Note from the President

Sean Simpson
URISA BC President 2008-2009

The BC Chapter of the Urban and Regional Information Systems Association, URISA BC, is pleased to bring you our first newsletter of the year. The URISA executive is comprised of GIS professionals from different sectors including municipal, private, provincial, and education who volunteer their time to coordinate seminars and promote information sharing. We are kicking off the New Year with a seminar on '**The New Dimension in GIS – 3D Analysis'** scheduled for January 22nd. This exciting seminar will cover a broad spectrum of topics in the use, creation, analysis, and future of 3D GIS. Presentations will include discussions on Lidar, Pictometry oblique imagery, the emerging business of Digital Cities, modeling a city centre in 3D, producing 3D views and fly-throughs, integrating multiple data types and viewing the interior world in three dimensions. To view the seminar program and register for the event, please visit the URISA BC website (www.urisabc.org). On June 10, 2008 URISA BC hosted a successful seminar on 'GIS and the Environment'. This well attended event focused on how GIS is being used in environmental studies, showcasing examples from the Stanley Park Restoration Project and others. Full presentation slides are available on the URISA BC website. URISA International held their annual event in New Orleans this past fall and I was fortunate enough to attend this informative and eye-opening conference. Many conference attendees stayed an extra day to volunteer their time helping to restore the Lakeview neighbourhood - one of the hardest hit areas by Hurricane Katrina. The goal of the event was to help encourage residents to return to their neighbourhood. Volunteers cleaned up some of the vacated lots and streets by picking up debris, clearing storm drains, and cutting overgrown lawns. With direction from the Beacon of Hope Resource Center it proved to be a very rewarding and successful day.

Finally, I would like to thank James Andrusiw, last year's URISA BC president and the rest of the executive for all of their hard work and dedication to making our seminars a success! Happy New Year and best wishes for the year of the Ox!

Seminar Sponsors

GIS Technology in the RCMP

The RCMP is the national police force of Canada divided into 16 divisions across the country corresponding to the provincial boundaries. British Columbia is designated E Division. The RCMP is also the BC Provincial Police and provides policing services across the province including Surrey, Burnaby, North Vancouver, Prince George, Nanaimo and Kelowna.

In the past, implementation of GIS technologies within the RCMP has been slow and on an ad-hoc basis as officers and support units have found the best tools to meet their goals. Often these tools were in some way geo-enabled. Approximately four years ago E Division established a full-time geomatics resource to manage the GIS needs of the division. The resource has been able to

build an internal geo-spatial data warehouse to support the division GIS, coordinate the geo-spatial activities of the various units and leverage resources and standards to achieve goals efficiently. Below are four examples of how GIS technologies are implemented in the RCMP:

1- Soon after establishing the division geomatics resource, the RCMP began to implement the Provincial Government mandated Police Records Information Management System (PRIME) in detachments across the province. The system is composed of a records management system (RMS), computer-aided dispatch (CAD) and mobile workstations (MDT). Both the CAD and MDT are geo-spatially enabled and require data support. This lead to the development of the E Division geo-spatial data warehouse and the digitizing of province wide police jurisdiction boundaries.

2- There are over 20 crime analysts working across the province as part of the RCMP's crime reduction initiative. The analysts use ArcGIS to build maps showing the distribution of incidents and perform a variety of spatial analysis to help determine the pattern of crime to aid in the deployment of policing resources. This is a joint initiative between the RCMP and municipal forces and has lead to significant reductions in crime across the province.

3-The 2010 Integrated Security Unit has a team of GIS support analysts to provide GIS and mapping services during the security planning and operations. A GIS enabled Common Operating Picture (COP) is being developed that will provide visualization of

ongoing events and analysis. The COP and security operations will be supported by the division server geodatabase and a team of GIS analysts.

4-The detachments and units across the province routinely require mapping support which includes the production of detachment maps, mapping of police vehicle GPS logs, and the acquisition of imagery.

For more information on the BC and National RCMP, visit the RCMP websites below:

RCMP In BC Website.
http://bc.rcmp.ca/

RCMP National Web Site.
http://www.rcmp-grc.gc.ca/

Robert Schultz is the Geomatics Coordinator for the RCMP in BC. He has worked in the GIS industry for over nine years, four with the RCMP.

Featured Web Site: COSMOS

This last fall, the City of Surrey enabled the ability for the public to download GIS data using COSMOS (City of Surrey Mapping On-line System). Surrey created this new functionality as part of their e-government initiative to offer more self-serve capabilities to the public. Using a wizard like interface, users can zoom to an area of interest, select from a large list of layers, choose their data format, and download directly to their desktop, in many cases free of charge. Check it out at http://cosmos.surrey.ca


Mapping Your Mouth?

GIS is a far cry from Dentistry, right? Perhaps not so much as 3D GIS technology is making its way to people's mouths.

In Dutch it's called Gebits Informatie Systeem (ironically GIS), it means Teeth Information System. In North America it's called the CEREC 3D Chairside Restoration System. Both are based on the same 3D GIS technology; 3D digitizing from an image, mapping tooth topography and extents and creating a model of the surface in order to custom fabricate ceramic fillings, crowns and veneers on site, while you wait. The tooth is dusted in powder and an "optical impression" is taken, that is, a very accurate photograph. The software then proceeds to build a 3D model from it.

It accounts for surrounding teeth as well, adjusting for your bite before the tooth is ever filled. This means no more biting down on that nasty red paper and drilling to adjust the top of your new filling. It also allows the dentist to interactively fine tune the filling from a model using 3D CAD software before it is sent to the milling machine for fabrication with diamond head cutters.
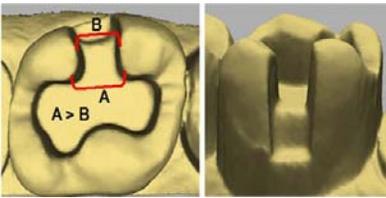
It has all the makings of GIS minus the coordinate system and it seems thanks to "GIS Dentistry" in an hour and half appointment you can have work done that used to take multiple appointments, uncomfortable moulds and imprints taken, and plaster models sent to a lab and back again. It may be expensive, but it really is mapping your mouth, GIS style.

Kelly Phillips-Watts

References:
http://www.directionsmag.com/article.php?article_id=2882&trv=1
http://en.wikipedia.org/wiki/CEREC
http://www.dazzlingteeth.com/cerec.html

2010 Air Photo Consortium

Air photos have become standard component GIS base information utilised by different levels of government and business organisations to understand the assets and resources on the ground. They are particularly useful tool to understand the changes where some of the GIS layers have not been updated. These have been increasingly used for emergency planning and response activities as well as planning related to public safety.

RCMP's Integrated Security Unit (ISU) is the lead agency in planning for security of the 2010 Olympics. Tiger Team is a multi-jurisdictional team addressing the geospatial requirements for

2010 Olympics. Tiger Team members include agencies and various levels of Government including Canada COM, RCMP, CANSOFCOM, GeoBC, PSC, CHS, NGA, City of Vancouver and ICIS representing cities and utilities across British Columbia. Tiger Team has requested GeoBC to coordinate the acquisition of air photos for the 2010 Olympic Area of Interest through creation of an Air Photo Consortium.

The 2009 regional coverage of aerial imagery will allow the security agencies specifically of the DND and RCMP to have the most up to date base information to perform a wide variety of analysis, planning, reconnaissance and response efforts related to security of 2010 Games. In addition other federal, provincial, municipal and private sector partners will be able to use these for their business requirements. Some of the advantages of the consortium include:

Common operating picture – seamless and consistent air photo coverage will first and

foremost provide a common operating picture for all agencies involved in emergency management and public safety related to 2010 Olympics and all future emergency and public safety events. A complex emergency management situation that could arise during 2010 Games requires high level of coordination between multiple agencies. All first responders, as well as the agencies that support them, must mobilize with a common understanding of the situation (view) and collaborate to produce a common operating picture required for response

Economies of Scale - There are significant economies of scale that can be attained through a consortium approach. The Consortium creates a unique partnership between multiple organizations within the Lower Mainland to acquire base information at a reduced cost. There will be unrestricted distribution rights for partners.

Collaboration and Building Relationships - Improved working relationship between stake holders on emergency management and public safety related to 2010 and beyond.

On December 10th 2008 a "Request For Proposal" document was posted for mapping and aerial photography companies to review – the goal is to solicit proposals from private industry for the collection of aerial photography and the creation of ortho photos for the extended lower mainland area. The final date for companies to submit proposals is January 19th 2009 and these will be reviewed by members of the project steering committee (GeoBC, DND, RCMP, ICIS and the City of Vancouver)

URISA
BRITISH COLUMBIA CHAPTER

Spring Newsletter 2009

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It is expected that the best proposal will be chosen by January 27th and contract negotiations with the selected vendor will start shortly after. Cost quotes from the Request for Proposal will determine the final figures, but we have put together some figures based on a set of reasonable assumptions, interest expressed thus far, and expected costs. Given that parts of the area will be licensed a number of times, we think the cost per square kilometre will be very reasonable. The acquisition cost is higher than that, but multiple sales allow the Consortium to pass along the savings.

The funding contribution level for each individual organization will be finalized through a formula that will be based on total project costs divided by total area including the production of orthophotography at 10 cm resolution in the urban areas and 50 cm in the rural areas. There will be a flat rate for the entire area irrespective of the resolution with no costing differences between the two resolution levels.

It's the intention of the Consortium to begin collecting aerial photography of the area starting in March and continuing likely through May, with the mapping work occurring throughout the summer. The first data delivery back to the consortium is due on July 31st 2009 and everything should be received by September 30th 2009. Once all data has been received from the contractor, the consortium will then start delivering the data that each partner has requested with a target of full delivery by November 2009

Over 30 organisations have expressed an interest to be part of the consortium. The Consortium has obtained commitments of funding from five agencies interested in the entire area. About two dozen other organisations including municipalities and regional districts are interested in areas within their jurisdictions. We are still actively looking for more participants for this project, and encourage your involvement.

URISA BC is proud to support this initiative. For further information on the Consortium please contact URISA BC Board members Gurdeep Singh or Jonathan Mark.

2009 Executive Changes

Thanks go out to Greg Allen for his work on URISA BC. This year we are pleased to welcome our new Executive member: Robert Schultz from the RCMP.

Our current executive committee consists of:

President – Sean Simpson, stsimpson@surrey.ca
Vice-President – Steve Scheepmaker, sscheepmaker@tol.bc.ca
Treasurer – Kathleen Kewley, Kathleen.Kewley@autodesk.com
Secretary – Derik Woo, dwoo@tol.bc.ca
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Any suggestions or comments on the newsletter please e-mail me at news@urisabc.org

Happy GISing!