CARTOUCHE

THIS ISSUE

"I would like a map of the whole world, please!"

Drawing courtesy of Bill Brookes
(Retired from the Geodetic Survey Division, Natural Resources Canada.)

A Word from the Editorial Team

We hope you already had the chance to connect to CCA Twitter and visit the CCA facebook page! If not, please don't miss this opportunity to get informed and make some good "cartographic" exchanges! This coming year, you will probably find ample opportunities to get involved in the program for our next conference in Waterloo. We're certain this event will be as well-organized, interesting and fun as it was when it was held there in 2002 and it will give you an opportunity to revisit this beautiful city! In advance of the conference, don't miss reading our student representative's opinion on *Twitter and the CCA* and be prepared to "tweet" and bring the next CCA conference to another level of communication and exchange!

In this edition of Cartouche, our chair of the Map Use and Design Interest Group presents an article on the cartographic software called Ortelius; and Paul Wozniak, our chair of Mapping Technology and Spatial Data group, discusses one of many issues of data management.

Have you seen our new membership renewal form? Now that our treasurer has made this form much easier to use, there is no excuse for not renewing your membership. We encourage you to submit your renewal soon.

All the members of the CCA editorial team wish you and your family a very nice Christmas season, health and a lot of good for the year 2012!

The Team

PRESIDENT
Gerald Stark

Greeting from the CCA President

Greetings fellow CCA Members!

I trust all of you have had an enjoyable summer and are now ready for another winter season. Over the past couple of months a few CCA related items have come across my desk that I want to pass along to you. Firstly, our entry into the realm of social media (ie. facebook and Twitter) seems to be a success, in terms of getting a broader exposure for the CCA. I have received interest for potential membership in our organization from as far away as South Africa, for example. Such enquiries are, I believe, a direct result of the social media pages we now have in place. I would therefore like to thank those CCA members who have posted information on our facebook and Twitter sites. I have tried to look at these postings as often as I can, and from what I have seen so far the interest in cartography seems to be as strong as ever. I must admit, however, that I have not been as diligent as I could in terms of social media posts. I'll try to get more involved with this in the future.

Another development which will impact all CCA members is our updated digital membership renewal form which is currently in the testing stage and should be rolled out very soon. I wish to thank our treasurer, Paul Heersink, for his work on this. And finally, I am pleased to announce that our Annual General Meeting will take place next year from May 28th to June 2nd in Waterloo, Ontario, at Sir Wilfred Laurier University (WLU) and the University of Waterloo (UW). And once again, the CCA will be partnering with the CAG. The Waterloo event is actually part of the Congress of the Humanities and Social Sciences, which is to be one of the largest academic gatherings in Canada.

Both the Department of Geography and Environmental Studies at WLU and the Department of Geography and Environmental Management at UW are at their respective half-century mark of teaching these disciplines. As such, the choice for the CAG to meet in Waterloo is understandable. This combination of two universities along with the many organizations participating has led the CAG to offer the theme for their gathering as "Towards Integration". This speaks to the strong linkages between cartographers, physical and human geographers, and the social sciences. More information is now available at the CAG's conference website: *http://env.uwaterloo.ca/cag2012/* The CCA will have an important role to play in Waterloo as we have been asked by the conference organizers (CAG) to set up a special session. I am working on this with help from the rest of the CCA Executive Committee and should have some news for our members around the middle of December.

Gerald

Gerald Stark is the President of the Canadian Cartographic Association. Gerald is a cartographer at Alberta Agriculture and Rural Development in Edmonton, Alberta.

VICE-PRESIDENT
Anna Jasiak

CCA is Live on Social Media!

Greetings to CCA members from Ottawa!

It appears that many messages from the executive are discussing the topic of social media. I am not one to challenge the trend – so I too would like to take this opportunity to talk a little more about the CCA on facebook.

Many of you are aware of our presence on this social media site – an initiative that was launched by Dawn Mooney. Dawn and I have been acting as administrators of this site since May of 2011. Being an administrator has encouraged me to visit the CCA page regularly in order to monitor activity and interest.

Figure 1 below is an image created at our inception – our facebook 'profile picture' – to announce who we are, with the intention of encouraging new visitors to further link to our official CCA website. The logo of CCA has been carried over from our official website and now resides on every facebook page. Thank you Dawn for developing these initial pieces for us. Figure 2 shows the CCA facebook page.
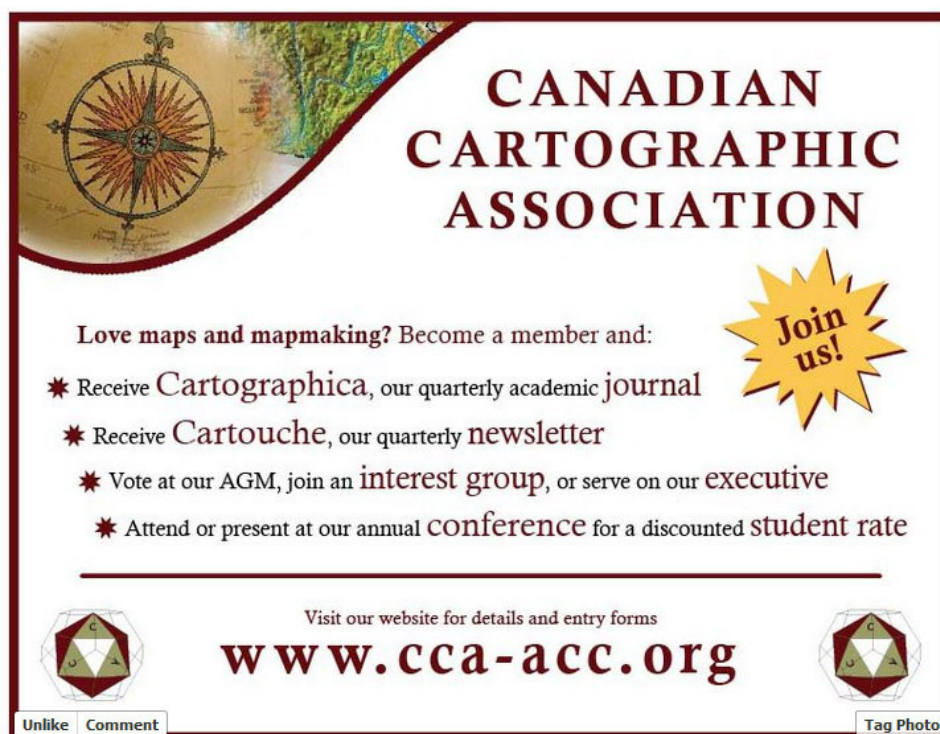

Figure 1: Image of the CCA facebook "profile picture"

In a nutshell, I recognize that the social media medium acts as an informal place for our CCA members to share news, items of interest, connect with like minds in the field of cartography, mapping, GIS and Geography, as well as to announce important events that may interest our membership. For those of you not familiar with facebook, this website acts as a broadcast messenger of information to all the "friends" and their "friends" that may be connected. It is an easy approach to extend ones reach when sharing and posting information. This reach also has the capability to stimulate new interest – and in the case of facebook – create new "friends" that would 'Like' our CCA page. Once they have connected, they are then able to link to or read items posted by our CCA membership and share with other similar communities in the virtual world.

Figure 2: CCA facebook page

Keeping this network of potential communication in mind, I decided to search for potential "friends" myself. In the process I have connected the CCA page to several Universities across Canada and the United States (those which had facebook pages), to specific Geography departments, to organizations such as the CAG, USGS, Royal Canadian Geographic Society, and Library and Archives Canada, to name a few. I decided then to pursue some of their "friends" which led me to other non-government organizations such as the Open Geospatial Consortium Inc, various cartography organizations, Great Canadian Geography Challenge, and the Canadian Geographic. The list is potentially huge!

To date the CCA is connected to the private sector and to industry through map distributers, GIS businesses, magazines, Federal Government linkages, academic institutions, related associations and our own members who have joined. This effort was not exhaustive. A simple example of sharing news is demonstrated by my posting our 2012 CCA conference as an event (see Figure 3). This is an easy way to inform our own members of events, workshops, lectures or meetings in an informal manner. It also allows viewers of our facebook page an opportunity to consider becoming a CCA member or attend the conference.

Figure 3: An "event", on the CCA facebook page, announcing the 2012 CCA/CAG conference in Waterloo

As of November, we have 34 active users and 42 who 'like' us, not to mention the views from "friends" of our users (see Figure 4). I continue to stimulate interest in our CCA page by reposting items and links of interest that are sent to me through our President and other CCA members as emails. An effortless task which has resulted in a more extensive window for communicating 'who we are' as an organization.

Figure 4: Overview of the statistics on the CCA facebook page users

I encourage those of you who have not yet ventured into the Social Media world – to give it a try. To become a member of facebook takes very little time and costs nothing. Consider it as a platform to discuss and communicate with your cartographic colleagues any items worthy of sharing. You may post questions, articles, images or photographs, links to events, or simply sending messages to your CCA colleagues.

I look forward to hearing from you about your reaction to this social media initiative.

See you on facebook!

Anna Jasiak

Anna Jasiak is Vice President of the CCA and works at Natural Resources Canada as a Geographer.
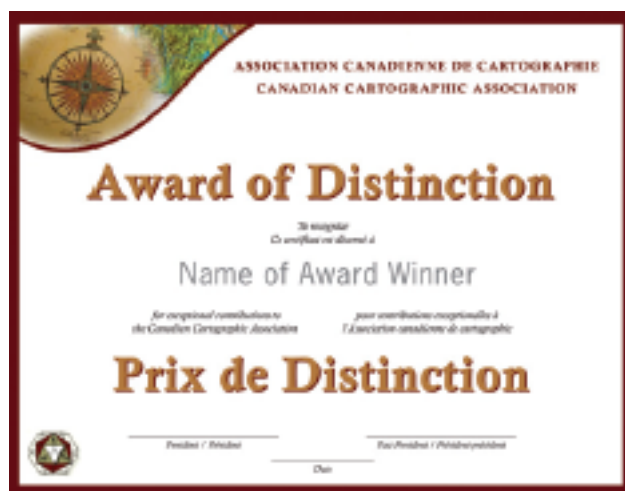
PAST PRESIDENT
Donna Williams

AWARD OF DISTINCTION:

General Call for Nominations

The CCA Awards of Distinction were initiated in 1994 to recognize individuals or groups who have made exceptional contributions in the field of cartography. The list of recipients to date is provided at: *www.cca-acc.org/awards-past.asp*   The deadline for receipt of nominations will be January 31, 2012. Nominations are sought in three categories:

I. Individuals who have or are making exceptional professional contributions to the practice of Cartography;
II. Individuals who have or are making exceptional scholarly contributions to Cartography; and
III. Individuals who have or are making exceptional contributions to the CCA.

The Committee will confer to select the award recipient from among the nominations received and determine the selection by February 28, 2012. Up to a maximum of two individuals in each of the three categories identified above may be granted awards per year. The awards may be granted posthumously. The Committee shall recommend their selection to the Executive for approval.

The Committee Chairperson will inform the award recipients shortly thereafter and will invite them or representatives to receive the award at the following Annual General Meeting (AGM) or the associated banquet. In any event, the names of the award winners will be announced at the AGM. The CCA is not able to reimburse the award winners or their representatives for their expenses in travelling to the AGM to receive the awards unless they qualify for reimbursement under the regulations of the CCA Travel Policy. The names of the award recipients and the award citations will be published in the first issue of Cartouche published after the AGM

Donna Williams is the Past President of the Canadian Cartographic Association and the Program Manager of the Atlas of Canada Program, Data Dissemination Division, Natural Resources Canada.

Ortelius – A Cartography Software with a Focus on Good Design

When teaching an introductory class in digital cartography at the University of Regina, I typically face the challenge of having to educate students in fundamental concepts of cartography and graphic design as well as software specific skills (in our case Adobe Illustrator). In this particular class, students often expect to be able to simply pick predefined map symbols, patterns and colours to create their maps in the GIS environment they are familiar with. Depending on their individual background they do not necessarily have the skills and sufficient time to design their own cartographically appealing maps while, at the same time, focus on correct techniques and methods.
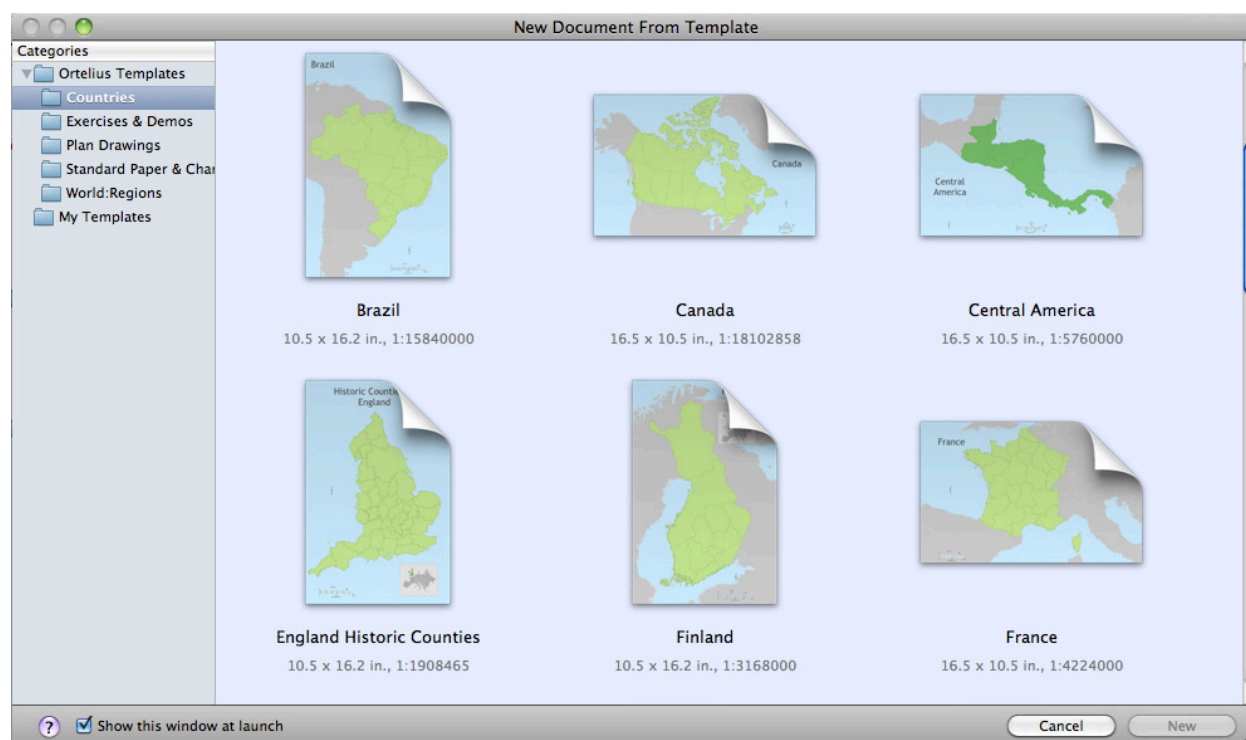

Figure 1: Sample base map templates

While working on ready-to-use symbol libraries and other design tools for my students to use in Illustrator for their assignments I recently came across newer cartographic software, called Ortelius by a US based company MapDiva (*http://www.mapdiva.com*). Named after Abraham Ortelius, a Flemish cartographer of

the 16th century, this vector-based software offers many useful tools and features that are of great value to users with little or no experience in cartography. Ortelius includes a variety of good quality base map templates (Figure 1) and a collection of consistently designed map symbols, patterns and colours (Figure 2).
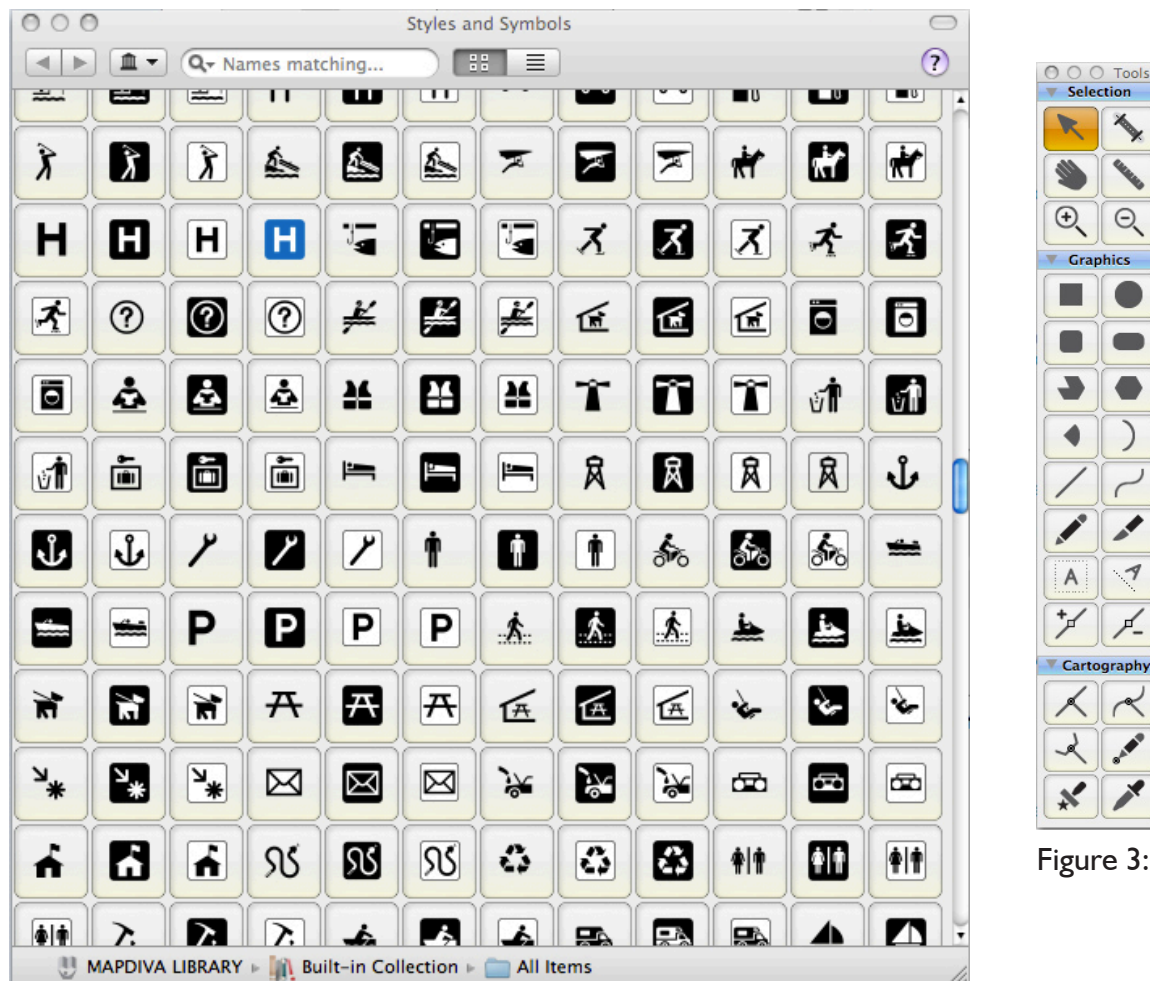

Figure 2: Sample of built-in map symbols

Figure 3: Tools

Other very neat features are the so-called cartography tools (Figure 3), which allow for the quick design of common linear elements such as intersections and over- or underpasses. Time consuming editing of such individually digitized map elements is unnecessary in this environment. For example, bridges can be incorporated easily in double lined road symbols. Other examples of very effective cartography tools are a so-called 'symbol stamp' (Figure 3, bottom left) and a 'style dropper' (Figure 3, bottom right).

These tools offer easy solutions to design maps with a consistent look. Users can also create their own symbols and build additional libraries, which can later be transferred to other map files. Ortelius also allows for import of shape files while retaining their objects' attributes. This is a clear advantage over graphics software such as Illustrator where alphanumeric data of shape files are lost when imported.

From a cartographer's point of view, the most valuable aspect of this software is the cartographic expertise that is evident in the design of many of the integrated high quality symbols and smart tools. This software allows users to design high quality maps without having to know a lot about graphic and cartographic design principles. And it is a great alternative to Google's map design, which is seen all too often nowadays. If

you are interested in new cartography software or are simply curious I recommend giving it a try. A demo version can be downloaded from the company's website.
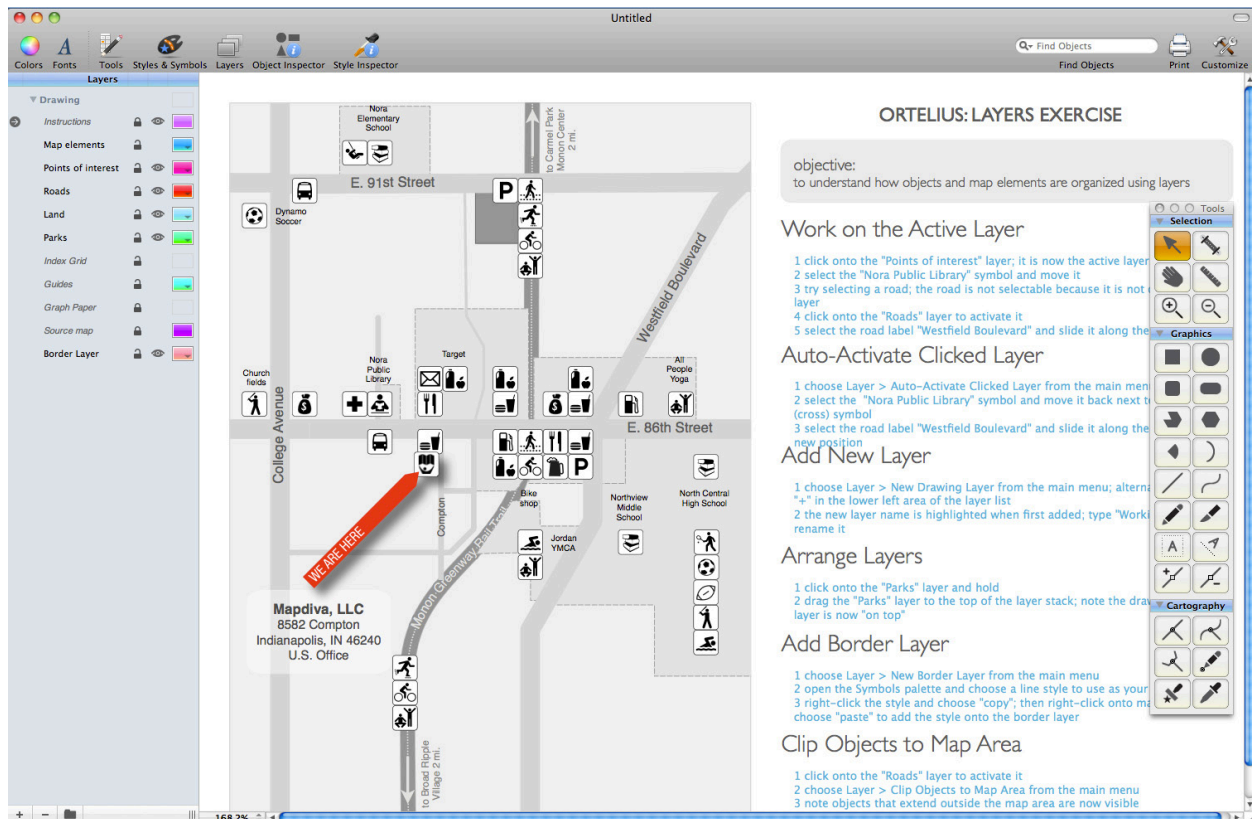
Figure 4: Sample tutorial

Overall, this software package is a very thoughtful product designed with aesthetically appealing, truly cartographic output in mind. It comes with a set of hands-on tutorials (Figure 4), which enable users to quickly get to know basic features and commands. Its downside – at least at this point – is the fact that Ortelius is only available for Apple Macintosh.

Author Julia Siemer is Chair of the Map Use and Design Interest Group. Julia is an Associate Professor of Geography, Cartography and GIS at the University of Regina.

Data Management: An Important Consideration for Implementing Web-based Map Apps

I recently had the opportunity to take a closer look at ArcGIS Server, ESRI's Web Apps software (*http://resources.arcgis.com/content/arcgisserver/10.0/about*). The software enables users of ArcGIS to quickly and easily share maps and GIS resources within or outside an organization using a web interface. The technology uses Web API's (application programming interfaces) including JavaScript, Adobe® Flex®, or Microsoft® Silverlight® to create GIS Services including Mapping, Geocode, Geodata, Globe, Image (spatial imagery), Network Analysis, Feature, Search, and Geometry Services. The relative ease of use that is now part of this technology is aptly demonstrated by a web tool (Figure 1) that allows users to compile and view their own maps online (*http://www.arcgis.com/home/webmap/viewer.html*).
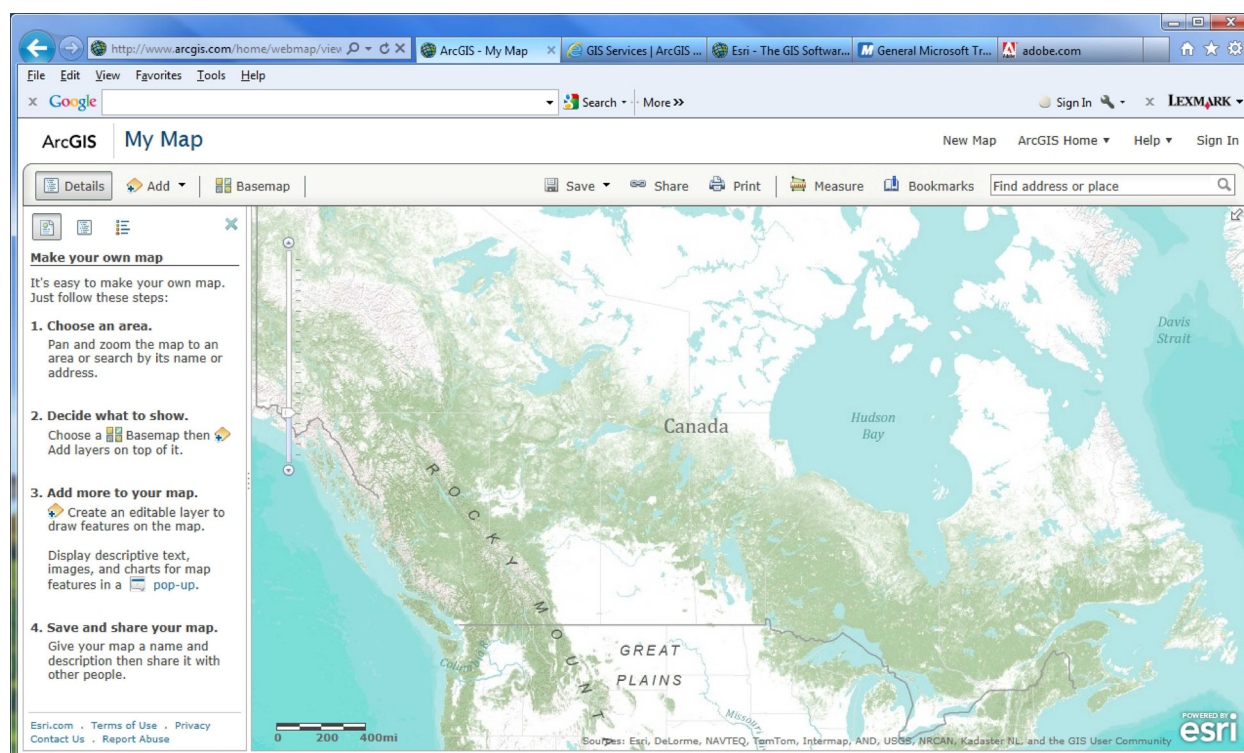

Figure 1. ESRI's My Map web application

ESRI's applications provide a comprehensive set of tools for implementing web mapping technologies, but a recent special issue of *Cartographica* (Volume 46, Issue 2) titled, Internet Mapping: Selected Papers from the 25th Conference of the International Cartographic Association, Paris, 3-8 July 2011, highlights some of the issues and research relevant to continued development of web mapping applications, often using open source data and tools. The relative ease of use in ESRI's offering, the uptake and interest in the open source community and continued development of the Open Geospatial Consortium (OGC®) standards (*http://www.opengeospatial.org/pressroom/pressreleases*) are good indications that these technologies have matured, but the increasing dynamic nature and increasing availability of spatial data still pose significant challenges for organizations interested in taking advantage of these technologies.

The issues relate to the infrastructure and related costs required to manage spatial data, coupled with the requirements many organizations have for standardizing on data that best meets their needs. These concerns are relevant to public and private sector users of spatial data and federal, provincial, and municipal government agencies that not only use spatial data but also create large volumes of spatial data that they provide to the public. In Canada, a federal perspective of available spatial data is provided by GeoConnections (*http://www.geoconnections.org/en/index.html*), a "Discovery Portal" or clearing house search interface. Although provincial and municipal agencies provide access through their own web sites (Figure 2) or an agent such as AltaLIS (*http://www.altalis.com/index.html*), GeoBase (*http://www.geobase.ca/geobase/en/index.html*) provides access to data compiled from multiple federal and provincial agencies (*http://www.geobase.ca/geobase/en/partners/index.html*) from a single source.
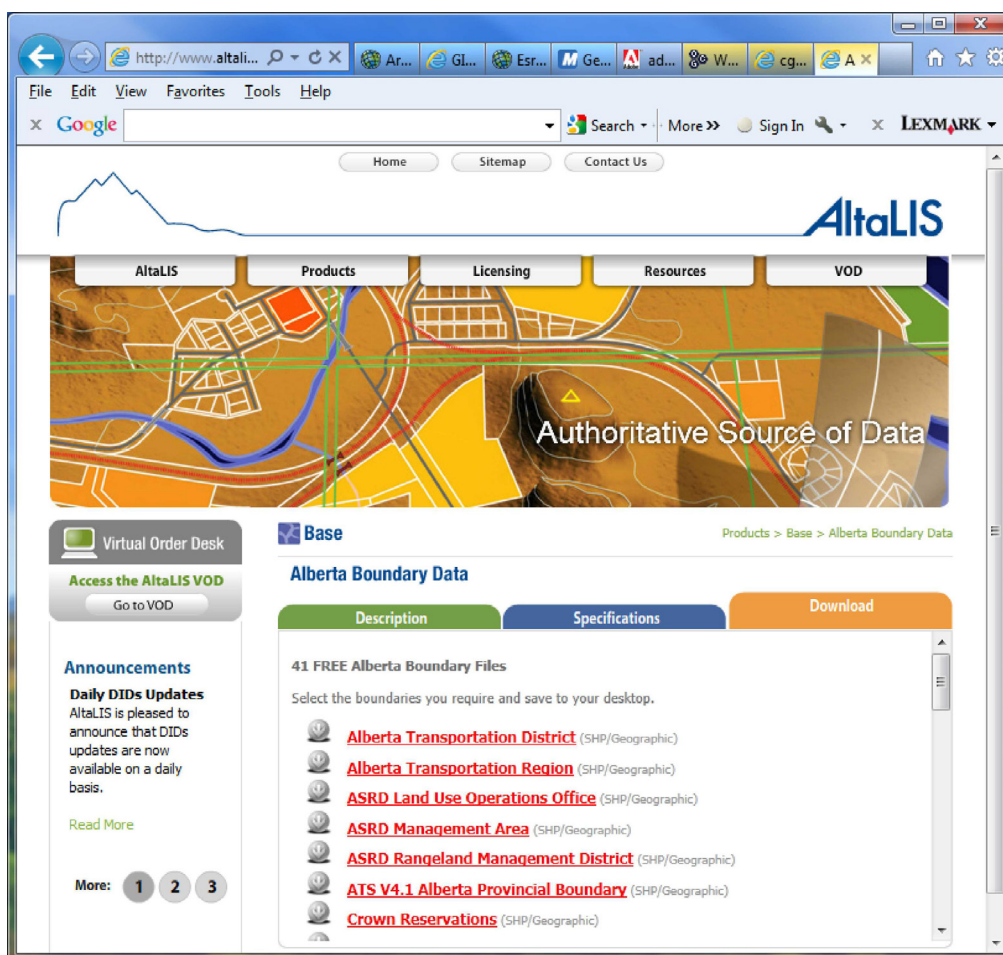
Figure 2. Boundary data available from AltaLIS

GeoGratis (*http://geogratis.cgdi.gc.ca/geogratis/en/index.html*) is yet another federal government data source that primarily provides framework data including the NTDB and CanVec topographic data. CanVec is a multi-source update of the NTDB data and represents the emerging dynamic nature of spatial data driven by improved technologies. These technologies allow for more frequent update of existing data and improve collection of new data as noted by the recent release of SPOT 4 and 5 orthoimagery (*http://www.geobase.ca/geobase/en/news/2011/imr.html*). An end-user must navigate through the data available from the different sources to decide which datasets are suitable for their applications or which datasets will best match the existing data available in an application such as ArcGIS, My Map (Figure 1). It is good to see that the data providers are recognizing the kind of discrepancies that can occur between data acquired from different sources and are now creating a greater awareness of where discrepancies are likely to occur and how they might affect use of the data (Figure 3).
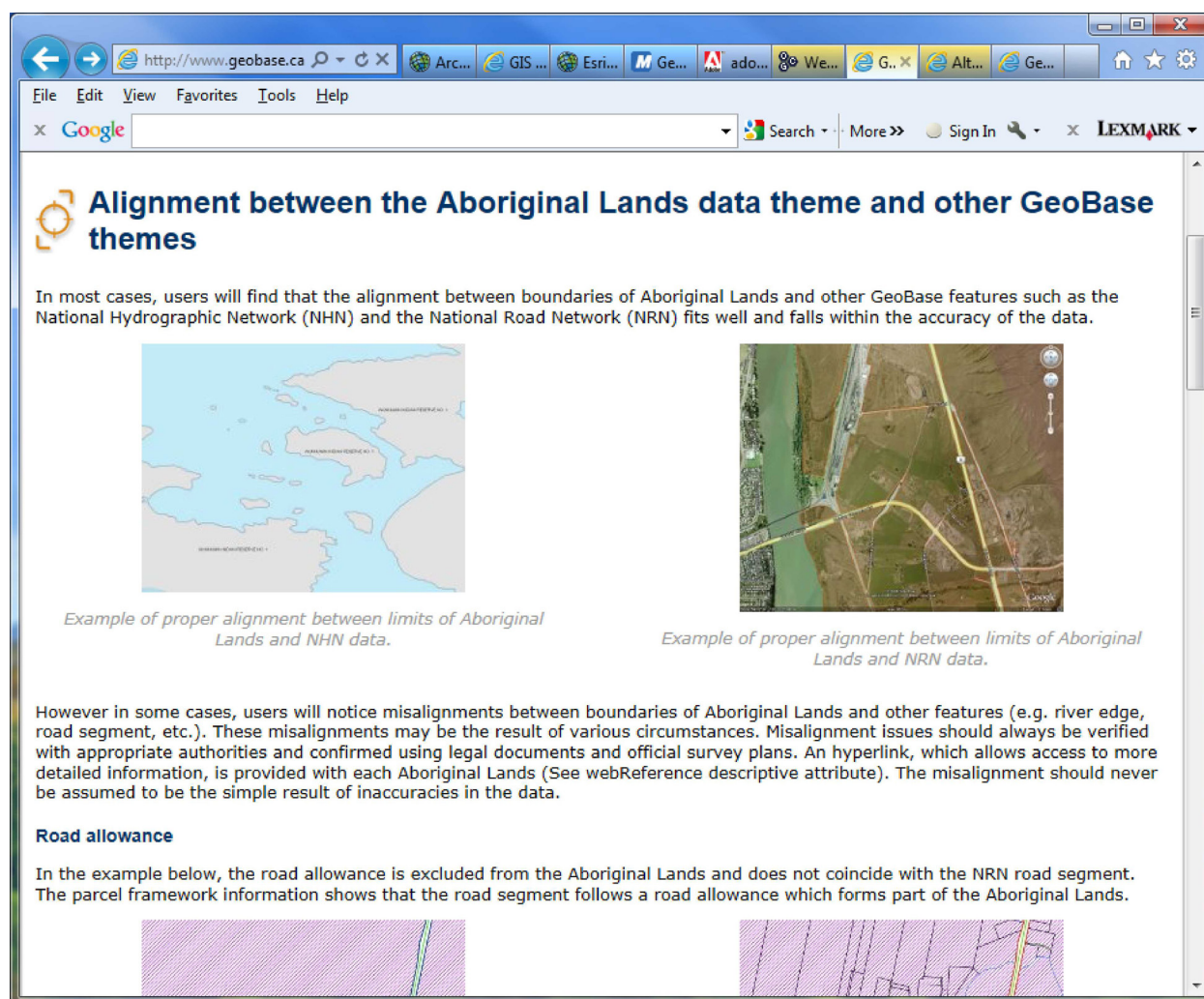
Figure 3. Notes on alignment discrepancies in GeoBase boundary themes
(*http://www.geobase.ca/geobase/en/data/admin/alta/alignment.html*)

Although the technologies that can eventually improve our ability to create, consume, and make use of spatial data have come of age, data management still represents a significant issue facing large organizations that require standardized use of spatial data. The data management issue relates to variability or reliability in the data available through web services and the discretion of end-users in the business units that

consume these services. In the event that two business units in an organization access different datasets that have associated discrepancies and the data is eventually integrated in an analysis, the results may not be satisfactory, and the organization must weigh the cost of this type of error versus the cost of managing the data internally and developing the services required by its business units. Whether or not an organization decides to access the data from an internally managed enterprise server, a Cloud service such as Amazon EC2 (*http://aws.amazon.com/ec2/faqs/*), or directly using a government web mapping service (*http://www.geobase.ca/geobase/en/wms/index.html*), the ability to leverage the technologies developed for web enabling spatial data will likely play an increasingly significant role in making use of spatial data. The important consideration to keep in mind when implementing these web technologies is the data source and how the data is managed over the lifecycle of a project or application.

ESRI, ArcGIS, and ArcGIS Server are trademarks, registered trademarks, or service marks of ESRI in the United States, the European Community, or certain other jurisdictions.

Open Geospatial Consortium OpenGIS® and OGC® are registered trademarks of OGC.

Microsoft and Silverlight are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Adobe and Flex are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Author Paul Wozniak is Chair of the Mapping Technologies and Spatial Data interest group and he is a geospatial data specialist at the Geological Survey of Canada.

STUDENT REPRESENTATIVE
Jeff Wielki

Twitter and the CCA

At the most recent CCA annual meeting I found myself a little bit lost and a little bit disconnected. I'm a big fan of technology, and for the most part that's the medium I like to use for networking. I don't want to imply I'm a fan of text messaging. That's not my favourite form of communication, but like so many tech-tools, I feel like texting has it's time and place. Certain technologies benefit me in very specific ways, and although I wasn't on board with Twitter from the start, the more I read about and heard from my peers how useful it could be, I decided I should get an account. After all, it has become a forum for crowd sourcing solutions, anthropological research, marketing, has been given credit for overthrowing dictators, and of course is useful for telling your friends what you're having for breakfast. Despite its enormous range of uses and users, I've found Twitter to be an excellent way to find and follow very specific topics of interest.

As ridiculous as this may initially sound (especially coming from a non-text messager), 140 characters is an excellent volume for conveying information. It's simple, clean, and direct (insert your own map design reference here). Partly due to its bite sized format, more and more conferences are leveraging Twitter to engage their audience, and are able to broadcast and follow the event through Twitter in some capacity. It may seem useful for someone who is not at the sessions, but it's extremely useful for people attending that specific conference. You can see what's happening, who's going to sessions, and you yourself can tweet highlights of sessions you are attending to enhance the experience of others. I have found these to be very useful updates.

The CCA annual meeting in 2011 at the University of Calgary was held in conjunction with CAG (Canadian Association of Geographers); neither organization had a Twitter account, and despite the efforts of three renegade tweeters, #CAG2011 was hardly a trending topic.

I'll be the first to admit, Twitter may not be a tool for everybody, and just because you have 100 followers, it doesn't mean 100 people are listening. So why is Twitter relevant to students of cartography or members of the CCA?

We all have different interests, but if you're reading this, you probably like maps, might like technology, and there's a good chance you will attend next year's CCA conference. I was first introduced to the usefulness of Twitter at a conference, and have looked for hashtags (topics or events you are interested in following preceded by # so they're easy to search) associated with conferences since then. If you have a Twitter account (or even if you don't) why not follow the CCA on Twitter to keep up on all things Canadian cartographic? And this year at Waterloo, follow along with the conference happenings, as they happen, maybe we can live-tweet the Urban Orienteering. It will be tough to get a golf announcer's tone right in 140 characters or less, but you'll know it when you see #golfclap. It won't be nearly enough to start a revolution, but we'll do our best to make #CAG2012 a hashtag worth following. See you there, tweeps. (That's not an insult… it's twitter slang for "twitter people")

Since it's inception in June 2011 @CdnCarto has accumulated about 100 followers and has averaged 28 tweets per month. If you'd like to announce something to the twitterverse via the CCA, feel free to tweet it or email it and @CdnCarto will spread the word.

You don't need a twitter account to see what is being tweeted by @CdnCarto:

https://twitter.com/#!/CdnCarto

Author Jeff Wielki is a Master degree student, Master MGIS, at the Department of Geography, University of Calgary.

CCA Executive / Exécutif de l'ACC

President / Président
Gerald Stark
Alberta Agric. and Rural Development
#206, 7000 113 Street,
Edmonton, Alberta T6H 5T6
E-mail: president@cca-acc.org

Vice President / Vice-présidente
Anna Jasiak
Natural Resources Canada,
Atlas of Canada, 615 Booth St.
Ottawa, Ontario K1A 0E9
E-mail: vicepresident@cca-acc.org

Past President / Présidente-sortante
Donna Williams
Natural Resources Canada,
Atlas of Canada, 615 Booth St.
Ottawa, Ontario K1A 0E9
E-mail: pastpresident@cca-acc.org

Secretary / Secrétaire
Elise Pietroniro
30 Shaughnessy Crescent,
Ottawa, Ontario K2K 2P2
E-mail: secretary@cca-acc.org

Treasurer / Trésorier
Paul Heersink,
39 Wakes Avenue
Markham, Ontario L3P 2C4
E-mail:treasurer@cca-acc.org

Interest Group Chairs / Présidents des groups d'Intérêt

GIS and Geovisualization / SIG et géovisualisation
Fiona Ryle
AbitibiBowater, Fort Frances Division
145 Third St. W.
Fort Frances, Ontario P9A 3N2
E-mail: fiona.ryle@abitibibowater.com

Cartographic Education / Éducation cartographique
Dawn Mooney
UBC Center for Health Sciences and Policy Research
#201-2206 East Mall
Vancouver, British Columbia V8V 3R4
E-mail: dmooney@chspr.ubc.ca

Map Use and Design / Conception et utilisation des cartes
Julia Siemer
Associate Professor of Geography,
Cartography and GIS
Department of Geography, University of Regina
3737 Wascana Parkway
Regina, Saskatchewan S4S 0A2
E-mail: Julia.Siemer@uregina.ca

Mapping Technologies and Spatial Data / Technologies cartographiques et données spatiales
Paul Wozniak
Geospatial Data Specialist
Geological Survey of Canada
3303 - 33 Street N.W.
Calgary, Alberta T2L 2A7
E-mail: pwozniak@NRCan.gc.ca

History of Cartography / Histoire de la cartographie
Ken Favrholdt
Department of Geography, AE 186
Thompson Rivers University
900 McGill Road, P.O. Box 3010
Kamloops, British Columbia V2C 5N3
E-mail: kfavrholdt@tru.ca

Appointees /Personnes nommées

Cartographica (submissions / proposition d'articles)
Nigel Waters
Geographic Information Science Center of Excellence;
Department of Geography and Geoinformation Science, College of Science, George Mason University
254B Research I, Fairfax Campus, MSN: 6C3
4400 University Dr. Fairfax, VA, U.S.A. 22030
Email: nwaters@gmu.edu

CNC Chair/Présidente CNC
Janet Mersey
Associate Professor
University of Guelph
Department of Geography
Guelph, Ontario N1G 2W1
E-mail: jmersey@uoguelph.ca

CCA Representative on the CNC/ Délégué de l'ACC au Comité national canadien
Roger Wheate
Faculty of Natural Resources
University of Northern British Columbia
Prince George, British Columbia V2N 4Z9
E-mail: wheate@unbc.ca

Membership Coordinator / Coordonnateur des adhésions
Penny Hutton
1303 Emo Road
Fort Frances, Ontario P9A 2V6
E-mail: membershipcoord@cca-acc.org

Cartouche Editorial Team / Équipe éditoriale de Cartouche
Diane Lacasse
Natural Resources Canada
Ottawa, Ontario K1A 0E9
E-mail: cartouche@cca-acc.org

Co-ordinator, National Map Exhibit / Coordonnateur de l'exposition cartographique nationale
Dan Duda
Queen Elizabeth II Library
Memorial University of Newfoundland
St. John's, Newfoundland and Labrador A1B 3Y1
E-mail: dduda@mun.ca

Barbara Petchenik International Children's Map Competition / Compétition internationale Barbara Petchenik de cartes dessinées par des enfants
Karen VanKerkoerle
Cartographic Section
Geography Dept., SSC, Western
London, Ontario N6A 5C2
E-mail: kvankerk@uwo.ca

Student Representative / Représentant des étudiants
Jeff Wielki
University of Calgary
Department of Geography
E-mail: jwielki@ucalgary.ca
        studentrep@cca-acc.org

ISSN 1183-2045

Canadian Cartographic Association (CCA)
L'Association Canadienne de Cartographie (ACC)

MEMBERSHIP RENEWAL / APPLICATION
RENOUVELLEMENT D'ADHESION ANNEE
2012

All fees are in Canadian dollars (no GST). Please note the additional mailing costs for members outside of Canada.

A $25 fee will be charged for any NSF cheque.

Donations may be made to the Nicholson Scholarship fund.

Tous les frais indiqués sont en dollars canadien (TPS nonincluse). Veuillez noter qu'un coût postal supplémentaire s'applique pour les membres hors-Canada.

Des frais de 25$ sont applicables pour les chèques sans fond (NSF).

Nous acceptons les dons pour le fond de la bourse Norman Nicholson.

☐ New Member / Nouveau membre

○ Regular / Réglier (1yr / année $90)

○ Retired / *à la retraite* (1yr / année $45)

○ Student/*Étudiant* (1yr / année $45)

Educational Institution/ *Nom de l'institution fréquentée*:

_____

○ Family/*Famille* (1yr / année $110)

Two names/*Nom des deux membres*:

_____

○ Corporate/*Entreprise (*1yr / année $200)

Company Name/*Dénomination sociale*:

_____

Two Representatives/*Noms des deux représentants*:

_____

○ Institutional/*Institutionnel* (1yr / année $45)

Institution Name/*Nom de l'institution*

_____

One Representative/*Nom de un représentant*:

_____

Institutional membership receives Cartouche only.
Les membres institutionnels reçoivent Cartouche seulement.

Address /*Addresse*:
Please make changes where necessary. / *S.V.P. indiquer les modifications s'il y a lieu.*

Name / Nom _____

Street / Rue _____

City / Ville _____

Prov/State _____

Country/Pays _____ Postal Code _____

E-mail/Courriel: _____

(must provide e-mail to receive Cartouche / *fournir courriel pour recevoir Cartouche*)

Tel(business))/*Tél(bureau)*: _____

Tel(home)/*Tél(domicile)*: _____

Fax/Télécopieur: _____

Please indicate relevant interest groups/
S.V.P. indiquez vos groupes d'intérêt:

☐ Map Production Technology/Technologie Cartographique

☐ Cartographic Education/Éducation Cartographique

☐ Map Use and Design/Conception et Utilisation des Cartes

☐ History of Cartography/Histoire de la Cartographie

☐ GIS and Geovisualization/SIG et Geovisualization

Additional Mailing Payment / *Coût Postal Supplémentaire*

☐ Outside Canada/*À l'extérieur du Canada* ($10)

☐ Online Access to Cartographica ($5)
   (Must supply e-mail for this option)

Donation / Don: _____

TOTAL: _____

Payment/*Paiement*:

☐ Cheque (Cheques payable to/*chèque à l'ordre de*:
   Canadian Cartographic Association/*L'Association Canadienne de Cartographie)*

○ VISA   ○ Mastercard   Exp. Date: ☐☐☐☐

Card Number: ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Please Return to /
***Veuillez expédier à*:**
Canadian Cartographic Association
c/o Paul Heersink, Treasurer
39 Wales Avenue
Markham, ON L3P 2C4
Fax: 416-446-1639
treasurer@cca-acc.org