CANADIAN CARTOGRAPHIC ASSOCIATION

27 – 29 May 2015 | Charlottetown, PEI | Hotel on Pownal

40th Annual Conference and General Meeting

"Cartography and Geovisualization"

in conjunction with the Samuel Holland 250 celebrations

Conference Program

2015 CCA

Celebrating 40 years of the CCA in the birthplace of Canada

Welcome from the CCA President

On behalf of the executive of the Canadian Cartographic Association, I would like to welcome all new and existing CCA members, academic partners, Geomatics colleagues in industry and students to our annual conference. We thank the Hotel on Pownal for providing such an excellent facility and for welcoming us during our 40th anniversary to the home of Canada's confederation.

At this time I would like to extend special thanks to the many hours of work dedicated by the conference organizing committee to ensure our conference would be a success, including event planning and conference program development. I also wish to extend my thanks to the presenters, without whom, this conference would not be possible.

All CCA conference participants are invited to our icebreaker reception at the Merchantman Pub (May 27, 7-9 pm), our PechaKucha night held at the conference venue (May 28, 7-9 pm) and our Banquet Pub Night held at PEI Brewing (May 29, 6-9pm). We also have a variety of field trip and other social events for Saturday May 30 planned for those that are still around and enjoying PEI!

Finally we wish to thank Tourism PEI (http://www.tourismpei.com/index.php3) and the organizing committee of the Samuel Holland 250 celebrations (http://www.samuelholland250.ca/) for inviting us. I encourage you to check out the festivities celebrating the completion of the survey that produced Samuel Holland's map of PEI. I look forward to talking to you all of you at this event.

Christopher D Storie
President, CCA

Organizing Committee

Conference Chair:	Christopher Storie
Technical Program:	Byron Moldofsky
	Roger Wheate
Conference Coordinator:	Claire Gosson

The Canadian Cartographic Association is an active participant in the International Map Year.

WE MAPS
INTERNATIONAL MAP YEAR 2015–2016

http://mapyear.org/
http://internationalmapyear.ca/

The International Map Year (IMY) is a worldwide celebration of maps and their unique role in our world. ***Supported by the United Nations****, IMY provides opportunities to demonstrate, follow, and get involved in the art, science and technology of making and using maps and geographic information.*

Social Program at a Glance

Wednesday May 27, 2015

- UPEI Climate Change Lab Field Trip (1:45-5:30 pm)
    - Visit and demo at UPEI climate change lab and field tour with Don Jardine (15 seat van) For more details see http://cca-acc.org/wp-content/uploads/CCA2015FieldtripWEDMAY27.pdf
    - 1.45 Depart from Hotel on Pownal (MEET IN LOBBY)
    - 2:00 to 2:20 at UPEI Climate Research Lab
    - 2:20 to 5:00 Driving to 3 locations to look at coastal erosion evidence and monitoring site
    - 5:00 to 5:30 return to UPEI in Charlottetown
- PEI Provincial Archives (6:00-7:00 pm)
    - http://www.gov.pe.ca/archives/
    - Hon. George Coles Building, 4th floor 175 Richmond Street , Charlottetown, PE
- Icebreaker at Merchantman Pub (7:00-9:00 pm)
    - ('backroom') 23 Queen Street, (corner of Queen and Water), Charlottetown PE

Thursday May 28, 2015

- Pecha Kucha Night (7:00-9:00 pm)
    - At the Hotel on Pownall (Cash Bar)
    - Fast-paced and fun presentations: 20 slides in 20 seconds each = 6 minutes 40 seconds per speaker.

Friday May 29, 2015

- Pub Night (6:00-9:00 pm) – PEI Brewing Company
    - 96 Kensington Road, Charlottetown, PE
    - Last public transit bus leaves (5:45) to get there for 6:00pm
    - Range of snacks provided, cash bar

Saturday May 30, 2015

- Farmer's Market (hours 9am-2pm)
    - 100 Belvedere Avenue, Charlottetown
- Lunch at Dave's Lobster (~12.30)
    - Founders' Hall, 6 Prince Street, Charlottetown, PE

Program

DAY 1 - THURSDAY MAY 28 **Scheduling and titles are provisional**

8:30 am **Welcome from Lieutenant-Governor of PEI and President of CCA**

	Plenary talk	
8:45-9:45	Douglas Sobey	Samuel Holland: His Work and Legacy on Prince Edward Island

Break 15 min

PRESENTATION SESSIONS Format: Each Presentation is given a maximum 20 minutes, with ~15 minutes at the end of the session for questions for all presenters

Morning Sessions

10:00-11:15 am	**Historical GIS and mapping session - part 1**	
	Peter Rukavina	Whatsmylot.com web application
	Rebecca Bartlett	Rewards and challenges of creating time-animated maps
	Gordon Campbell (student COGS)	Using Cartography to tell a Story! "Persecution Of Pilot Mackey"

Break 15 min

11:30 am-12:45	**Historical GIS and mapping session - part 2**	
	Jim Thompson	The moons of Jupiter: Holland's use of celestial navigation in mapping Prince Edward Island
	Daniel Brendle-Moczuk	Dam(n)ing BC: Utilizing historical maps and web maps to remember the dam(n)ed
	Byron Moldofsky	Canadian Historical Geographic Information Systems Partnership - Plans and possibilities

12:45-2:15 pm	**LUNCH BREAK**	

Afternoon Sessions

2:15-3:30 pm	**Webmapping session**	
	Yifei Chen and Andrea M. L. Perrella	Interactive Map to Illustrate Seat of political Party Support Level: A WebGIS Application
	Claus Rinner	About Quick-Service Mapping and Lines in the Sand
	Heather Smith (student COGS)	Building a webmap for sharing language

Break 20 min

3:50-5:10 pm	**Teaching Cartography and GIS session (short presentations, longer panel discussion)**	
	Monica Lloyd	A journey in teaching web cartography
	Emmanuel Stefanakis	Education and Training on Web Mapping and the Geospatial Web
	Claus Rinner	Recent experiences in teaching GIScience and Cartography
	Teaching Cartography and GIS Panel	Presenters panel discussion; Ada Cheung comments and moderator

	DINNER BREAK	**NOTE: CARTOGRAPHICA BOARD MEETING**

7:00 pm	**Thursday evening: PUB and PechaKucha Night; Details to be announced** **PKN presenters - still open to proposals!** Send yours to byron@geog.utoronto.ca	
	Janet Mersey	Canadian Maps to Unroll in Rio: Canada's 2015 ICA Cartographic Exhibit
	Paul Heersink	Mapping World War 2 Ships Sinkings
	Bill Crumplin	Is getting there from here really a linear process? Provincial road and tourist maps - where have they gone?
	Roger Wheate	My top 20 Canadian maps 1975-2015
	Byron Moldofsky	On the Road Again: Open Source web-mapping for theatre history

DAY 2 - FRIDAY MAY 29

	Plenary talk	
8:30-9:30 am	Martin Gamache, National Geographic	The Art of the Mappable: Cartography at National Geographic

Break 20 mins

Morning sessions

9:50-11:10 am	**Cartophilia session**	
	W.C. van den Hoonaard	Moonstruck: Exploration of the Moon by Mary Adela Blagg and K.S. Shingareva
	Trish LeBlanc	The W.K. Morrison Special Collection at the NSCC Centre of Geographic Sciences
	Ted Mackinnon	The Art of Cartography

Break 20 min

11:30 am -12:40	**Canadian Cartographic Association past and future session**	
	Joni Storie and Weldon Hiebert	Mapping the History of Cartouche
	Roger Wheate, M. Wachowicz, E. Stefanakis	Celebrating 40 years of the CCA and 50 years of Cartographica
	Christopher Storie	The Future of CCA - Options and Decisions

12:45- 2:15 pm	**LUNCH BREAK (NOTE: extended break for CCA Annual General Meeting)**

Afternoon sessions

2:15 - 3:30 pm	**GIScience and techniques session**	
	Emmanuel Stefanakis	A Data Structure for Enriched Line Simplification
	Paul Heersink	What's New from the ESRI perspective...
	Monica Wachowicz, M.T. Manrique, H.R.N. Velacoracho & M.A. Manso	Developing a synthesis process for producing schematic maps from cognitive maps
Break 15 min		
3:45-4:40 pm	**Geovisualization session**	
	Zeynep Atas	An exploratory method for an alternative narrative of housing history in Istanbul
	Alex Chen, A. Dorion, A. Fenech & N. Hedley	Climate Change Geovisualization: Methodologies, Applications and Implementation on a Local Scale

6:00 pm **Friday night: Pub night at PEI Brewing Co., Charlottetown.**

Abstracts

DAY 1 - THURSDAY MAY 28

PLENARY TALK

Douglas Sobey, (Institute of Island Studies, University of PEI)
Samuel Holland: His Work and Legacy on Prince Edward Island

2015 marks the 250th anniversary of the completion of a year-long survey of Prince Edward Island carried out by Captain Samuel Holland and his team under the direction of the British government. It culminated in the creation of a 9 foot by 13 foot map which soon became widely known in small-scale printed versions, and which was to provide the blueprint for the development of the Island in the next 100 years. The impact of the map on Prince Edward Island continues up to the present day. Holland divided the Island into its three counties and chose the sites for the three county-towns. He laid out the 67 townships, which were to become the basis for landed proprietorial estates, and so would determine the pattern of settlement. Holland's township- and county-lines, aligned along the magnetic north of 1764 (13.5 degrees west of true north), determined the orientation of many of the Island's roads, as well farm and field boundaries. Holland also assigned over 200 names to natural features around the coast and a large number of these survive as the names of important bays, rivers and points of land, while 99 present-day communities have a name that comes from Holland's survey through name-transfer.

Doug Sobey will describe the historical events behind the creation of the map and he will consider what the map reveals about the preceding French period in Island history. He will also assess the accuracy of Holland's map, and the survey's effect on the subsequent colonization and development of Prince Edward Island.

Historical GIS and Mapping Session (I)

Peter Rukavina Reinvented, Inc.
Title: WhatsMyLot.com web application

In 1765, Surveyor-General of North America Samuel Holland undertook a survey of Prince Edward Island, in the process devising a system of three counties, 67 township lots and selection of the capital city of Charlottetown.
The 250th anniversary of this survey is being commemorated in 2015, and as part of this effort, I have created WhatsMyLot.com, an open web app that allows those standing on Prince Edward Island to identify what township lot they are standing in, as well as to learn something of the history of the lot.
My goal was to increase what might be called "peripheral lot literacy" amongst Islanders and visitors to PEI, making more obvious a geographic layer that, while burned into the bureaucratic structure of the Island, is otherwise not as much in contemporary use as it once was.
The app leverages the ability of modern mobile devices to geolocate themselves, the open Leaflet JavaScript mapping framework, and jQuery Mobile app framework, and a GeoJSON representation of the Holland survey.
I will discuss the genesis and development of the app, the technical challenges faced in squeezing the lot map into a mobile app, and the mechanisms by which the app was distributed to various app marketplaces for various platforms.

Rebecca Bartlett GIS and Digital Resources Librarian, Carleton University
Rewards and challenges of creating time-animated maps

The workflow involved in developing a temporal cartographic animation will be described using the case study of a time-enabled digital map of Prince Edward Island rural general stores, 1864-1984. The data sources included multiple materials in both print and digital formats, including a one-of-a-kind hand-annotated map of PEI roadbuilding and a Microsoft Word document that contained details of nearly 1500 rural general stores extracted from historical directories. Discussion will include the friction between technical limitations and achieving the desired aesthetics and functionality in the final product, as well as the challenges of amalgamating diverse sources into a cohesive product hopefully greater than the sum of its parts.

Gordon Campbell (Student NSCC Centre of Geographic Sciences (COGS))
Using cartography to tell a story: "Persecution Of Pilot Mackey"

This project embodies the use of cartography to tell a story and to enhance the user's understanding of a sequence of events. Completed as a major school project for an external client, there is a printed map component and a digital online component. It is interesting to compare the methods and outcomes involved with the two products. The printed maps are designed for inclusion in a book, with the web map embedded in a linked website. They were created as a visual reference for the readers, to enhance their understanding of spatial relationships between places and things mentioned in the text. The book is about Harbour Pilot Francis Mackey, who was persecuted for his involvement in the events of the Halifax Explosion almost 100 years ago. The maps are built largely from manually digitized, historically accurate data, as well as a variety of written accounts and scholarly research. Upon consideration of the two approaches to visualizing the same data, one may assess the communicative effectiveness of each, in this age of increasingly easy access to online mapping (but let's not count out the classic printed map just yet).
Book Title: TBA (in editing phase currently) but working title is "Persecution Of Pilot Mackey"
Book author: Janet Maybee
Publication: September / October 2015, Nimbus Publishing, Halifax NS

Historical GIS and Mapping Session (II)

Jim Thompson Physician, Navigation instructor, Charlottetown
The moons of Jupiter: Holland's use of celestial navigation in mapping Prince Edward Island

In 1764, Samuel Holland arrived from England in a Navy ship to map major islands in the Gulf of St. Lawrence. Working largely from boats, his survey teams constructed the first precise map of Prince Edward Island, while navy crews took soundings of the surrounding waters. In order to place the PEI map on a smaller scale map of the Gulf in correct positions relative to other features, Holland needed to measure latitude and longitude of at least one point in Prince Edward Island. This talk outlines the cutting-edge celestial navigation procedures used by his teams.

Daniel Brendle-Moczuk, GeoSpatial & Social Sciences Data Librarian, University of Victoria Library
Dam(n)ing BC: Utilizing Historical maps and Web maps to Remember the Dam(n)ed

On December 16, 2014 BC government and BC Hydro bureaucrats announced they were "officially" constructing the Site C hydro-electric dam and reservoir. Despite being billed as "clean energy" the report of the Site C Joint Review Panel states there are very significant adverse impacts of hydro-electric dams and reservoirs. The report further states today's electricity consumers benefit from the dams and reservoirs of the 1960s and "do not remember the Finlay, Parsnip, and pristine Peace River...". Utilizing historic primary maps and sources, the original writings of their authors and creators, and a web map of re-constructed historic topographic maps, this paper will attempt to re-tell the historical geography of the drowned landscapes.

Byron Moldofsky Manager, GIS and Cartography Office, University of Toronto
Canadian Historical Geographic Information Systems Partnership - Plans and possibilities

Scholarship using Historical Geographic Information Systems (HGIS) involves labour-intensive data preparation before advanced spatial analysis or visualization of patterns can be achieved. However, once these data are "made spatial", and an infrastructure built for their on-line dissemination, they can be used by other scholars anywhere, over and over again. There are enormous financial and scholarly benefits to sharing historical spatial data but as yet no suitable frameworks exist in Canada to permit or facilitate the re-use of these resources. This project aims to consolidate efforts to build this framework, and bring efficiency and economies of scale to these endeavours. This presentation will outline the plans for these developments, and ask the audience for their input and participation.

Webmapping Session

Yifei Chen, MA student University of Waterloo, and **Andrea M.L. Perrella**, Wilfrid Laurier University
Interactive Map to Illustrate Seat Projections of Political Party Support Levels: A WebGIS Application

The Constitution of Canada requires federal electoral districts be reviewed and redistributed, if necessary, after each decennial (10-year) census. The last federal redistribution process was completed October, 2013. The 338 new electoral districts boundaries and names will be put into use for the next general federal election, expected to take place October, 2015. A WebGIS application is developed using the new electoral map and displays seat projections generated by the Laurier Institute for the Study of Public Opinion and Policy (LISPOP). Seat projections convert public opinion support for the major political parties into seats, based on a detailed analysis of an aggregation of polls. While such an exercise is not new to Canadian politics, the inclusion of a map that illustrates a seat projection is unique. There is expected to be great interest in such a geographical application in an election year, as journalists and analysts desire to understand implications of changes in public opinion for political parties. Voters, too, are expected to use the map as they become increasingly interested in the parties' standings in their own particular district or region. The datasets used to create the map include shape files of cartographic district boundaries and water features, collected from GeoBase, a Canadian open geospatial data website. ArcGIS software, primarily ArcMap, was used for data preprocessing. The map was published through ArcGIS Server, and using Notepad++ as the platform, coding language HTML and JavaScript were used to implement the required functions. Cartographic boundaries were generalized in order to speed up the display of the website, and water features were erased to provide a better presentation of the national land cover. The map and its 338 seats is symbolized based on LISPOP's seat projection. Two key functionalities of the interactive map are popup windows when hovering over a constituency and a dropdown menu that direct users to a particular province, a region (e.g., Southern Ontario) or any of Canada's largest cities.. Popup windows display the district's name, LISPOP's projection as to which party is currently in the lead, as well as the 2011 election result of the selected district, which is based on poll-division ballots from the 2011 general election re-aggregated according to the new 2013 Electoral Order boundaries, all openly available from Elections Canada. Compared to the previous electoral map used during the 2011 federal election, which was created using Adobe Flash, the new map is more aesthetic when presenting at the national scale and when zoomed into a specific region. In addition, the use of ArcGIS software enables fast and effective updates. During an election campaign, when seat projections may need to change three to four times a week, the map can be updated in minutes by simply replacing the existing data on the ArcGIS Server with the updated version. The final product can be viewed on http://lispop.ca/elections/fed2015.html.

Claus Rinner, Department of Geography and Environmental Studies, Ryerson University
About Quick-Service Mapping and Lines in the Sand

In March and April 2015, a heated discussion about Twitter maps and "exploratory playfulness with maps" flared up in cartography-centred blogs and on Twitter itself. The appearance of new types of maps is facilitated by innovative, cloud-based mapping services such as CartoDB and MapBox, which I propose to call "quick-service mapping". Specifically, CartoDB recently introduced a direct connection to Twitter, which is targeted at marketers and brand analysts in business as well as data journalists.

In this presentation, I will review some of the highlights of the online debate, such as a call to liberate new map-makers from cartographic "dogma"; a caution against drawing lines in the sand between trained and neo-cartographers, or old and new approaches; and a reminder about the possible real-world impacts of poorly designed maps. I will use examples of my students' Twitter maps to discuss the fundamental issues with the underlying social media data. The examples include an analysis of the spatial patterns of heat-related tweets in Toronto, a map of local food-related tweets, and student course projects about mapping brand popularity, trending topics, and local politics reflected in geo-located tweets.

The presentation concludes with suggestions on how to reconcile neo-cartography with established cartographic and data processing guidelines, including mapping at local scales, using the temporal dimension, appropriately normalizing data, and working with thematic subsets of big data. However, the use of social media data for substantial geospatial research and decision-making appears to be limited at this time.

Heather Smith (student, NSCC Centre of Geographic Sciences (COGS))
Building a Web map for Sharing Language

How to navigate the myriad interconnected options available for web mapping to create and customize a professional cartographic product for the public? Na Gàidheal agus an ainmean-àite an Albainn Nuaidh / The Gaels and their place names in Nova Scotia is a web map viewable at www.nagaidheil.ca. It was created as a student-cleint project at the Centre of Geographic Sciences for the Office of Gaelic Affairs in Nova Scotia.

The project was completed using QGIS, CartoDB, Inkscape, and the Leaflet JavaScript library. The presentation describes the technical process of building the map to an audience unfamiliar with web mapping. It is my hope to encourage more cartographers to make the leap into creating maps for the web by walking them through one of the possible paths.

The map is dynamically linked to an online dataset, which can be easily edited and updated by a non-technical client. These changes are then reflected dynamically in the webmap. Technical challenges included annotation, creating custom basemap tiles, and responsive layouts for mobile devices. The process of building the map by using various Leaflet plugins to achieve elements such as a search bar and labels will be outlined. Cartographers must learn to code to build the webmaps that they want, but this presentation aims to prove that this is not an impossible task.

Teaching Cartography and GIS Session

These will be abbreviated presentations (15 minutes) followed by a moderated panel discussion.

Monica Lloyd, Faculty, NSCC Centre of Geographic Sciences (COGS)
A Journey in Teaching Web Cartography

Trends in cartography may come and go, but at the heart of every map is a story, a theme, a message to be shared. Web cartography is a classic example of a cartographic trend. Online maps all share a message or tell a story about interesting facts, news, or events; the possibilities are endless. This is the story of how we, at COGS, updated our cartography and GIS curriculum to keep up with industry trends, and the challenges faced in teaching the necessary skills to create well-designed, interactive web maps.
Design considerations, map development tools and web mapping tips and tricks will be shared. The audience will also have an opportunity to view student web mapping projects produced at COGS in the two year Diploma in Geographic Sciences program.
Keywords: COGS, web mapping, web cartography, cartography curriculum, student work

Emmanuel Stefanakis, University of New Brunswick
Education and Training on Web Mapping and the Geospatial Web
Experiences in teaching these subjects to students at UNB will be summarized and shared.

Claus Rinner, Ryerson University
Recent experiences in teaching GIScience and Cartography
Examples from lectures, hands-on labs, and student evaluation in 'Cartographic Principles and Practice', 'Geographic Information Science', and 'GIS and Decision Support' at Ryerson will be shared.

Teaching Cartography and GIS Panel Discussion will follow these presentations. Moderator: Ada Cheung, NSCC

THURSDAY EVENING – PECHAKUCHA Night Presentations - (so far - still open for submissions!)

Janet Mersey: Canadian Maps to Unroll in Rio: Canada's 2015 ICA Cartographic Exhibit

Paul Heersink: Mapping World War 2 Ships Sinkings

Bill Crumplin: Is getting there from here really a linear process? Provincial road and tourist maps - where have they gone?

Roger Wheate, UNBC: My top 20 Canadian maps 1975-2015
I arrived in Canada in September 1975, just as the CCA was forming. I have selected my 20 favourite maps that have influenced my understanding and appreciation of Canadian cartography and the Canadian landscape. These range from personal favourites to generally recognised classics and include both topographic and thematic examples.

Byron Moldofsky: On the Road Again: Open Source web-mapping for theatre history
Four research projects initiated at the University of Toronto in the Department of English involve creating databases of historical theatrical performances. The geographical and historical settings for these range from 16th century England, through to 20th century Southern Ontario. Ten years ago, an interactive mapping add-on to two of these datasets was created using ArcIMS. This project updates these earlier webmapping tools and database connections using Drupal and Openlayers, and extends them to include the modern Southern Ontario data. In the process, a re-useable template has been created which may be adaptable to other data-rich event-based webmapping projects.

DAY 2 - FRIDAY MAY 29

PLENARY TALK

Martin Gamache, National Geographic Magazine
The Art of the Mappable: Cartography at National Geographic

National Geographic Magazine has been publishing maps within its pages since the first issue of the journal of the National Geographic Society was published in 1888. This year we celebrate the centenary of our map division, this provides us with a good opportunity to look back and examine what makes our maps special. I will discuss 5 principles that distinguish the maps currently being created for publication in National Geographic Magazine.

Cartophilia Session

Will C. van den Hoonaard, Atlantic Centre for Qualitative Research and Analysis, Saint Thomas University
Moonstruck: Explorations of the Moon by Mary Adela Blagg and Kira S. Shingareva

This paper highlights the contributions of two women pioneers in mapping the Moon, Mary Adela Blagg (1858-1944) and Kira S. Shingareva (1938-2013). It first sets out the culture and social context of their respective successful efforts to map the near side and the far side of the Moon, respectively. Throughout, the paper offers a history of lunar nomenclature that exemplifies the unique challenge that women took upon themselves to set a new course in planetary research. While some readers might not consider Mary Blagg and Kira Shingareva as "explorers" in the usual sense of the word, one could argue that both were committed to exploring a terra incognita (or rather, luna incognita). Besides, their efforts took place on the outer edges of geographical knowledge.

Trish LeBlanc NSCC Centre of Geographic Sciences (COGS), Campus Librarian, Annapolis Valley Campus
The W.K. Morrison Special Collection at the NSCC Centre of Geographic Sciences

The W. K. Morrison Special Collection at the NSCC Centre of Geographic Sciences is a print collection of historical maps, atlases, periodicals and books that is unique in the Province in terms of its focus on the early mapping of Nova Scotia and specifically the 18th Century nautical charts of J.F.W. DesBarres' Atlantic Neptune. The Collection also contains early European periodicals containing maps not present in other collections. Donated to the College by the late Walter Morrison, it spans the evolution of cartography from the earliest map in the collection from 1545 to a 1962 orbital chart carried into space by John Glenn. Library staff and COGS students started digitizing the Collection in 2014 with an aim to creating a digital archive with high resolution images and quality metadata that students would be able to use for projects, but also be accessible to the public. To that end, a great deal of research was done into best practices and standards before the digitization work began. It uses the Islandora platform (an open-source software framework originally developed by the University of Prince Edward Island's Robertson Library) with students providing the geospatial metadata. This session will review the digitization and metadata standards and procedures developed as well as highlight the repository, how students contribute to the project and plans for future work.

Ted Mackinnon CanadianGIS.com
The Art of Cartography

The evolution of the computer and the Internet has done wonders for geographic sciences and has helped more people realize the importance that the role of location plays in everyday society but in this process have we lost the more traditional artistic component of cartography?

Considering that very few Universities or Colleges in Canada offer cartography courses any more and more emphasis is placed on GIS related courses, can true cartographers really exist? In the process of making it easier and more efficient to create and use maps (now days anyone can do it), our industry has seemed to lost some key elements along the way. Many feared that GIS and online mapping would be the death of the traditional paper maps and although we do see much less paper maps these days, there is still demand for them in many cases. Perhaps the same could be said about cartography, or will events like International Map Year helping to educate people on maps and an increase in social media sharing help bring some attention back to the Art of Cartography.
This presentation will take a look at historic cartography and modern day mapping to help discover if we really have lost the more traditional artistic component of cartography.

Canadian Cartographic Association – Past and Future session

Joni Storie and Weldon Hiebert Department of Geography, University of Winnipeg, Manitoba
Mapping the history of Cartouche

2015 marks the fortieth anniversary of the Canadian Cartographic Association (CCA). This article celebrates the CCA with a historical summary of Cartouche, the Associations' newsletter. The approaches used to document the history of the newsletter from 1991 to 2014 were bibliometrics and geovisualization. Through the bibliometrics approach, three questions surfaced: (1) How did editors influence the style and content of the newsletter? (2) Does Cartouche have a sense of place? and (3) Where is the map? The quantification of the newsletter was divided into two categories, the cover page (i.e., visual type, location, text topic) and newsletter interior (i.e., page count, image types). These variables were analyzed using geovisualization tools including maps, temporal profiles, animation and summary graphics. The preliminary results show that editors may have an influence on the style of Cartouche, that Cartouche place in the world goes beyond Canada's borders, and that the association members are a very social bunch. In addition to being a fun way to celebrate the CCA and Cartouche, it is hoped that this review will spark a conversation about the future style and content of Cartouche.

Roger Wheate (University of Northern British Columbia), **Monica Wachowicz** and **Emmanuel Stefanakis** (University of New Brunswick)
Celebrating 40 years of the CCA and 50 years of Cartographica

Bernard Gutsell founded the journal that became Cartographica in 1965 and then the Canadian Cartographic Association in 1975. We trace the development of both in ten year intervals between the mid-decades, and identify the linkages between the journal and association with the immense changes in cartographic production methods and education up to the present time. These range from post-war period map production expansion and technology, the start of the digital mapping era, the impact of Geographic Information Systems, then the internet and online mapping. Today, both the association and journal are facing interesting and challenging times ahead. There are a number of questions which we need to address with regards to what we are going to publish, what is relevant and how to communicate the distinctiveness of Cartographica, along with the projected continuing role of the CCA.

Christopher Storie, University of Winnipeg
The Future of the CCA - Options and Decisions

This presentation will continue the discussion started at last year's meeting by the CCA's president about the future of the Canadian Cartographic Association. We will summarize the past roles the CCA has played, and its current roles, as identified in that discussion. The current realities of the CCA will then be illustrated. The presentation will then conclude with a summary of the future direction points made at last year's meeting. Following the presentation a brief discussion will be moderated in an effort to establish a 5-year vision of the CCA with short, medium and long-term goals being identified that will help guide the CCA.

GIScience and techniques session

Emmanuel Stefanakis, Dept. of Geodesy and Geomatics Engineering, University of New Brunswick
A Data Structure for Enriched Line Simplification

One fundamental generalization process in cartography is simplification, which applies to linear features (e.g., roads, rivers) or outlines of areas (e.g., municipal boundaries, lake banks). Simplification of a line involves removal of high density vertices, based on a given criterion (e.g., minimize line distortion by controlling the offset of the generalized line from the original; e.g., Douglas-Peucker algorithm, 1973), to reduce complexity or redundancy in a dataset. As the generalized version retains a subset of the vertices, linear features suffer from a progressive diminution in length during the simplification process (Keates, 1989).

A data structure that preserves the attributes of the original line, i.e., length and other semantic characteristics associated with that line, into the generalized version has been developed and tested. These characteristics may be expressed in either aggregated values associated to the simplified segment as a whole or array of values corresponding to multiple locations along the simplified segment. The data structure and associated algorithms have been implemented and tested with multiple synthetic and real linear features from static and dynamic domains.

Paul Heersink, ESRI Canada
What's New from the ESRI perspective

A lot has been happening in the ESRI world in the last year. This is a whirlwind tour of what's new at ESRI, specifically from a cartographic perspective. Topics to be covered include ArcGIS Pro, online smart mapping and updates to the Community Maps Program.

M. Wachowicz (University of New Brunswick), **M. T. Manrique** (Technical University of Madrid), **H.R.N. Velacoracho** (Complutense University of Madrid), **M. A. Manso** (Technical University of Madrid)
Developing a synthesis process for producing schematic maps from cognitive maps

Everything humans know of reality is conditioned by the perception of geographical features in such a way that their responses to a situation are not made based on the actual physical environment, but on the cognitive map they have of it. Cognitive maps are internal abstractions of a set of geographical features that have been learned for solving different tasks such as navigation, planning and management. In contrast, schematic maps have been designed by map makers for intentionally emphasizing certain aspects of geographical features in detriment of others by using topographically and geometrically inaccurate generalizations. However, schematic maps play a more important role in providing a unique tool for modeling the representation of cognitive knowledge, assuming that there is a correspondence between the internal abstractions (cognitive maps) and external abstractions (schematic maps). In this paper, we propose a unique approach to synthesise the knowledge represented in cognitive maps for producing "cognitive-aware" schematic maps that are needed to support the needs of people in motion in urban areas. The overall synthesis process is intentionally centered on user perception. A case study is used to illustrate the process for producing "cognitive-aware" schematic maps for tourists in Madrid, Spain. The results are promising towards the potential use of "cognitive-aware" schematic maps as an interface with Internet of Things devices, which Gartner analysts predict about 24 billion of these devices by 2020.

GEOVISUALIZATION SESSION

Zeynep Atas PhD, Istanbul Technical University
An exploratory method for an alternative narrative of housing history in Istanbul

This paper is an exploration of an heuristic method of data analysis and visualization in producing a historical narrative. Housing production in Istanbul is selected as a case to be explored through relational analysis based on data visualization, in order to propose an alternative historical narrative to the processes of housing development in Istanbul. The data on the share of state, private sector and housing cooperatives in housing development in Istanbul between 1987-2007 has been processed by Correspondence Analysis (CA), an exploratory method for cross-tabular data analysis (Greenacre and Blasius 1994). The outputs of the process are maps and a number of numerical statistics that reveal features of the data, unlike the graphic displays as pie charts or bar charts that describe the data exactly as it is (Greenacre and Blasius 1994). An analysis of such data containing information on the share of the three actors in housing development and its geographical distribution leads to a spatiotemporal analysis of public and private housing development processes in Istanbul for that specific 20 year-period. Maps create a basis for relational analysis, while revealing certain relation networks and breaks in the history of housing development that are not quite perceptible looking at the data tables only. Thus, drawing upon the discoveries from the maps, a nonlinear narrative of housing history is proposed as a collection of several thorough analyses on the discoveries, through the economic, political and social dynamics particular to this geography.

Alex Chen (MES student U of Toronto,) **Andrew Doiron** (MSc student, UPEI), **Adam Fenech** (Director, UPEI Climate Lab), **Nick Hedley** (Director, SFU Spatial Interface Research Lab)

Climate Change Geovisualization: Methodologies, Applications and Implementation on a Local Scale

It is anticipated that climate change will bring more intense storms, sea level rise and reduced sea ice coverage, which normally protects the shore from wind and waves. Coastal erosion will become more severe, threatening public and private infrastructure at great economic cost. Visualizations will be key in communicating and illustrating the potential impacts climate change will have in our society.

This presentation will present the key methodologies and effectiveness of different climate change Visualizations that currently exist in scientific and governmental literature. The **Coastal Impact Visualization Environment (CLIVE)** is an analytical geovisualization tool and an example of such a visualization. Created by researchers at the University of Prince Edward Island's (UPEI) Climate Lab, University of Toronto Climate Lab and Simon Fraser University's (SFU) Spatial Interface Research Lab, CLIVE combines 3-D geovisualization, GIS and game engine technologies for the purpose of communicating costal impact and sea level rise. Using a mixture of climatological, spatial and coastal erosion data, Clive can simulate future environmental effects.

CARTOGRAPHICA

www.utpjournals.com/cartographica

CALL FOR PAPERS

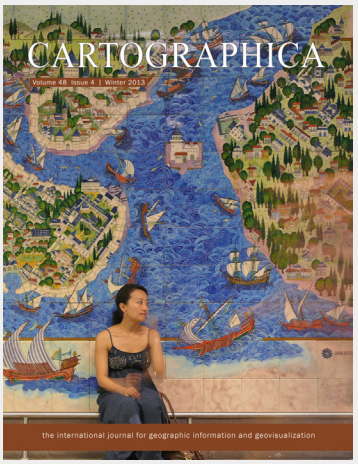
Cartographica is an international, interdisciplinary, peer-reviewed journal which publishes transformative research, education, and practice contributions to the methodological, social, political, technological, and historical aspects of cartography, mapping, GIS, surveying, geography, computer science, remote sensing and visualization. Editors-in-Chief – Monica Wachowicz (University of New Brunswick, Canada) and Emmanuel Stefanakis (University of New Brunswick, Canada). Associate-Editor - Bin Jiang (University of Gävle, Sweden)

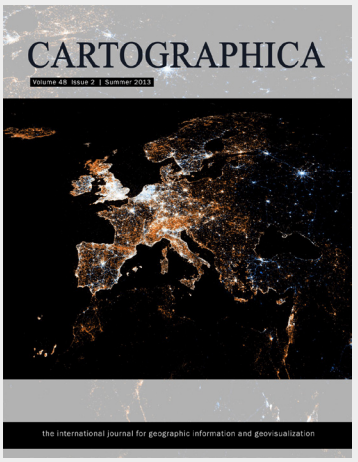
Cartographica welcomes manuscript submissions of original perspectives and innovative findings in the production, design, use, cognitive understanding, and novel applications of maps in arts, computer science, economy, engineering, geography, history, medicine, health, and surveying.

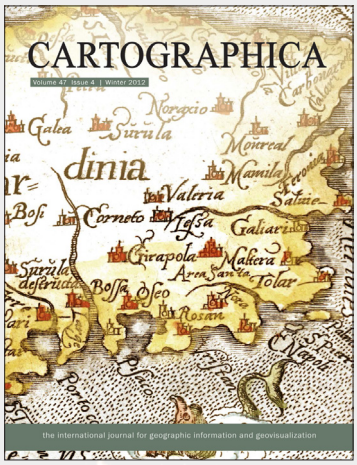
All manuscript submissions are made via PRESTO - bit.ly/cartopresto. For full submission guidelines, visit www.utpjournals/cartographica

Special Issues proposals

Special Issues proposals are encouraged to be submitted and will be reviewed by the journal editors. A special issue should be organized by the special issue editor(s) around a specific content area or methodology that may represent a large scale international development; a single-topic monograph providing an extensive look at one particular area of cartography; or a collection of manuscripts presented at a conference or workshop. The monographs and all manuscripts will be double blind peer reviewed and the special issue editor(s) is/are expected to work with authors until the special issue meets the standards of manuscripts published in the journal. Content, timeliness of the topic, thoroughness of the proposal, relevance for the journal's readership, and production schedule are among the criteria used for selection. Please email the journal editors at monicaw@unb.ca or estef@unb.ca to submit proposals for review. Submissions are accepted on a rolling basis.







5201 Dufferin Street, Toronto, ON M3H 5T8 Canada
Tel: (416) 667-7810 Fax: (416) 667-7881
journals@utpress.utoronto.ca www.utpjournals.com
www.facebook.com/utpjournals

UNIVERSITY OF TORONTO PRESS
Journals