilton, Lucie Gendron, Rosa Orlandini, Laurie Schretlen. (Photo Cathy Moulder)

JERS-1 (Japan), and high resolution systems such as IKONOS (USA), EROS-A (USA), and QuickBird (USA). There are also satellites with particular applications, such those used for meteorology, vegetation monitoring, environmental studies, and ocean monitoring. Microwave satellites use radio waves for detection that can penetrate the atmosphere in all conditions. Radar is the acronym for "radio detection and ranging". One such radar satellite is RADARSAT1, which was launched by Canada in 1995, while RADARSAT2 is scheduled to be launched in 2004. RADARSAT's primary applications are ice reconnaissance, coastal surveillance and land cover mapping (e.g. agriculture, forestry). LIDAR sensors (light detection and ranging) have replaced traditional photogrammetric methods for terrain and surface feature mapping. These data are geo-referenced from the start and are compatible with GIS applications as a result. Christine then talked about Landsat, a well known Earth Observation Satellite, which carries the enhanced thematic mapper sensor. The slide illustrating the principle applications of the various spectral bands and band combinations was helpful. When ordering CanImage files, a choice of enhancements may be made. She had a slide that explained the enhancements, and showed the differences between each. Christine gave two live demonstrations. The first demonstrated a downloadable image viewer at http://www.pcigeomatics.com/freeware/freeware.html, which allows the bands of an RGB composite image to be changed around simply. The second demonstration illustrated how an RGB composite image could be built using Photoshop. Photoshop was used to demonstrate a quick and simple way

to build an RGB composite image for those who do not have or do not feel comfortable using more powerful GIS software. A handout "Building a RGB composite image in Photoshop" was also distributed. (SH)

After a short break, Karen McEwen of the Centre for Topographic Information (Ottawa), Mapping Services Branch, Natural Resources Canada, spoke about the "National Air Photo Library: What's New?" Karen used PowerPoint slides to demonstrate the functionality of the National Air Photo Library (NAPL) Online which is web accessible at: http://airphotos.nrcan.gc.ca/photos_e.php. She indicated that the NAPL collection currently holds approximately 6 million air photos, some dating as far back as the 1920s, and that NAPL functions as an archive, a record centre and an order office. There is a new web application called NAPL Online for access to, searching, viewing and retrieval of the contents of the NAPL via the Internet. This application is based on Web Mapping Service (WMS) standards and specifications of the Open GIS Consortium (OGC). It accesses six different remote-based spatial databases or services including the GeoNames Gazetteer Service and the Data Infrastructure (CGDI) Postal Codes database. Some of the features of the application include: Searching: there are six ways to search for an area of interest; e.g. place name, Draw AOI (area of interest) tool, lat/long, loading a shapefile; Displaying results: users can choose air photo footprint, centre point, flight line; Viewing photos: one can view a selected number of scanned photos that are referenced to the corresponding footprint; currently 1,000 photos are scanned, at 600 dpi; Adding cartographic detail:

background mapping provided by Toporama; users can, for example, turn on/off toponymy, roads, railroads; Metadata: users can view and print metadata for each air photo; Saving results: one can view, edit, e-mail and print results; and Ordering: users can place an order by e-mail to the NAPL. First time users must register but this takes just a couple of minutes. ACMLA members are invited to submit suggestions or comments about the application to Karen McEwen at kmcewen@nrcan.gc.ca . (RP)

The afternoon concluded with "East View Cartographic: Aerial Photo Digitization and Topographic Map Indexing Programs". Geoffrey Forbes provided an overview of East View Cartographic's Aerial Photo Preservation service using the Georgia Aerial Photographs Project as an example of what can be accomplished. This project can be viewed on the web at: http://dbs.galib.uga.edu/gaph/html/. The Georgia Aerial Photographs database provides online access to approximately 50,000 black and white aerial photographs and indexes of selected counties from the State of Georgia; the project includes the indexing of 225,000 air photos. The Preservation service, customized to meet customers' needs, may include the following: Cleaning air photos: removal of grease markings, etc; Scanning: images up to 40' wide and resolutions up to 600 dpi; Digital correction: includes colour balancing, exposure correction, de-skewing; Digital storage: photos are preserved as TIFF files on firewire drives and/or CD-ROMs; MrSID compression is available; and

Indexing: provides control of images and metadata. Geoffrey next described East View Cartographic's Vector Index Mapping Program. He demonstrated a vector index product for NTS map sheets at 1:50,000; attributes associated with each sheet include NTS number, latitude, and sheet name. This product provides an easy way to locate a particular map sheet and map number in a GIS environment. His company can supply vector indexes on a country basis or as needed. Prices for this service are negotiable. For more information, visit the company's website: http://www.cartographic.com/ (RP)

There were closing remarks from the conveners and officers plus an invitation to come to St. John's for the conference next year at the end of July. Announcements regarding it will be appearing soon. People dispersed for travel or a final get-together before departures the next day. Hope to see many of you in St. John's in 2005!
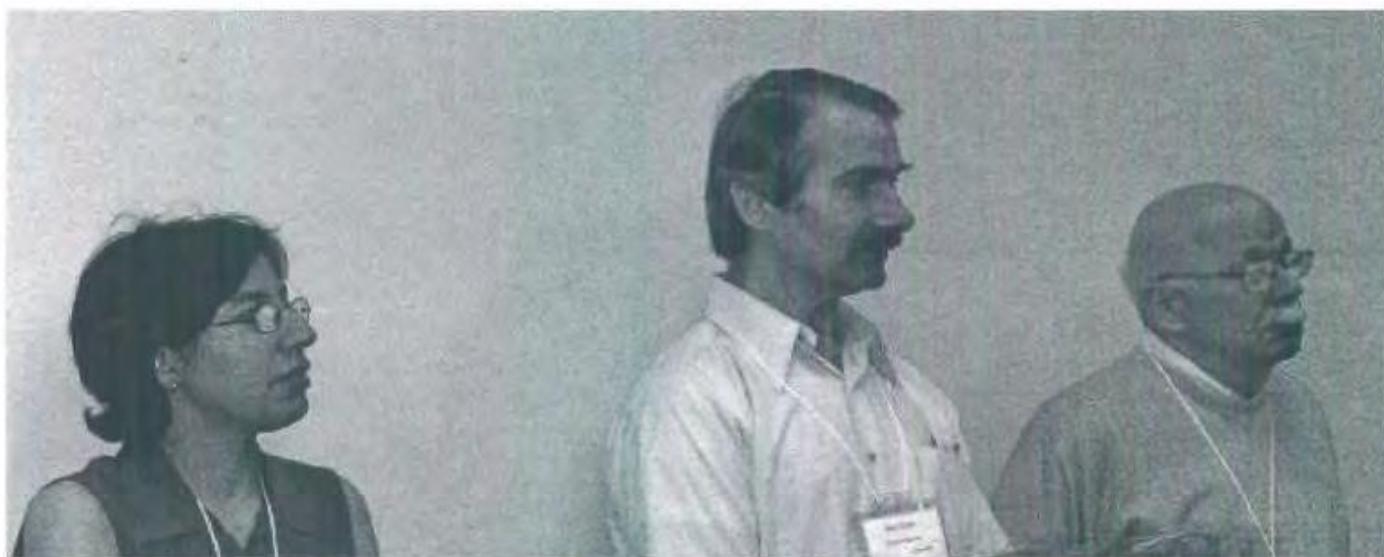
Organizers of a very successful conference in Winnipeg (left to right): Rosa Orlandini, Gary Strike, Hugh Larimer. (Photo Alberta Auringer Wood)

MAP CATALOGUING SURVEY 2004 REPORT

Alberta Auringer Wood
Memorial University of Newfoundland

In mid-March of this year, a survey regarding map cataloguing was distributed via the CARTA listserv by me, and to the TSIG-L Listserv by one of my cataloguer colleagues here at Memorial, Elizabeth Browne, and it was posted on the ACMLA website, as well. It is included as Appendix A to this report of the analysis of it. This survey was the result of several months of deliberations and exchanges of information among a number of members of the ACMLA Bibliographic Control Committee (BCC): Trudy Bodak (Chair of the BCC), Frank Williams and Grace Welch - along with Emilie Lowenberg, Chief of the Union Catalogue Division of the National Library of Canada (now Library and Archives Canada). Their input is much appreciated. There were 40 responses as of July 2004 from libraries across the country when analysis was undertaken. The determination of library type was based on information external to the information gathered by the survey. The library respondents include 23 Canadian Association of Research Libraries (CARL) members, 11 other university libraries, one college library, one public library and four government agency libraries, including the Library and Archives of Canada. Unfortunately, no other archival institutions are included. University libraries predominated in the survey respondents, making up 85 percent of the total respondents. The entire list of respondents is given in Appendix B. Their participation is certainly appreciated by myself and the committee.

Table 1: Institution Type

	Numbers	Percent
CARL Member	23	57.5
Other University Library	11	27.5
College Library	1	2.5
Public Library	1	2.5
Government Agency	4	10
Total	40	100

The survey responses were entered into SPSS for tabulation and analysis of the results. This report presents the results of that analysis. For example, 80% (32) of the libraries reported that catalogued maps are included in the main library catalogue while 20% (8) reported that they were not. The distribution by the type of institution is noted in the table below based upon question three.

Table 2: Maps in Main Library Catalogue

Institution Type	Yes	No	Total
CARL Member	19	4	23
Other University Library	10	1	11
College Library	1	0	1
Public Library	0	1	1
Government Agency	2	2	4
Total	32	8	40

The sizes of map collections reported ranged from three maps to over two million maps. This is shown in the following table in grouped categories, though the information was gathered in question four as a distinct number from each institution. The Library and Archives of Canada was the largest of the map collections, not too surprisingly.

Table 3: Number of Maps in Collection by Institution Type

			Institution Type			
Number of maps in collection	CARL Member	Other University Library	College Library	Public Library	Government Agency	Total
No Answer	2	2	0	0	1	5
0-10,000	1	2	1	1	1	6
10,001-35,000	1	4	0	0	1	6
35,001-95,000	6	2	0	0	0	8
95,001-190,000	10	1	0	0	0	11
190,001-2,060,000	3	0	0	0	1	4
Total	23	11	1	1	4	40

The largest category of numbers of maps catalogued was in the range of 0 – 1,000 as is shown in the next table. Half of those who answered this question (number 4A) had 10,000 or more maps catalogued. The survey did not track numbers of titles, but rather numbers of maps.

Table 4: Number of Maps Catalogued by Institution Type

			Institution Type			
Number of maps catalogued	CARL Member	Other University Library	College Library	Public Library	Government Agency	Total
No Answer	2	1	0	0	1	4
0-1,000	1	7	1	1	1	11
1,001-10,000	5	2	0	0	0	7
10,001-20,000	6	0	0	0	1	7
20,001-95,000	5	1	0	0	0	6
95,001-229,000	4	0	0	0	1	5
Total	23	11	1	1	4	40

There was quite a bit of variation in terms of derived versus original records, but 20 libraries reported deriving 50% or more of their catalogue records and 10 noted that more than 70% of their map cataloguing were original records. This included six libraries where 90-100% of their cataloguing was the creation of original records. Of this group, there were four CARL libraries. On the other hand, nine of the CARL libraries did only 10-29% original cataloguing. Perhaps, this is an indication of the usefulness and time saving of the original cataloguing for this larger group. One quarter of libraries either did not know what

the comparison between original and copy cataloguing was or did not answer the question (numbers 4B & 4C and number 15).

Table 5: Percent of Original vs. Copy Cataloguing by Institution Type

Percent of original vs. copy cataloguing	Institution Type					
	CARL Member	Other University Library	College Library	Public Library	Government Agency	Total
90-100%	2	3	0	0	1	6
80-89%	2	0	0	0	0	2
70-79%	1	0	0	0	1	2
60-69%	0	0	0	0	0	0
50-59%	2	1	0	0	1	4
40-49%	1	2	0	0	0	3
30-39%	1	0	0	0	0	1
20-29%	5	0	0	0	0	5
10-19%	4	1	0	0	0	5
0-9%	0	1	1	0	0	2
Do Not Know	4	3	0	0	0	7
No Answer	1	0	0	1	1	3
Total	23	11	1	1	4	40

Some of the details of the numbers of original map records are given in Table 6 (from question number 4B), while those for derived map records are in Table 7 (from question number 4C). The breakdown is also by type of institution. Nearly 30% of respondents to the survey did not answer this question, but among the 73% who did respond, the majority of them (62%) had created fewer than 9,000 original map records, while the remaining 38% created more than that.

Table 6: Number of Original Map Records by Institution Type

Number of original map records	Institution Type					
	CARL Member	Other University Library	College Library	Public Library	Government Agency	Total
No Answer	7	3	0	0	1	11
0-100	2	3	1	1	1	8
101-1,800	2	3	0	0	0	5
1,801-9,000	5	0	0	0	0	5
9,001-25,000	4	1	0	0	1	6
25,001-222,000	3	1	0	0	1	5
Total	23	11	1	1	4	40

Similarly, 30% did not answer the question regarding the numbers of derived records. Of the 75% who did respond, most derived 6,000 or fewer records (80%), with the remaining 20% using more than that.

Table 7: Number of Derived or Copy Records by Institution Type

Number of derived or copy records	CARL Member	Other University Library	College Library	Public Library	Government Agency	Total
No Answer	7	2	0	0	1	10
0-100	3	5	0	1	1	10
101-825	2	3	1	0	0	6
826-6,000	6	0	0	0	2	8
6.001-31,500	2	1	0	0	0	3
31,501-204,000	3	0	0	0	0	3
Total	23	11	1	1	4	40

AACR2 was the cataloguing rule of choice for 35 libraries, while three libraries indicated that they did not use it and two did not answer the question. RAD and an "in house" scheme were other rules reported. This information is based upon question number five and is tabled below.

Table 8: Cataloguing Rules are AACR2

	Frequency	Percent
Yes	35	87.5
No	3	7.5
No Answer	2	5
Total	40	100

Table 9: Other Rules Used

	Frequency	Percent
RAD	1	2.5
In house	1	2.5
No Answer	38	95.0
Total	40	100

There was quite a bit of variation in terms of classification scheme use, with the majority of libraries (34 or 85%) reporting use of the Library of Congress (LC) classification. Only one used Dewey, while 10 (25%) indicated various other classification schemes were in use, such as Boggs and Lewis, which 5 CARL libraries reported using. As can be seen in the table below prepared from question number six, some libraries used a number of classification schemes resulting in a higher number of responses than the number of libraries who responded.

Table 10: Classification Schemes by Institution Type

	Institution Type					
Classification Scheme	CARL Member	Other University Library	College Library	Public Library	Government Agency	Total
LC	20	9	1	0	4	34
Dewey	1	0	0	0	0	1
Boggs-Lewis	5	0	0	0	0	5
Roll number	1	0	0	0	0	1
U of T Class G	2	0	0	0	0	2
SNRC	0	1	0	0	0	1
In house	1	0	0	0	0	1
Total	30	10	1	0	4	45

Most libraries (34 or 85%) noted doing full records, with the CARL member libraries having the largest number followed by other university libraries, the college library and all the government libraries. This is reported below and based upon question number seven.

Table 11: Institution Type by Full Cataloguing

	Full cataloguing				
Institution Type	Yes	No	No Answer	Partial	Total
CARL Member	21	1	0	1	23
Other University Library	8	0	2	1	11
College Library	1	0	0	0	1
Public Library	0	0	0	1	1
Government Agency	4	0	0	0	4
Total	34	1	2	3	40

33 (or 82.5%) of the reporting map libraries used LC subject headings, with the largest group being CARL member map libraries with 19 or 47.5%, followed by other university map libraries with 9 or 22.5%. All the government map collections which responded make use of LC subject headings, as did the only college library that responded. The following table shows this and is based upon question eight.

Table 12: Institution Type by LC Subject Headings Used

LC Subject Headings Used

Institution Type	Yes	No	No Answer	Total
CARL Member	19	4	0	23
Other University Library	9	0	2	11
College Library	1	0	0	1
Public Library	0	0	1	1
Government Agency	4	0	0	4
Total	33	4	3	40

Eight of the responding libraries indicated the use of other types of subject headings in response to the same question (number eight). Two university libraries use the Canadian Subject Headings (CSH), three institutions use French versions of the Library of Congress subject headings (LCSH), a government agency library uses FDC, while another government agency uses Precis, and one CARL library has developed their own subject headings. This is represented in the following table.

Table 13: Institution Type by Other Subject Headings Used

Other Subject Headings Used

Institution Type	CSH	French LCSH	FDC	In house	Precis	No	Total
CARL Member	1	2	0	1	0	19	23
Other University Library	1	0	0	0	0	10	11
College Library	0	0	0	0	0	1	1
Public Library	0	0	0	0	0	1	1
Government Agency	0	1	1	0	1	1	4
Total	2	3	1	1	1	32	40

Some sort of control of the authorities was used by all the libraries, with 25 reporting in question number nine that it is automatic while 15 reported it was manual. A number of libraries reported use of both an automated and a manual authority control. The following two tables give the details on the results of this question.

**Table 14: Institution Type by Automatic
Subject Authority Control**

Automatic Subject Authority Control

Institution Type	Yes	No	No Answer	Total
CARL Member	15	6	2	23
Other University Library	6	2	3	11
College Library	1	0	0	1
Public Library	0	0	1	1
Government Agency	3	1	0	4
Total	25	9	6	40

**Table 15: Institution Type by Manual
Subject Authority Control**

Manual Subject Authority Control

Institution Type	Yes	No	No Answer	Total
CARL Member	9	4	10	23
Other University Library	5	2	4	11
College Library	0	0	1	1
Public Library	0	0	1	1
Government Agency	1	1	2	4
Total	15	7	18	40

Interestingly, more than half of the libraries (23 or 57.5%) responded that their records were reported to the Union Catalogue (AMICUS), while 17 (42.5%) indicated that they were not. Nearly 90% of those sending their map catalogue records to AMICUS are university libraries. These are the other details below and all are compiled from question number 10.

**Table 16: Institution Type by Holdings
Reported to AMICUS**

Holdings Reported to AMICUS

Institution Type	Yes	No	Total
CARL Member	14	9	23
Other University Library	6	5	11
College Library	1	0	1
Public Library	0	1	1
Government Agency	2	2	4
Total	23	17	40

The most common reason for not reporting was lack of staff to do it, followed by lack of time to do it. A number of institutions had multiple reasons for not reporting which resulted in the tabular information shown in Table 17 below based upon responses to question number 11. Of the non-reporting group, six (15%) indicated a wish in their response to question number 12 to be contacted by someone from AMICUS. Those institution names, as well as a contact name, have been sent on to an appropriate person at the Union Catalogue office.

Table 17: Institution Type and Reasons For Not Reporting to AMICUS

Institution Type	Lack Staff	Lack Time	Lack Expertise
CARL Member	7	5	3
Other University Library	1	2	0
College Library	0	0	0
Public Library	0	0	0
Government Agency	2	2	1
Total	10	9	4

The questions (numbers 13 and 14) about who did the cataloguing were not well formulated to get answers easily tabulated. They asked who did original and who did copy cataloguing rather than offering categories of choices. The responses submitted by survey respondents varied, but included terms such as librarian, map librarian, library technician, library assistant, map library technician, map library assistant or cataloguing staff. With this, the compiler grouped the responses as shown below in Table 18, and, it is possible to determine that 20 (50%) of libraries reported either librarians or map librarians did original cataloguing, while 10 (25%) indicated that it was done by a library technician or assistant or map library technician or assistant. There were 6 (15%) libraries who were not specific as to whether it was librarians or technicians who did the original cataloguing, but simply noted that it was cataloguing staff. 21 (52.5%) institutions reported that library or map library technicians did copy or derived cataloguing. In many cases, there were librarians and technicians doing both tasks. The details are given in Table 18 below.

Table 18: Who Does Original or Copy Cataloguing

	Original	Percent	Copy	Percent
Librarian	11	27.5	3	7.5
Map librarian or cataloguer	9	22.5	4	10.0
Library technician or assistant	6	15.0	14	35.0
Map library technician or assistant	4	10.0	7	17.5
Cataloguing staff	6	15.0	7	17.5
Total	36	90.0	35	87.5
No Response	4	10.0	5	12.5
Total	40	100.0	40	100.0

Many libraries (30 or 75%) used AMICUS for a source of their cataloguing copy, while 23 (57.5%) used OCLC. Numerous libraries reported use of other sources, such as AG Canada which had 9 (22.5%). The rest of the sources cited as derived from question 16 are given in Table 19 below.

Table 19: Institution Type and Source of Copy

Source of Copy

Institution Type	AMICUS	OCLC	Book -where	Z39.50	AG Canada	LC Maps	Other Univ.	Ohio -Link	MUN &Melvyl	No Answer
CARL Member	17	18	1	1	7	3	1	0	1	9
Other University Library	8	4	1	2	1	0	1	1	0	5
College Library	1	0	0	1	0	0	0	0	0	0
Public Library	0	0	0	0	0	0	0	0	0	1
Government Agency	4	1	2	0	1	0	1	0	0	0
Total	30	23	4	4	9	3	3	1	1	15

It was somewhat discouraging as a result of questions 17 and 18 to find that a slight majority (22 or 55%) of respondents were unaware of the Map Cataloguing Section or its parts of the ACMLA site and that a distinct majority (34 or 85%) did not use it or any of its parts. However, 18 or 45% of respondents were familiar with it, though only 12.5% of them actually used it. Perhaps, not having the web site address in the survey document was a hindrance to this aspect. As a result, the web address is given in Appendix C of this report.

Table 20: Familiarity With and Use of ACMLA Web Site

	Familiar with ACMLA Web Site	Percent	Use ACMLA Web Site	Percent
Yes	18	45.0	5	12.5
No	22	55.0	34	85.0
No Answer	0	0.0	1	2.5
Total	40	100.0	40	100.0

Between 20% and 45% of respondents to questions 17 indicated a familiarity with cataloguing helper parts of the ACMLA web site as shown in Table 21 below. The highest familiarity was to the LC schedule for atlases page at 45%, with the *Map Cataloguing Manual* page close behind at 40%. The numbers that indicated use of these pages in response to question 18 were lower, however, ranging from 10% to 20% with numbers shown below in Table 22. In the case of usage, the *Map Cataloguing Manual* with 20% was ahead of the schedule for atlases page with 17.5%. Several people indicated using the paper versions of some of these items.

Table 21: Familiarity with Parts of ACMLA Web Site

	Core Level Cataloguing	LC G Schedule for Atlases	Reports & Documents	Links to Web Resources	Map Cataloguing Manual	MARC 21
Yes	11	18	8	12	16	16
No	16	9	19	15	10	11
No Answer	13	13	13	13	14	13
Total	40	40	40	40	40	40

Table 22: Use Cataloguing Helper Parts of ACMLA Web Site

	Core Level Cataloguing	LC G Schedule for Atlases	Reports & Documents	Links to Web Resources	Map Cataloguing Manual	MARC 21
Yes	4	7	5	5	8	7
No	18	15	17	17	14	14
No Answer	18	18	18	18	18	19
Total	40	40	40	40	40	40

The situation was similar regarding other Map Cataloguing web pages, though more respondents (32.5%) to questions 19 and 20 used them than used the ACMLA pages, though fewer were familiar with them (35%) than those familiar with the ACMLA pages (45%).

Table 23: Familiarity and Use of Other Cataloguing Helper Sites

	Familiar with Other Web Sites	Percent	Use Other Web Sites	Percent
Yes	14	35.0	13	32.5
No	20	50.0	24	60.0
No Answer	6	15.0	3	7.5
Total	40	100.0	40	100.0

The other map cataloguing helper site that was used most was that of the Western Association of Map Libraries and Archives (WAML) with 22.5%, while Memorial University's (MUN) Map Library Cataloguing Helpers web page had 20%, ALA (American Library Association) MAGERT's (Map and Geography Round Table) web page had 10%, the OCUL (Ontario Council of University Libraries) Map Group had 15%, while LIBER Cart (Ligue des Bibliothèques Européennes de Recherche Groupe des Cartothécaires de LIBER) had 5% as noted numerically in Table 24 below. These web site addresses are also given in Appendix C. In anticipation of the British Cartographic Society's Map Curators Group launching a cataloguing helper site, I have included a web site address for them, too.

Table 24: Other Map Cataloguing Helper Sites Used

	WAML	MUN	ALA MAGERT	OCUL Map Group	LIBER Cart
Yes	9	8	4	6	2
No	19	20	23	22	26
No Answer	12	12	13	12	12
Total	40	40	40	40	40

Fewer respondents to question 21 (11 or 27.5%) had training in the past five years in map cataloguing than those who had not had it (29 or 72.5%). This is one of the questions that everyone answered with one institution noting one person had training while the other had not. The CARL libraries were predominant in having had training in the past 5 years with 82% or 9 of those who had training being in those institutions.

Table 25: Training in Map Cataloguing in Past 5 Years by Institution Type

	Had Training in Map Cataloguing in Past 5 Years		
Institution Type	Yes	No	Total
CARL Member	9	14	23
Other University Library	1	10	11
College Library	0	1	1
Public Library	0	1	1
Government Agency	1	3	4
Total	11	29	40

Most of those who had training had received it either in-house one on one (30%) or at a national workshop (25%). In-house workshops (17.5%) and regional workshops (12.5%) were considerably less usual forms of training. The figures on these results from question 22 are shown in Table 26.

Table 26: Types of Training

	In house Workshops	In house One on one	Regional Workshops	National Workshops
Yes	7	12	5	10
No	21	15	22	21
No Answer	12	13	13	9
Total	40	40	40	40

A significant majority of respondents (34 or 85%) indicated that there were cataloguing areas where they would like to have additional training in responding to question number 23. The details are shown in Tables 27. The specific topics were listed in question number 24 and the numbers interested in them are reported in Table 28.

Table 27: Institution Type and Interest in Additional Training in Cataloguing

| Institution Type | Interest in Additional Training in Cataloguing | | | |
	Yes	No	No Answer	Total
CARL Member	19	3	1	23
Other University Library	9	2	0	11
College Library	1	0	0	1
Public Library	1	0	0	1
Government Agency	4	0	0	4
Total	34	5	1	40

Table 28: Topics of Interest for Cataloguing Workshops

Cataloguing Topic	Numbers Interested
Metadata for geospatial digital data	27
Digital data cataloguing	25
Authorities	11
Coding of fixed fields	13
Coding of variable fields	11
Main entry	12
Imprint	8
Physical description	12
Subject headings	12
Other subject headings	8
Finding sources of copy for cataloguing	12
Using sources of copy for cataloguing	9
Series	14
Classification and Cuttering	1
Multi-level	1
Early maps	1

Highest on the list of topics of interest for a cataloguing workshop as shown in Table 28 above was metadata for geospatial digital data with 27 or 67.5%, followed closely by digital data cataloguing at 25 or 62.5%. Also generating a higher amount of interest were the topics of series, coding of fixed fields and finding sources of copy for cataloguing, with authorities, coding of variable fields, main entry, physical description and subject headings right behind. In single digits was interest in imprint, other subject headings, using sources of copy for cataloguing, and other (classification, cutter numbering, multi-level

techniques, historic and manuscript map cataloguing). It presents solid ideas for the Bibliographic Control Committee (BCC) to use in planning on future cataloguing workshops.

Most respondents were not creating metadata for geospatial data (32 or 80%), but six (15%) were and two (5%) did not answer this question (number 27). All those creating metadata were in university libraries.

Table 29: Creating Metadata by Institution Type

| | Creating Metadata | | | |
Institution Type	Yes	No	No Answer	Total
CARL Member	5	16	2	23
Other University Library	1	10	0	11
College Library	0	1	0	1
Public Library	0	1	0	1
Government Agency	0	4	0	4
Total	6	32	2	40

A significantly greater number of people would be able to attend a workshop in their region (34 or 85%) than at a national conference (24 or 60%). However, a workshop at a national conference was of interest to a majority of respondents. Most people preferred a one (25 or 62.5%) or two (22 or 55%) day event, though 10 (25%) did choose three days. Only two people indicated an interest in a week-long workshop. This information gleaned from questions number 25 and 26 is show below in Table 30.

Table 30: Attend Workshops

	Regional	National	One day	Two day	Three day	Week
Yes	34	24	25	22	10	2
No	4	12	5	5	15	19
No Answer	2	4	10	13	15	19
Total	40	40	40	40	40	40

There were quite a few other comments either regarding map cataloguing in general or about why they were not creating metadata. Some of these were:
• Very helpful to get the information on web sites which have cataloguing information. For example, I'd never heard that we're supposed to use two 007s for remote-sensing images, one for the "map" and one for the "remote sensing" aspect.
• Our electronics cataloguer does the cataloguing for digital data as well as for geospatial data. No printed maps are catalogued. However, all atlases have full cataloguing. We have a work station for GIS Data and have all of our data listed there. But it's happening so fast we have a difficult time keeping up. We have full cataloguing for our CD-ROMs.

• Thanks for making me aware of places to go for on-line help when questions come to me for review and classification.

• Of about 180 items which could be categorized as maps or chiefly maps, 170 are atlases and treated as books for cataloguing purposes at [name removed].

• My map cataloguing skills are essentially self taught.

• Funding to attend a workshop is an issue.

• [Cataloguing is] never good enough for patrons to find maps. Need and use 535 fields and extra 651, 650 fields; I would love to see more courses offered on map libraries, map collections in general, and map cataloguing in Library Technician or MLIS programs across Canada. Additionally, it may be worth considering on-line courses in map cataloguing, rather that traditional workshop formats.

• Actually, we have a small map collection and there are zero maps catalogued. But we want in the near future to begin to catalogue them. We are depository for all NRCan and some other maps of our region.

• Training would be most welcome as this map and aerial photo collection are both new areas to both of us.

• We very much appreciate being able to make use of derived records and support any effort to ensure that records are created to meet current cataloguing standards.

• Help! Desperately needed here.

The overall conclusions from this survey are that cataloguing of maps is a growing activity in Canadian libraries, and that additional training is desired for those working in the area. Public libraries have not yet become active map cataloguing institutions. Archives were not polled. Their rules are somewhat different, but their activities are of interest to the BCC. Follow-up, by holding workshops both on a national or regional level, as well as other types of training or education in map cataloguing will be a focus for the BCC. For example, it is planned to have a cataloguing workshop at the 2005 conference in St. John's.

APPENDIX A

The Bibliographic Control Committee of the ACMLA is seeking information on interest in map cataloguing and training in it, as well as the status of map cataloguing in Canada.   To this end, the following survey has been prepared.   Please fill in and return to awood@mun.ca as soon as possible before April 16. There should be only one form per institution. People should circle as many questions as appropriate, and they should answer as much as they can.

ASSOCIATION OF CANADIAN MAP LIBRARIES AND ARCHIVES
BIBLIOGRAPHIC CONTROL COMMITTEE

CATALOGUING SURVEY
2004

PLEASE FILL IN OR MARK AS NOTED.

1.   Name and address of institution

2.   Name and address of person filling out the form

3.   Are maps in your library catalogued?
      A.   In the main library catalogue?   (Mark one)   Yes   No
      B.   In a separate catalogue?   (Mark one)   Yes   No

4. How many maps are in your collection?
    A. How many are catalogued?
    B. How many are original catalogue records?

5. What cataloguing rules do you use?
    A. AACR2?   (Mark one) Yes No
    B. Other (please name it)?

6. What classification system do you use?
    A. LC?   (Mark one) Yes No
    B. Dewey?   (Mark one) Yes No
    C. Other (please name it)?

7. What is the level of cataloguing?
    A. Full (main/added entries, descriptive, subject analysis, classification)?
    (Mark one) Yes No
    B. Partial (please name fields used)?

8. What is used for subject heading creation?
    A. LCSH?   (Mark one) Yes No
    B. Other (please name it)?

9. Are these subjects controlled by an authority of some kind?
    A. Is it automatic?   (Mark one) Yes No
    B. Is it manual?   (Mark one) Yes No
    C. Other (please name it)?

10. Are you reporting your map holdings to the Union Catalogue (AMICUS)?
    (Mark one) Yes No

11. If not, why not?
    A. Lack of staff to do it?   (Mark one) Yes No
    B. Lack of time to do it?   (Mark one)   Yes No
    C. Lack of expertise to do it?   (Mark one)   Yes No
    D. Other (please name it)?

12. Would you like someone from the Union Catalogue (AMICUS) to contact you about reporting?
    (Mark one) Yes No

13. Who does original cataloguing of your maps?

14. Who does copy cataloguing of your maps?

15. What is the approximate ratio of original vs. derived map cataloguing performed in your institution?
    (please indicate it)

16. What sources do you use to derive copy cataloguing information?
    A. AMICUS?   (Mark one) Yes No
    B. OCLC?   (Mark one) Yes No
    C. Other (please name it)?

17. Are you familiar with the Map Cataloguing section of the ACMLA web site?
     (Mark one)   Yes No
     or the following parts?
     A.   Core Level Cataloguing for Non-serial Cartographic Materials? Yes No
     B.   Library of Congress G Schedule for Atlases?   (Mark one) Yes No
     C.   REPORTS AND DOCUMENTS page?   (Mark one) Yes No
     D.   LINKS TO WEB RESOURCES page?   (Mark one) Yes No
     E.   Map Cataloguing Manual?   (Mark one) Yes No
     F.   MARC 21?   (Mark one) Yes No

18. Do you use the Map Cataloguing section of the ACMLA web site?   (Mark one) Yes No
     or the following parts?
     A.   Core Level Cataloguing for Non-serial Cartographic Materials? Yes No
     B.   Library of Congress G Schedule for Atlases?   (Mark one) Yes No
     C.   REPORTS AND DOCUMENTS page?   (Mark one) Yes No
     D.   LINKS TO WEB RESOURCES page?   (Mark one) Yes No
     E.   Map Cataloguing Manual?   (Mark one) Yes No
     F.   MARC 21?   (Mark one) Yes No

19. Are you familiar with other Map Cataloguing Helper Pages?   (Mark one) Yes No
     A.   Western Association of Map Libraries' Map Librarian's Toolbox? Yes No
     B.   Memorial University Map Library Cataloguing Helpers?   (Mark one) Yes No
     C.   ALA Map and Geography Round Table web pages?   (Mark one) Yes No
     D.   OCUL Map Group web pages?   (Mark one) Yes No
     E.   Ligue des Bibliothèques Européennes de Recherche Groupe des Cartothécaires de LIBER web
     pages?   (Mark one) Yes No

20. Do you use other Map Cataloguing Helper Pages?   (Mark one) Yes No
     A.   Western Association of Map Libraries' Map Librarian's Toolbox?   (Mark one)   Yes   No
     B.   Memorial University Map Library Cataloguing Helpers?   (Mark one) Yes No
     C.   ALA Map and Geography Round Table web pages?   (Mark one) Yes No
     D.   OCUL Map Group web pages?   (Mark one) Yes No
     E.   Ligue des Bibliothèques Européennes de Recherche Groupe des Cartothécaires de LIBER web
     pages?   (Mark one) Yes No

21. Have you had training in map cataloguing in the past 5 years?
     (Mark one) Yes No

22. What type of training have you had?
     A.   In house workshops?   (Mark one) Yes No
     B.   In house one on one?   (Mark one) Yes No
     C.   Regional workshops?   (Mark one) Yes No
     D.   National workshops?   (Mark one) Yes No

23. Are there cataloguing areas where you would like to have additional training? Yes No

24. What are these areas? (Circle or mark ones of interest and/or describe them)
     A.   Metadata for geospatial digital data?
     B.   Digital data cataloguing?
     C.   Authorities?
     D.   Coding of fixed fields?
     E.   Coding of variable fields?
     F.   Main entry?

G. Imprint?
H. Physical description?
I. Subject headings?
J. Other subject headings?
K. Finding sources of copy for cataloguing?
L. Using sources of copy for cataloguing?
M. Series?
N. Other (please name)?

25. Would you be able to attend a map cataloguing workshop should one be offered?
A. In your region?   (Mark one) Yes No
B. At a national conference?   (Mark one) Yes No

26. What is the length of workshop that you would prefer?
A. One day?   (Mark one) Yes No
B. Two days?   (Mark one) Yes No
C. Three days?   (Mark one) Yes No
D. A week?   (Mark one) Yes No

27. Are you creating metadata for geospatial data?   (Mark one) Yes No

28. If not, why not? Please describe.

29. Do you have any other comments regarding map cataloguing? (Please write them in the space below here)

Please send the filled in survey to

Alberta Auringer Wood
Maps, Data, and Media Librarian
Memorial University of Newfoundland
St. John's, NL
A1B 3Y1

By regular mail or by email to awood@mun.ca

————oo◦╣◼╠◦oo————

APPENDIX B

Respondents to Map Cataloguing Survey 2004

In Alphabetical Order by Institution Name:

Acadia University
Brock University
Carleton University
Dalhousie University
Lakehead University
Library and Archives of Canada
McGill University
McMaster University
Memorial University of Newfoundland
Mount Allison University

Mount St. Vincent University
Natural Resources Canada, Geoscience Research Library
Natural Resources Canada, Earth Sciences Information Centre
Nova Scotia Community College, Centre of Geographic Sciences
Queen's University
Ryerson University
Saskatchewan Environmental Forestry Information Centre

Simon Fraser University
Université de Moncton
Université de Sherbrooke
Université Laval
University of Alberta
University of British Columbia
University of Calgary
University of Lethbridge
University of Manitoba
University of New Brunswick
University of Northern British Columbia
York University

University of Ottawa
University of Regina
University of Saskatchewan
University of Toronto
University of Victoria
University of Waterloo
University of Western Ontario
University of Windsor
University of Winnipeg
West Vancouver Memorial Library
Wilfred Laurier University

————◦◦◦❃◦◦◦————

APPENDIX C

WEB ADDRESSES FOR SITES MENTIONED IN THE TEXT

ACMLA top page – http://www.acmla.org/ or http://www.ssc.uwo.ca/assoc/acml/acmla.html

ALA MAGERT web page – http://magert.whoi.edu:8000/

British Cartographic Society Map Curators Group – http://www.cartography.org.uk/Pages/Groups/Curators/index.html

Core Level Cataloguing – http://www.ssc.uwo.ca/assoc/acml/bcc/bcc5.pdf

LIBER Groupe des Cartothécaires – http://www.kb.nl/infolev/liber/intro.htm

Library of Congress G Schedule for Atlases – http://www.ssc.uwo.ca/assoc/acml/lcg.html

Links To Web Resources – http://www.ssc.uwo.ca/assoc/acml/bcc/bccwebres.html

Map Cataloging Manual – http://www.itsmarc.com/crs/map0001.htm

MARC 21 – http://www.loc.gov/marc/bibliographic/

Memorial University (MUN) Map Library Cataloguing Helpers – http://www.library.mun.ca/qeii/maps/cata.php

OCUL Map Group – http://www.lib.uwaterloo.ca/ocul/oculmap.html

Reports And Documents – http://www.ssc.uwo.ca/assoc/acml/bcc/bccpage.html

WAML – http://www.waml.org/maptools.html

REGIONAL NEWS/NOUVELLES REGIONALES

Andrew Nicholson

Newfoundland and Labrador

Memorial University of Newfoundland &
Newfoundland and Labrador Public Libraries
Alberta Auringer Wood
awood@mun.ca

Suanne Reid is back to work in the Map Library after her extended maternity leave. She is quickly picking up where she left off. Rose Marie Power has returned to the Media and Data Centre. We have one regular student assistant helping us this summer, Michelle Mifflin, who is dealing with the post-Winter semester clean-up, as well as special projects such as shifting maps to three cabinets received as a gift from the Canada-Newfoundland and Labrador Offshore Petroleum Board. Two students are being supervised for a web project relating to Newfoundland materials. We have acquired an HP 4600n Laser Jet printer, which we plan to use for colour printing of maps, for a fee due to the high costs of cartridges and paper. With our other colour printer, we had not charged a fee.

Dan Duda is organizing us for the **CARTO 2005,** *Joint ACMLA/CCA Conference,* to be held at Memorial University of Newfoundland, St. John's, NL from July 26-29, 2005. Since tours and committee meetings have yet to be scheduled, it may begin a day earlier and end a day later. Firmer dates will be announced shortly. In addition to the three of us from the Map Library, David Mercer, cartographer in the Geography Department, will participate as the Canadian Cartographic Association representative. Others from both CCA and ACMLA will assist in the program planning aspects. The CARTO 2005 Local Arrangements Committee would like to invite everyone to St. John's next year for the joint ACMLA/CCA conference. We have already had several meetings to get things underway and have made arrangements with Memorial University for accommodations in the residences. We are looking into a number of activities, such as: Boat tours; a Haunted hike; Bus tours to give scenic highlights of the city and nearby areas; a trip to Ferryland, an

archeological site about an hour's drive from St. John's; the Newman Wine Vault or the new Geocentre for the opening reception or tours; a hike up Signal Hill; and an evening at a Dinner Theatre. Suggestions for other activities are welcomed, too. The Wednesday following our conference is Regatta Day, one of the oldest organized sporting events in North America. Keep this in mind when making your plans. We have started to design and organize our website and hope to have it up in the fall of 2004, so people can start making their arrangements. As more information comes available, Dan will let people know through the ACMLA site and CARTA to keep everyone informed and up-to-date. If you have any questions, please do not hesitate to contact Dan Duda, Chair, CARTO 2005, dduda@mun.ca or 709-737-8514 or me at awood@mun.ca to have your questions answered.

From John Griffin of the Newfoundland and Labrador Collection, Provincial Resource Library, Newfoundland and Labrador Public Libraries (an ACMLA Institutional Member), we have some information about the t-shirts that they produce: "The idea of doing a t-shirt started small. Many clients of the Newfoundland and Labrador Collection were not even aware of their maps, and it was thought a t-shirt would be a means to promote the collection, and raise a few dollars as well. A 19th century reproduction of John Mason's circa 1620 map (Insula olim vocata Noua Terra, the island called of olde: Newfovnd land) was chosen for a full frontal print accompanied by the words Newfoundland Maps St. John's Public Libraries. They used a local company to screen print the shirts. At first, the company felt challenged to do such a detailed image. The result, however, was fantastic. The t-shirts have been especially popular with visitors to the province as well as for gifts to family away. This year, long sleeve shirts are also available with the same design. Short sleeve shirts sell for $12.00; long sleeve shirts sell for $18.00." For further information email John at johngriffin@nlpubliclibraries.ca. [Editor's note: Dan Duda is wearing one of these shirts in the photo on page 26.]

New Brunswick / Nouveau-Brunswick

Université de Moncton
Stefano Biondo
biondos@umoncton.ca

Il y a beaucoup de changements cet été à la cartothèque de la Bibliothèque Champlain de l'Université de Moncton (N-B). En effet, nous avons embauché deux étudiants, Simon Dubé et Marie-Josée Arsenault, pour une période de huit semaines afin de réorganiser la cartothèque. Leurs principales tâches consistaient à faire l'inventaire, le rangement ainsi que l'élagage de cartes topographiques du gouvernement fédéral. Nous sommes heureux d'avoir pu redistribuer plus de 600 cartes topographiques au sein de diverses cartothèques canadiennes. Les étudiants ont également réparé plus d'une centaine de cartes de la région de l'Atlantique en plus de participer à différentes autres tâches.

Toujours dans le cadre du plan de réorganisation de la cartothèque, nous avons débuté la relocalisation de tous les atlas de la bibliothèque vers la cartothèque. Aux atlas s'ajouteront également certains documents classés actuellement avec les documents officiels tels que les rapports géologiques et la série de cartes *Inventaire des terres du Canada*.

Finalement, nous espérons être en mesure de compléter un site Web dédié à la cartothèque d'ici la fin décembre 2004.

----∞◦|◦|◦∞----

There is a lot of change this summer in the Map library at the Bibliothèque Champlain, of the Université de Moncton (NB). In order to reorganize the Map Library we hired two students, Simon Dubé and Marie-Josée Arsenault, for eight weeks. Their main tasks were to do the inventory, to tidy up the collection and do some weeding in the federal topographical maps collection. We are glad to be able to redistribute more than 600 maps through Canadian map libraries. These two students have also mended about a hundred maps of the Atlantic region and done many other tasks.

Within this reorganization, we also began to bring the entire library's Atlas collection into the Map Library. We will also add some documents from the government document section like the geological reports and the map series Canada Land Inventory.

Finally, we wish to be able to complete a Web site dedicated to the Map Library by the end of December 2004.

University of New Brunswick
Elizabeth Hamilton
hamilton@unb.ca

New Brunswick Spatial Data at Your Fingertips

The University of New Brunswick recognized Service New Brunswick (SNB) on Geomatics Day in 2002 for their exemplary contribution to the academic sector over the years through the provision of SNB spatial data to universities and community colleges in the province. SNB was the first provincial spatial data agency in Canada to enter into an academic licensing agreement, providing spatial data through UNB Libraries without charge since 2000. Products included the 1:10,000 topographic files, elevation files, orthophotographs, property boundaries — in short, just about everything produced through that agency.

In 2002, SNB suggested that dissemination of spatial data through UNB Libraries be expanded to all academic institutions within the province, and a new agreement was signed in the Spring of that year. SNB also worked with UNB Libraries on requests from students in other provinces through their local map librarians and curators. Following SNB's example, the provincial Department of Natural Resources has also signed an academic licensing agreement with UNB Libraries, under terms similar to the first SNB academic license signed in 2000.

Service New Brunswick has once again stepped to the lead, announcing in the Spring of 2004 that they will be opening up their products to the world for free download through the web — again, without fees or registration. Service New Brunswick anticipates having the finishing touches put on their web site by the end of September, and their web site will be open to all for the download of spatial files. SNB are due an enthusiastic thanks for their positive vision on spatial data distribution and use, and are to be congratulated on their leadership, once again!

Ontario

McMaster University
Cathy Moulder
moulder@mcmaster.ca

In December, Gord Beck (Lloyd Reeds Map Collection Library Assistant) completed his Geographic Information Systems certificate at Mohawk College, after four years of part-time study. To complete this certificate, Gord took a variety of courses including introductions to GIS, to ArcView and to AutoCAD (computer-assisted drafting), a course in Remote Sensing and another in Global Positioning Systems, and three levels of Microsoft Access. And despite juggling these courses with work and family, his marks have been consistently outstanding. Congratulations, Gord, on a real accomplishment.

The Map Collection was featured as the special topic of the Albert Lager Lecture series on April 15th. The Lager Lectures are special educational events organized by McMaster University's Office of Alumni Advancement, in honour of Albert Lager, an alumnus with a deep commitment to life-long learning. I presented the Lager Lecture on the topic "Discover and Explore the Amazing World of Geographic Information", which gave the sixty participants an insight into our modern map collection, our marvellous rare map collection and the rapidly growing developments in Geographic Information Systems (GIS) technology. The participants then visited the Lloyd Reeds Map Collection to view displays highlighting these three themes of past, present and future in geographic information. Gord Beck organized an excellent display representative of our World War One trench map collection, and Reference Library Assistants Lorna Turcotte and Diane Wales selected and prepared a display of interesting old maps of Europe and the British Isles from their work on our rare map webpages. All four of us answered seemingly unending questions from the enthusiastic participants, including a small group of alumni from the Geography Class of 1950.

On May 17th, I was quite overwhelmed to be presented with McMaster University Faculty Association's very first Award for Outstanding Service. The award honours faculty members or librarians who "have affected the University, enhanced its reputation, provided excellent service and demonstrated innovation". (http://www.mcmaster.ca/mufa/newsAprMay04.html)

And as if this is not enough excitement, I have been seconded to a University committee for the next year. This committee is composed of a balance of management and union representatives, and will be re-evaluating all jobs in the McMaster University Staff Association bargaining unit (1,856 employees). The Job Rating Committee started training in mid-April and is now grinding into action. This commitment will require that I am absent from the Map Collection every morning probably for the next year. The Library will be replacing me in part with a newly hired Government Publications librarian (Krista Godfrey) who starts July 19th and who will be cross-training in both maps and data, a Reference Desk intern from September to April, and the occasional loan of two librarians and two Library Assistants from the Reference Department. Sounds like a big crowd, but in actual fact the Map Collection will be very much in the capable hands of Library Assistant Gord Beck.

Earth Sciences Information Centre (ESIC)
Natural Resources Canada
Irene Kumar & Bruce Blair
esic.map@nrcan.gc.ca

In the last few months, many map images have been added to the GEOSCAN database, a bibliographic database containing records covering all the publications of the Geological Survey of Canada. These maps have been scanned as part of the Map Image Rendering Database for Geoscience (MIRAGE) project. This project was started in July 1998 with a grant from the Earth Sciences Sector (ESS) ResSources GSC initiative (RGSC) and resumed in 2003.The scanned images are stored as MrSID compressed images and as Adobe Acrobat files.

To view these images, you must first access the GEOSCAN database from the ESIC web page, (http://www.nrcan.gc.ca/ess/esic/geoscan_e.html). At the bottom of the search screen, check the **"Only items with online images"** box and click **"Search"**. In addition to the scanned MIRAGE images, you will also be able to view any other digital information and web sites related to specific Geological Survey of Canada publications. The GEOSCAN database currently has approximately 3500 images available for viewing.

For more information, please contact Irène Kumar, Map Library and Open File Coordinator

<esic.map@nrcan.gc.ca> or Bruce Blair, Special Databases Manager <esic.geoscan@nrcan.gc.ca>

----∞⟨●⟩∞----

Centre d'information sur les sciences de la Terre (CIST)
Ressources naturelles Canada
Irene Kumar & Bruce Blair
esic.map@nrcan.gc.ca

Au cours des derniers mois, plusieurs images cartographiques ont été ajoutées à la base de données GEOSCAN, une base de données bibliographiques contenant des notices relatives à toutes les publications de la Commission géologique du Canada (CGC). Ce balayage de cartes a été effectué dans le cadre du projet MIRAGE (pour **M**ap **I**mage **R**endering **D**atabase for **Ge**oscience, ou Base de données pour l'affichage d'images géoscientifiques). Ce projet, qui a débuté en juillet 1998, grâce à une subvention de l'initiative ResSources CGC (RCGC) du Secteur des sciences de la terre (SST), a repris en 2003. Les cartes numérisées sont stockées sous forme d'images MrSID comprimées et de fichiers en format PDF.

Pour visionner ces images, il faut tout d'abord accéder à la base de données GEOSCAN de la page web du CIST, (http://www.nrcan.gc.ca/ess/esic/geoscan_f.html). Au bas de l'écran de recherche, choisissez l'option "Seulement des publications avec une image en ligne" puis cliquez sur "Recherche". En plus des images balayées du projet MIRAGE, vous pourrez aussi visionner toute autre information numérique et sites web reliés à des publications spécifiques de la Commission géologique du Canada. La base de données GEOSCAN contient présentement environ 3500 images disponibles pour des fins de consultation.

Pour plus amples informations, veuillez communiquer avec:
Irène Kumar, Coordinatrice de la cartothèque et des dossiers publiques <esic.map@nrcan.gc.ca> Bruce Blair, Gestionnaire, Base de données spéciales <esic.geoscan@nrcan.gc.ca>

University of Toronto at Mississauga
Andrew Nicholson
anichols@utm.utoronto.ca

The UTM Library recently added a second GIS workstation as part of the Provosts Courseware

Development fund. The Library is working closely with Geography, Anthropology and other programs to promote and integrate GIS into the curriculum. For instance, the Library is offering GIS instruction in the Forensic Anthropology Field Course this fall. The Library has also been involved with the creation of Web-based Learning Modules for the first year Geography courses. Students can look at maps and data online and complete quizzes.

University of Waterloo
Richard Pinnell
rhpinnel@library.uwaterloo.ca

Work continues on the library's various projects including the TriUniversities Data Resources' GIS metadata project. A total of 342 metadata records have been compiled under 15 ArcIMS map services. Chris Close, a former graduate student in Geography, worked on this metadata project until the end of April, at which time he started to work full time elsewhere. We currently have not found a replacement for Chris. The Faculty of Environmental Studies (FES) computing folks would like us to migrate the metadata application (http://www.fesspatial.uwaterloo.ca/library/) from their FES ArcIMS server to a Library server; before we do this we need to rethink the "architecture" of the application and whether we wish to continue using ArcIMS or perhaps another product such as MapServer.

Our GIS statistics continue to rise. Beginning in May 2003 and ending with May 2004, our monthly counts of GIS reference/consultation statistics are as follows: 51, 27, 28, 5, 129, 79, 124, 46, 56, 72, 71, 24, 32. Peak months are clearly September (129) and November (124) but the pattern is unusual given the drop last year in October (79). The rhythm is probably related to the scheduling of class assignments. More and more students from departments other than the "traditional" client group (Planning, Geography and Architecture) are now requesting access to geospatial data; in particular, we are seeing increasing numbers of students from Earth Sciences, Civil Engineering and Biology.

The most significant data acquisitions in the past few months have been updated datasets from the City of Waterloo and orthoimagery (year 2000) covering the City of Guelph. I have been in touch with staff at the Grand River Conservation Authority and negotiated a special academic price for access

to the orthoimagery for the entire GRCA watershed, flown in April 2000 and scanned at 30 cm resolution. I am now seeking development funds to cover the cost of this future purchase.

The opening of the UW Library's new architecture branch library in Cambridge is still scheduled for September 7th, 2004. Much work as already been done to prepare for the transfer of 25,000 book and serial volumes from the University Map and Design Library, from the Dana Porter Library, the Doris Lewis Rare Book Room, and the TUG Annex facility in late August. Staff in Cambridge will have read-only access to the SNAP server which is used to store the Library's geospatial datasets, and ESRI has been contacted to seek assurances that our campus site license for ESRI products, particularly ArcGIS software, will allow for the installation of ArcGIS on workstations in a remote location, i.e. Cambridge, Ontario.

University of Western Ontario
Cheryl Woods
cawoods@uwo.ca

The summer "to do" list is always longer than the amount of time there seems to be to get these projects finished. However, good intentions prevail! We have two major projects underway – one is doing a major inventory and reorganization of our GSC maps – all series, scales, etc. However, our major project is inputting our card catalogue information into the retrieval software DB/Text by INMAGIC which we already use for atlases, departmental theses, foreign topographic series and foreign urban plans (http://janus.ssc.uwo.ca/mapref/pubsearch.htm). It is expected that this ambitious endeavour will take 3-5 years to complete due to the size of the collection (approx 223,000 sheets) and the limited staff time which we can afford to give this project.

A list of selected new acquisitions over the past 6 months is now available at our website (http://publish.uwo.ca/~mapref/serge_a.htm). This list began many years ago as an informative list which was circulated only within the Geography department, but has proven to be of interest to a much wider audience.

The spring was busy with tours for school groups and through the summer there will be a few classes of library and information science students in. On June 10th, we hosted the annual convocation awards ceremony for the honours Geography class of 48 students, their families, Geography department staff, faculty and graduate students.

With money from the Social Science student levy fund, we have purchased a copy stand with lights and digital camera to assist those who wish to copy material we do not loan or is too fragile to scan or photocopy.

Library and Archives Canada/
Bibliothèque et Archives Canada
Louis Cardinal
louis.cardinal@lac-bac.gc.ca

Library and Archives Canada

On May 21, 2004, the *Act to establish the Library and Archives of Canada* was proclaimed into force by order of the Governor in Council. Consequently, the *National Archives Act* and the *National Library Act* are now repealed. All employees of the two former institutions automatically become employees of the new Library and Archives Canada.

The Minister of Canadian Heritage, the Honourable Hélène Chalifour Scherrer, has asked Mr. Ian E. Wilson, the former National Archivist, to assume, on an interim basis, the duties of the newly-created position of Librarian and Archivist of Canada.

The vision for the new Library and Archives Canada was one conceived initially by both the former National Librarian, Roch Carrier, and the former National Archivist.

As Mr. Wilson stated recently:
"We will be building on the strong foundations of our two predecessor institutions, their collections, their traditions and, most especially, their expertise. With these we will be ready to face the challenges, possibilities and expectations of the 21st century.
We will continue to build and preserve our collections but we will also ensure they are a living part of the Canadian experience and accessible to Canadians wherever they may live in our vast country."

Canadian Hydrographic Conference CHC 2004

The Canadian Hydrographic Conference 2004 was held in Ottawa May 24-27 to celebrate the centenary of the Canadian Hydrographic Service. Different aspects of hydrography and charting were discussed

including: history; explorations; information management; maritime heritage; legal and policy view; bathymetric data; chart production; surveillance; navigation systems; maritime jurisdiction; geospatial data; infrastructure and technology, etc. The historical session was presented May 27th and included papers by the authors (James Pritchard, Andrew David, Andrew S. Cook, Richard H. Gimblett, Christopher Andreae, G.S. Ritchie, Vladimir Sergeevich Sobolev, Michael L. Hadley, David H. Gray) of the chapters in the book recently launched *Charting Northern Waters, Essays for the Centenary of the Canadian Hydrographic Service* (Edited by William Glover. Montreal & Kingston, London, Ithaca. Published for the Canadian Nautical Research Society and made possible with financial support from CARIS by McGill-Queen's University Press, 2004. ISBN 0-7735-2710-9). On May 26th, a-reception hosted by Library and Archives Canada and Canadian Nautical Research Society took place at LAC to inaugurate exhibition *Charting the Waters of New France / Levés hydrographiques de la Nouvelle-France,* presenting charts and maps produced between 1546 and 1769. The exhibition will be showing at Library and Archives Canada, main floor, 395 Wellington Street, Ottawa, through to January 2005.

Bibliothèque et Archives Canada

Le 21 mai 2004, la *Loi constituant Bibliothèque et Archives Canada* est entrée en vigueur par décret du gouverneur en conseil. Par conséquent, la *Loi sur les Archives nationales du Canada* et la *Loi sur la Bibliothèque nationale* sont maintenant abrogées. Les fonctionnaires des deux anciennes institutions sont automatiquement devenus membres du personnel de Bibliothèque et Archives Canada.

La ministre du Patrimoine canadien, l'honorable Hélène Chalifour Scherrer, a demandé à M. Ian E. Wilson, l'ancien archiviste national, d'occuper, à titre intérimaire, le nouveau poste de bibliothécaire et archiviste du Canada.

Le projet de créer Bibliothèque et Archives Canada est le fruit d'une longue collaboration entre l'ancien administrateur général de la Bibliothèque nationale du Canada, M. Roch Carrier, et l'ancien archiviste national du Canada, M. Ian E. Wilson.

Comme M. Wilson l'a récemment déclaré :

« C'est à partir des assises solides des deux institutions précédentes avec leurs collections, leurs traditions et, en particulier, les compétences de leur personnel, que nous allons nous tourner vers l'avenir. De tels atouts nous permettront de relever les défis, de saisir les occasions et de répondre aux attentes que nous réserve le XXIe siècle.

Nous allons continuer d'enrichir et de préserver nos collections et nous allons veiller aussi à ce qu'elles deviennent une partie vivante de l'expérience canadienne. Pour ce faire, nous allons les rendre de plus en plus accessibles à l'ensemble de la population canadienne, peu importe où les gens se trouvent sur notre vaste territoire. »

Conférence hydrographique du Canada CHC 2004

La conférence hydrographique du Canada 2004 s'est tenue à Ottawa du 24 au 27 mai pour célébrer le centième anniversaire du Service hydrographique du Canada. Les communications portaient sur divers aspects de l'hydrographie et de la cartographie : l'histoire; les explorations; la gestion de l'information; le patrimoine maritime; le droit de la mer; la surveillance maritime; les données hydrographiques; l'infrastructure et la technologie; les sonars; la publication des données géospatiales, etc. La séance du 27 mai était consacrée à l'histoire de la cartographie marine du Canada et les conférenciers (James Pritchard, Andrew David, Andrew S. Cook, Richard H. Gimblett, Christopher Andreae, G.S. Ritchie, Vladimir Sergeevich Sobolev, Michael L. Hadley, David H. Gray) étaient les auteurs des chapitres du livre récemment publié : *Charting Northern Waters, Essays for the Centenary of the Canadian Hydrographic Service* (Edited by William Glover. Montreal & Kingston, London, Ithaca. Published for the Canadian Nautical Research Society and made possible with financial support from CARIS by McGill-Queen's University Press, 2004. ISBN 0-7735-2710-9). Le 26 mai au soir une réception organisée par Bibliothèque et Archives Canada et la Société canadienne pour la recherche en histoire nautique se tenait pour inaugurer l'exposition *Levés hydrographiques de la Nouvelle-France / Charting the Waters of New France* qui regroupe des cartes produites entre 1546 et 1769. L'exposition sera en montre à Bibliothèque et Archives Canada au réz-de-chaussée du 395 de la rue Wellington à Ottawa jusqu'en janvier 2005.

Alberta

University of Alberta
David L. Jones
David.Jones@ualberta.ca

A major activity this spring has been the evaluation and packing of the Ron Whistance-Smith Collection as reported in the last issue of the *Bulletin*. This continues. We have completed the removal of the maps from Ron's basement and this summer will tackle the large number of maps in the garage etc.

The Library received a monetary donation from WAML in memory of Ron. This was used to purchase a large decorative (brass & semi-precious stone) globe. Although this is not really a scientific instrument, it reflects Ron's artistic appreciation of all things cartographic and is something that we would not have been able to purchase from our own funds.

The collection has received 15 new map cabinets and we are in the process of moving our growing 'LC-Classified Collection' of post-1995 maps to a more prominent and accessible location. These cabinets, and the ones that they release, will provide space for collection growth and also relieve some of the existing over-crowded drawers.

We have taken advantage of our NRCan depository status and have ordered a large number of GSC Open File maps of western and northern Canada. These are being catalogued at the sheet level and will be accessible through the online catalogue http://www.library.ualberta.ca/catalogue.

Our 'out-reach' program has expanded with a presentation on Map Collection to the *School of Library and Information Science's* Government Publications Course. This augments sessions that have been presented in the Archives and Cataloguing courses for a number of years.

This summer we have two summer student projects on the go:
• Ulrike Burkhard, a library school student from Germany is here for 6 weeks and building a database of our Austro-Hungarian holdings.
• Tina Sawchuck is entering records of our western Canada maps for the *Peel Prairie Provinces* web portal http://peel.library.ualberta.ca. This is a major bibliography of Prairie literature, with both

bibliographic records and full text documents. Tina's project is a pilot study to expand the 'Peel' to include western Canadian mapping. The end-goal is to include digitized images of the maps – but that is still 'down the road'.

News from the BCC

The ACMLA Bibliographic Control Committee and representatives of the National Library of Canada's Union Catalogue Division have been working together on the National Union Catalogue of Maps, which is available in the National Library of Canada's online catalogue, AMICUS. This database now includes 140,000 cartographic cataloguing records from 23 Canadian institutions. Instructions for accessing AMICUS are available on the ACMLA web site and also on Library and Archives Canada's web site.

The document for *Core Level Cataloguing for Non-serial Cartographic Materials* has been revised and is now posted on the ACMLA web site. The major changes include the following: 1) Tag 256 has been deleted. Tag 352 has been moved to where 256 was in the Core Document. 2) Examples: the "Geomatics cataloguing bibliographic record" has been revised. Two more examples have been added: "Remote-sensing image bibliographic record" and "Remote-sensing map bibliographic record".

Velma Parker's article on "Cataloguing Notes from the Bibliographic Control Committee (2003)", that was originally published in ACMLA *Bulletin* 116, Winter 2003, is also now available on the ACMLA web site.

I would appreciate it if you would please pass this message on to your map cataloguers, for their information.

Best regards,
Trudy Bodak,
Chair, Bibliographic Control Committee

NEW BOOKS AND ATLASES

Eva Dodsworth

Bancroft-Hunt, Norman. 2004. *Historical atlas of ancient Mesopotamia*. New York: Checkmark Books. 192 p. $35.00 US. ISBN 0816057303.

Carpenter, Richard. 2003. *A railroad atlas of the United States in 1946*. Baltimore: Johns Hopkins University Press. 328 p., 202 colour maps. $65.00 US. ISBN 0801873312.

Clark, Audrey. 2003. *The Penguin dictionary of geography*. 3rd Edition. London; New York: Penguin Books. 256 p. $17.00 US. ISBN 0140515054.

Constable, Nick. 2003. *Historical atlas of ancient Rome*. New York: Checkmark Books. 189 p. $35.00 US. ISBN 0816053316.

Foster, David and John D. Aber. 2004. *Forests in time: the environmental consequences of 1,000 years of change in New England*. New Haven: Yale University Press. 467 p. $45.00 US. ISBN 0300092350.

Gilbert, Martin. 2003. *The Routledge atlas of Jewish history*. London; New York: Routledge. 152 p., 140 maps. Paper: $29.95 CDN. ISBN 0415281504. Cloth: $112.00 CDN. ISBN 0415281490.

Goffart, Walter. 2003. *Historical atlases: the first three hundred years, 1570-1870*. Chicago: University of Chicago Press. 512 p. $65.00 US. ISBN 0226300714.

Gutfreund, Owen. 2004. *Twentieth-century sprawl: highways and the reshaping of the American landscape*. Oxford; New York: Oxford University Press. 320 p. $35.00 US. ISBN 0195141415.

Goulding, Michael, et al. 2003. *Smithsonian atlas of the Amazon*. Washington: Smithsonian Institution Press. 256 p., 162 maps. $39.95 US. ISBN 1588341356.

Hall, Carolyn and Hector Brignoli. 2003. *Historical atlas of Central America*. Norman, Oklahoma: University of Oklahoma Press. 336 p., 405 colour maps. $99.95 US. ISBN 0806130377.

Harlan, James and James Denny. 2003. *Atlas of Lewis and Clark in Missouri*. Columbia; London: University of Missouri Press. 138 p. $59.95 US. ISBN 0826214738.

Harris, Nathaniel. 2003. *Atlas of the world's deserts*. New York: Fitzroy Dearborn (Taylor & Francis Group). 192 p. $188.00 CDN. ISBN 1579583105.

Hayes, Derek. 2003. *Historical atlas of the Arctic*. Vancouver: Douglas & McIntyre Ltd. 208 p. $75.00 CDN. ISBN 1553650042.

Hutchinson, Scott. 2004. *Inside ArcView GIS 8.3*. Clifton Park, NY: Thomson/Delmar Learning. 510 p., CD. $49.95 US. ISBN 0766834751.

Issac, Michael. 2004. *Historical atlas of Oman*. New York: Rosen Publishing Group. 64 p. $22.95 US. ISBN 0823945006.

Jacob, Katherine. 2004. *Grand River country trails*. Cambridge, ON: Grand River Conservation Foundation. 104 p. $15.95 CDN. ISBN 0968338941.

Khan, Aisha. 2004. *A historical atlas of Kyrgyzstan (historical atlases of south Asia, Central Asia and the Middle East)*. New York: Rosen Publishing Group. 64 p. $30.00 US. ISBN 0823944999.

Killingray, David. 2004. *Historical atlas of Kent*. Oakville, CT: David Brown Book Co. 200 p. $45.00 US. ISBN 1860772552.

Kresse, Wolfgang and Kian Fadaie. 2004. *ISO standards for geographic information*. New York: Springer-Verlag. 322 p. $129.00 US. ISBN 3540201300.

Lemmon, Alfred, et al. 2003. *Charting Louisiana: five hundred years of maps.* New Orleans: Historic New Orleans Collection. 448 p., 193 colour maps. $95.00 US. ISBN 0917860470.

Lillesand, Thomas, et al. 2004. *Remote sensing and image interpretation.* 5th Edition. New York: Wiley. 784 p. $116.95 US. ISBN 0471152277.

London: a cartographic history 1746-1950: 200 years of folding maps. 2002. Compiled by Lucinda Boyle; introductory essay by Ralph Hyde. Wycombe, Buckinghamshire: Countrywide Editions. 161 p. £95.00. ISBN N/A.

Longley, Paul and Michael Batty. 2003. *Advanced spatial analysis: the CASA book of GIS.* Redlands: ESRI Press. 460 p. $39.95 US. ISBN 1589480732.

Magocsi, Paul Robert. 2002. *Historical atlas of central Europe.* Seattle, Washington: University of Washington Press. 288 p., 109 colour maps. Paper: $45.00 US. ISBN 0295981466. Cloth: $75.00 US. ISBN 0295981938.

Mandal, Hrisikesh, et al. 2002. *India: an illustrated atlas of tribal world.* Calcutta, India: Anthropological Survey of India. 106 p. $39 US. ISBN 8185579652.

Mehler, Carl. 2003. *Atlas of the Middle East.* Washington, DC: National Geographic Society. 96 p., 80 maps, 40 photos. $31.00 CDN. ISBN 0792250664.

Mills, A.D. 2003. *A dictionary of British place-names.* Oxford; New York: Oxford University Press. 544 p. $14.95 US. ISBN 0198527586.

Nag, Prithvish. 2002. *Science and technology atlas of India.* Kolkata, India: National Atlas and Thematic Mapping Organisation, Department of Science & Technology, Government of India. 84 p. $25.00. SKU: B20158.

National Geographic Society. 2003. *African adventure atlas.* Chicago: Rand McNally. 336 p. $49.94. ISBN 1566951739.

Padron, Ricardo. 2004. *The spacious word: cartography, literature, and empire in early modern Spain.* Chicago: University of Chicago Press. 280 p. $35.00 US. ISBN 0226644332.

Pickles, John. 2004. *A history of spaces: cartographic reason, mapping and the geo-coded world.* London; New York: Routledge. 256 p. Paper: $29.95 US. ISBN 0415144981. Cloth: $110.00 US. 0415144973.

Playne, David and Gillian. 2003. *The timeline history of New York City.* New York, NY: Pallgrave Macmillan. 32 p. $29.95 US. ISBN 1403962421.

Rand McNally 2004 Road Atlas: United States, Canada, Mexico. 2003. Chicago: Rand McNally. 144 p. $11.95 US. ISBN 0528845055.

Ruthven, Malise. 2004. *Historical atlas of Islam.* Cambridge, MA: Harvard University Press. 208 p., 70 colour maps. $35.00 US. ISBN 0674013859.

Salton Sea Atlas. 2002. Redlands Institute, University of Redlands. Redlands, California: ESRI Press. 132 p. $79.95 US. ISBN 1589480430.

Seelye, Martin. 2004. *An introduction to ocean remote sensing.* New York: Cambridge University Press. 500 p. $75.00 US. ISBN 0521802806.

Short, John Rennie. 2003. *The world through maps.* Toronto: Firefly Books. 224 p. $50.00 CDN. ISBN 1552978117.

Smith, Dan and Ane Braein. 2003. *The Penguin state of the world atlas 7th edition.* New York: Penguin USA. 144 p. $20.00 US. ISBN 0142003182.

Stillwell, John and Graham Clarke. 2004. *Applied GIS and spatial analysis.* England; Hoboken, NJ: Wiley. 420 p. $125.00 US. ISBN 0470844094.

Taylor, John and Martin Bell. 2004. *Population mobility and indigenous peoples in Australasia and North America.* London; New York: Routledge. 304 p. $156 CDN. ISBN 0415224306.

Young, Terence. 2004. *Building San Francisco's parks, 1850-1930.* Baltimore: Johns Hopkins University Press. 260 p. $45.00 US. ISBN 0801874327.

GEOSPATIAL DATA REVIEWS

Richard Pinnell

ArcCanada: Schools and Libraries Edition Version 3.0

ArcCanada: Schools and Libraries Edition Version 3.0. Environmental Systems Research Institute Canada Ltd. (ESRI), 2003. [4 CD-ROMs]

ArcCanada 3.0, the Schools and Libraries Edition database, is a compilation of some of the more commonly used layers found in Canadian geospatial datasets. Eliminating the need to locate individual layers from a large pool of independent datasets, ESRI has organized and compiled the features into one product. ArcCanada 3.0 includes geospatial data from the following Canadian resources: Natural Resources Canada, Environment Canada, Statistics Canada, DMTI Spatial Inc., Agriculture and Agri-Food Canada, Parks Canada and the National Archives of Canada.

Designed for use in schools and libraries, ArcCanada 3.0 offers almost 2 gigabytes of data in the form of topographic and thematic layers, as well as imagery at the provincial, national, continental and world levels. Most of the datasets provided are a less detailed version of the original data (i.e. the streets layer from DMTI Spatial Inc.), making ArcCanada a rather general, but broad Canadian resource. The layers offer a wide range of themes, from base information like roads and rivers, to statistical information such as demographics. Although some of the datasets are poor in attributes, ArcCanada offers several additional tables to supplement the information.

Released in March 2003, ArcCanada 3.0 is supplied on 4 CD-ROM disks: Disk 1 covers National data (scale 1:5M) and Western Canada (1:1M); Disk 2 covers all of Eastern Canada; Disk 3 covers Continental (1:3M) and World data; Disk 4 covers specialty datasets and utilities. Data are in geographic coordinates (decimal degrees, NAD 83). All vector datasets are ESRI coverages, and raster datasets are either in JPG or Tiff image formats. Each dataset includes a separate ArcGIS layer file (.lyr) which provides symbols and classifications for the dataset when viewed in ArcGIS (as .avl does for

ArcView). Accompanying tables are stored in separate folders, and are mainly available for the National datasets. The tables are in dBase format and can be opened in ArcView and ArcMap. These tables can be joined to the attribute tables of the shapefiles to create more detailed maps. For the purpose of the review, all datasets and accompanying files were viewed using ArcMap 8.1.

The National dataset includes detailed metadata documents providing complete documentation, including identification, description, content, purpose, status (including currency), accessibility, creator, publisher, data quality, spatial data organization, spatial reference, entity and all attribute descriptions, distribution, and metadata reference information. A thumbnail image of the layer is also included. The metadata conforms to the FGDC Content Standards for Digital Geospatial Metadata, and is available in both XML and HTML. XML can be viewed in ArcGIS and can also be used with the ArcIMS Metadata Server. The metadata in HTML can be viewed in any Web browser. Alberta, a part of the provincial dataset, is the only province for which metadata is available. Continental and World datasets do not include metadata.

Users who do not have earlier versions of ArcCanada will find this product to be a terrific resource for students who are looking for either general-purpose base maps and/or in-depth statistical information. Users who are upgrading to version 3.0 will find that most of the layers are identical to ArcCanada version 2.0 and have not been updated to reflect change (i.e. statistical information). Where version 3.0 differs however, is that it now includes Continental and World data, as well as miscellaneous American and Canadian vector and raster datasets. What is interesting to note is that ESRI includes most of the National and World datasets with a copy of ArcView or ArcGIS. Therefore, if the user has one or both of these programs, he or she may already own a similar version of ArcCanada's 3.0 National and World datasets (Disks 1 and 3). In this case, the user will find Disk 4, the hodgepodge of various datasets, to be

the only refreshing content out of the entire product.

Data at the National level contain base information such as water bodies, roads, boundaries, as well as soil, ecological zones and regions, and earthquake epicenters. Fault lines, 2001 census data, and telephone area code boundaries are new layers available in version 3.0. Additional tables accompany several layers at this level, providing some interesting details. The *national historical site* layer, for example is Parks Canada data which lists nationally significant places and events. This point layer provides the name, address and description of each historical designation in Canada. The accompanying tables for this layer however also provide monthly visitor statistics for every historical site. These statistics are available for the years 1993-2001. This additional information can show the user which historical sites are the most popular, and for which months. Since data is available for the span of nine years, one can also examine popularity patterns throughout the years.

The strength of the National dataset is in the 1996 provincial statistical tables, with a wealth of information including demographics, health, agriculture, socio-economic data, and a lot more. The agriculture statistical table, for example, focuses on provincial farmlands, providing information such as the size of farms growing soybeans, blueberries or canola, or the area of land that is fertilized or treated with herbicides. Other interesting findings include the value of farms, farm expenses and outstanding debt owed by the farmer. Since the statistics are available for every province, the user will find this table to be a very rich resource for researching the Canadian farm industry. This table can be linked to the Census Divisions or Census Subdivisions tables. The CD and CSD datasets are available for 1991, 1996 and 2001.

The Provincial level data contain the same base information as the National dataset with the addition of geological layers, digital elevation models and in-depth 1996 statistical information at the Census Subdivision level. Since contours are sometimes difficult to obtain for the entire country, it is worth mentioning that contour lines are available for every province, but at varying scales (Alberta's contour interval is 250 meters whereas Ontario's is 100 meters). The geological layer is also a worthwhile dataset as it provides basic geology for all of the provinces. This shapefile contains information about broad ranges of surface

materials, such as alluvial, lacustrine, marine, and glacial, as well as bedrock. In addition, the units are subdivided by different characteristics: texture (e.g., marine mud vs. marine sand); thickness (e.g., till blanket vs. till veneer); and landform (e.g., glacioflucial plain vs. glaciofluvial complex).

ArcCanada 3.0, Provincial level dataset does not differ very much from its previous version, except for the addition of 2001 Census Subdivisions, and Census Tracts for 1996 and 2001. This type of update probably does not warrant the purchase of an upgraded version, especially since many libraries already have access to Statistics Canada statistical database.

Both Continental and World datasets (Disk 3) provide very general cartographic layers with little or no attribute information. World data includes minerals, faults, plates and earthquakes, as well as demographic data for 1992, 1995, and 2000. There are also additional tables that provide very detailed statistical content for 169 countries (population, fertility rate, migration, sex ratio, imports and exports, coal and gas production, electricity usage, etc.), making this a very strong worldwide statistical resource.

Disk 4 includes a number of interesting datasets and imagery. Most of these resources have not been made available in previous ESRI packages. Some of the more interesting datasets include Kingston's local data, Historical Railways and the North American dataset.

Kingston's local dataset at first glance appears to be useful only to those who are interested in mapping Kingston, Ontario. It includes a lot of the basic topographic information (i.e. golf courses, buildings, wetlands, land use) which CanMap from DMTI offers for all cities in Canada. What this dataset also includes however is a business directory – including the names and addresses of businesses, type of business (shoe store vs. chartered bank), sum of sales, number of employees, and net worth. Since all of the more popular franchises are listed (Zellers Inc., McDonald's Restaurant, J J Motors), as well as some less well-known ones (Aunt Lucy's Restaurant, Shalimar Shoes Ltd.), users (such as students studying retail) can use this database to study retail location, compare business' net worth, and generally use this database as a sample of a typical city's business profile. Kingston's dataset also includes census information with additional statistical tables including population estimates, labour force, and income.

The Historical Railways dataset provides a historical trace of the evolution of railway transportation in Canada. This layer displays Canada's entire railway system from 1836-1992, and includes all operating and abandoned lines. Railway attributes include: date of construction, builder (i.e. Canadian Pacific Railway), year abandoned, and length of the line. An accompanying table provides railway transaction details, such as name change (i.e. Canadian Copper Co. to Inco Ltd.), lease, purchase or amalgamation (i.e. Guelph and Goderich Railway Co. with Canadian Pacific Railway). Users can use this layer to learn about the history of railways in Canada or more specifically about individual railway lines. For example, users may map railway lines based on year of construction (i.e. display all railways that were built between 1836-1870). Or alternatively, users may wish to map the railways based on builder – for example display all railway lines built by Canadian Pacific. Since many railway lines are not operating anymore, a user may be interested in learning where the abandoned railways are located.

Lastly, the North American dataset is a wonderful base map that covers North America and parts of South America. This is a great resource for users who are interested in both Canada and the U.S. in terms of general geography of states, provinces and territories. Although weak in attributes, this dataset provides place names, city and state boundaries, major roads, rail, and lakes from Canada south to Brazil. A couple of unique features that are not available elsewhere in ArcCanada's package are the glacier and bathymetric layers. Although the glacier feature does not have attributes associated with it, it does display where glaciers are present. The bathymetric layer provides depth of water in four ranges (0-200 m, 200-500 m, 500-2500 m, and >2500 m), and is displayed in Figure 1. There is an abundance of resources available on Disk 4, with information that is unique to other datasets made available to libraries. Since this product covers such a large spread of information, users will find that this CD offers something for everybody. I recommend purchasing ArcCanada 3.0, if not for the entire package, then at least for the fourth CD.

As per ESRI's licensing agreement, ArcCanada 3.0 may be used for classroom instruction at Canadian Universities and Colleges as well as for research at schools and libraries. A university-wide site license is $1500 plus taxes, however a library-use (for research purposes) copy of ArcCanada 3.0 may be purchased from ESRI Canada for $99 plus taxes. Please contact Colleen Raymond, Education Industry Manager at craymond@esricanada.com for purchasing inquiries.

Eva Dodsworth
Library Assistant, University Map & Design Library
University of Waterloo
edodswor@library.uwaterloo.ca

Bathymetric map of North America, categorized by water depth. Map was generated using ArcMap 8.1 from ArcCanada 3.0 Disk 4, North America dataset.

CANADIAN CARTOGRAPHIC EXHIBIT
22ND INTERNATIONAL CARTOGRAPHIC CONFERENCE
9-16 JULY 2005, A CORUNA, SPAIN

It is now time to assemble a new edition of the Canadian Cartographic Exhibit for the forthcoming 22nd International Cartographic Conference of the International Cartographic Association (ICA) to be held in A Coruna, Spain, from July 9-16, 2005. The web site is located at http://www.ica.coop/ica/ica/icaevents/index.html

At this time, we would like also to take this opportunity to prepare an exhibit of all of the Canadian Maps submitted for 2005 in Spain and display these at the joint conference of the Canadian Cartographic Association (CCA) and the Association of Map Libraries and Archives (ACMLA) to be held in St. John's, Newfoundland in July 2005. At this conference we will assemble of team of judges from both ACMLA and CCA and choose the best maps in the exhibit. A certificate of achievement will be given to the best maps by category.

Your assistance is now being sought to identify and provide copies of significant maps and atlases, produced in Canada since 2002. The theme for the display should include topography, nautical and bathymetry, geology, urban plans, recreational and orienteering, satellite images, globes and atlases and other cartographic products of superior quality. Canadian cartographic Journals and Magazines that are appropriate to the Canadian Display will also be considered.

Cartographic material to be considered must have been published after January 1st, 2002, and must not have been exhibited in Durban, South Africa in 2003.

If you need additional information, please contact Claire Gosson by email at Claire.gosson@ccrs.nrcan.gc.ca or by telephone at (613) 992-4134.

We look forward to receiving your suggestions for this display and to prepare an interesting and impressive exhibit for both Spain and St. John's. More detailed information on this exhibit will follow soon.

Claire Gosson, President, Canadian Cartographic Exhibit, ICA 2005

L'EXPOSITION CARTOGRAPHIQUES
22[IEME] CONFÉRENCE DE L'ASSOCIATION
CARTOGRAPHIQUE INTERNATIONALE (ACI)
LE 9 AU 16 JUILLET, 2005, A CORUNA, SPAIN

Le temps est venu de penser a la nouvelle édition de l'exposition internationale cartographique et de la participation canadienne a cette prestigieuse exposition, qui se tiendra dans le cadre de la 22[ieme] conférence de l 'Association Internationale de cartographie (ACI) A Coruna, Espagne du 9 au 16 juillet, 2005. Le site Web pour la conférence se situe http://www.ica.coop/ica/ica/icaevents/index.html.

De plus, nous aimerions profiter de l 'opportunité de préparer une exposition des cartes canadiennes soumise pour la conférence en Espagne en 2005 et de monter une exposition de cartes lors de la prochaine conférence conjointe de l'Association canadienne de cartographie (ACC) et de l'Association de canadienne des cartothèques et archives cartographiques (ACACC) qui aura lieu a St. John's en juillet, 2005. Pendant cette conférence nous prévoyons assemblé un comité de juge qui consistera des membres de L'ACC et de l'ACACC pour choisir les meilleures cartes de l'exposition. Un certificat de mérite sera présenter pour les meilleures cartes de l'exposition par catégorie.

Afin de mettre sur pied cette exposition, les membres du Comité canadienne vous demandent d'identifier et fournir des cartes et des atlas produits au Canada depuis 2002. Les thèmes varient et incluent les cartes topographiques, marine, bathymétrique, géologiques, urbaine, de loisir et de course d 'orientation, image satéllitaires, les globes, les atlas, et toute autre produits cartographiques de qualité supérieure. Les Revues et Journaux cartographiques seront aussi considérer.

Le matériel cartographique présenter pour l'exposition de 2005 doit avoir été publier après janvier 2002 et ne doit pas avoir été exposé à Durban, Afrique de Sud en 2003.

Si vous avez des questions, veuillez contacter Claire Gosson par couriel a l 'adresse claire.gosson@ccrs.nrcan.gc.ca ou par téléphone au (613) 992-4134. Des instructions plus détailler concernant cette exposition suivront bientôt.

Espérant que vous participer à l'exposition, je vous prie de recevoir, Madame, Messieurs, mes salutations distinguées.

Claire Gosson, Président, Comité de l 'Exposition cartographique canadienne, ACI 2005

DMTI SPATIAL ANNOUNCES WINNERS OF 2004 GREAT CANADIAN MAPPING CHALLENGE

Markham, ON - September 30, 2004 - DMTI Spatial (TM), Canada's leading provider of comprehensive geospatial products and services is pleased to announce the winners of its 2004 Great Canadian Mapping Challenge.

The Great Canadian Mapping Challenge is a scholarship program that offers Canadian university and college students the opportunity to add a spatial view to their studies and to earn a monetary reward for their creative and analytical excellence. The program is open to students attending an educational institution that subscribes to DMTI Spatial's SMART (Spatial Mapping Academic Research Tools) program. To qualify for the scholarship, students are required to submit a paper demonstrating their use of location based technology to access and analyze data.

Papers were judged by a panel of experts in the field of geography and geographic information systems, from a diverse spectrum including government, private industry, academia and publishing.

In the undergraduate category, first place and a $3,000 prize was awarded to Ghassene Jerandi, at the University of Ottawa, for his paper, titled *2021 Ottawa Metropolitan Light Rail System Vision Network using Least-Cost Path Analysis*.

Second place and $2,500 was awarded to Tamar Ifrah, at Ryerson University, for her paper, titled *Market Concentration in Canadian Food Retailing - The Weston and Sobey Groups' Strategies with a Focus on Ontario*.

And third place, along with $2,000 was awarded to Geneviève Cool, at the University of Ottawa, for her paper, titled *Trail Proposal for Pukaskwa National Park's Tiptop Mountain, Ontario*.

In the graduate category, the grand prize and $2,500 went to Daniel Cossette, at the University of Ottawa, for his paper, titled *A GIS Based Study of Wireless Broadband Internet Marketing Potential for the Canadian Population*.

"This was a most successful program," said John Fisher, President and CEO of DMTI Spatial. "The submissions we received exceeded our expectations. The caliber of work was exceptional and it was no easy task to select the finalists." DMTI extends a special thanks to all the participants and to each of our panelists who gave generously of their time and energy to select the winning entries.

ACMLA
Canadian Cities: Bird's Eye Views
Villes du Canada: Vues a vol d'oiseau

2 *New* Views Available this Spring:

Calgary [1910] & Ottawa [1893]

The following colour reproductions have been printed through the Association of Canadian Map Libraries and Archives' Historical Maps Committee. Maps cost $15.00 each and are printed on high quality paper 55 x 70cm (22" x 28"). A minimum of $7.50 will be charged for postage and handling. Larger orders will be charged the actual surface/parcel rate.

Les reproductions en couleurs suivantes seront imprimées par le comté des cartes historiques de l'Association des cartothèques et archives cartographiques du Canada. Cout 15,00$ par copie. Les cartes imprimées sur papier de grande qualité 55 x 70cm (22" x 28"). Un minimum de 7,50$ sera demande pour payer l'affranchissement des colis. Les tarifs varieront selon le poids et la destination du colis.

Calgary, AB - [1910] *NEW!*	Ottawa, ON - [1893] *NEW!*
Dawson City, YK - 1903	Québec, PQ - 1905
Halifax, NS - 1879	St. John's, NF - 1879 *(SOLD OUT)*
Hamilton, ON - 1894	Toronto, ON - 1876
London, ON - 1872	Vancouver, BC - 1898
Montréal, PQ - 1889	Waterloo, ON - [189-]
Ottawa, ON - 1876	Winnipeg, MB - 1881

Orders should be directed to:
Les commandes doivent être envoyées à:

ACMLA/ACACC
c/o Gordon Beck
Lloyd Reeds Map Collection
Mills Library, McMaster University
Hamilton, Ontario, CANADA   L8S 4L6

E-mail: beckg@mcmaster.ca
Telephone: 905-525-9140 ext. 24745
Fax: 905-546-0625
Web: *www.acmla.org*