Welcome to the FOSS4G Community
Introduction

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Boundless
Boundless provides geospatial tools and services for managing data and building applications.

Open Source Projects
GeoTools
GeoServer
uDig

Open Source Geospatial Foundation
Board Member
OSGeo Incubation Chair
GeoTools Project Officer

Eclipse Foundation
LocationTech Project Steering Committee
LocationTech Technology Project
Free and Open Source Software for Geomatics

FOSS/GRASS Users Conference
12-14 September, 2004
BANGKOK, THAILAND

Presented by FOSS/GRASS 2004 International Organizing Committee

Free/Libre and Open Source Software for Geoinformatics: GIS-GRASS Users Conference

**Held at**
Chulalongkorn University
Department of Survey Engineering
Pathumwan
Bangkok, Thailand
10330

**September 12 - 14, 2004**

**ABOUT THE CONFERENCE**

The Free/Libre and Open Source Software (FOSS) for Geoinformatics: GIS - GRASS Users Conference will be held in Bangkok, Thailand, 12-14 September 2004. An extended successor to a long series of GRASS-GIS Users Conferences (last held on September 2002 in Trento, Italy), the series will be in Asia for the first time. The conference brings together GRASS developers and users worldwide to foster closer relations, and to share ideas for improving software and applications. (Unlike at closed-source software users meetings, anyone can turn findings of this meeting into new code and improved applications.) The BangKok conference will cover all aspects of FOSS for Geoinformatics, in addition to GRASS itself. Thus the aim of the conference is twofold: (a) exchange of experiences between GRASS users and developers and (b) provide first-hand information on FOSS capabilities for developing national/local spatial data infrastructures, with emphasis on Asian countries. One unique aspect of the conference will be the **INSTALLFEST**. Bring your computer (or buy one in Bangkok), install GRASS and other geoinformatics software, and begin to use it, all at the conference!

**Venue and Organizers**

The conference is being organized by the Faculty of Engineering, Chulalongkorn University, Thailand, with support from several other institutions. The Organizing Committee includes prominent experts in FOSS for Geoinformatics.
Regional Events

FOSS4G Europe 2017

FOSS4G Africa
Johannesburg 2017

FOSS4G
Korea 2017

FOSS4G UK
Southampton 2016

FOSS4G-ASIA
Hyderabad, India
Jan 26th-29th 2017

FOSS4G-CEE
Bucharest 2013

FOSS4G-CEE
Bremen 2014

FOSS4G-CEE
Prague 2012

HOKKAIDO
FOSS4G Community • it is a lifestyle choice
Welcome to the FOSS4G Community

FOSS4G Community
• Open Data
• Open Standards
• Open Source
• Open Collaboration
• Open Science and Education
Open Data - software without data is like a piano without music
Spatial Data is important

- Expensive and time-consuming to collect
- Use of standards facilitates the reuse and repurposing of existing data
- Datasets tend to have a very long lifespan
  - It is common for datasets to outlast the product that created them.
  - It is not uncommon to work with historical data from the 1970s or 1870s
• freely available to reuse and republish
  • Open Street Map
  • GeoNames
  • EPSG Geodetic Parameter Dataset
• slightly different from "free data" (which is available free of charge)
The GeoNames geographical database covers all countries and contains over eight million placenames that are available for download free of charge.

OpenStreetMap powers map data on thousands of web sites, mobile apps, and hardware devices.

OpenStreetMap is built by a community of mappers that contribute and maintain data about roads, trails, cafés, railway stations, and much more, all over the world.

Local Knowledge

OpenStreetMap emphasizes local knowledge. Contributors use aerial imagery, GPS devices, and low-tech field maps to verify that OSM is accurate and up to date.

Community Driven

OpenStreetMap's community is diverse, passionate, and growing every day. Our contributors include enthusiast mappers, GIS professionals, engineers running the OSM servers, humanitarians mapping disaster-affected areas, and many more. To learn more about the community, see the user diaries, community blogs, and the OSM Foundation websites.
Open Standards - puts this sharing into open data.
Open Standards

• define how software can communicate together
• is available as a spec for anyone (even.especially us) to implement
• this is the "glue" that allows so much of our open source software to work together and thrive
- International Organization for Standardization (ISO)
  - interoperability between geospatial systems (known as TC 211)
- World Wide Web Consortium (W3C)
  - communication on the web
  - protocols used for machine-to-machine communication
Industry standards

• Open Geospatial Consortium (OGC)
  • web standards we used for publishing spatial information

• OGP Geomatics Committee (OGP)
  • the EPSG Geodetic Parameter Dataset
    (facilitate communication between geospatial systems)
• GeoJSON (now W3C standard)
• GeoTIFF
• MBTiles
• MBStyle
• WMS-C
  • informal tile standards defined right here at a foss4g event
We of course have to respect existing investment in data:
- Shapefile
- Oracle Spatial
- MapInfo TAB
Welcome to the OGC

The OGC (Open Geospatial Consortium) is an international not for profit organization committed to making quality open standards for the global geospatial community. These standards are made through a consensual process and are freely available for anyone to use to improve sharing of the world's geospatial data.

OGC standards are used in a wide variety of domains including Environment, Defense, Health, Agriculture, Meteorology, Sustainable Development and many more.

Our members come from government, commercial organizations, NGOs, academic and research organizations.

Recent Tweets

- OGC: Open Geospatial Consortium on Twitter
  - Nov 19-20 geographic20 @geolive Nov 20 geographic20.org Expand

GeoJSON is a format for encoding a variety of geographic data structures.

The following geometry types: Point, LineString, Polygon, MultiPoint, and MultiPolygon. Geometric objects with feature objects. Sets of features are contained by GeoJSON objects for more detail. See also geojson.org/doc/draft-butler-geojson/. An Internet-Draft of the original specification. Public JSON Working Group

The OGC through its Geographic JSON Working Group, in conjunction with the original GeoJSON Task Force, is revising the original GeoJSON Working Group: http://www.opengeospatial.org/workinggroups/geojsonWG
If you download the app, you can download the source.
• Open Source:
  • when you receive software you also receive the source code
• Accomplished using a software license
OpenLayers 3 BSD 2 Clause License
Copyright 2005-2013 OpenLayers Contributors. All rights reserved. See AUTHORS.md for full list.

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• The Open Source Initiative maintains a list of recognized open-source licenses.

• Licenses differ in how they balance
  • the freedoms granted to users of software
  • how they protect software developers
• BSD
  • The Berkeley Software Distribution license permits commercial use, such as including the software in your own application or website.
  • The only restriction is the inclusion of a license and copyright notice in the OpenLayers file you use.
  • Your own work (that is, the website) remains unaffected.
  • This ability to be freely mixed with your own work makes BSD an excellent choice for OpenLayers.
• **GPL**: The GNU General Public License
  • is arguably the most popular open-source license
  • Any modifications made to the original application must be provided to those running the application.

• This is the license used for GeoServer
  • It is especially appropriate, in that system administrators want to be sure exactly what is running on their server, while ensuring that any customizations made are available.
  • The GPL license is also used by Oracle for the distribution of the OpenJDK implementation of Java.
• LGPL: The Lesser General Public License
  • formerly the Library General Public License
  • Allows the mix of open source and proprietary technology, making it a little more relaxed than the GPL.

• This license is employed by the GeoTools library
  • Pragmatic choice, allowing GeoServer to smoothly integrate with proprietary systems such as Oracle Spatial and ArcSDE.
License Compatibility

Permissive
- MIT
- BSD
- Apache

Weak
- LGPL

Strong
- GPL

may be combined with proprietary software
required to maintain license
Choosing an OSS license doesn’t need to be scary

Which of the following best describes your situation?

I want it simple and permissive.

The **MIT License** is a permissive license that is short and to the point. It lets people do anything they want with your code as long as they provide attribution back to you and don’t hold you liable.

jQuery and Rails use the MIT License.

I’m concerned about patents.

The **Apache License** is a permissive license similar to the MIT License, but also provides an express grant of patent rights from contributors to users.

Apache, SVN, and NuGet use the Apache License.

I care about sharing improvements.

The **GPL (V2 or V3)** is a copyleft license that requires anyone who distributes your code or a derivative work to make the source available under the same terms. V3 is similar to V2, but further restricts use in hardware that forbids software alterations.

Linux, Git, and WordPress use the GPL.

What if none of these work for me?

http://choosealicense.com/
• An open source license:
  • only describes how software is distributed
  • How the software was obtained (and how the project is managed) are a matter of "Governance"
• participation without representation is no way to play
• Adopting a new software component
  • has well-understood risks for procurement
  • Open-source software helps mitigate some risks (such as vendor lock-in) while exposing an organization to others (such as the license incompatibility)

• This is the responsibility of the project team's "governance"
  • Although you probably want to perform an audit
  • A software foundation is standardize governance (and reduce the risk of using open-source software).
• **Open Development = Transparent and Inclusive**
  - Perform decision making in an open and public manner.
  - Key factor success factor - projects that practice open development are in position to recover if one or more contributors fall by the wayside
  - The ability to see what is being worked on, and the opportunity to take part, is the key test of open development.

• **GeoServer**
  - maintains a public issue tracker which can be used to report problems
  - Uses a public email list for development, discussions and questions
  - Public "developers guide" documents procedures (including how to join the project)
An open source license is the terms under which users receive software, need to check license applied correctly

- Failure to check prevents the open source license from being effective.
- Each source code file contains an introduction header describing who wrote the file and under what terms it has been provided to the project.
- GitHub projects include a CONTRIBUTING file describing what is needed
- Some projects ask for a contributing license to be signed
• Failure to check prevents the open source license from being effective.
  • This can result in a project being pulled from the market until such time as the problem can be addressed or the section of code rewritten.

• A common mistake is an employee contributing a fix in their own name.
  • In this case, it is their employer who owns the fix and needs to provide correct authorization.

• Your legal department, or a software foundation, are in a position to conduct code audits (or intellectual property checks) on software before it is released.
  • This is done both to protect their own liability (and to let your legal department verify the results prior to use.)
Software Foundation vs Forge

- **Software foundation**
  - provides "vendor neutral" governance
  - can offer strong legal projection for a project (and its users)
  - most common lawsuits are copyright and patent infringement

- **Software Forge**
  - GitHub is focused strictly on hosting source code (similar to how gmail hosts email messages online)
  - GitHub does not operate as a software foundation (instead it makes money by selling services to corporate customers)
Open Source Geospatial Foundation
• Empower everyone with open source geospatial

LocationTech
• working group developing advanced location aware technologies.
Open Science
• It is simply better science
  • Include the data
  • Include the software
  • Reproduce the result

Open Education
• It is simply better education
  • Open document license applied to course and syllabus material
  • Shared risk, shared benefit
  • Available to all
Welcome to the FOSS4G Community – enjoy the event!
Discover, Learn, Collaborate, and Share With GIS Professionals

connect.boundlessgeo.com

Check out our booth #103