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A Friendly Hands-on Survey of Geospatial Services

Short Description:
Would you like to get started with free and open source software for geomatics? This workshop will get you started from the comfort of a desktop application! Offering a survey of popular open source geospatial software allowing you to plan the rest of your week based on first hand experience.

Long Description:
Would you like to get started with free and open source software for geomatics? This workshop will get you started from the comfort of a desktop application! This workshop provides a survey of popular open source geospatial software allowing you to plan the rest of your week based on first hand experience. The background of each project will be provided and you will have a chance to see how the different applications perform and what they are capable of.
The User-friendly Desktop Internet GIS (uDig) application is used to provide an introduction to geospatial concepts and ideas. The uDig application is integrated with the desktop experience with drag and drop support, features an embedded internet browser, and is available on a range of platforms. With support for open standards we will show you some of the great information available in the Climate Change Intergeneration Plugfest and give you hands on experience with the leading open source solutions.
The first leg of our tour covers popular Web Map Servers which are used to provide maps on the internet. We will discuss what public information is available, and what makes it cool.
The uptake of Web Feature Servers has not been quite as dramatic. Web Feature Servers are charged with serving up the actual data used behind the maps; public information at this level is often harder to find. We will discuss what is available today and how it can be of benefit.
For those new to the geospatial field we will cover how Features and Projections are used to draw your information onto a Map.
Finally, we will look into your enterprise needs ranging from use of PostGIS to working with simple Shapefiles. With access to more powerful data sources we will explore the range of styling and visualisation options as only an interactive desktop application can.
Plenty of time will be set aside for questions. Welcome to FOSS4G!

User Level (choose one):
Beginner User

User Prerequisites (platform, applications, development languages, etc.):
Bring your questions and curiosity.

Instructor Name:
Jody Garnett
Mark Leslie
Andrea Antonello

Instructor Coordinates:
Sydney, 33°51′35.9″S 151°12′40″E
Sydney, 33°51′35.9″S 151°12′40″E
Bolzano, Italy – 46.48227, 11.32868

Instructor Biography:
Jody Garnett is the lead uDig architect and on the steering committee for GeoTools; GeoServer and uDig. Jody Garnett is an employee of LISAsoft with a background in training and mentoring.

Mark Leslie has broad experience at LISAsoft integrating proprietary and open source solutions. An active PostGIS committer he has developed and extended software across the Open Source Geospatial stack, including UMN MapServer, PostGIS, uDig and GeoTools.

Andrea Antonello from HydroloGIS developers geospatial open source solutions for environmental analysis. Andrea is well known as the lead developer of the JGrass project and is part of the uDig project steering committee.

Instructor Experience:
Jody Garnett is an experienced mentor and trainer; teaching the uDig workshop twenty times since 2005. A well known OSGEO advocate and charter member.

Mark Leslie has been speaking at a number of conferences in North America (WALICE, SSI) and North America and recently at a PostGIS users group meeting in Sydney.

Andrea Antonello dresses smartly and is more intelligent then the other two.

Links to any material relevant to your workshop submission:
The material presented will be similar in pace to UDIG Walkthrough 1 and UDIG Walkthrough 2 making use of CCIP services. Slides will be based on a presentation made this year at GITA available here on slide share.

Feedback on a similar tutorials is available online
here http://wiki.osgeo.org/wiki/FOSS4G2007_Workshop/Lab_Evaluations as LAB 08. Workshop evaluation forms are here (example “a REAL hands-on experience) and the feedback totals are here.

Building Custom GIS Applications using MapWindow and the Microsoft .NET Framework.

Short Description:
This workshop includes hands-on instruction and practical programmer-focused guidance and demonstration on how to write Windows-based GIS software using the MapWindow standalone libraries and the MapWindow Desktop plug-in interface. Attendees will build two separate applications that serve as examples for creating custom GIS end user desktop tools following both approaches.

Long Description:
The free and open source MapWindow GIS project (www.mapwindow.org) is the largest fully Microsoft Windows based free GIS project with over 6000 downloads per month and over 10000 registered users world-wide. While many of these individuals are primarily end-users of the software, a large number (approximately 35%) are programmers working on software applications targeting the Microsoft Windows operating system. These developers use the MapWindow GIS programming libraries to add geospatial data access, geoprocessing, and visualization to their own software (which can be both proprietary and/or open source).

This workshop will be targeted to individuals interested in buildign custom GIS enabled software applications for the Windows operating system. The workshop will include hands-on instruction and practical programmer-focused guidance and demonstration on how to write standalone Windows-based GIS software using the MapWindow libraries (ActiveX and .NET components) and the VB.NET/C# languages. Attendees will also become familiarized with customizing the MapWindow GIS Desktop Application through configuration files and plug-ins as an alternative approach to deploying custom GIS software applications.

By the end of this workshop, attendees will have built two separate applications that serve as examples for creating custom GIS end user desktop tools following both ActiveX (i.e. totally standalone) and plug-in (i.e. extensions to the base MapWindow desktop application) paradigm/approach. All attendees will receive a MapWindow GIS T-Shirt and a tutorial CD that includes installers for the latest MapWindow project components.

User Level:
Beginner Developer

User Prerequisites (platform, applications, development languages, etc.):
The optimal attendee at this workshop will have 1) basic programming knowledge and experience in any language, 2) an interest in programming custom GIS tools for the Windows operating system, 3) basic knowledge of primary GIS data types and functions (i.e. an understanding of what is symbology, etc). For example, the person who needs to build software for tracking taxi cabs in Malaysia, or the person who needs to build a tool for distributing GIS linked streamflow data in Mongolia, or the person who needs to deliver a custom application for viewing flood risk zones in Ohio. All of these are problems that can be addressed by building a custom Windows application using the MapWindow building blocks.

Instructor Name:
Dan Ames and Ted Dunsford

Instructor Coordinates:
Idaho Falls, Idaho: Lat: 43.493, Lon: -112.035

Instructor Biography:
Daniel P. Ames is an associate professor of Geosciences and Civil Engineering at Idaho State University – Idaho Falls where he directs the Geospatial Software Lab and leads the open source MapWindow GIS project. Dr. Ames has been an advocate of OSGeo since its inception and has actively participated in the OSGeo Journal effort, OSGeo Education Committee, FOSS4G 2006 (workshop presentation) and FOSS4G 2008 (booth sponsor and workshop and lab presented by Dr. Ames' students). With a primary interest in developing programmer tools Windows platform, Dr. Ames' GIS software projects have included work for many U.S. agencies and international collaborators. Ted Dunsford is a PhD Candidate in Engineering and Applied Sciences at ISU and will help deliver the workshop.

Instructor Experience:
Dr. Ames teaches several GIS courses at Idaho State University and has delivered versions of this workshop at a number of venues including the ISU GIS Center, FOSS4G 2006, ISESS 2007, and elsewhere. Ted Dunsford has helped give workshops similar to this at ISESS 2007 and FOSS4G 2008. The latter in particular was very well attended and received.

Links to any material relevant to your workshop submission:
Most of the material for the workshop is drawn from the project web-site, www.mapwindow.org with specific use of tutorials located here: http://www.mapwindow.org/wiki/index.php/Tutorials

Building Web Mapping Applications with GeoExt

Short Description:
GeoExt is toolkit for building browser based mapping applications based on OpenLayers and ExtJS. Workshop participants will be guided through exercises demonstrating how to assemble GeoExt widgets together, culminating in a basic data browsing application.

Long Description:
GeoExt is a JavaScript library that provides a framework for creating web-mapping applications. As a practical introduction to GeoExt, this workshop will guide participants through composing a basic web-based data browsing application using the library.

GeoExt combines the web mapping library OpenLayers with ExtJS, "a cross-browser JavaScript library for building rich internet applications." GeoExt provides a suite of customizable widgets and data handling support that makes it easy to build applications for viewing, editing, and styling geospatial data.

After a brief introduction to the range of applications that can be built with GeoExt, participants will use basic JavaScript to build a web application that uses the following GeoExt features.

1. An application UI panel that contains a configurable map of geographical data.
2. A UI widget that displays and manages the layers of data on a map.
3. A widget for browsing WMS layers from a server and adding them to a map.
4. A panel that shows the legend of a WMS layer.
5. Easy-to-add functionality that lets users click on a feature of a WMS layer and display information about that feature in a popup.

The resulting application will allow users to browse data from the Climate Change Integration Plugfest served via WMS.

User Level (choose one):
Beginner User

User Prerequisites (platform, applications, development languages, etc.):
Basic knowledge of Javascript is required

Instructor Name:
Tim Schaub, Cédric Moullet, Sebastian Benthall, Eric Lemoine

Instructor Coordinates:
Cédric lives in Switzerland (46°32'N,06°38'E), Camptocamp SA, Lausanne.
Eric lives in France (45° 34′ N, 5° 54′ E), Camptocamp France SAS, Chambéry.
Tim lives in Montana, United States (45° 46′ N, 111° 9′ E).
Sebastian lives in New York City, United States (40° 47′ N, 73° 58′ W).

Instructor Biography:
Cédric Moullet is CTO Geospatial of Camptocamp SA and member of the GeoExt PSC.
Eric Lemoine is senior developer at Camptocamp France SAS and commiter for MapFish and serves on the PSC of OpenLayers
Tim Schaub serves on the PSC of GeoExt and OpenLayers and works as a developer for OpenGeo.
Sebastian is a developer at OpenGeo. He also works on OpenGeo's business development team.

Instructor Experience:
Eric has presented several Workshops, Tutorials and Conferences at FOSS4G.
Cédric presented several conferences at Autodesk University and GIS/SIT.
Tim has conducted workshops and presented talks at several FOSS4G, Where 2.0, and similar conferences.
Sebastian has presented at FOSS4G2008 and has been a teaching assistant for several university courses.

Links to any material relevant to your workshop submission:
www.geoext.org

Creating web GIS applications using geomajas

Short Description:
In this workshop you will create a web based GIS application using a single client-server solution, in which the problem of routing will be tackled. The main technology used in creating this web application is geomajas. Geomajas is a client-server solution specialized in editing and complex attribute relations.

Long Description:
The need for web based GIS applications keeps growing. But when presented with a new specific problem in a specific domain, how does one integrate the many technologies needed to solve the problems that present themselves? In this workshop you will create a web based GIS application using a single client-server solution, in which the problem of routing will be tackled.

The main technology used in creating this web application is geomajas. Geomajas is a client-server solution specialized in editing and complex attribute relations. Both client and server are written in Java, as geomajas is built using the Google Web Toolkit. This eliminates most, if not all, of the browser specific quirks that have been bothering web application programmers for years, which speeds up implementation time considerably. Secondly, because of the tight client-server integration in combination with the complex attribute relations, it allows for domain specific logic to be added at any point.

This workshop will start at the server side, showing you how to use Hibernate Spatial to create complex relations, using a PostgreSQL/PostGIS database. As a first step we will configure layers and their features in maps and visualize them in a browser.

Secondly we will have a look at the client. We will add a few widgets to the mix, such as a toolbar, a legend and a feature table. After that some exercises showing the advantages of working in a full Java environment, such as the event model.

Finally we will add to the application the ability of routing, using the roads of Sydney.

User Level (choose one):
Advanced Developer

User Prerequisites (platform, applications, development languages, etc.):
Users should have some familiarity with Java, Eclipse and HTML.

Instructor Name:
Pieter De Graef

Instructor Coordinates:
Ghent, Belgium
Latitude 51,3
Longitude 3,42

Instructor Biography:
Pieter De Graef works at geosparc as lead developer and community manager of the geomajas technology. With a Master degree of Numerical Computer Science and a background in 3D technology, he has extended experience of the inner workings of geographical and mathematical software technologies.

Instructor Experience:
Pieter has presented a loab, workshop and small demo at foss4g 2008. Furthermore, he has given a presentation at the CASCADOSS conference in Leuven, Belgium this februari.
He also has experience in creating and delivering 3 day courses on the subject that will be presented in this workshop.

Links to any material relevant to your workshop submission
http://www.geomajas.org/

From Geodata to Geoinformation-52North Web Processing Service (WPS) and SEXTANTE

Short Description:
This workshop demonstrates how to perform distributed and standardized geoprocessing with free and open source 52°North services on the basis of the SEXTANTE geoprocessing library. The participants will be guided to set up, configure and develop the necessary components to give answers to applied climate change challenges.

Long Description:
Background
The Open Source Software Initiative 52°North develops solutions for standardized geoprocessing on the web. Today's Spatial Data Infrastructures provides several means to find and consume data. However, the most important step is still performed with classical desktop GIS solutions: Processing Data to derive information. To fill this gap and to automate spatial related business processes-interoperable processing services have been standardized recently. The Open Geospatial Consortium (OGC) developed the Web Processing Service standard. This internet based service allows the web based execution of geoprocessing functionality. However, current WPS implementations provide only limited and simplistic geoprocessing functionality. The intrinsic complexity of geodata requires often more complex functions.
The open source SEXTANTE geoprocessing library provides over 220 geoprocessing algorithms. These algorithms allow the comprehensive processing of raster and vector data.
The open source 52North Web Processing Service implementation exposes these SEXTANTE functionalities as interoperable WPS processes to enable an easy integration into existing SDIs and thereby bridge the gap from geodata to geoinformation.

Workshop Contents
After a brief introduction to the basic concepts of standardized geoprocessing and SEXTANTE capabilities, the participants will set up a scenario installation of the different 52°North geoprocessing components. With the help of these free components, an applied geoprocessing problem dealing with climate change will be solved.
The workshop attendees might hand in one of their example data sets or processes to the workshop organizer in advance. The workshop organizer will choose one of the processes and datasets and apply them during the workshop.
Setting up the scenario implies:

- download the 52°North WPS
- install and configure the 52°North WPS
- create your own simple WPS process
- utilize existing SEXTANTE functionality in the WPS
- execute the self-made process and several SEXTANTE processes from uDig

After successful execution of the processes in uDig, it will be explained how to export the process results to GoogleEarth.
The workshop will be completed by an outlook on future topics and a discussion on capabilities and limitations of web based processing in different scenarios.

User Level (choose one):
Advanced User
Advanced Developer

User Prerequisites (platform, applications, development languages, etc.):
This section should list the knowledge or experience the users will need to ensure full enjoyment of the workshop.
Basic XML skills
Java knowledge

Instructor Name:
Bastian Schäffer

Instructor Coordinates:
Münster, Germany
Latitude 51° 56’06.00’’ N Longitude 7° 39’ 07.72’’ E

Instructor Biography:
Bastian Schaeffer works as a research associate at the Institute for Geoinformatics, University of Muenster, Germany. His research interests focus on interoperability, web based geoprocessing, workflows and security. He also heads the 52°North Geoprocessing Community and is active in several OGC working groups. Frequent presentations on these topics are given around the globe.

Instructor Experience:
During the last two FOSS4Gs in Victory and Capetown, Mr. Schaeffer gave several presentations and a workshop and a lab on related topics. Besides, as a research assistant, practical introductions to web processing services are frequently provided to students, internal and external staff as well to project partners.

Links to any material relevant to your workshop submission:
52°North general site: http://www.52north.org
52°North Geoprocessing Community site:
http://www.52north.org/wps

Slides to e.g. the workshop in capetown can be emailed on request.

FOSS4G routing with pgRouting tools, OpenStreetMap road data and GeoExt

Short Description:
pgRouting adds routing functionality to PostGIS. This introductory workshop will show you how. It gives a practical example of how to use pgRouting with OpenStreetMap road network data. It explains the steps to prepare the network data, make routing queries, assign costs to the network links and use GeoExt to show your route on in web-mapping application.

Long Description:
Navigation for road networks requires complex routing algorithms that support turn restrictions and even time-dependent attributes. pgRouting is an extendible open-source library that provides a variety of tools for shortest path search. The library in its current version is an extension of PostgreSQL and PostGIS. It's predecessor "pgDijkstra" was written by Sylvain Pasche from Camptocamp. It was then extended by Orkney (Japan) and renamed to pgRouting.

An introduction will give an overview of the project history, development team, infrastructure, productive environments and scope of use. The workshop will explain about shortest path search with pgRouting in real road networks and how the data structure is important to get faster routing results. Also you will learn about difficulties and limitations of implementing pgRouting functionality in GIS applications.

To give a practical example of how to perform shortest-path searches with pgRouting, the workshop makes use of OpenStreetMap road network data. The OpenStreetMap community creates their own road data that is freely available for a rapidly growing number of areas. We will use OpenStreetMap data of Sydney for this workshop. You will learn how to convert the data into the required format and how to calibrate the data with "cost" attributes. Furthermore we will explain the difference of the three main routing algorithms "Dijkstra", "A-Star" and "Shooting-Star".
By the end of the workshop you will have a good understanding of how to use pgRouting and how to get your network data prepared.

To learn how to get the output from rows and columns to be drawn on a map, we will then build a basic map GUI with GeoExt. We listened to the students feedback of the last year's workshop and want to guide you through the basic steps to develop a simple browser application. Our goal is to make this as easy as possible, and to show you that it is not difficult to integrate with other FOSS4G tools. For that reason we selected the GeoExt framework, which is a JavaScript library providing the groundwork for creating web-mapping applications based on OpenLayers and Ext. .

Due to time limitation installation of pgRouting is not part of this workshop. An installation with pgRouting will be provided for you as well as the OpenStreetMap sample data for Sydney.

User Level (choose one):
Advanced User

User Prerequisites (platform, applications, development languages, etc.):
You should have some familiarity with SQL (PostgreSQL, PostGIS). This workshop assumes you are comfortable with using PostgreSQL through command line. For GeoExt some knowledge of Javascript and HTML is helpful.

Instructor Name:

Claude Philipona
Daniel Kastl

Instructor Coordinates:
Lausanne (Switzerland), 46.5177 N, 6.562 E
Yokohama (Japan), 35.4259 N, 139.632 E

Instructor Biography:
Claude Philipona is co-founder of Camptocamp SA and professor at the University of Applied Sciences Western Switzerland (HES-SO).
Daniel Kastl is project leader and developer at Orkney Inc., responsible for pgRouting community and development.

Instructor Experience:
Claude and Daniel already presented the pgRouting workshops at the last two FOSS4G conferences. They also held presentation and workshop at the Japan OSGeo conferences 2008 in Osaka and Tokyo.

Links to any material relevant to your workshop submission:
The workshops of the previous conferences are available online:

- FOSS4G 2007 workshop: http://pgrouting.postlbs.org/wiki/WorkshopFOSS4G2007
- FOSS4G 2008 workshop: http://pgrouting.postlbs.org/wiki/WorkshopFOSS4G2008

Project websites:

- pgRouting: http://pgrouting.postlbs.org/
- GeoExt: http://geoext.org/trac/geoext

Getting Started with MapServer

Short Description:
This hands-on workshop is intended as an introduction to Web mapping with the University of Minnesota MapServer. The participants will go through the process of setting up a MapServer environment which includes configuring a Web server, creating a MapServer application, and adding spatial data.

Long Description:
This hands-on workshop is intended as an introduction to Web mapping with the University of Minnesota MapServer. The participants will go through the process of setting up a MapServer environment which includes configuring a Web server and creating a MapServer application. The creation of a MapServer application will include step-by-step examples of building a map file, including defining the WEB object, the LAYER objects, and assigning symbology to these objects. Once a map file is created, the participants will then go through the process of creating a web-based interface.

Important MapServer and Web mapping concepts will be discussed throughout the workshop. A significant portion of the workshop will involve accessing data from several different data types and incorporating them into a MapServer map file.

User Level (choose one):
Beginner User

User Prerequisites (platform, applications, development languages, etc.):
- Windows operating system

Instructor Name:
Primary: Jeff McKenna
Secondary: Tyler Mitchell, Pericles Nacionales

Instructor Coordinates:
Ottawa, Ontario, Canada
Latitude: 45.411879
Longitude: -75.700644

Instructor Biography:
In 2008 Jeff started his own consulting company based around FOSS4G, Gateway Geomatics, and is actively contributing to OSGeo.

- Founding and Charter member of OSGeo
- Maintainer for Maptools.org
- Developer for MS4W
- Developer for OSGeo4W
- MapServer Project Steering Committee (PSC) member
- MapServer documentation lead
- OSGeo FOSS4G conference committee chair
- FOSS4G Workshop committee member
- founding co-chair of OSGeo Ottawa Local Chapter

Instructor Experience:

Jeff, Tyler, and Perry have given the Getting Started with MapServer workshop at every FOSS4G conference event since 2004.

Links to any material relevant to your workshop submission:
FOSS4G2008 slides and data: http://conference.osgeo.org/index.php/foss4g/2008/paper/view/24
FOSS4G2007 slides and data: http://www.foss4g2007.org/workshops/W-09/
FOSS42006 slides: http://www.foss4g2006.org/contributionDisplay.py?contribId=20&sessionId=60&confId=1
OSG2005 slides and data:
http://ms.gis.umn.edu/community/conferences/MUM3/workshop/mapserver/
OSGIS2004 slides and data: http://www.omsug.ca/osgis2004/proceedings.html

Geospatial BI with FOSS: an introduction to GeoMondrian and Spatialytics

Short Description:
This workshop offers a practical introduction to two new Open Source projects in the Geospatial Business Intelligence field: GeoMondrian, a Spatial OLAP server based on Mondrian (Pentaho Analysis Services), and Spatialytics, a web-mapping client for building Geo BI solutions (dashboards and web Spatial OLAP clients) based on OpenLayers.

Long Description:
Open Source Business Intelligence (BI) software has begun permeating the market thanks to offers from companies such as Pentaho, Jaspersoft, Talend and Spago Solutions. Geospatial BI, combining GIS and BI technologies, has recently stirred marked interest for the huge potential of combining spatial analysis and map visualization with proven BI tools and techniques such as data warehousing, Online Analytical Processing (OLAP) and data mining. It is in this perspective that we, the GeoSOA Research Group at Laval University, started to work on integrating geospatial functionality in existing open source BI software. This has led to the release of GeoKettle, a spatial ETL tool based on Pentaho Data Integration (Kettle) and targeted for analytic data warehousing, and more recently GeoMondrian, a Spatial OLAP server which extends the open source Mondrian OLAP server with GIS data types and functions. On the client side, Spatialytics has been developed, initially during a Google Summer of Code project mentored by Dr. Thierry Badard under the umbrella of the OSGeo and later as part of works within our research group. Spatialytics provides a client visualization component for Spatial OLAP data, using GeoMondrian as a data source and OpenLayers as the web mapping front-end. It enables the creation of drillable, interactive thematic maps based on multidimensional OLAP cubes and can be embedded in Geo BI web applications such as geo-analytical dashboards.

This workshop proposes a practical introduction to GeoMondrian and Spatialytics. A short intro to the fundamental concepts of data warehousing and OLAP will be part of the program, so deep knowledge of this field is not required to participate. From an already constructed spatial data warehouse, the attendees will learn how to build a cube schema, which is a relational-to-multidimensional mapping used by Mondrian (and by extension GeoMondrian) for querying the relational data warehouse (in SQL) by the means of multidimensional MDX queries. The users will then have a chance to issue simple queries on this cube, with focus given on the geospatial extensions to MDX offered by GeoMondrian. Finally, the attendees will experiment with Spatialytics, for the visualization of the cube's data using its spatial dimensions. This will also demonstrate its integration in the familiar OpenLayers web mapping client, with easy to use navigation widgets for drilling across the cube's hierarchical presentation of data and configurable choice of thematic mapping styles. At the end, the attendees should have a working knowledge of GeoMondrian and Spatialytics, in order to build rich Geo BI applications.

User Level (choose one):
Advanced User

User Prerequisites (platform, applications, development languages, etc.):
- Good knowledge of SQL and Simple Feature for SQL geospatial extensions (e.g. PostGIS)
- Basic knowledge of OpenLayers
- Knowledge of data warehousing and OLAP (MDX language) is an asset but is not required

Instructor Name:
Thierry Badard and Etienne Dubé (co-instructors)

Instructor Coordinates:
GeoSOA Research Group, Laval University
Quebec City, Quebec, Canada
http://geosoa.scg.ulaval.ca
SRID=4326;POINT(46.782536 -71.270199)

Instructor Biography:
Dr. Thierry Badard is professor in geoinformatics at the Department of geomatics sciences of Laval University in Quebec City (Canada). He heads the GeoSOA research group and is a full time researcher and a member of the steering committee of the Centre for Research in Geomatics (CRG). He is also a regular researcher of the GEOIDE Network of Centres of Excellence in geomatics. He has more than 13 years of experience and he has been involved and has led national and international R & D projects of importance. His research interest deals with geospatial (Web) Services Oriented Architectures (SOA), location-based and context-aware web services, geospatial Business Intelligence and geo-analytical tools and the design of intelligent mobile applications for better decision support. He acts as a reviewer for several international journals and scientific conferences and has already an important record of scientific contributions. Dr. Thierry Badard is also involved in the geospatial free and open source community. He is administrator and project coordinator of the GeOxygene, GeoKettle, GeoMondrian and Spatialytics open source projects. He is an OSGeo charter member and acts as a member of the OSGeo conference committee. He is in charge of the free software commission in the OSGeo Francophone local chapter and he co-chairs the OSGeo Quebec local chapter. He is also a co-chair of the ICA (International Cartographic Association) working group on open source geospatial technologies. For further details, please visit http://geosoa.scg.ulaval.ca.

Etienne Dubé is a research assistant in the GeoSOA Research Group, Laval University. He holds a Masters degree in Geomatic Science and a Bachelor degree in Computer Engineering. He is the main developer in the GeoMondrian, Spatialytics and GeoKettle projects.

Instructor Experience:
In addition to many years of experience in lecturing for university coursework where he teaches (open source) geospatial technologies and GIS programming (see Teaching section at http://geosoa.scg.ulaval.ca), Dr. Thierry Badard has delivered several workshops and training sessions on geospatial software and technologies, including a workshop on the open source GeOxygene framework at FOSS4G 2006 (Lausanne, Switzerland) and training courses on open source geospatial – BI or not – technologies (PostGIS, MapServer, etc.) and on geospatial ISO and OGC standards for governmental bodies and private organizations.

Etienne Dubé has been working as a teaching and lab assistant for computer engineering and GIS programming courses since the last year of his Bachelor degree. In his young career, he delivered quite a few presentations (including a session on GeoBI at FOSS4G 2007, Victoria, Canada) and training sessions on open source geospatial – BI or not – technologies in private organizations.

Links to any material relevant to your workshop submission:
This could include things such as slides used in this or similar workshops that you have previously presented, additional biographical material, etc.

Some presentations of the GeoBI software stack developed by the GeoSOA research group:

- FOSS4G 2007: http://www.foss4g2007.org/presentations/view.php?abstract_id=192
- GeoCamp 2008: http://www.virtualvernisage.com/archives/2008_jun2_633480435734375000/?hideSocial=false&archiveID=71
- GeoCamp 2009: http://fosslc.org/drupal/node/264 .

GRASS GIS 6.4: An introduction to new features and old tricks

Short Description:
This workshop will provide a practical introduction to a modern full-featured Free GIS. Both first-time and old-time users will appreciate the brand new user-friendly interface. Users will be lead through project creation; data import; map display and interaction; powerful analysis tools; cartography; scripted automation; and interaction with other software.

Long Description:
GRASS GIS is a powerful geospatial software suite which is the result of constant user-driven improvements over the last 25 years. It is a fully featured GIS boasting over 400 powerful modules in the main distribution and consisting of approximately 1 million lines of source code. It contains specialist tools for many fields of study as well as powerful low-level generalist tools for creating custom solutions with a minimum need for coding.

The latest release of GRASS GIS features a completely new user friendly interface and cross-platform compatibility with all the major operating systems while retaining its core stability, scriptability, and scalability. Most common geodata formats are now supported.

This workshop will introduce attendees to the new friendlier software interface and many of the latest features by way of a series of common task mini-tutorials using real-world datasets. Users will learn how to set up a new GRASS project, interact with other GIS data formats and software, perform powerful spatial analyses, and create sophisticated graphics. Long-time users will rediscover overhauled modules, newly translated and consistent module interfaces, and new options for automated processing of bulk datasets.

Venturous users will learn how to find and add custom Add-On modules provided by the GRASS user community. Power users will be interested to learn how GRASS is now able to take full advantage of the Python scripting language by way of a standard Python toolkit and a "SWIG" interface to the wealth of internal GIS library functions previously only available to C programmers.

Interaction and collaboration with other common FOSS GIS software such as Quantum GIS, GDAL, PROJ.4, GMT, and R-GeoStatistics will be discussed. At the end of the workshop there will be an open forum where users will be encouraged to share their needs and an attempt will be made to craft custom strategies and solutions on-the-fly in demonstration of the extreme flexibility and speed of development available with FOSS.

Finally a brief history of GRASS and a synopsis of where GRASS 7 development is headed will be discussed.

User Level (choose one):
Beginner User

User Prerequisites (platform, applications, development languages, etc.):
Previous experience with analysis focused GIS software; familiarity with map projections; and a well rounded knowledge of computer systems is recommended.

Instructor Name:
Hamish Bowman

Instructor Coordinates:
Dunedin, New Zealand

Instructor Biography:
Hamish is a leading member of the GRASS development team and a foundation member of the

GRASS project steering committee. He is the author of several key modules and at some point or another has worked on most parts of the code base. In his professional capacity he is a researcher at Otago University specializing in habitat mapping and fjord oceanography. Prior to his academic career he trained as a scientific instrument and electronics field engineer specializing in shipboard navigation and autonomous satellite transmitting GPS buoys. Besides GRASS he contributes to a number of FOSS geospatial projects and is an avid sailor.

Instructor Experience:
My most common teaching role at the university has been one-on-one mentoring of graduate students unfamiliar with GIS in aspects relating to the spatial components of their research. I am comfortable talking to large groups and am given to a very patient nature. I have given many presentations about applied scientific GIS projects both at university seminars and national conferences. Both the NZ Department of Conservation and the NZ Ministry of Fisheries have awarded me (on separate occasions) best presentation prizes at meetings of the NZ Marine Sciences Society (hundreds of delegates). I am the author of two tutorial guides published in the GRASS project Newsletter* volumes 1 and 3 and numerous tutorials of the GRASS Wiki and module help page examples.
[*] GRASSNews has now been merged into the OSGeo Journal

Links to any material relevant to your workshop submission:
It is planned that the workshop will be a revamp of earlier FOSS4G conference GRASS workshops given by Markus Neteler and Helena Mitasova. The earlier coursework developed for those workshops will be retooled for the latest version of GRASS and new content added as appropriate to demonstrate new functionality. Links to prior workshop PDF material is available upon request (courtesy Markus Neteler).

GRASSNews articles: http://grass.osgeo.org/newsletter/
Wiki tutorials: (I'm the author of many of these)
http://grass.osgeo.org/wiki/GRASS_Documents#Help_with_tasks
http://grass.osgeo.org/wiki/MODIS
http://grass.osgeo.org/wiki/LIDAR#Micro-tutorial

How to Cope with GeoSpatial – Intro to GeoTools for the Java Developer

Short Description:
Are you new to GeoSpatial? Are you not cool enough to be a Neo-Geographer AJAX empowered meta tagging Ruby wunderkind ? Does scientific mumbo-jumbo make your head hurt? Are you (gasp!) just out to get the job done? Come to this workshop and go home happy.

Long Description:
Are you new to GeoSpatial? Are you not cool enough to be a Neo-Geographer AJAX empowered meta tagging Ruby wunderkind ? Does scientific mumbo-jumbo make your head hurt? Are you (gasp!) just out to get the job done? Come to this work shop and go home happy.

This workshop offers a survey of the Java GIS landscape; if you are new to the GeoSpatial scene it offers an introduction to current concepts and projects, and how to avoid common pitfalls.

We will start with something nice, fun and visual - practicing fetching content from Web Map Servers on the Internet using the GeoTools toolkit. We can talk about what is going on, but the focus is on you and the code you need to get the job done.

Moving on, we will explore what maps are made of, sugar and spice and all things nice? Would you believe they are made of Features (literally things you can draw on a Map), Geometry (what to actually draw) and details like coordinate reference systems, units and projections.

The good news is all this stuff is captured at the Java level as nice normal objects by the GeoTools and Java Topology Suite projects. There are utility classes around so we can avoid going down into any mind-numbing minutiae.

We will work with a couple of common GeoSpatial data formats and show how to make queries and modify information.

On the visualization side of things we will make use of one of the available rendering systems and do so with Style. Well, we can show you how to use a Style Layer Descriptor document and then hack apart the result to see what makes it tick.

Attend this workshop and be well-versed for the Java presentations at this years conference. Attend this workshop and receive one million randomly generated points free of charge. Just show up - it will be fun.

User Level (choose one):
Advanced Developer

User Prerequisites (platform, applications, development languages, etc.):

Workshop attendees (that means you!) are expected to be comfortable with Java development – no geospaital knowledge required.

The workshop materials will be normal Java programs, you are expected to be a good (in your own mind) Java programmer. The materials will be prested within the comforts of the Eclipse IDE; altough you are welcome to use NetBeans or VI as suited to your needs.

Instructor Name:
Jody Garnett
Michael Bedward

Instructor Coordinates:
Sydney, 33°51′35.9″S 151°12′40″E

Instructor Biography:

Jody Garnett is the lead architect for the uDig project; and on the steering committee for GeoTools; GeoServer and uDig. Taking the roll of geospatial consultant a bit too literally Jody has presented workshops and training courses in every continent (except Antarctica). Jody Garnett is an employee of LISAsoft

Michael Bedward is a recent addition to the GeoTools community known for helping everyone on the user list covering topics from Geometry construction to the finer points of styling and JMapPane use. He also claims to be a research ecologist with the NSW Department of Environment and Climate Change.

Instructor Experience:
Jody Garnett is an expereinced mentor and trainer; teaching the uDig workshop twenty times since 2005. A well known OSGEO advocate and charter member.

Michael Bedward is an active contributor to the GeoTools users' list and uses GeoTools extensively in his research activities. He has a particularly wide grasp of all the possible mistakes one can make with it.

If even slightly encouraged, Michael will talk at length about spatio-temporal models of plants and animal population dynamics, so avoid making eye contact with him at the pub on Monday night.

Links to any material relevant to your workshop submission:
Previous coverage of this material at FOSS4G 2007 (http://www.foss4g2007.org/labs/L-13/) was used to bootstrap the geotools user guide (http://docs.codehaus.org/display/GEOTDOC/Home). This user guide has bean growing and I would like a chance to present this introduction again based on the experience.

Summary of how this was received (http://docs.codehaus.org/display/GEOTOOLS/GeoTools+at+FOSS4G+2007), in class reviews here (http://wiki.osgeo.org/wiki/FOSS4G2007_Workshop/Lab_Evaluations) summary here (http://hypersphere.telascience.org/Workshop-Files/evaluations/2007/results/FOSS4G2007_Lab-13_Evaluation_Results.pdf).

Introduction to PostGIS.

Short Description:
A hands-on introduction to PostGIS Spatial extensions for PostgreSQL. Participants will be given an overview of PostgreSQL RDBMS and taken through the installation of PostgreSQL and PostGIS, configuration, data loading and access. Working examples will be used to demonstrate the relational and analytical capabilities of PostGIS.

Long Description:
PostGIS is an extension to the PostgreSQL RDBMS that provides Simple Features compliant geometric data types, functions and operators. By leveraging PostgreSQLs extension framework, PostGIS offers high performance spatial filtering, analysis and management capabilities with all the advantages of concurrency, data integrity and user access management of an enterprise database.

This workshop will include both instructional and hands-on components. It will start with an overview of the history of PostGIS and some short case studies. The hands-on component of the workshop will include:

- Installation of PostgreSQL and PostGIS
- System Configuration
- Loading or Creating Data
- Indexing Data
- Spatial Queries
- Query Tuning
- Viewing Data

User Level (choose one):
Beginner User

User Prerequisites (platform, applications, development languages, etc.):
Familiarity with SQL statements and basic relational database concepts. Should be comfortable with command line tools in a Windows environment.

Instructor Name:
Mark Leslie, assisted by Paul Ramsey.

Instructor Coordinates:
Sydney, Australia
33.86069S 151.182612E

Instructor Biography:
Mark Leslie has broad experience integrating Proprietary and Open Source products into customer infrastructures. He has developed and extended software across the Open Source Geospatial stack, including UMN MapServer, PostGIS, uDig and GeoTools and is now Software Architect at LISAsoft.

Instructor Experience:
Mark has developed and presented a number of sessions on Open Source software at conferences around Australia, including the WALIS conference in Perth, Spatial Sciences Institute (SSI) Queensland, Open Source Industry Australia (OSIA) and a PostgreSQL Users Group (PUG) meeting. The PUG was the hardest; those geeks know their stuff.

Links to any material relevant to your workshop submission:
PUG slides:
http://www.slideshare.net/mleslie/introduction-to-postgis

WALIS Proceedings:
http://www.walis.wa.gov.au/forum/proceedings/2008/
http://www.walis.wa.gov.au/forum/assets/2008/proceedings/readyforprimetime.ppt

Introduction to the Mapbender Geoportal Framwework

Short Description:
This workshop gives an in-depth introduction to the geoportal software Mapbender, a managed, web based client framework. The focus of the workshop lies on how to build web mapping applications with distributed Spatial Data Infrastructure components and how to manage user access.

Long Description:
This workshop gives an in-depth introduction to the software Mapbender, a managed, web based geoportal framework implementing the publish / register, find, bind, execute paradigm for geospatial data. The focus of the workshop lies on building web mapping applications with distributed Spatial Data Infrastructure components and how to manage user access.

The introduction will give an overview of the project history, development team, infrastructure, productive environments and scope of use. During the course the following topics will be covered:

- create web mapping interfaces;
- upload remote OGC WMS services (Capabilities caching);
- combine uploaded WMS services for overlay, editing layer visibility, order, format, caption;
- edit and extend service meta data (ISO profile) based on Capabilities document for catalog with CS-W interface, connect remote catalogs;
- upload and configure WFS services to search, find and highlight geo objects;
- bind transactional WFS with WMS service to enable online digitizing (with cross service snapping functionality);
- create users, groups and grant access to services and modules (see also below);
- restrict user access with the OWS security proxy module via trusted servers and encrypted protocols;
- monitoring, status notification and auto-update service for remote OGC services;
- deploy OpenLayers clients from the Mapbender service repository

The workshop will run completely on the Mapbender Portal provided by OSGeo, no software will be installed during the course all that is needed is a web terminal.

Attendees who want to work with their own copy of the software should either install it on a server that is available via internet during the workshop or on their own notebook. To the experienced geoportal operator the installation is straight forward, all information can be found on the Mapbender web site http://www.mapbender.org.

If you want to install you own copy but are new to either GIS, web technology, mapping, OGC standards or any combination thereof it is recommended to start the installation well in advance to the workshop as it involves a web server, database, PHP, Mapbender internet accessibility. You will get all the help that you need to set up the system and get it to run properly on the http://www.mapbender.org/index.php/Mapbender_Mailing_Lists.

User Level (choose one):
Beginner User

User Prerequisites (platform, applications, development languages, etc.):
Users should have a basic understanding of distributed spatial data infrastructures.

Instructor Name:
Arnulf Christl.

Instructor Coordinates:
Bonn,
Germany
50.7N 7.07E

Instructor Biography:
Arnulf works as system architect for spatial data infrastructures with the Free Software SDI stack of OSGeo. He is active member of the Mapbender Project Steering Committee but most of the time he spends giving consultation, talks and conducting workshops. He has been with FOSS4G and the German language sibling FOSSGIS since their respective inceptions. If you want to experience a database training that runs exclusively on the command line he is the man for you. He is co-founder and works with the WhereGroup.

He is an active member of OSGeo (and current president) where he tries to organize marketing and spreading word on Free Software business models and Open Source development.

Instructor Experience:
Arnulf has given the Mapbender workshop in different versions and length over the past five years at several conferences each year. He is trainer at the WhereGroup where Mapbender is part of the regular curriculum. He has loads of experience.

Links to any material relevant to your workshop submission:
http://conference.osgeo.org/index.php/foss4g/2008/paper/view/82
http://www.foss4g2007.org/workshops/W-03/
https://svn.osgeo.org/mapbender/trunk/documents/presentations/

Introduction to the OpenGeo Stack: PostGIS, GeoServer, GeoWebCache, and OpenLayers

Short Description:
This workshop provides a hands-on introduction to the "OpenGeo Stack", comprised of PostGIS, GeoServer, GeoWebCache, and OpenLayers. Workshop attendees will work through exercises targeted at building up a complete web mapping solution from scratch.

Long Description:
The workshop will begin with an introduction of the stack, providing an overview of each of the major components:

PostGIS: A spatially enabled relational database based on PostgreSQL. PostGIS is the backbone of many open source and non-open source based GIS systems.

GeoServer: A feature rich standards compliant server that connects information to the geospatial web. GeoServer reads a variety of spatial formats and publishes that data on the web through standard services and formats.

GeoWebCache: A WMS tile-caching library that provides an effective solution for the efficient serving of web maps.

OpenLayers: A web based mapping toolkit built on Ajax technology. OpenLayers provides a web based front end for a number of web mapping technologies such as WMS and WFS.

Following the introduction workshop attendees will begin the hands-on component. Exercises will cumulatively build off each other and work toward the goal of setting up a simple base map of the Manhattan area.

Initial exercises will focus on performing simple tasks with GeoServer such as publishing shapefiles, setting up styles for map visualization, and use of the map preview tool.

Once the basics of GeoServer have been covered attendees will be exposed to PostGIS. These exercises will focus on loading spatial data into PostGIS, as well as configuring GeoServer to connect to a PostGIS database.

With a functioning GeoServer setup on top of PostGIS focus will shift to the creation of the Manhattan base map. This section will focus mainly on map style configuration and exploring the capabilities of Styled Layer Descriptor (SLD) for the visualization of spatial data.

Once the base map has been set up attendees will build a simple web based map using the OpenLayers library. This component involves some web scripting with JavaScript, in which attendees will learn how to visualize a GeoServer WMS with OpenLayers. Additionally some of the OpenLayers styling capabilities will also be explored.

The final part of the workshop will focus on GeoWebCache, using it to add tile-caching capabilities to the base map.

User Level (choose one):
Beginner

User Prerequisites (platform, applications, development languages, etc.):
A passing familiarity with any of the stack components is beneficial. Workshop attendees should be familiar with interacting with web applications through the browser. Familiarity with the windows command line is also beneficial. Some javascript

Instructor Name:
Justin Deoliveira

Secondary: Andrea Aaime, Paul Ramsey, Tim Schaub

Instructor Coordinates:
New York, USA

Instructor Biography:
Justin has been active in the open source community for a number of years. He is a charter member of the Open Source Geospatial Foundation (OSGEO), as well as a committer on projects such as Geotools, GeoServer, and uDig.

Instructor Experience:
The instructor has been giving workshops based on GeoServer since FOSS4G 2006. Other conferences in which similar workshops were given include Where 2.0, GSDI, and GeoWeb.

Links to any material relevant to your workshop submission:
Last years version of the workshop can be found at:

http://svn.opengeo.org/foss4g2008/og_workshop/trunk/workshop

JGrass-uDig's sense of climate change - a pragmatic approach

Short Description:
Everybody talks about climate change. Too many people talking about it use it just as a buzz word. Fewer people are able to build scenarios and analyze them to exploit the results in their own environment. This workshop covers the collection, preparation and analysis of environmental data, as well as the discussion of the obtained results.

Long Description:
Everybody talks about climate change. Too many people talking about it use it just as a buzz word. Some people are able to read the environmental signs bound to climate change. Fewer people are able to build scenarios and analyze them to exploit the results in their own environment. This workshop aims to the collection, preparation and analysis of environmental data, as well as the discussion of the obtained results.
The used GIS will be uDig extended with the JGrass spatial analysis toolbox as well as its maximum discharge peakflow model, its full hydrological model adige and the soil stability shalstab model.
The workshop will be divided into four main part:

1. Short introduction to the tools of JGrass and uDig that will be used during the workshop.
2. Extraction of geomorphological data: starting from the digital elevation model the attributes of the terrain will be extracted. The main attributes will be for example the slopes, gradients, curvatures, contributing areas. Also the river network and the hillslopes map will be extracted and some of their main attributes will be defined. All the needed data will be retrieved from free data sources over the web. In the case of network problems, the instructors will anyway show the data retrieval procedure and use local data supplied on a cdrom.
3. Extraction of the necessary meteorological data: the diverse connections of the GIS to online data sources will be exploited to get meteorological (spatial and non spatial) data. The data will be analyzed, quickly validated and interpolated to be spatially distributed, if necessary. Handled data will be for example precipitation data, temperature, air pressure, wind speed and soil moisture. In the case the CCIP (Climate Challenge Integration Plugfest) should not handle those kind of data, the instructors will supply the missing data necessary for the workshop on a cdrom.
4. Connection of the data collected up to that point to the attributes of the territory. Creation of temporal maps of the meteorological quantities over the considered timeframe. Use of hydrological models to calculate environmental attributes on the extracted watershed. Particular attention will be put on the evolution of the water flow and the snow coverage, considering the soil interaction with precipitation, temperatures and other meteorological quantities.

Time permitting a hillslope stability model will be presented.

We are very excited about this material and look forward to meeting you at FOSS4G 2009.

User Level (choose one):
Advanced User

User Prerequisites (platform, applications, development languages, etc.):
All in all a general scientific knowledge will be required. A good GIS knowledge is mandatory. For most of the trial knowledge about terrain data handling will be enough. The last part will

specifically deal with environmental models. The approach will anyway be practical, the theoretical part will be touched only quickly as an introduction.

Instructor Name:
Andrea Antonello
Silvia Franceschi
Jody Garnett

Instructor Coordinates:
Andrea Antonello, Bolzano, Italy – 46.48227, 11.32868
Silvia Franceschi, Bolzano, Italy – 46.48227, 11.32868
Jody Garnett, Sydney, Australia

Instructor Biography:
Andrea Antonello works on GFOSS development since his degree in environmental engineering at the University of Trento, Italy. Together with Silvia Franceschi he leads HydroloGIS, a company that makes, use as well as develops GFOSS software for environmental analyses and is specialized in technology transfer from universities. Andrea is coordinator and main developer of the JGrass project and part of the project steering committee of uDig. Since 2007 he is doing a PhD about GFOSS development for digital field mapping (BeeGIS extensions for JGrass). Silvia is a power user of GFOSS GIS tools. She actively contributes to the JGrass, BeeGIS and uDig projects. Jody is coordinating and pushing force in both the geotools and uDig communities.

Instructor Experience:
The instructors of this workshop have worked for several years at the University of Trento after their degree. As such they were involved in organization of and teaching at high expertise courses for both the academic field as well as for professionals, in the field of open source GIS solutions for terrain analyses. Silvia is teacher for the application part of the course of hydrology at the University of Trento, faculty of engineering. Jody is experienced instructor for GIS software. The instructors of this workshop have organized and taught at courses of different length (from few hours to several days) and languages (English, Italian, German).

Links to any material relevant to your workshop submission:
The team of instructors involved in the workshop has lately produced the workshop material available here:
http://jgrass.wiki.software.bz.it/jgrass/Presentations_about_JGrass
as well as the manuals available here:
http://www.ing.unitn.it/dica/tools/download/Quaderni/jgrass_manual_ENG.pdf
http://www.ing.unitn.it/dica/tools/download/Quaderni/JGrass_tutorial_ENG.pdf

Making Maps Fast - Performance tuning and Tile Caching.

Short Description:
Maps in apps. They look great and allow for user-intuitive functionality, but not if they are slow. This workshop will show how to make rendering maps and using spatial data as fast as it needs to be for a positive user experience.

Long Description:
Speed of response is critical to a user experience. While hardware and platform considerations are briefly discussed, the focus of this workshop is on what can be done at the data level, the service level and especially caching. Participants will see how small changes in design and implementation can reap big benefits. The topics of the workshop include:

The Data: Spatial data stores. Attribute and spatial indexes.
The Map: Limiting what gets rendered. Image size vs quality.
The Cache: Google does it, so can you.
The OS: Scalability and concurrency.

Once we have data loaded into PostGIS and served by GeoServer we will move on to the main focus of the workshop: tile caching.
Installing TileCache.
Setting up your layer.
Configuring GeoWebCache in GeoServer.
Metatiling.
How it works with HTTP, caching proxies and caching clients.

OpenLayers will be used throuout the workshop to verify the effects of our changes.

User Level (choose one):
Advanced Developer

User Prerequisites (platform, applications, development languages, etc.):
The focus of the workshop is mainly on spatial software configuration and installation. No knowledge of the software packages (PostGIS, GeoServer, TileCache, GeoWebCache, OpenLayers) is assumed, though a cursory understanding of spatial concepts would be helpful.

Instructor Name:
Arne Kepp, OpenGeo
Jim Groffen

Instructor Coordinates:
Arne Kepp: Asker, Norway, 59.85,10.45
Offices: 349 West 12th Street, New York, NY, 40.74,-74.01

Jim Groffen: Adelaide, South Australia.-34.93,138.6
Offices: Level 1, 30 Currie Street Adelaide, SA. -34.924434,138.598752

Instructor Biography:
Jim Groffen is a Senior Software Engineer at LISAsoft. Working in IT since 1998, Jim has been with LISAsoft since 2005 working on various Spatial projects. Jim participated in OGC projects such as CGDI-IP and OWS-6. As part of OWS-6 Jim will be contributing updated WMTS support

to the TileCache open source project. Other relevant areas of interest include spatial catalogues and registries, OpenLS and all things Python.

Arne Kepp is a Software Engineer at OpenGeo and lead developer of GeoWebCache. He became a user and proponent of Open Source software while filling the role as system administrator for a GIS consulting firm in 2000. Since then he has been studying hardware architecture and used his experience to improve the performance and reliability of several web services.

Instructor Experience:
Jim has performed various presentations for CentricMinds content management software, and held workshop style training sessions for North Western Adelaide Health Service and ClubsNSW private organisations.

Arne interacts with users of GeoWebCache and GeoServer on a daily basis through the mailing lists. He has previously done presentations on a wide variety of topics, including workshops on Linux Apache MySQL PHP (LAMP) performance and scalability.

Links to any material relevant to your workshop submission:
This workshop will make extensive use of the WMS Performance Tests - MapServer vs GeoServer presentation delivered by Andrea Aaime and Justin Deoliveira for FOSS4G 2008:
http://presentations.opengeo.org/2008_FOSS4G/WebMapServerPerformance-FOSS4G2008.pdf
Guide to TileCache: http://geoserver.org/display/GEOSDOC/TileCache+Tutorial

Making Maps Pretty with Style Layer Descriptor

Short Description:
Tips and tricks to get your maps looking great. Supported by many GIS packages today, Styled Layer Descriptor (SLD) uncouples map styling from the mapping services. Learn how to make and apply SLD using freely available tools.

Long Description:
This workshop introduces Styled Layer Descriptor: SLD. SLD is an OGC standard that allow users to define symbolisation and colouring of spatial data. The exercises in this workshop learn the basics of SLD, and some tips and tricks:

- SLD editing with uDig.
- The GeoExt based SLD editor in GeoServer.
- What you can do with SLD rules.
- How filters control what gets styled.
- Styling tricks.
- Performance considerations.

The exercises performed build up a case for the benefits of SLD and the best practices for using it. There will also be an opportunity to compare SLD support in OpenJUMP, OpenLayers and other open source packages.

An information sheet on SLD support in existing GIS packages and a quick reference guide for both SLD and the Filter Encoding Specification will be provided.

User Level (choose one):
Advanced User

User Prerequisites (platform, applications, development languages, etc.):
Examples users include anyone that works with spatial data including users of GIS desktop applications. No developer skills are required but an understanding of spatial data in general and an awareness of OGC standards such as WMS is expected. The workshop will involve installation of uDig and optionally GeoServer. Appropriate installers will be provided.

Instructor Name:
Andrea Aaime, OpenGeo
Jim Groffen, LISAsoft

Instructor Coordinates:
Andrea Aaime, Offices: 349 West 12th Street, New York, NY, 40.74,-74.01

Jim Groffen Adelaide, South Australia.-34.93,138.6
Offices: Level 1, 30 Currie Street Adelaide, SA. -34.924434,138.598752

Instructor Biography:
Jim Groffen is a Senior Software Engineer at LISAsoft. Working in IT since 1998, Jim has been with LISAsoft since 2005 working on various Spatial projects. Jim participated in OGC projects such as CGDI-IP and OWS-6. As part of OWS-6 Jim will be contributing updated WMTS support to the TileCache open source project. Other relevant areas of interest include spatial catalogues and

registries, OpenLS and all things Python.

Instructor Experience:
Jim worked at the World Congress on IT 2002 and CeBIT in Sydney 2004 manning a stand for CentricMinds. Jim has also performed various presentations for CentricMinds content management software, and held workshop style training sessions for North Western Adelaide Health Service and ClubsNSW private organisations.

Links to any material relevant to your workshop submission:
The following are links to relevant technologies but not specific to this workshop submission.

- http://www.opengeospatial.org/standards/sld
- http://geoserver.org/display/GEOSDOC/SLD+Intro+Tutorial

MapServer OGC Web Services

Short Description:
Interoperability is increasingly becoming a focus point for organizations that distribute and share data over the Internet. The Open Geospatial Consortium (OGC) focuses on the development of publicly available geospatial web standards. MapServer currently supports numerous OGC specifications, allowing users to publish their data services in an interoperable manner. This workshop will review the OGC specfications 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.

Long Description:
Interoperability is increasingly becoming a focus point for organizations that distribute and share data over the Internet. The Open Geospatial Consortium (OGC) focuses on the development of publicly available geospatial web standards.

MapServer currently supports numerous OGC specifications, allowing users to publish their data services in an interoperable manner. This workshop will review the OGC specfications 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

OGC specifications allow for sharing of geospatial data across various software implementations and tools (both open source and proprietary). OGC specifications covered in this workshop include Web Map Service (WMS), Web Feature Service (WFS), Styled Layer Descriptor (SLD), Geographic Markup Language (GML), Web overage Service (WCS), and Sensor Observation Service (SOS). Printed handouts will be provided to attendees. The examples will show the power and flexibility of OGC specifications through MapServer and other tools (clients, servers).

User Level (choose one):
Advanced User

User Prerequisites (platform, applications, development languages, etc.):
Windows operating system
comfortable editing a MapServer .map file
You must be familiar with basic MapServer concepts to do this workshop. This workshop assumes you are comfortable with writing and working with mapfiles.

Instructor Name:
Primary: Jeff McKenna
Secondary: Daniel Morissette

Instructor Coordinates:
Ottawa, Ontario, Canada
Latitude: 45.411879
Longitude: -75.700644

Instructor Biography:

Jeff McKenna:

In 2008 Jeff started his own consulting company based around FOSS4G, Gateway Geomatics, and is actively contributing to OSGeo.

- Founding and Charter member of OSGeo
- Maintainer for Maptools.org
- Developer for MS4W
- Developer for OSGeo4W
- MapServer Project Steering Committee (PSC) member
- MapServer documentation lead
- OSGeo FOSS4G conference committee chair
- FOSS4G Workshop committee member
- founding co-chair of OSGeo Ottawa Local Chapter

Daniel Morissette:

Daniel is a software developer, mostly interested in webmapping and data access and distribution. He has been an active developer and user of open source geospatial software since 1999 and have led and/or contributed to several open source projects over the years:

- MapServer (member of the MapServer PSC)
- GDAL/OGR (member of the GDAL PSC)
- MITAB (project lead)
- AVCE00 and E00Compr (project lead)
- MapTools.org (one of the instigators and maintainers of the maptools.org portal)
- Involved directly or indirectly in several MapTools.org projects

Instructor Experience:
Jeff and Daniel have been involved in giving MapServer workshops at the annual FOSS4G event as far back as 2003. Daniel is one of the key MapServer developers, and Jeff is heavily involved in the MapServer documentation.

Links to any material relevant to your workshop submission:
FOSS4G2008 workshop: http://conference.osgeo.org/index.php/foss4g/2008/paper/view/19
FOSS4G2007 workshop: http://www.foss4g2007.org/workshops/W-05/
FOSS4G2005 workshop: http://ms.gis.umn.edu/community/conferences/MUM3/workshop/msogc
FOSS4G2004 workshop: http://www.omsug.ca/osgis2004/proceedings.html

OpenLayers – Your Foundation for Browser Based Mapping

Short Description:
OpenLayers provides a full featured library for building browser based mapping applications. This workshop will guide participants through the library core, providing the experience necessary to build interactive mapping applications. We will cover best practices for dealing with a variety of raster and vector data sources, investigate client side styling, and discuss options for integrating OpenLayers with other JavaScript libraries.

Long Description:
OpenLayers provides a full featured library for building browser based mapping applications. This workshop will guide participants through the library core, providing the experience necessary to build interactive mapping applications. We will cover best practices for dealing with a variety of raster and vector data sources, investigate client side styling, and discuss options for integrating OpenLayers with other JavaScript libraries.

The hands-on workshop will include detailed exercises divided into five modules:

- Map Basics - Understand how maps are created and configured.
- Layer Types - Add data to your map from a variety of sources.
- User Interaction - Set up controls to manage user interaction.
- Editing & Styling - Focussing on vector data, read data from remote sources, allow for creation and editing of new data, and explore options for styling data client side.
- Integration - OpenLayers provides the mapping core for your application. Build rich widgets with mapping functionality by integrating OpenLayers with other JavaScript libraries.

The modules will be presented by core OpenLayers developers who will be available for support throughout the workshop. Participants will be guided through exercises that result in working examples of a wide range of OpenLayers functionality. Printed materials will be provided that demonstrate advanced concepts in addition to workshop exercises.

This year's materials will be a complete rewrite of previously presented workshops - including coverage of recently added functionality.

User Level (choose one):
Beginner User
Beginner Developer

User Prerequisites (platform, applications, development languages, etc.):
Participants will gain the most from the workshop if they have a good working knowledge of JavaScript and the basics of building web applications. Participants with specific OpenLayers experience will have an opportunity to deepen their knowledge and will learn advanced tips for getting the most from the library.

Instructor Name:
Tim Schaub
Roald de Wit

Instructor Coordinates:

Bozeman, MT USA (45.69 N, 111.04 W)

Instructor Biography:
Tim Schaub is a senior geospatial developer with OpenGeo. He is a core contributor and serves on the Project Steering Committee for OpenLayers.

Roald is a software engineer/team lead for LISAsoft, a geospatial systems integration, software development and consulting company. His main area of expertise lies in the visualisation of geospatial information through innovative and user friendly interfaces using web-based thin clients.

Instructor Experience:
Tim Schaub has presented talks on OpenLayers at FOSS4G, Where 2.0, GOSCON, and similar conferences. He has provided professional OpenLayers training and has conducted OpenLayers workshops at a variety of conferences.

Links to any material relevant to your workshop submission:
The FOSS4G 2008 materials are available online http://workshops.opengeo.org/openlayers/intro/doc/en/. This year's material will be a complete rewrite of previous modules.

Organizing your geospatial data and services using GeoNetwork opensource

Short Description:
Participants will setup a catalog to serve and access geospatial data through the Web. Topics that will be covered are the publishing of geospatial data, harvesting spatial data resources from remote catalog-servers, finding and using spatial data through applications like News Readers and Google Earth and the integration of the publishing process in existing workflows.

Long Description:
The half-day workshop will focus on the implementation of a catalog to serve and access geospatial data through the Web.
A local catalog will be installed and configured. Harvesting of spatial data resources from remote servers will be configured and geospatial web map services will be set up using the embedded GeoServer and will be configured for access through the catalog web interface.
Participants will use the catalog in different ways, including the web interface and OGC-CSW ISO, the new ebRIM CSW ISO, OAI-MHP and GeoRSS protocols. The user will learn how to use the catalog to receive automatic updates when new resources of interest become available using news feeds in different client applications (news readers, Open Layers, Google Maps and Virtual Earth). The use of user feedback mechanisms including data rating and social book marking will be discussed.
Attention will be given to import and export functionality of the catalog that allow integration of the publishing process in existing workflows like desktop GIS or operational data processing servers.

User Level (choose one):
Beginner User

User Prerequisites (platform, applications, development languages, etc.):
Basic understanding of geospatial web services (like OGC Web Map Services and Catalog Services for the Web) is useful.

Instructor Name:
Primary instructor: Jeroen Ticheler
Secondary instructor: François Prunayre

Instructor Coordinates:
Jeroen Ticheler
De Braakweg 12a, 7524 PH Enschede, The Netherlands
Tel/Fax: +31 53 7370049
Mobile: +31 6 81286572
Email: Jeroen.Ticheler@GeoCat.net
WWW: http://geocat.net

Instructor Biography:
Jeroen Ticheler is passionate about Africa, people, maps and technology. He's convinced that open source software is the best option to help sustainable development. Making geospatial data more accessible caused him to start the development of GeoNetwork opensource in 2001 at the Food and Agriculture Organization of the UN, the first fully open source software in the organization. He has been pushing for geospatial data sharing within the United Nations for years as task group manager on interoperable services in the UN Geographic Information Working Group and pushed the concept of a UN Spatial Data Infrastructure in that same group. In 2008 he started GeoCat bv to

provide commercial services for GeoNetwork opensource. In his nightlife he supports OSGeo activities, marketing and a hacking event.

Instructor Experience:
The instructor has developed and led multiple workshops on GeoNetwork opensource since the start of the project. Successful workshops were held at the FOSS4G conferences, within the United Nations and within the GeoNetwork opensource community. Furthermore he has held numerous presentations on the software and on Spatial Data Infrastructure and open source software in general.

Links to any material relevant to your workshop submission:
Previous workshops:

- FOSS4G2006 Lausanne - Using the GeoNetwork opensource Spatial Data Catalog - (http://www.foss4g2006.org/contributionDisplay.py?contribId=17&sessionId=64&confId=1)
- FOSS4G2007 Victoria – instructor provided assistance to L-09: Using the GeoNetwork open source Spatial Data Catalog (http://www.foss4g2007.org/labs/L-09/)
- FOSS4G2008 Cape Town – Instructor of workshop - http://conference.osgeo.org/index.php/foss4g/2008/paper/view/60
- GeoNetwork opensource 2007: Assisted and given workshops on GeoNetwork during the GeoNetwork workshop 2007 (see: http://geonetwork-opensource.org/documentation/workshops/workshop-2007/tutorial-all-pages)
- GeoConnexion article - Open Source #10 - GeoNetwork opensource - (http://www.geoconnexion.com/uploads/opensource_intv7i5.pdf)

Data available through the Climate Change Integration Plugfest (CCIP) will be used in the workshop to demonstrate interoperability

Practical Introduction to Fusion

Short Description (50 words):
Fusion is an open source web-mapping application framework that integrates several other open source libraries and services. It provides all the tools required for web developers to build rich mapping applications quickly and easily. This workshop will cover a range of topics, from installing Fusion up to creating a custom application.

Long Description (400 words):
Fusion is an open source web-mapping application framework that integrates several other open source libraries and services, including OpenLayers, Jx, MapServer and MapGuide. It provides all the tools required for web developers to build rich mapping applications quickly and easily. Fusion does not require any browser plug-ins and works in all the major browsers on Windows, Mac, and Linux.

Standards-compliant HTML templates and CSS styles sheets in conjunction with the Jx library provide the application chrome. The mapping services and widgets deployed in an application are configured in an XML application definition file. This approach allows enables maximum flexibility and code re-use.

Fusion was initially designed to support the MapServer and MapGuide Open Source server side architectures, but the client uses the OpenLayers library so Fusion can be extended to use any server technology supported by OpenLayers. Version 2.0 of Fusion leverages OpenLayers further for rendering vectors on the client and various controls and handlers.

This workshop will cover a range of topics from installing Fusion up to creating a custom application. More advanced topics such as creating custom widgets will be covered in brief.

The target audience for this workshop are developers tasked with implementing applications and have a good understanding of HTML, CSS, XML and JavaScript.

User Level (choose one):
Beginner User

User Prerequisites (platform, applications, development languages, etc.):
Attendees are expected to have a good understanding of HTML, CSS, XML and JavaScript.

Instructor Name:
Michael Adair
possible co-presenters Julien-Samuel Lacroix, Paul Spencer

Instructor Coordinates:
Ottawa, Ontario, Canada
-75.733 45.403

Instructor Biography:
Mike Adair is has been working for DM Solutions Group since 2007 coming from Natural Resources Canada and the GeoConnections program. He is responsible for core technology design and development primarily for client-side technologies supporting DMSG commercial services. He is an active contributor to several projects under the Open Source Geospatial Foundation umbrella

(MapBuilder, Proj4js, OpenLayers, Fusion). Mike has a B.Sc. and M.Sc. in physics. He has delivered several MapBuilder workshops and various presentations at FOSS4G conferences from 2003 to 2007.

Instructor Experience:
Mike Adair is one of the core developers of the Fusion project. He has/will delivered a similar workshop at the Ottawa Summercamp (http://fosslc.org/drupal/summercamp2009). He has previously delivered several MapBuilder workshops and presentations at FOSS4G conferences.

Links to any material relevant to your workshop submission:
Main Fusion website http://trac.osgeo.org/fusion/
OpenLayers http://openlayers.org/
Proj4js http://trac.osgeo.org/proj4js/
MapBuilder http://docs.codehaus.org/display/MAP/Home/
FOSS4G 2007 http://www.foss4g2007.org/labs/L-02/

Practical Introduction to GRASS and related software for beginners

Short Description:
This workshop aims to overcome the initial barrier between GRASS and its potential users due to the steep learning curve. It has two parts: a brief GRASS overview and a hands-on session by the attendees. A custom live DVD with the software and the workshop documentation will be provided.

Long Description:
GRASS is the leading FOSS GIS and its wide ranging analysis capabilities make it an ideal tool to set up environmental models, as well as to support land planning and management.
Therefore, GRASS can be an important tool in general for environmental researchers and in particular for scientists and planners in Developing Countries. In fact, GRASS has been already succefully used in many projects in Africa, Asia and Latin America. However, its steep learning curve makes the first approach to GRASS sometimes tricky for beginners: this workshop aims to overcome the initial barrier between GRASS and its potential users.
The workshop has two parts: a brief GRASS overview and a hands-on session by the attendees. The aim is to allow the first users to understand the logic of the software and to experiment some significant, although necessarily limited, data elaboration for technical and environmental GIS applications. The workshop provides a brief introduction to GRASS and then it is structured as a step by step tutorial to guide beginners in the basic applications of the software, stressing the interoperability with other FOSS and proprietary software. The tutorial is structured in a growing difficulty level to make the participants gradually familiar with the software. It will be possible for the participants to follow different paths depending on their skills and interests.

Structure of the Workshop:
Brief GRASS overview:
History and basic features of the software, applications, releases, operative systems, where to download it, where to find solutions to your problems, related softwares.
Hand-on Part:
First steps with GRASS

- project (location) setup
- raster and vector data import and export
- vector data analysis
- raster data analysis
- network analysis (short)
- visualization (nviz – short)

Hints for practical usage of external RDBMS will be given with a particular attention to interoperability.
A custom live DVD containing all the software and the workshop documentation will be provided.

User Level (choose one):
Beginner User

User Prerequisites (platform, applications, development languages, etc.):
No particular prerequisites are required, being a beginners workshop, the Live DVD will run the GNU/Linux OS.

Instructor Name:
First Name and Surname: Paolo Zatelli,
Names of any co-instructors: Marco Ciolli and Clara Tattoni.

Instructor Coordinates:
City: Trento
Country: Italy
Instructor Coordinates: Latitude 46° 04' N Longitude 11° 08' E

Instructor Biography:
Paolo Zatelli, born in Pavia, Italy the 2 March 1968. PhD in Topographic and Geodetic Science (1998). From 2001 Assistant professor in Topography and cartography at the DICA of the Engineering Faculty of the University of Trento. University and PhD courses: Survey and statistical data treatment, Photogrammetry, Numerical cartography and GIS, Remote sensing and GIS, Mathematical and statistical methods, Environmental data management and analysis. Didactic activity in continuing education and post graduate courses and masters: GRASS, FREE and OPEN SOURCE GIS and GEODATABASE, theory and applications, second level Master Analysis and management of Geotechnical systems SIGEO. Coordinator for the Doctoral School in Environmental Engineering of the University of Trento. Research topics: Land survey and data treatment, efficient elaboration and integrated management techniques, multiresolution data analysis for efficient data representation and filtering. Bibliography http://polaris.unitn.it/author.php?idu=2944 .

Co-instructor
Marco Ciolli, born in Firenze, Italy the 12 May1964. PhD in Forest Management obtained in 1998. From 2002 Assistant professor in Forest management and planning at the Laboratory of Forest Ecology at the DICA (Department of Civil and Environmental Engineering) of the Engineering Faculty of the University of Trento. Didactic activity in University and PhD courses: Sustainable Landscape planning, GIS applied to environmental management, Ecology, Applied Ecology and sustainable development, Tropical and subtropical ecosystems. Didactic activity in continuing education and post graduate courses: GRASS, FREE and OPEN SOURCE GIS and GEODATABASE, theory and applications. Coordinator for the scientific section of SSIS (Specialisation school of secondary teaching). Research topics: Forestry, Forest Landscape management and planning, GIS applied to forest management. Bibliography http://polaris.unitn.it/author.php?idu=2939

Co-instructor
Clara Tattoni was born in Milano, Italy the 4 September 1976. She is M Sc in Environmental Science, University of Milano-Bicocca and PhD in "Analysis, protection and management of biodiversity" University of Insubria (Italy, 2006). She is now cooperating with the Laboratory of Forest Ecology at University of Trento. Main research topic is using GIS in wildlife management, forestry and ecology. She has been using FOSS since university and she has been teaching FOSS GIS since 2004 at professional courses and at universities of Varese and Trento. She developed some tutorials for GRASS and QGIS available on the web in the Italian language. She is part of the Os Geo educational committee.

Instructor Experience:
The cited research group has dealed with GIS and environmental applications at the University of Trento, Italy, for more than ten years and it has been since involved in the development of GRASS. We have organized the "Open Source Free Software GIS - GRASS users conference 2002", Trento, Italy, 11-13 Sept. 2002 http://www.ing.unitn.it/~grass/conferences/GRASS2002/home.html and we have reached the 8th edition of the course GRASS, FREE and OPEN SOURCE GIS and GEODATABASE, theory and applications. We have already organized the workshops “GRASS Beginners” and “GRASS external RDBMS” for FOSS4G2006, the “GRASS GIS and RDBMS” workshop for FOSS4G2007 and the “Practical Introduction to GRASS and related software for

beginners" workshop for FOSS4G2008.

Links to any material relevant to your workshop submission:
Here is a list of Workshops/Labs that we have previously presented and additional biographical material.
Workshops about GRASS, QGIS and aother FOSS4G presented at the Italian GRASS Users Meetings:
III Meeting degli utenti italiani di GRASS - Trieste, february 2002 - GRASS
VII Meeting degli utenti italiani di GRASS - Genova, 23-24 february 2006 - GRASS
VIII Meeting degli utenti GRASS - Palermo, 14-15-16 february 2007 – GRASS, QGIS

Workshops presented in Lausanne, FOSS4G2006
GRASS GIS Beginner's Workshop
http://www.foss4g2006.org/contributionDisplay.py?contribId=42&sessionId=59&confId=1
http://www.gdf-hannover.de/dassau/foss4g2006/presentation/grass_beginners_workshop.pdf
GRASS GIS and external RDBMS
Slides
http://www.gdf-hannover.de/holl/projekte/FOSS4G2006/grass_database_workshop.pdf

Workshop presented in Victoria, FOSS4G2007
GRASS GIS and RDBMS
http://www.foss4g2007.org/workshops/W-11/
Slides
http://www.foss4g2007.org/workshops/W-11/GRASS_DBMS_workshop.pdf
Live DVD
http://www.ing.unitn.it/~grass/software/FOSS4G2007_GRASS_RDBMS_DVD.html

Workshop presented in Cape Town, South Africa, FOSS4G2008
http://conference.osgeo.org/index.php/foss4g/2008/paper/view/294
Slides
http://www.ing.unitn.it/~grass/docs/GRASS_beginners_2008_workshop.pdf
Live DVD
http://www.ing.unitn.it/~grass/software/FOSS4G2008_GRASS_beginners_DVD.html

List of tutorials:
http://www.ing.unitn.it/~grass/documents.html

List of courses given in Italian for professionals:
http://www.ing.unitn.it/~grass/training.html

Since 2003 we teach GRASS FREE and OPEN SOURCE GIS and GEODATABASE, theory and applications course that has reached the 8th edition:
http://www.ing.unitn.it/~grass/training/corsi/GRASS/2009/06/home.html

Further information, pubblications, documents on line can be found at the site:
http://www.ing.unitn.it/~grass/

Practical introduction to MapFish, the web 2.0 mapping application framework.

Short Description:
The goal of this workshop is to create a web mapping application from scratch by using the web 2.0 technology included in MapFish.
The usage of several widgets will be described. The server part of MapFish will also be introduced throug practical examples.

Long Description:
MapFish is an open-source development framework for building web-mapping applications.

MapFish is based on the GeoExt library which is a combination of ExtJS and OpenLayers, and extends the Pylons general-purpose web development framework with geo-specific functionnalities.

This workshop will introduce the usage of the MapFish development framework and will demonstrate how it can help developers implement rich web-mapping applications.

On the client side, several MapFish widgets and components will be presented:

- The map panel for the representation of geographical information through OGC webservices like WMS, WFS or TMS.
- The toolbar for the access to the functions within the GUI
- The layer tree for the organization and management of the geospatial layers
- The 3D widget for the 3D representation of geographical data using Google Earth
- The print widget for the creation of reports.
- The geostat widget for the creation of advanced representations of the data through chloropleth or proportional symbols
- The edit functions for the creation and update of data sets.
- The search and recenter widget for advanced navigation within the data.
- The query widget for getting information about the represented data
- The offline mode for allowing an usage of MapFish without Internet connection
- The templating system for the definition of reusable GUI

On the server side, the following things will be practically introduced:

- The creation of RESTful services for the data access and data manipulation. Usage of SQLAlchemy and Shapely will be highlighted.
- The configuration of the print server component for the definition of reports.
- The presentation of other development environment working together with MapFish: PHP, Java, Ruby on rails and the integration with Symfony

User Level (choose one):
Beginner User

User Prerequisites (platform, applications, development languages, etc.):
Basic knowledge of Javascript and python are required.

Instructor Name:
Claude Philipona, Cédric Moullet, Frédéric Junod, Eric Lemoine

Instructor Coordinates:

Claude, Cédric and Frédéric are living in Switzerland (46°32'N,06°38'E), Camptocamp SA, Lausanne. Eric is living in France (45° 34′ N, 5° 54′ E), Camptocamp France SAS, Chambéry

Instructor Biography:
Claude Philipona is co-founder of Camptocamp SA and professor at the University of Applied Sciences Western Switzerland (HES-SO).
Cédric Moullet is CTO Geospatial of Camptocamp SA and member of the GeoExt PSC.
Eric Lemoine is senior developer at Camptocamp France SAS and commiter for MapFish, OpenLayers and GeoExt. Member of the GeoExt and OpenLayers PSC.
Fréderic Junod is developer at Camptocamp SA and commiter for MapFish, OpenLayers and GeoExt.

Instructor Experience:
Claude and Eric have presented several Workshops, Tutorials and Conferences at FOSS4G. Cédric presented several conferences at Autodesk University and GIS/SIT CH.

Links to any material relevant to your workshop submission:
www.mapfish.org

Working with GeoServer

Short Description:
A hands-on introduction to GeoServer: a server that connects spatial information to the geospatial web. This workshop will provide a comprehensive introduction to GeoServer, covering topics from installation to more advanced features.

Long Description:
GeoServer is a feature rich geospatial web server built on top of open standards. A Web Map Service, Web Feature Service, and Web Coverage Service, GeoServer is a technology built for publishing data on the geospatial web.

Initial exercises will focus mainly on basic tasks such as installation of GeoServer and the publishing of some simple data sets. Attendees will learn how to publish a variety of data sets in different formats. From Shapefiles, to a PostGIS spatial database, to raster data formats such as GeoTIFF.

Workshop exercises will focus mainly on the GeoServer WMS, and its cartographic capabilities. Workshop attendees will be given an introduction oto the GeoServer styling engine (SLD), and work through some simple examples. More advanced features such as labeling options, raster symbolization, and dynamic symbolization will also be covered.

Later exercises will shift more toward GeoServer "geoweb" oriented capabilities such as KML output and Google Earth support. Initial exercises will illustrate how to publish data from GeoServer in Google Earth, moving to advanced features such as KML templates, 2.5 dimensional height support, and regionation.

Time permitting other topics covered may include tile caching with GeoWebCache, WMS optimization with paletted images, and image watermarking.

User Level (choose one):
Beginner

User Prerequisites (platform, applications, development languages, etc.):
No prerequisites absolutely necessary, but a familiarity with OGC web services is beneficial. Experience with XML is recommended.

Instructor Name:
Justin Deoliveira

Andrea Aime

Instructor Coordinates:
New York, USA

Instructor Biography:
Justin has been active in the open source community for a number of years. He is a charter member of the Open Source Geospatial Foundation (OSGEO), as well as a committer on projects such as Geotools, GeoServer, and uDig.

Instructor Experience:

The instructor has been giving workshops based on GeoServer since FOSS4G 2006. Other conferences in which similar workshops were given include Where 2.0, GSDI, and GeoWeb.

Links to any material relevant to your workshop submission:
http://svn.opengeo.org/foss4g2008/og_workshop/trunk/workshop