

Training Workshop “Spatial Data Sharing and Web Mapping Using FOSS4G MapServer and OpenLayers”

I Course Outline

Free and Open Source Software for Geoinformatics (FOSS4G) is being continuously improved and refined based on the interaction between software development and user communities. Major new releases of FOSS4G tools such as GRASS, MapServer, GDAL etc. have been made possible due to the collaborative efforts of international teams of developers and users. Realizing the potential of FOSS4G as a viable software development model, new initiatives to release formerly proprietary solutions through FOSS4G is on the increase. Recently, the “Open Source Geospatial Foundation” (OSGeo; <http://www.osgeo.org>) has been created to support and build the highest-quality FOSS4G solutions. The OSGeo's goal is to encourage the use and collaborative development of community-led projects. Our experience in using FOSS4G suggests that many the basic tools have already matured while others are undergoing rapid development.

Training workshop will introduce running FOSS4G on MS-Windows platform. Participants can bring their own laptop and install FOSS4G software. Participants will be provided with software tools for self-learning and also implementation of Web-GIS application.

II Course Contents

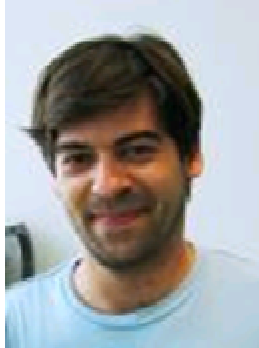
- 1. Introduction to OSGeo4W (60 minutes):** In this session OSGeo4W (OSGeo for Windows) package will be introduced and installation on MS-Windows platform will be demonstrated. Brief introduction on how to use the most commonly required GIS tools and an overview of geospatial software libraries (GDAL/OGR, PROJ4, GEOS) used by those tools will be provided.
- 2. Introduction to MapServer (90 minutes):** In this session we will introduce the MapServer project and show you how you can easily display your GIS Data and share them through OGC Web Services simply using a MAPFILE and its special syntax. We will present you how to create your own MAPFILE efficiently and how to avoid common mistakes.
- 3. Introduction to TileCache (60 minutes):** In this session, we will show you how to install third party components (Python & TileCache) to make you able to tile displayed data (WMS-C / TMS) and then display them efficiently. You will be able to configure and test accessing your own data through this new Web Service.
- 4. Web-Mapping application using OpenLayer (120 minutes):** Session 1-3 above will help you to learn how you can display your data on the server side. Based on this background, this session will show you how to access your data from the client side in an efficient way. We will show you how it is simple to create your own web page, displaying and interacting with your GIS Data using this JavaScript API. We briefly present about other JavaScript APIs to make your Web-GIS a Rich Interactive Application.
- 5. Q & A: (30 Minutes)**

II About the Trainers



Gérald FENOY obtained his Master degree in Computer Science for University of Montpellier II. After graduation he worked in a private company as a developer for Web-GIS application and PostGIS based system integration. He later established his company "Geolabs" in 2005 and has done several projects in France and overseas. He has been actively developing and promoting OSGeo technologies through training workshops and publications. At Geolabs he created the API for OOCMS (Object Oriented ContentManagement System which is a powerful

document and map production system using OpenOffice UNO server and FOSS4G tools. He is a regular participant and contributor to FOSS4G International Conferences. He has also contributed several enhancements and bug-fixes to Mapserver, GDAL and OpenLayers. He is presently working on implementing an ZOO OWS Platform in C++. His present research interests are distributed geospatial web services, sensor network and cloud computing.



Dr. Nicolas BOZON is an open source GIS expert working in the field of environmental modeling and agriculture. After completing under-graduate studies in geography and environmental sciences in University of Montpellier II, France and Laval University, Canada, he has specialized in GIS and Open Source computing during a GIS Master degree. Nicolas obtained his PhD in applied mathematics from University of Montpellier II, France. The topic of his thesis was on atmospheric dispersion model with Open Source GIS software. He was a Visiting Researcher at Osaka City University in 2009, working on implementing Web GIS architecture using the Web Processing Service (WPS). This work is done in close collaboration with Prof. Venkatesh Raghavan, and also with the support of two French enterprises (Geolabs and 3liz). Nicolas is presently in France with 3LIZ (<http://www.3liz.com>) as communication manager. His main duties in the company are business and human network development, but also Web development and Web design for open source Web Mapping and GIS applications. He is also one of the founders of the ZOO Open OWS Project



Prof. Venkatesh Raghavan (Venka) has been involved in OSGeo since its inception. He was one of the Directors in the first OSGeo Board and is currently a Charter Member. He is deeply involved in OSGeo Local Chapters in Asia. Presently, he is based in Japan as Professor of Geoinformatics at Osaka City University. His research interest includes, distributed geoprocessing, Sensor Network and Remote Sensing for change detection. He is actively engaged in promoting Geoinformatics technologies in Vietnam for almost a decade and is presently the Executive Committee Member of the Japan-Vietnam Geoinformatics Consortium (JVGC). He is also one of the founders of the ZOO Open OWS Project. He is on the editorial board of several scientific journals and has more than 50 scientific publications to his credit.