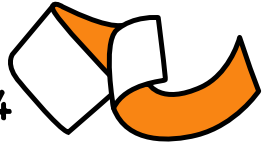


Open Source GIS Conference 2004



Second Annual
MapServer User Meeting

Conference Program

June 9-11, 2004
Carleton University
Ottawa, Ontario, Canada

Letter from the Conference Chair



Dear Colleague,

Welcome to Ottawa and what we hope will be an exciting and inspiring three days of discussions about something important to all of us – open source GIS technologies. The organizing committee has been working diligently over the past year, since the highly successful inaugural MapServer User Meeting in Minnesota, to bring you an extensive program of presentations, workshops, and discussions on both MapServer and related technologies. These opportunities will take place within the MapServer User Meeting as well as the new addition for this year – the broader Open Source GIS Conference.

But learning about open source technologies represents only a fraction of what makes these events so special. The opportunity to meet in person the developers of the technologies you use on a daily basis and share with them your experiences brings our entire community that much closer. It helps all of us to continue striving to raise the bar for the open source technologies that we share.

The Open Source approach is one that emphasizes a community approach and a spirit of collaboration. We hope that the spirit strongly evident at the first MapServer User Meeting will carry over to your experience here in Ottawa as we meet again to celebrate the continuing growth and success of open source GIS technologies.

Sincerely,

A handwritten signature in blue ink, appearing to read 'D. McIlhagga', followed by a period.

Dave McIlhagga
Chair of the OSGIS and MUM Organizing Committee
DM Solutions Group

OSGIS 2004 / MUM 2 Conference Committee

CHAIR
Dave McIlhagga
DM Solutions Group

Shawn Barnes
*Centre for Sustainable
Watersheds*

Jean-Francois Doyon
*Canada Centre for
Remote Sensing*

Girma Gebrehana
*Natural Resources
Canada*

Liz Godwin
*Agriculture and Agri-
Food Canada*

Tom Kralidis
Environment Canada

Jeff McKenna
DM Solutions Group

Tuan Nguyen
*Halogen Marketing
Group*

Debbie Pagurek
*Agriculture and Agri-
Food Canada*

Peter Pulsifer
*Geomatics and
Cartographic Research
Centre, Carleton
University*

Mark Sunohara
*Centre for Sustainable
Watersheds*

Conference Overview

This three-day conference consists of two parallel events. The first, a general Open Source GIS conference that focuses on various open source technologies and their implementations around the world, and second, the Second Annual MapServer User Meeting that focuses on the MapServer open source web mapping product and continues the tradition of an annual user group meeting.

The event opens with a joint plenary that sets the direction for both conferences. There is an Exhibitor Showcase during the first two days of the event. The showcase provides government, academia, and private organizations and associations the opportunity to demonstrate their talents and to educate participants about open source technologies. There are opportunities to mingle at evening events: a "Meet & Greet Exhibitor" reception and a fun Boat Cruise on the Ottawa River.

Open Source GIS Conference 2004

Both management issues and technical approaches are highlighted in the Open Source GIS Conference. The management seminars concentrate on how open source technologies have been adopted and implemented into organizations of all sizes and with various organizational goals and objectives. The technical seminars and workshops provide exciting opportunities to meet and hear from the technical leaders of various open source projects around the world.

Second Annual MapServer User Meeting

The Ottawa MapServer User Group is pleased to host this year's annual MapServer User Meeting. The first meeting, held in Minnesota in June 2003, was a huge success. This year's meeting continues the tradition by holding interesting workshops and sessions over a three-day period. There are many great opportunities planned for networking and meeting fellow MapServer users.

Conference Exhibitors

DM Solutions Group

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Atlas of Canada

612 Booth Street, Room 650
Ottawa, Ontario
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<http://atlas.gc.ca>

Conference Sponsors

Platinum Sponsor



DM Solutions Group

www.dmsolutions.ca

A major provider of Web and desktop mapping solutions, DM Solutions Group Inc. leads the development of open source mapping technology. DM Solutions Group works with organizations that want their custom Web mapping solutions to look and feel professional. We deliver these results as the primary developer of MapServer, MapLab, and Chameleon technologies. MapServer was originally developed by the University of Minnesota, and DM Solutions Group has added several key enhancements since 2000 to become the world's largest MapServer contributor.

Founded in 1998, DM Solutions Group is headquartered in Ottawa, Ontario, Canada and operates an office in Chicoutimi, Quebec, Canada.

Silver Sponsor



Tydac.ch

www.tydac.ch & www.mapserver.ch

TYDAC Inc of Bern, Switzerland specializes in the application of geographic information and spatial analysis in any kind of area. TYDAC has developed a broad client base and expertise in the application of GIS for forestry, engineering, telecommunications, market analysis, administration, education, and many more fields. TYDAC's customers include major retailers, communication and utility companies, government agencies, and a large number of engineering companies.

In the last five years, TYDAC developed its own product, a Web Application Development and Web Mapping Content Management System called Neapoljs, on which the swissgeo.org application is based. Neapoljs is available for ESRI ArcIMS, MapInfo MapXtreme, and UMN MapServer.

Bronze Sponsors

Camptocamp

www.camptocamp.com

GeoConnections

www.geoconnections.ca/CGDI.cfm

Media Sponsors



GIS Monitor

www.gismonitor.com



GIS User

www.gisuser.com

Conference Map



Map Legend

- Restaurants
- Credit / Change Parking
- Parking Meters
- Shuttle Stop

◆ PDF Version

Source: Carleton University website
www.carleton.ca/cu/campus/

① Tory Building (TB)

Rooms: Foyer, 208, 210, 340

- Presentations
- First Day Registration
- Information
- Coffee Breaks

④ Southam Hall (SA)

Rooms: 509, 513

- Workshop Labs

⑦ University Centre (UC)

Porter Hall

- Exhibit Area
- Breakfast Keynote

⑫ Steacie Building (SC)

- Shuttle Stop

⑮ Loeb Building (LA)

Room: 241B

- Workshop Lab
- * Loeb Cafe in Basement

⑲ Residence Commons

- * Restaurant

③① Azrieli Theatre (AT)

Rooms: 101, 102

- Opening Plenary
- MapServer User Plenary
- Closing Panel Discussion
- Closing Plenary

Speaker Information

Dr. Philip Bogden (Keynote Speaker)

Acting Director of the Southeastern Universities Research Association (SURA) Coastal Ocean Observing and Prediction (SCOOP)

Program <http://www.sura.org/>

CEO, Gulf of Maine Ocean Observing System (GoMOOS), Inc. <http://gomoos.org/>

Dr. Bogden is the CEO of GoMOOS, the Gulf of Maine Ocean Observing System. GoMOOS is a national program designed to bring hourly oceanographic data from the Gulf of Maine to all those who need it.

He is leading several projects that will augment GoMOOS activities by establishing new levels of interoperability between ocean observing systems and federal agencies. Data exchange and integration will leverage the OpenGIS Consortium web service protocols and other middleware activities in the ocean observing community.

Dr. Bogden is also Acting Director of the SURA Coastal Ocean Observing Program (SCOOP). He is directing the coastal research initiative to create a robust integrated data grid linking coastal ocean observations along the entire east coast from Maine to Florida and the Gulf of Mexico.

Stephen Lime

Minnesota Department of Natural Resources <http://www.dnr.state.mn.us/>

Stephen Lime was the original author of the MapServer application and continues to maintain much of the core functionality. Steve's real job is with the Minnesota Department of Natural Resources where he manages the Data and Application section of the MIS Bureau. He is married with two daughters. In his spare time, he is into golfing, gardening, and playing the drums (although he is not particularly adept at any of them).

Flavio Hendry

TYDAC, Inc. <http://www.tydac.ch> and <http://www.mapserver.ch>

Flavio Hendry is civil engineer by profession (M.Sc. Engineering, Zurich, dipl. Ing. ETH) and a GIS aficionado by heart. He has over fifteen years experience in the field of GIS, beginning with IBM in 1988 where he came across a Canadian GIS product called SPANS (Spatial Analysis System). So taken was he with the elegance and power of this little MS-DOS (!) GIS, which could outperform its UNIX competitors at the time, that he started up his own company in 1991 called TYDAC, using the same name as the Canadian company which developed SPANS.

TYDAC, based in Bern, Switzerland, has gone on to become a top GIS company with clients across Europe who are using TYDAC's solutions in many application areas including forestry, planning, geomarketing, environment, telecommunications, and so on. Today TYDAC builds its own solutions as well as integrating leading technology such as from MapInfo, ESRI, and Safe Software. As CEO of TYDAC, Flavio is the driving force behind TYDAC's proven ability to deliver practical solutions that stand up to the rigors of everyday work environments. He is also the head behind TYDAC's Web Mapping Application Design, a robust product that gives hundreds of users across the web simultaneous access to powerful GIS applications.

Tom Kralidis

Systems Scientist, Environment Canada <http://www.ec.gc.ca/> and <http://cise-scie.ca/>

Tom is a Systems Scientist for Environment Canada. At EC, Tom provides technical and architectural leadership in support of EC's geospatial information holdings and management through the Canadian Information System for the Environment (CISE). Tom's professional background includes key involvement in the development and integration of geospatial web standards, systems, and services for the Canadian Geospatial Data Infrastructure (CGDI) with Natural Resources Canada (NRCan). Tom is also active in the OpenGIS Consortium (OGC) community, and is lead contributor to the OGC Web Map Context Documents specification team.

Dave McIlhagga

President, DM Solutions Group Inc. <http://www.dmsolutions.ca/>

Dave McIlhagga holds the position of president with DM Solutions Group Inc., a company that in addition to leading, he also founded. Dave has positioned DM Solutions Group as the leader in open source web mapping technologies. Dave graduated from Carleton University with an Honours Bachelor's degree in Geography, concentrating in Geographic Information Processing.

Conference Plenaries

Wednesday, June 9, 2004

9:00am – 10:00am

Welcome and Opening Conference Plenary

AT 102

Dave McIlhagga – Dave McIlhagga will open the conference with a 15 minute introduction.

Dr. Philip Bogden “Mapping the Ocean with Open Source”

Were it not for Open Source, oceanographers would still be waiting to discover the world of GIS. We’ve always made maps, but two things have kept us from investing in more traditional GIS. First, we rarely had enough data to justify the investment in desktop GIS. Second, 2-D maps are only part of the story; the ocean really needs all three spatial dimensions, and time as well. The future is bright because technical advances are creating vast amounts of ocean data and the need for marine GIS. We’re hoping the second issue will disappear with new Open GIS Consortium standards and new web-based mapping tools to implement them, both of which seem to be revolutionizing the Internet.

Dave McIlhagga, DM Solutions Group &
Dr. Philip Bogden, CEO, GoMOOS and Acting Director of SURA’s SCOOP Program

10:30am – 12:00pm

MapServer User Plenary

AT 102

Stephen Lime – “MapServer: Past, Present, and Future”

The title says it all! The presentation will present a brief history of the MapServer software and will highlight development milestones of the past year. In addition, future development opportunities (some already on the drawing board and others that are just ideas) will be discussed.

Flavio Hendry – “UMN MapServer for Dummies – A Business Opportunity”

There are basically two ways to look at web mapping: from the server side as a programmer and from the client side as a user. Both map servers and applications, in over 90% of cases, dramatically lack usability. Setting up MapServer (and other map server packages) reminds one of good old assembler times ... creating applications turns out to be lengthy and tough. Some finally achieve it and put "something" online – however severely lacking in usability. And shouldn't a web-mapping application also be eye-catching? We at TYDAC felt challenged by all this, which turned out to be a great business opportunity!

Tom Kralidis – “MapServer Deployment in Environment Canada”

This presentation will discuss Environment Canada's implementation of MapServer in support of support discovery, access and use of departmental geospatial information holdings. This presentation will discuss the benefits and challenges of deploying MapServer in an organization with many regional facilities and IT infrastructures.

Stephen Lime, Minnesota Department of Natural Resources,
Flavio Hendry, TYDAC AG, &
Tom Kralidis, Environment Canada

Conference Plenaries

Friday, June 11, 2004

9:00am – 10:00am Breakfast Keynote

UC Porter Hall

“Partnerships Between Industry And Communities Through Open Source”
Friday morning you are invited to attend a breakfast sponsored by DM Solutions Group at Porter Hall. Start the day off right with a catered breakfast and learn how the open source development model has introduced an exciting phenomenon of collaboration between communities and industry, as presented by DM Solutions Group’s President.

Dave McIlhagga, DM Solutions Group

10:30am – 12:00pm OSGIS 2004 Wrap-up: Panel Discussion

AT 101

Following two extensive days of presentations and workshops on the current and future state of open source GIS, this panel will discuss the many issues that will have arisen among these three leaders in the development, use, and promotion of open source GIS technologies. Attendees will have an opportunity to ask the panel for their thoughts on the status of open source GIS and where it is headed in the future.

Dave McIlhagga, DM Solutions Group,
Paul Ramsey, Refractions Research, &
Kevin Flanders, PeopleGIS

MapServer User Meeting Closing Panel – Ask the Developer

AT 102

This is your opportunity to ask in person those questions you always wanted to ask of the people who make the software tick. Join three of the leading developers of MapServer in discussions about the current and upcoming releases of MapServer and future plans for the technology.

Stephen Lime, Minnesota Department of Natural Resources,
Frank Warmerdam, GISGuru, & *Daniel Morissette*, DM Solutions Group

1:00pm – 2:30pm Closing Conference Plenary

AT 102

The conference closing plenary will allow attendees to hear the impressions of the conference and state of open source GIS technologies from three highly prominent members of our community. With our panelists representing the development, user, and community stakeholders of open source GIS technologies, an interesting discussion is sure to emerge from questions from our audience and moderator.

Dr. Philip Bogden, CEO, GoMOOS and Acting Director of SURA’s SCOOP Program
Frank Warmerdam, Consultant,
Tyler Mitchell, Riverside Forest Products Ltd.

Conference Workshops

Wednesday, June 9, 2004

1:00pm – 2:30pm

Introduction to GRASS GIS

OSGIS
SA 513

A summary of the GRASS project, including a survey of its capabilities (with hands-on demonstration), and a brief overview of the development project and its goals.

Scott Mitchell,
Carleton University

PHP MapScript

MUM
SA 509

MapServer supports the MapScript interface, which allows popular scripting languages such as PHP, Perl, Python, and Tk/Tcl to access MapServer functionalities. This workshop will review the main classes and functions available in PHP MapScript and build a simple application to demonstrate the usage of these functions.

*Daniel Morissette &
Yewondwossen Assefa,* DM
Solutions Group

Getting Started with MapServer

MUM
LA 241B

This workshop is intended for users who are interested in learning MapServer, how it works, and what it takes to create simple web mapping applications. Participants will learn how to create a MapServer configuration file, called a mapfile, add different data layers to their web map, label objects in the map, reproject the data layers on-the-fly, and design a simple user interface to view and interact with the map. We hope that attendees will leave this workshop with enough understanding of some of the basic features of MapServer and that they would be curious as to what advanced capabilities MapServer offers.

Pericles Nacionales, University
of Minnesota &
Tyler Mitchell, Riverside Forest
Products Ltd.

3:00pm – 4:30pm

Chameleon 101

MUM
SA 509

Chameleon is a generic web mapping toolkit based on MapServer, PHP/MapScript, and PHP. This workshop is intended to give participants a brief overview of the technology as well as an introduction to creating web mapping applications with Chameleon templates.

*Jason Fournier &
Cariad McIlhagga,* DM
Solutions Group

Introduction to MapLab

MUM
LA 241B

Users will be introduced to mapfile editing with MapEdit v2.2, including a hands-on modification of an existing mapfile. Users will also add remote layers from WMS servers to the mapfile using MapBrowser. There will be a discussion on how to easily publish the mapfile. Finally, we will have a hands-on demonstration of upcoming map editing technologies currently in development.

*Jeff McKenna &
Zak James,* DM Solutions
Group

Conference Workshops

Thursday, June 10, 2004

8:30am – 10:00am

JUMP

OSGIS
SA 513

JUMP is an interactive, extensible, 100% Java platform for building spatial applications. It is based on the Open GIS Consortium geometry model for 2-D linear vector geometry. It provides rich visualization of geometric features using different kinds of symbology, colour theming, decorators, and labelling. JUMP supports editing both geometry and attributes of spatial features. Several different file formats are supported, including the ability to read GML files. The basic application provides access to simple spatial analysis functionality and geometric QA functions. As well as 2-D vector data, JUMP can display raster maps generated by Web Map Servers. JUMP is intended to be used by Java developers to provide application-specific functionality via easily installed extensions.

Martin Davis, Vivid Solutions Inc. &
Aaron Griffin, Centre for Sustainable Watersheds

Advanced Chameleon Customization

MUM
LA 241B

Chameleon is a generic web mapping toolkit based on MapServer, PHP/MapScript, and PHP. This workshop is targeted at users who are already familiar with Chameleon. It will cover advanced topics for building applications, using advanced widgets, and customizing applications.

Paul Spencer & Jason Fournier, DM Solutions Group

Building MapServer Applications with PostGIS

MUM
SA 509

PostGIS is a full spatial database, and provides native query and data manipulation much more complex than that available with Shape files. Using PostGIS as a data backend, you can build complex MapServer applications just by changing the SQL query code in your map file. This workshop will quickly cover PostGIS basics, like installation and data loading. Tuning for MapServer applications, including indexing and database optimization, will be covered. Spatial SQL and applications of SQL in the MapServer map file will be explained. Some basic knowledge of SQL is a useful prerequisite to this workshop. Note that this workshop is a reprise of the 2003 MUM PostGIS workshop.

Paul Ramsey & Chris Hodgson, Refractions Research

10:30am – 12:00pm

Introduction to PostGIS

OSGIS
LA 241B

PostGIS is a spatial database add-on for the PostgreSQL relational database server. It includes support for all the functions defined in the OpenGIS “Simple Features for SQL” specification. Using the many spatial functions in PostGIS, it is possible to do advanced spatial processing and querying entirely at the SQL command-line. This workshop will begin with spatial database basics and a short discussion of the spatial database business case. PostGIS installation, data loading using the PostGIS tools, performance tuning, spatial SQL basics, spatial SQL best practices, and spatial processing will all be covered. Some basic knowledge of SQL is a useful prerequisite to this workshop. We will demonstrate some third-party tools for accessing PostGIS and discuss some possible PostGIS data infrastructure designs.

Paul Ramsey & Chris Hodgson, Refractions Research

MapServer and OGC Web Services

MUM
SA 509

Interoperability is increasingly becoming a focus point for organizations that distribute and share data over the Internet. The OpenGIS Consortium (OGC) focuses on the development of publicly available geospatial web standards. UMN MapServer currently supports numerous OGC specifications, allowing users to publish their data services in an interoperable manner. This workshop will review the OGC specs supported in MapServer as well as provide information on implementation options and issues, as well as what the future holds for OGC support in MapServer.

Tom Kralidis, Environment Canada &
Yewondwossen Assefa, DM Solutions Group

Conference Workshops

Thursday, June 10, 2004

10:30am – 12:00pm	Accessing Vector Data through MapServer	
MUM SA 513	One of the most powerful features of MapServer is the ability to access data in a very wide variety of data formats. The large number of data formats supported makes it the only web-based mapping solution for many enterprises with mixed data environments. The traditional approach of converting all data into a single format is not required, and this mixing of different formats allows users to rapidly develop MapServer applications with their raw data. This workshop will look at many of the different types of formats and how to access them as layers in a MapServer application. The focus will be on file, directory, and database accessible vector formats and how to add these as layers in an application. Common mapping file syntax and format specific options will be reviewed. Participants are encouraged to bring their own data to load as layers in the demo application.	<i>Tyler Mitchell</i> , Riverside Forest Products Ltd. & <i>Jeff McKenna</i> , DM Solutions Group
1:00pm – 2:30pm	OpenEV Use and Customization	
OSGIS LA 241B	Participants are taken through hands-on use of OpenEV for exploration of raster and vector data, then simple image processing and data preparation steps, and followed by simple customization of the OpenEV menus with new functions. It is suggested that participants not familiar with OpenEV also sit in on the "Introduction to OpenEV" presentation prior to the workshop.	<i>Frank Warmerdam</i> , Consultant & <i>Paul Spencer</i> , DM Solutions Group
	Enhancing the User Interface with jBox and dBox	
MUM SA 509	The workshop will provide an introduction to the jBox and dBox client-side user interface extensions. These MapServer clients add rubberband zoom boxes, dynamic panning, coordinate display, and other user interface extensions. jBox is the Java applet implementation, dBox is the DHTML version.	<i>Rich Greenwood</i> , Greenwood Mapping, Inc. & <i>Steve Lime</i> , Minnesota Department of Natural Resources
3:00pm – 4:30pm	Raster Data Access in MapServer	
MUM SA 509	Participants are taken through several MapServer projects with raster data, from a simple greyscale image display, to handling transparency, offsite values, worldfiles, tile indexes and some new MapServer raster features, as time permits.	<i>Frank Warmerdam</i> , Consultant & <i>Ed McNierney</i> , TopoZone.com / Maps a la carte, Inc.
	A Big SWIG of MapScript: MapServer C Extension Modules for High Level Languages Using the Simplified Wrapper and Interface Generator	
MUM LA 241B	Not only will we learn about using the new features of MapScript, we will take a look under the hood to see how SWIG works and to clarify the development process for potential new MapScript module developers. This workshop will cover: <ul style="list-style-type: none">- How SWIG works, how to get it, write a module interface, and run it.- How MapScript is developed, tested, and documented.- The MapScript module, classes and their attributes and methods.- Developing MapScript applications- Roadmap for future developments	<i>Sean Gillies</i> , Consultant

Conference Presentations

Wednesday, June 9, 2004

(For further details, please see the *OSGIS 2004/MUM 2 Presentation Abstracts* supplement.)

10:30am – 12:00pm OSGIS TB 208	Intro to Open Source	<i>Dave McIlhagga</i>
	A Brief Survey of Open Source GIS Software	<i>Paul Ramsey</i>
	Adopting OSGIS technology in heterogeneous environments – Providing decision makers with arguments beyond cost	<i>Arnulf Christl</i>
OSGIS TB 210	Introducing Mapbuilder – A web mapping JavaScript library	<i>Mike Adair</i>
	Developing Interfaces for Open Source GIS According to Human Computer Interaction Guidelines	<i>Jens Ingensand</i>
	MapCheck production system	<i>Peter Højholt</i>
1:00pm – 2:30pm OSGIS TB 208	Watersheds InfoXchange: Leveraging Open Source GIS Software in a Non-Profit Organization	<i>Mark Sunohara</i>
	Communicating Antarctic Science Using Open Source Software	<i>Peter Pulsifer</i>
	CHiRP – An Environmental Partnership for Community Mapping in Whistler, BC	<i>Tracy Howlett</i>
MUM TB 210	MapServer Support for Web Coverage Services	<i>Steve Lime & Tom Burk</i>
	ArcIMS Emulation with IMSEMU	<i>Paul Ramsey</i>
	MapServer-OGR-OPeNDAP: An Integrated System for Uniform Access to Land and Oceanographic Datasets	<i>Tom Burk & Frank Warmerdam</i>
3:00pm – 4:30pm OSGIS TB 208	CIETmap: free GIS and epidemiology software from the CIET group, helping to build the community voice into planning	<i>Steve Mitchell</i>
	Interactive Mapping of Database Queries: Every Map Tells a Story	<i>Mishtu Banerjee & Tyler Mitchell</i>
	Have You Met MO?	<i>Kevin Flanders</i>
OSGIS TB 210	JTS Topology Suite	<i>Martin Davis</i>
	Intro to OpenEV	<i>Frank Warmerdam</i>
	Proj.4 – Handling Coordinate Systems	<i>Frank Warmerdam</i>
MUM TB 340	MapServer in the Pacific Islands – South Pacific Applied Geoscience Commission	<i>Franck Martin</i>
	Near Real Time Ocean Observations Online	<i>Charlton Purvis</i>
	Case Study: The Application of Open-Source Web-based GIS and Database Tools in the Development of an Education Information Database in Peru.	<i>Michael G. Leahy & G. Brent Hall</i>

Conference Presentations

Thursday, June 10, 2004

(For further details, please see the *OSGIS 2004/MUM 2 Presentation Abstracts* supplement.)

8:30am – 10:00am OSGIS TB 208	Best Practices for Web Mapping Design	<i>Flavio Hendry</i>
	The Atlas of Canada – A User-Centred Approach to Mapping Interface Design	<i>Eric Kramers</i>
MUM TB 210	How MapServer is Enhancing Environmental Management In Brazil: A Brief Description of Successful Applications	<i>Rafael Sperb</i>
	Perspectives from the Client Side, Integrating Backbone OS Technology with PG/PostGIS, UMN MapServer and Mapbender	<i>Arnulf Christl</i>
	Integrating MapServer with other Online Data Services	<i>Doug Renwick & Matt Perry</i>
10:30am – 12:00pm OSGIS TB 208	Enabling a Wider Web-Mapping Open Source Community	<i>Darren Redfern</i>
	Going mainstream: Geodata infrastructures with Open Source	<i>Arnulf Christl</i>
	Public Geodata License: Open source license initiative for geographical data	<i>Daniel Faivre</i>
MUM TB 210	Designing a User Interface for MapServer: The Principles behind MapClient	<i>Jan Hartmann</i>
	MapServer and SDE	<i>Howard Butler</i>
	New MapServer Raster Features	<i>Frank Warmerdam</i>
1:00pm – 2:30pm OSGIS TB 208	OGC in Open Source GIS Products	<i>Tom Kralidis, Peter Pulsifer, Jeff McKenna, & Bart van den Eijnden</i>
	Advanced MapServer Hosting Services	<i>Doug Renwick & Matt Perry</i>
MUM TB 210	e-geo.ch, an Internet GIS framework for the Swiss federal administration based on CartoWeb MapServer and PostGIS	<i>Sylvain Pasche</i>
3:00pm – 4:30pm OSGIS TB 208	Dutch Ministry of Transport, Public Works and Water Management implements OpenGIS web services with Open Source software	<i>Wim de Haas & Chiel Stroeven</i>
	Open Source Solutions for a Growing Atlas of Canada	<i>Doug O'Brien</i>
	Agency scale Geospatial Applications using Open source GIS	<i>Joel Schlagel</i>
OSGIS TB 210	Open Source Software Image Map (OSSIM) Overview	<i>Mark Lucas</i>
	Dynamic Data Access and Dynamically Generated WMS Layers – Using and Creating Open Source Technologies	<i>Xiaoyuan Geng</i>
MUM TB 340	Federal, State and Local Government applications: Interfacing Multiple Geographic Levels of Decision Support with Map Server to evaluate education quality in Peru	<i>Michael G. Leahy & G. Brent Hall</i>
	MapReport: a Corporate Performance Management tool using GIS Balanced Scorecards	<i>Wilman Rojas & Vincente Aragon</i>

Special Events

Meet and Greet Exhibitor Reception

Wednesday June 9, 2004: 4:30pm – 7:00pm

This is a great opportunity for delegates, companies, and exhibitors to become more acquainted with each other. Exhibitors will be providing special demos and information during this reception. With your pass or exhibitor ticket, two free drinks and finger food will be provided. The reception takes place in Porter Hall, UC (Exhibition room). You can purchase tickets at the door for \$20 or contact Tuan Nguyen at 612-3471.

Dinner & Drinks @ Fat Tuesday's

Wednesday June 9, 2004: 7:00pm – 10:00pm

(After the Exhibitor's Reception)

Fat Tuesday's Restaurant – 62 York St. (in the Byward Market)

After the Exhibitor Reception at the conference, come join us for dinner and drinks. The restaurant is a short taxi ride away from Carleton University and the conference hotels.

Summer Breeze Boat Cruise

Thursday June 10, 2004: 7:00pm – 11:00pm

Join us for a tour of the beautiful Ottawa River on the River Queen, a 19th century stream-driven-styled boat equipped with three cash bars and room for 340 people. Guests will be treated to live music from the local band "PUSH", who will be playing hard rocking rhythm and blues throughout the evening. Dinner will also be served for all guests. Additional tickets for this event are \$30, and will be available at the conference registration/information desk and at the event.

Busses will be leaving at 5:45pm Thursday from the Steacie Building at Carleton University to go to the cruise. One bus will also leave from Carleton at 4:45pm to go to the hotels (intersection of Cooper St and Cartier St.) for people who want to drop off belongings before the cruise. At 6:00pm there will be a pickup at the hotels/downtown (intersection of Cooper St. and Cartier St.) to go directly to the cruise. At 11:00pm, busses will be at the docks to take people back to Ottawa with stops in the Byward Market, at Cooper St. & Cartier St., and then at Carleton University.

Ottawa Beer Festival

Friday June 11, 2004: 5:00pm – 11:00pm

Saturday June 12, 2004: 2:00pm – 10:00pm

Lawn in front of Ottawa City Hall – 110 Laurier Avenue West. (one block from the conference hotels)

This is not a conference event, however it should not be missed. Outdoors, live music, food, and BEER ... enough said. Tickets are \$20 per day but include 5 free drinks. For more information, visit http://www.beerfestivals.ca/index_ott.asp

Hotels & Transportation

Hotels

Carleton University Residence

www.carleton.ca
261 Stormont Bldg., 1125 Colonel By Drive
1-866-278-8687 (toll-free)
613-520-5611

Cooper Street Hotel & Suites

111 Cooper Street
1-800-267-9378 (toll-free)
238-1331

Aristocrat Suite Hotel

141 Cooper Street
1-800-563-5634 (toll-free)
613-236-7500

Transportation

Shuttle Buses

A shuttle bus has been arranged to take hotel/downtown guests to Carleton University each morning. The bus will be at the intersection of Cooper St. and Cartier St. It is a large, articulated bus that will say "Charter" at the front.

Wednesday, June 9: – 8:00am
Thursday, June 10: – 8:00am
Friday, June 11: – 8:30am (sleep in!)

The bus will go to Carleton University and stop in front of the Steacie Building on Campus Avenue (Building 12 on your map). The conference registration is located in the Tory Building Foyer (Building 1) and is followed by the Opening Plenary in the Azrieli Theatre (Building 31).

At the end of the day, the bus will pick up hotel/downtown guests at the Steacie Building on Campus Avenue and will go back to the hotels on the following schedule:

- Wednesday, June 9 – 7:00pm, following the Exhibitor Reception
- Thursday, June 10 – boat cruise night:
 - 4:45pm – bus to hotels/downtown (one stop at Cooper and Cartier)
 - 5:45pm – buses from Carleton Steacie building to Boat cruise.
 - 6:00pm – bus pickup at hotels/downtown to boat cruise (Cooper and Cartier)
 - 11:00pm – buses at the docks at 11:00pm, stops in the Byward Market, at Cooper and Cartier, and then at Carleton University.
- Friday, June 11 – 3:00pm, following the closing plenary

Car Rental

Enterprise Rent-A-Car: Ottawa Airport – 248-0005
Hertz Downtown – 241-7681

Taxi

The following are numbers for taxi service in Ottawa:
Blueline – 238-1111
DJ – 829-9011
Capital Taxi – 744-3333

Public Transportation

www.octranspo.ca
OCTranspo – 741-4390