

2007 Annual Report

Open Source Geospatial Foundation



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Special Edition

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Thank you to our 2007 Foundation Sponsors

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Software Project Reports

FDO – Feature Data Objects

Period covered by report: Jan-Dec 2007

Contact name: Greg Boone

Key Accomplishments

Releases

The following 4 releases of FDO were made available in 2007.

1. FDO Open Source 3.2.1 Released - March 2007
 - Bug fixes from 3.2.0 release
 - The complete roadmap and features of FDO 3.2.1 can be found [here](#)³⁰.
2. FDO Open Source 3.2.2 Released - July 2007
 - Improved reverse engineering of views in MySQL and ODBC
 - Upgraded filter support for Upper, Lower, Floor and Ceil functions in SDF
 - Enhanced Bounds support for GDAL Provider configuration files
 - FDO Provider Support for ArcSDE 9.2
 - Addition of the FDO KingOracle Provider

- The complete roadmap and features of FDO 3.2.2 can be found [here](#)³¹.
3. FDO Open Source 3.2.3 Released - August 2007
 - Bug fixes from 3.2.2 release
 - The complete roadmap and features of FDO 3.2.3 can be found [here](#)³².
 4. FDO Open Source 3.3.0 Beta 1 Released - December 2007
 - Addition of the FDO Expression Engine
 - Addition of the PostGIS Provider
 - Continued development and release of the KingOracle Provider
 - Alpha Release of the SQL Server Spatial Provider
 - The complete roadmap and features of FDO 3.3.0 can be found [here](#)³³.

Adoption

FDO adoption into Third Party applications continued in 2007:

- 1Spatial Radius Studio v1.4: 3.2.0
- Safe Software FME 2007: 3.2.1

³⁰FDO 3.2.1: <http://trac.osgeo.org/fdo/milestone/3.2.1>

³¹FDO 3.2.2: <http://trac.osgeo.org/fdo/milestone/3.2.2>

³²FDO 3.2.3: <http://trac.osgeo.org/fdo/milestone/3.2.3>

³³FDO 3.3.0: <http://trac.osgeo.org/fdo/milestone/3.3.0>

³⁴Products using FDO: <http://fdo.osgeo.org/content/products-using-fdo>

- Autodesk Map 3D 2008: 3.2.1
- Autodesk MapGuide Enterprise 2008: 3.2.2
- MapGuide Open Source 1.2.0: 3.2.3
- A list of products using FDO can be found [here](#)³⁴

External Vendor Adoption of FDO:

- FME FDO Provider for AutoCAD Map 3D 2008

Areas for Improvement

- Implement a formalized release process.
- While community contribution to the project is growing, most of those contributions are still on the periphery of the project. The core development on the API is still primarily fuelled by developers at Autodesk. The project needs developers from the community actively working on some of the core components.
- Getting started with FDO and the process of building new providers are still more difficult than they need to be. Enhanced documentation, tutorials and certification tools would go a long way to improving this experience.
- A public build system for FDO would provide the community information on the state of trunk and access to daily builds of trunk.
- Linux based builds of FDO remain more difficult than they should be. Additional work is required to the build system of FDO to make it fully FGS viable.
- The PostGIS, King Oracle and SQL Server Spatial providers would really benefit from increased community development and support.

Opportunities to Help

All contributions and help is welcome, but in particular:

- Develop a new FDO provider for your currently unsupported format
- Help work on the PostGIS, KingOracle and SQL Server Spatial Providers
- Refine the website navigation and site structure.
- Develop and refine help and documentation, in particular a getting started tutorial.
- Enhance the Linux build system and complete the FGS package work.
- Testing and quality bug reports.

Outlook for 2008

2007 was a great year for the FDO project. Considerable momentum has grown around the development community. The community hopes to keep this momentum going in 2008. Community contribution continues to grow at a steady pace, and we believe the 3.3.0 release will spark even more enthusiasm and collaboration. Finally with a little effort and support we believe the number of external developers contributing to the core code base will start to increase.

Expected Major 2008 Milestones

- Graduate OSGeo Incubation: February 2008
- Final Release of FDO 3.3.0: March 2008
- Final Release of SQL Server Spatial Provider for 3.3.0 and 3.2.3
- Continued enhancements to the feature set of the PostGIS Provider
- Continued development towards a service pack release of FDO 3.3.1 and beyond
- Continued development of new Data Providers for FDO
- Enhancements to the FDO API as discussed on the [FDO Futures Discussion Page](#)³⁵

³⁵FDO Futures Discussion: <http://trac.osgeo.org/fdo/wiki/FdoFutures>

GDAL/OGR

Period covered by report: Jan-Dec 2007

Contact name: Frank Warmerdam

Key Accomplishments

Software Releases:

1. GDAL/OGR 1.5.0 Release
 - Over 20 new drivers added.
 - Five new feature RFCs implemented
2. GDAL/OGR 1.4.1, 1.4.2, 1.4.3, and 1.4.4 stable branch releases
 - The 1.4.x series represents the first time the project maintained a stable branch from which bug fix releases could be issued.
 - The 1.4.x series included nearly 200 bug fixes
3. GDAL/OGR 1.4.0 Release
 - Six new drivers
 - Many bug fixes and new features

Sponsors & Project Management

- \$32500 USD in funds collected from nine sponsors - thanks to Analytical Graphics/AGI (Gold), i-cubed, Cadcorp, Safe Software, SRC, ACT, Waypoint and INGRES.
- Mateusz Loskot was contracted using project sponsorship funds
- Added Tamas Szekeres and Even Rouault to the project steering committee
- Added 12 new Committers
- Migrated the mailing lists, web site and bug tracking to OSGeo
- Utilization of Trac wiki for user contributed documentation.
- Partial translation of the web pages to Portuguese.
- A one day sprint/hack-a-thon at FOSS4G, including distribution of "Team GDAL" t-shirts.
- Three Google Summer of Code student projects.

Areas for Improvement

- The 1.4.3 release included ABI (application binary interface) breakage and had to be retracted. Better review and testing mechanisms are needed to avoid breaking our ABI stability guarantees.

- While substantial progress was made over the year, the project still struggles with many old bug reports that have not been addressed.
- Additional outreach to projects and products using GDAL is required to ensure their needs are being met.
- Improve our provision of "standard binaries" for at least Win32, Linux and MacOS X. The OS-Geo4W effort may be helpful in this regard for Win32.
- Broaden the coverage of the test suite (more formats, more special cases)
- Seek, and incorporate feedback from sponsors and the community via the Survey going out with this annual report.

Opportunities to Help

- Contribute to documentation - especially FAQ, special build notes, language specific examples and suggestions and general how-to topics - add these in the Trac wiki!
- Seek additional sponsorships, to provide more stable maintainer funding.
- Testing and quality bug reports are always valuable.

Outlook for 2008

The growth of the base of project developers is very encouraging, and will hopefully continue. The coming year is an opportunity to continue to professionalize and community-ize project maintenance reducing the reliance on any one contributor. I also see this as a year when we need to work to make the projects technical strengths accessible to more projects through continued improvements to language bindings and documentation, and to more end users via easy to use standard binaries (eg. OSGeo4W).

I also look forward to more funded maintainer hours available to deal with our bug report backlog, and to ensure timely response to new bug reports. This will hopefully provide a payback to sponsors, and ensure a continued positive technical reputation for the project.

Sponsorship Funds Report

Sponsors³⁶

Item	Amount
i-cubed	5000.00
AGI	9000.00
Cadcorp	3000.00
Safe Software	3000.00
SRC	3000.00
ACT	3000.00
Waypoint	3000.00
Microimages	500.00
INGRES	3000.00
Subtotal	32500.00
OSGeo 25%	-8125.00
Net Total	24375.00

Expenditures

Item	Amount
Mateusz - Jan to Aug.	4395.00
Mateusz - Sept to Dec	6426.00
Mateusz - FOSS4G T-shirts	1700.00 626.00
Total	13147.00

Sponsorship Balance: \$11228.00 USD

GeoNetwork opensource

Period covered by report: Jan-Dec 2007

Contact name: Jeroen Ticheler & François Prunayre

Key Accomplishments

We made progress on incubation during the year 2007 and the following release of GeoNetwork opensource was made available in 2007:

- GeoNetwork opensource 2.1 (September 2007)
 - New user interface based on Ajax and including Intermap as a web map client
 - New harvesting mechanism (supporting WebDav, OAI-PMH, Z39.50, CSW)
 - Support for opensearch client
 - Bug fixes from 2.0

Events:

- Lab at FOSS4G2007 (September 2007)
- GeoNetwork opensource workshop in Roma/-FAO (November 2007)

- User workshop
- Define principles to pass the OSGeo Incubation process
- PSC election

GeoNetwork opensource community website and trac moved to OSGeo infrastructure

Many, many new participants:

- 200+ subscribers to developers list
- 300+ subscribers to users list

Outlook for 2008

- OSGeo Incubation process
- Improve documentation (migration to DocBook)
- Create synergies with other SDI components (e.g. GeoServer, Talend Spatial Data Integrator, ArcCatalog)
- Improve modularity and work on new user interface to be embedded in existing website

³⁶Includes sponsorships received in late 2006

GEOS

Period covered by report: Sep-Dec 2007

Contact name: Paul Ramsey

The GEOS project is pleased to have been accepted into incubation! At FOSS4G 2007, members of the GEOS community met, and decided to move the project under the OSGeo umbrella. Since then, the bug tracking and code repositories have been moved to OSGeo, and we

are moving into the next stages of incubation: selecting a project steering committee, establishing the ground rules for decision making, and reviewing the GEOS code base for intellectual property issues. GEOS should be a great addition to OSGeo, with lots of strong corporate support and wide use throughout the geospatial software ecosystem!

GeoTools

Period covered by report: Jan-Dec 2007

Contact name: [Jody Garnett](#)

Key Accomplishments

- An amazing amount of software at FOSS4G was built around the GeoTools library; we were very happy with the community presence at this event
- We had a 3 day long code sprint after FOSS4G in which we switched over to Java 5 and the GeoAPI feature model. This is the end of a three years of development, months of careful planning and review prior to the event allowed this change to go smoothly.
- Adrian Custer performed an exhaustive check into what is needed to assign copyright to the OSGeo Foundation, this has allowed us to resume discussions with the OSGeo board.
- Jody Garnett has started putting together a user guide for the library
- Our policy change allowing new developers to use the code repository to work on “unsupported” modules has been a great success. Unsupported modules are not bundled with the main GeoTools library and represent work that has not yet met our quality assurance guidelines. This change lowers the bar to participation allowing the GeoTools project to incubate new talent and ideas.

Areas for Improvement

- We made no progress on incubation during the year as we waited for a way forward; this seems

to be resolved for 2008

- We have no time to talk to other Java developer communities, there is a lot of code duplication in this space (and several forks of the GeoTools code)
- The burden of keeping a build box going for such an active community is punishing
- SVN access has had bouts of downtime; we are clearing up the repository (of large test data) and considering moving to a newer version of SVN on OSGeo hardware. Developers have started playing with distributed version control.
- There are more answers going by on the user list than are being captured in the user guide; additional help jotting down code examples would be welcome

Opportunities to Help

Please try out the User Guide and give us feedback; we want to make sure the you can start hacking

Outlook for 2008

GeoTools is looking forward to making 2008 the best year yet. There is a lot of exciting development now underway - from embracing Java 5, to rolling our WFS 1.1 support. 2008 will see the long expected return of swing widgets to the GeoTools library.

GeoTools 2.4.0 is available now and marks the last Java 1.4 release of the library.

GRASS GIS

Project Steering Committee Report 2007

This report is a summary of activities undertaken by the [GRASS-PSC](#)³⁷. It is expected that portions of this document will be included in the OSGeo Annual Report, and this document is not meant to be entirely inclusive.

Report Period

Period covered by report: Nov 2006 - Dec 2007

Contact name: Markus Neteler

PSC Members: Michael Barton, Dylan Beaudette, Hamish Bowman, Massimiliano Cannata, Brad Douglas, Paul Kelly, Helena Mitsova, Scott Mitchell, Markus Neteler, Maciej Siczka

Formation Motion

The GRASS-PSC was formally convened on September 11, 2006, with [Markus Neteler](#) being appointed chair. David Sampson is acknowledged for pushing on the formation of the GRASS-PSC. Guidelines for the operation of the PSC and its formal connection to the GRASS project were extensively discussed for a number of months and formally adopted on 6 April 2007.

2006 Activities

- 20 Dec 2006: GRASS GIS / OSGeo Newsletter Published - The first combined GRASS-News / OSGeo-News volume is available
- 12 Dec 2006: GRASS 6.2.1 released - This release fixes several bugs discovered in the 6.2.0 source code
- GRASS-PSC: CVS write access to S. Pallecchi (granted, 12 Dec 2006)
- GRASS-PSC: PSC Chair motion (chair: M Neteler, 9 Dec 2006, see related email message³⁸)
- GRASS-PSC: CVS write access to R. Antolin (granted, 8 Dec 2006)
- RFC 2: Legal aspects of code contributions (adopted 8 Dec 2006)³⁹

³⁷GRASS-PSC: <http://grass.gdf-hannover.de/wiki/PSC>

³⁸PSC Chair motion: <http://lists.osgeo.org/pipermail/grass-psc/2006-December/000143.html>

³⁹RFC 2: http://download.osgeo.org/grass/grass6_progman/rfc/rfc2_psc.html

⁴⁰GRASS SoC projects: http://wiki.osgeo.org/wiki/SoC_Report_2007#GRASS

⁴¹RFC 1: http://download.osgeo.org/grass/grass6_progman/rfc/rfc1_psc.html

⁴²GRASS Incubation Progress: http://wiki.osgeo.org/wiki/GRASS_Incubation_Progress

- 06 Dec 2006: GRASS 6.2.1RC1 released - This release fixes several bugs discovered in the 6.2.0 source code
- 31 Oct 2006: GRASS 6.2.0 released - The stable version is published: Source code available now, packaged installers for major platforms are currently being built and will follow shortly
- 24 Oct 2006: GRASS 6.2.0RC3 released - The last release candidate
- 06 Oct 2006: GRASS 6.2.0RC2 released - Approaching the final release
- 26 Sep 2006: GRASS 6.2.0RC1 released - The first release candidate
- 18 Sep 2006: GRASS 6.2.0beta3 released - The last beta version

Early to Mid 2007 Activities

- Summer: participation in Google Summer of Code 2007 (Under the OSGeo umbrella) with two projects⁴⁰(now in the main release)
- GRASS-PSC: CVS write access to P. Marcondes for PT translations (granted, 2 June 2007)
- 26 Jul 2007: GRASS 5.4.1 released - Courtesy release containing several bug fixes for legacy users
- 16 Jul 2007: GRASS 6.2.2 released - This release fixes several bugs discovered in the 6.2.1 source code
- 29 May 2007: GRASS 6.2.2RC1 released - Bugfix release candidate
- RFC 1: Project Steering Committee Guidelines (extensively discussed and adopted 6 April 2007)⁴¹
- Italian GRASS and GFOSS Users Meeting - GRASS and GFOSS Users Meeting, Palermo (Italy), 14-16 Feb 2007
- 12 Feb 2007: New GRASS bug and wish tracker - Gforge based
- 10 Feb 2007: GRASS GIS 6.2.1 winGRASS/Cygwin binaries available - download package

Mid to Late 2007 Activities

- OSGeo "incubation" process ([GRASS Incubation Progress](#)⁴²): almost completed, waiting for men-

- tors approval to reach graduation
- [Migration to OSGeo source code](#)⁴³ and bug tracker infrastructure (after many years successful hosting by Intevation GmbH)
- 30 Nov 2007: GRASS 6.3.0RC3 released - Technology preview release candidate 3
- 27 Nov 2007: GRASS 6.2.3 released - This release fixes several bugs discovered in the 6.2.2 source code
- 20 Nov 2007: GRASS 6.3.0RC2 released - Technology preview release candidate 2
- 24 Oct 2007: GRASS 6.3.0RC1 released - Technology preview release candidate
- 21 Oct 2007: GRASS 6.2.3RC1 released - Bugfix release candidate
- 24-27 Sep 2007: progress report, workshop and several talks presented at FOSS4G 2007⁴⁴
- 19 Sep 2007: OSGeo Journal Volume 2 Published - The second volume of the new Journal
- 15 Aug 2007: test version of a new data set (Spearfish replacement) released

User statistics

End of 2007, more than 4000 subscribers were counted in the various GRASS mailing lists.



Figure 1: Registered GRASS users

Future strategy

Establish GRASS as GIS backbone, especially for other OSGeo projects.

gvSIG

Period covered by report: Jan-Dec 2007

Contact name: [Jorge Sanz](#)

Key Accomplishments

Releases:

1. 1.0.1 (4 of January)
 2. jCRS and geoBD pilots (21 and 22 of February)
 3. 1.0.2 (9 of May)
 4. SEXTANTE 0.1 (7 of June)
 5. Network pilot (27 of June)
 6. 1.1.0 (21 of October)
 7. Raster pilot (10 of December)
 8. 1.1.1 (21 of December)
- gvSIG has joined the SEXTANTE project, adding to gvSIG a powerful and extensible framework to create easily raster and vectorial algorithms. Nowadays SEXTANTE adds to gvSIG almost 200 algorithms.

- gvSIG has been translated into many languages, and the web site is now offered in English and Chinese besides Spanish and Valencian languages.
- Some developers and managers presented at FOSS4G 2007 in Victoria (Canada) current and near features, as the 3D extension and gvSIG for mobile devices.
- The 3rd gvSIG meeting was a successful event, with more than 500 attendees from many countries, presenting project advances, new applications and projects using gvSIG as underlying technology as well as other FOSS4G projects like Geonetwork Open Source.
- gvSIG has entered into OSGeo incubation as a way to improve the relationship of the project with the community and other FOSS4G projects

⁴³GRASS Migration: http://grass.gdf-hannover.de/wiki/GRASS_Migration_to_OSGeo

⁴⁴FOSS4G 2007 event: <http://www.foss4g2007.org/>



Figure 1: 3rd gvSIG Conference

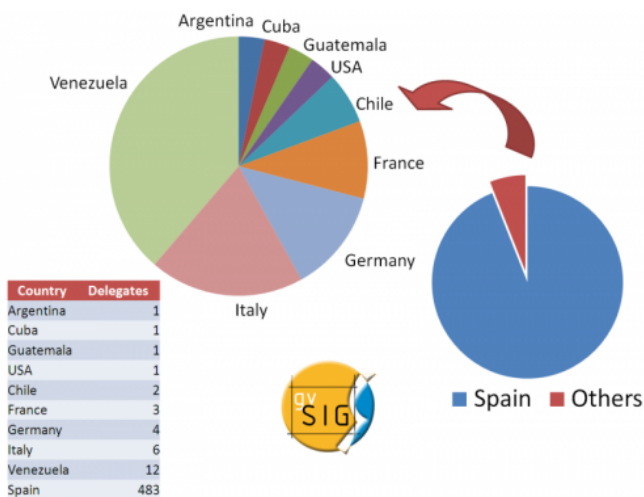


Figure 2: 3rd gvSIG Conference attendance by country

Downloads

These are approximate numbers about gvSIG releases downloads during 2007:

Releases	Downloads	Pilots	Downloads
0.6	421	Network	600
1.0	23,000	Raster	1,800
1.0.1	6,500	geoDB	1,900
1.0.2	11,800	ArcIMS	400
1.1	17,700	jCRS	738
1.1.1	300		

Areas for Improvement

- The collaborative infrastructure needs to be improved, allowing community to interact with the project in a more efficient way.
- The user, and specially, the developer documentation has to be on the website not only as PDFs.
- Keep the organization more in touch with the community, giving information about the technical and organizational decisions, ongoing projects, and so on.
- Improve the use of the English language to foster the communication with non Spanish community.
- Improve the communication channels with other FOSS4G projects to find common approaches for tools, procedures, etc.

Opportunities to Help

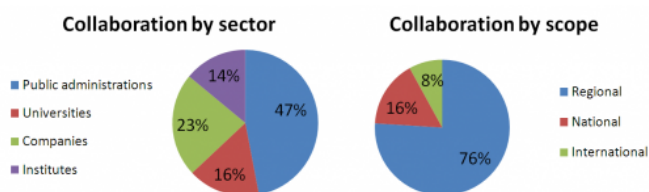


Figure 3: gvSIG related projects by sector and geographical scope

- Discuss on the mailing lists!
- Test and send bugs
- Propose new features for gvSIG
- Translate the application and the documentation and many other materials
- Write successful (or not) use cases
- Sponsor the gvSIG meeting
- Offer training with gvSIG
- Develop new plugins

Outlook for 2008

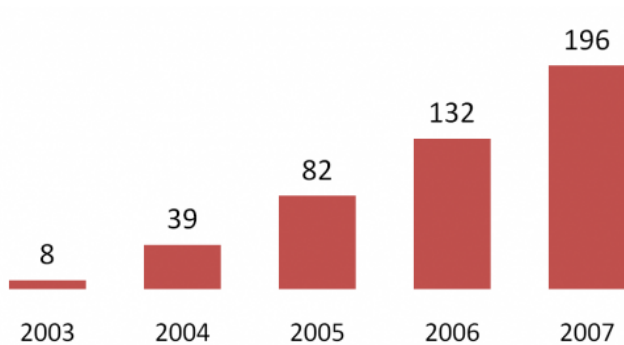


Figure 4: Number of people related with the project by year (total 457)

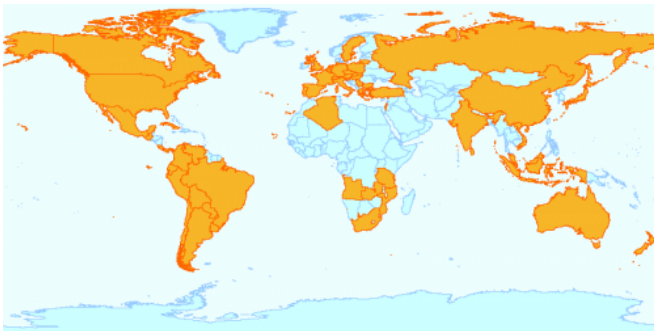


Figure 5: Known countries where gvSIG is being used

- Publish the new portal for the gvSIG project with:
 - Complete user and developer documentation (first in Spanish, later in English and other languages)
 - Community support (howto's, mailing lists, planet, ...)
 - Support for gvSIG internationalization
 - News and events related with gvSIG and other FOSS4G projects
 - Information about new gvSIG developments and releases
- Create a new organization that will support and strengthen the gvSIG project
- Start a training program for gvSIG
- Publish first releases of:
 - 3D support
 - Raster and remote sensing capabilities
 - Metadata handling capabilities
 - gvSIG Mobile
 - Web publishing extension
 - New topology and geoprocessing capabilities
 - Advanced symbology
 - More SDI integration: WPS client
 - Advanced editing
- Start working on new features:
 - 4D support
 - Geostatistics
 - Surveying
 - Sensor web

Mapbender

Period covered by report: Jan-Dec 2007

Contact name: [Christoph Baudson](#)

Key Accomplishments

Quality assurance

- Increased the percentage of re-usable code by switching from script-oriented to object-oriented design
- Since 02/07: well-used bug tracking system Trac supplied by OSGeo (163 tickets up to now), supplement of patches for bugs.
- Since 03/07: well-defined release proceedings, releases on a regular basis (at least 4 releases per year)
- 12/07: optimization of Mapbender's load process: it now loads 4-5 times as fast.
- Since 04/07: growing HTML API of JavaScript and PHP classes⁴⁵
- 01/07: establishment of coding conventions⁴⁶

Community building

- Since 03/07: regular, productive weekly IRC meetings⁴⁷
- 05/07: development sprint with around 20 participants
- Since 01/07: integration of several new developers outside of the core team (Michael Schulz, Marc Jansen, Marko Samson, etc.)
- Since 07/07: development of internationalisation techniques (in collaboration with Italian developers)
- Multi-language documentation at mapbender.org

Areas for Improvement

- Enhance international outreach, address more people outside Germany (or Europe)
- Develop an easy-to-use update routine
- Integration of OSGeo software, like OpenLayers
- Despite having an opportunity to host demos at Telascience, a machine with better connection to

Europe might be desirable. The server is very slow here.

Opportunities to Help

- Wiki: [Request for an Account](#) and add your web application to the [Gallery](#) or help on the documentation
- Contribute your set of buttons to make Mapbender look better
- Offer service around Mapbender, there is still a lot of commercial potential
- Join development by throwing code over the fence or joining the core development team. We need people who have fun creating Web 2.0 style interfaces and have a hand for design work
- Fund core development by sponsoring

Outlook for 2008

- Release of Mapbender 2.5, featuring i18n, KML support, optimized code etc.
- Stabilise and enhance input/output of standardized formats like WMS, WFS, WMC, GeoJSON, KML
- Continue to work on re-design to allow interoperation with state-of-the-art software
- WFS FilterEncoding interface - this means that you can query geographic objects for spatial and attribute data
- SLD Editor
- Install / Setup script
- Catalog connectors
- Enhanced update functionality
- New interfaces (badly needed, we still look like from the late nineties...)

Maybe (depending on interest - so ask for it!)

- OpenLayers as alternative map interface
- FeatureServer support
- Tile cache support

⁴⁵Mapbender class docs: <https://svn.osgeo.org/mapbender/trunk/documents/jsdoc/index.html>

⁴⁶Mapbender Code Conventions: http://www.mapbender.org/index.php/Code_conventions

⁴⁷Mapbender meeting logs: http://www.mapbender.org/index.php/IRC_Meeting

Mapbuilder

Period covered by report: Jan-Dec 2007

Contact name: Cameron Shorter

Introduction

This document summarises the state of the Mapbuilder project and it's relationship with projects around it. It doubles as Mapbuilder's OSGeo annual report.⁴⁸

Community Mapbuilder is a browser based, standards compliant advanced web mapping client and framework.

2007 has been a solid year for Mapbuilder which has grown into a mature, stable project. Many new features have been added, there has been significant collaboration, sharing of code and developers with OpenLayers and our Project Steering Committee has steadily grown.

Mapbuilder related to other OSGeo projects

OpenLayers

[OpenLayers](#) is a browser based mapping library while Mapbuilder is more of a [framework](#). OpenLayers provides one Javascript API which can access multiple data sources: Google Maps, Yahoo Maps, MSN Maps, WMS, WFS, Tiled Cache, KML, GML, etc. OpenLayers has a strong community behind it and its feature set continues to grow. If I were writing a SWAT analysis, OpenLayers could be listed under "Threats".

There has been significant collaboration between OpenLayers and Mapbuilder. Developers from the two projects regularly and openly share ideas and code and make adjustments to ensure functionality is useful for both projects. Many developers contribute to both projects. Recent areas of collaboration include:

- Sharing design ideas
- Vector Rendering
- Styling
- Projection (Proj4js)
- KML layers

Mapbuilder differs from OpenLayers by:

1. Using a Model/View/Controller design pattern in the client, which means that multiple widgets

(views) can present data from one model in numerous ways, or one widget can aggregate data from multiple models. There is no dependency between widgets, so a designer can add/remove widgets without effecting the overall Mapbuilder framework.

- (a) Mapbuilder is good at handling multiple models which drive interdependent widgets.
2. Most state is stored as XML inside the model. Consequently:
 - (a) Using XML makes transactions with XML based web services simpler. In particular, standards based OGC services are mostly defined as XML and there is no loss of information round tripping XML->JS->XML.
 - (b) XSLT can be used to transform Models to views or transactions. XSLT is easier to work with than Javascript transformations from XML to Javascript then back to XML again.
3. OWS Context: Mapbuilder stores state in OWS Context format. OWS Context is a draft OGC standard for describing layers and an AreaOfInterest from multiple data sources. It can be shared between supporting clients (like uDig).
4. The configuration of Mapbuilder is stored in an XML file making it easy to develop a Mapbuilder application and migrate an application from one version to the other.

For less complicated web mapping applications, OpenLayers should be considered.

Mapbender

[Mapbender](#) is another OSGeo webmapping client.

Web Services

Mapbuilder acts as a client to WMS and WFS services like [Geoserver](#) and [Mapserver](#). In particular, Mapbuilder shares examples with OpenLayers which makes it easy to test both applications.

Heavy clients

Mapping systems usually need a light, web based client, as well as functionally complete desktop applications like uDig, Jump, OpenJUMP, etc.

⁴⁸For the complete Mapbuilder report including metrics and graphs see: <http://docs.codehaus.org/display/MAP/Strategic+Direction+-+February+2008>

Key Accomplishments

Feb 2006: OSGeo was founded with Mapbuilder one of the founding projects. The extra visibility meant the number of Mapbuilder downloads doubled overnight.

Oct 2006: Mapbuilder was the second OSGeo project to graduate OSGeo incubation. This involved a code license audit, and refining and documenting our processes:

Dec 2006: GML Viewer client completed as part of OGC Testbed OWS4. This project introduced OpenLayers as a rendering engine and developed vector rendering in conjunction with OpenLayers.

started serious collaboration between OpenLayers and Mapbuilder as the projects shared the development of cross-browser vector (GML) rendering.

2007: Migration to OpenLayers' rendering engine completed. Through OpenLayers, Mapbuilder has access to the multitude of different layers types: WMS, WFS, Google Maps, MSM Maps, Yahoo Maps, GML, KML, ...

2007: Mapbuilder's re-projection code was refactored and migrated to its own library so that it can:

1. Be used by other AJAX libraries - the code is currently being incorporated into OpenLayers.
2. Use re-projection as a service.

2007: Internationalization. Mapbuilder uses a language lookup table for all user messages.

2007: [Commercial Support](#) officially provided.

Areas for Improvement

Mapbuilder needs to define and sell its market position with respect to other webmapping clients, particularly OpenLayers. OpenLayers has attracted many of the potential Mapbuilder developers at the low end of the market. Our next focus needs to be on make Mapbuilder functionality accessible to OpenLayers developers, enabling Mapbuilder to be an extension to OpenLayers.

This is to be achieved by moving Mapbuilder to use the same inheritance model as OpenLayers. (Some work has already been done in this area. For instance, projection code has been restructured to make it accessible to OpenLayers).

While Mapbuilder's documentation is now passable and has most issues covered, there is still room for improvement.

Opportunities for help

Key areas where people can help Mapbuilder include:

1. Marketing, including demonstrating Mapbuilder functionality at conferences, providing workshops etc.
2. Focusing documentation. Refining the documentation to be easier to use. Writing and refining tutorials.
3. Integrate codebase with OpenLayers, to enable OpenLayers users to use Mapbuilder.

Outlook for 2008

Expect to see:

1. proj4js spin off into a separate project
2. Reshaping of Mapbuilder as a framework which complements OpenLayers and makes it easy for OpenLayers users to access Mapbuilder functionality. This is a good opportunity for a Google Summer of Code student.
3. Extension of Mapbuilder's testing process to include TestAnotherWay, as used by OpenLayers. This will complement Mapbuilder's existing testing which targeted at the integration level.

[For the complete Mapbuilder report including metrics and graphs see [here](#).]⁴⁹

⁴⁹Complete Mapbuilder report: <http://docs.codehaus.org/display/MAP/Strategic+Direction++February+2008>

MapGuide Open Source

Period covered by report: Jan-Dec 2007

Contact name: Robert Bray, PSC Chair

Key Accomplishments

- Completed all milestones toward the release of MapGuide Open Source 2.0 - Beta 2 Released mid-December.
 - Incorporates the Fusion technology from DM Solutions which represents the biggest source code donation from the community to date. Fusion uses Open Layers at it's core and provides tremendous flexibility for application and web developers.
 - Support for the AGG Renderer significantly improves anti-aliasing and overall map quality.
 - The complete roadmap and features of 2.0 can be found [here](#)⁵⁰.
- MapStudio Open Source makes its debut. MapStudio OS is a desktop application for authoring and configuring MapGuide Open Source related data. MapStudio OS was developed independently of the MapGuide Open Source project and is available [here](#)⁵¹.
- MapGuide Open Source 1.2.0 Released - September 4, 2007
 - The complete roadmap and features of 1.2 can be found [here](#)⁵².
- MapGuide Graduates Incubation - March 5, 2007
 - In February the MapGuide project met all of the requirements for OSGeo incubation and graduated the incubation process.
- MapGuide Open Source 1.1.0 Released - January 22, 2007

Areas for Improvement

While community contribution to the project is growing, most of those contributions are still on the periphery of the project. The core development on the MapGuide project is still primarily fuelled by developers at Autodesk. The project really needs developers from the community actively working on some of the core components.

⁵⁰MapGuide Open Source 2.0 roadmap: <http://trac.osgeo.org/mapguide/milestone/2.0>

⁵¹MapStudio Open Source: <http://code.google.com/p/mapstudios>

⁵²MapGuide Open Source 1.2 roadmap: <http://trac.osgeo.org/mapguide/milestone/1.2>

Getting started with MapGuide is still more difficult than it needs to be. Improvements to the authoring tools (Web Studio / Map Studio) and a tutorial would go a long way to improving this experience.

A public build system for MapGuide would provide the community information on the state of trunk and access to daily builds of trunk.

Linux based builds of MapGuide and FDO remain more difficult than they should be. Some effort was put into an FGS installer but more work is required to the build systems of both FDO and MapGuide to make FGS fully viable.

Website navigation is still more difficult than it should be. The project needs to do some reconciliation of what is in Drupal vs. what is in Trac, and come up with a plan and resources to make the site easier to navigate and use. It would also be beneficial to get the doxygen API documentation available directly from Trac.

Opportunities to Help

All contributions and help are welcome, but in particular:

- Contributions to the website navigation and site structure.
- Contributions to the help and documentation, in particular a getting started tutorial.
- Help with the Linux build system and completing the FGS package work.
- Additional testing and quality bug reports.

Outlook for 2008

The outlook for the MapGuide Open Source project in 2008 and beyond is very bright. From a technology standpoint MapGuide Open Source 2.0 will be released early in 2008. With the new AGG renderer and incorporation of Fusion we anticipate broad adoption of 2.0. Community contribution continues to grow at a steady pace, and we believe the 2.0 release will spark even more enthusiasm and collaboration. Finally with a little effort and support we believe the number of external developers contributing to the core code base will start to increase.

MapServer

Period covered by report: Jan-Dec 2007

Contact name: Steve Lime

Key Accomplishments

- Transformed the MapServer Technical Steering Committee (TSC) into the MapServer Project Steering Committee (PSC) (see RFC-23⁵³)
- Added four new members to the PSC
- Three maintenance releases of MapServer 4.10
- Migrated significant portions of MapServer project infrastructure, specifically CVS and Bugzilla, from the University of Minnesota to OSGeo infrastructure (SVN and Trac) in April 2007
- Implemented a buildbot⁵⁴

MapServer 5.0 Release

Released MapServer 5.0 in early September 2007 closing more than 200 tickets. Key features include:

- Support for the AGG⁵⁵ rendering engine
- Label prioritization control
- Style and label attribute binding

- Dynamic charting capabilities
- Raster color correction via color lookup table
- Dynamic allocation for most statically allocated elements (e.g. layers, classes and styles)
- Improved memory management and garbage collection for MapScript
- Enhanced debug/logging capabilities

Areas for Improvement

- OSGeo incubation process was slow, primarily limited to infrastructure migration from UMN to OSGeo.
- Like most projects, keeping documentation up-to-date with development remains a challenge.
- There was little or no time for collaboration with other similar (e.g. MapNik, GeoServer, MapGuide) projects although I guess this is only natural given the other demands of working on a project.
- The MapServer development team did a poor job representing the new release of MapServer (5.0) at the FOSS4G conference in Victoria.

OpenLayers

Period covered by report: Jan-Dec 2007

Contact name: Chris Schmidt and Erik Uzureau

Key Accomplishments

- Graduated from OSGeo incubation
 - Three major releases in 2007
- 2.3:
- Bug fixes from 2.2 release
 - Improvements in tile handling
 - Support for TMS
- 2.4:
- Vector drawing support
 - Improved event handling framework

- New editing controls
- 2.5:
- Additional format support: KML, GeoRSS, GeoJSON
 - More vectorization tools
 - Better third party API integration
 - Improved system for developer documentation
- Many, many new participants:
 - 250+ subscribers to developers list
 - 550+ subscribers to users list
 - Over 110 users manually signed up for TRAC accounts
 - Integration of OpenLayers into existing toolkits:

⁵³MapServer RFC-23: <http://mapserver.gis.umn.edu/development/rfc/ms-rfc-23/>

⁵⁴Buildbot: <http://buildbot.osgeo.org:8504/>

⁵⁵AGG rendering engine: <http://www.antigrain.com/>

[MapBuilder](#)⁵⁶, [Fusion](#)⁵⁷, and [MapFish](#)⁵⁸

Areas for Improvement

- Plan to migrate to OSGeo infrastructure for SVN/-Trac
- Process to become a committer better defined (add more committers, add reviewer role, etc.)
- Better documentation, memory handling
- Continue to expand support for existing Geo standards.

Opportunities to Help

- Case Studies: Why are you using OpenLayers? What do you gain by using it over other tools?
- Examples:
- Documentation: Prose text describing how to perform a series of steps to achieve a goal in OpenLayers, to add to the existing developer documentation and examples
- Improved interaction with current users of proprietary software to understand and target their needs, including (but not limited to):
 - Possibly developing support for ESRI-specific map requests like ArcXML

- Improved documentation on how to transition from proprietary software to OpenLayers

Outlook for 2008

In 2008, OpenLayers is poised to continue on its current trend of taking geographic information to the web. With support for new geographic formats and servers, improved performance, and web browsers becoming more and more commonly used as the sole client to access datasets, OpenLayers has placed itself in a strong growth position. Patches and contributions are arriving from around the globe, from contributors on 5 different continents.

In 2008, expect to see wider usage of OpenLayers as the project becomes more widely used and better documented. Already, we have seen major governmental organizations take up OpenLayers as the sole public API to their data, preferring the open source project to commercial ventures such as Google, Yahoo, or Microsoft's offerings. With this trend, it is likely that users can expect to see continued usage leading to wider support for different browsers, improved functionality, and more in 2008.

⁵⁶MapBuilder: <http://communitymapbuilder.org/>

⁵⁷Fusion: <http://www.dmsolutions.ca/technology/fusion.html>

⁵⁸MapFish: <http://www.mapfish.org/>

OSSIM

Period covered by report: Jan-Dec 2007

Contact name: Mark Lucas

Key Accomplishments

OSSIM has continued to evolve as additional tools, applications and web solutions have been developed with the core C++ library. The key contributors of the project have been working on US Government projects that have been responsible for many of the new tools and capabilities. Most of the recent work has focused on ossimPlanet and OMAR.

ossimPlanet is an accurate 3D global visualization client that emphasizes native file access, navigation and data synchronization between clients and servers, and event driven alerts. This client is being used by several government projects and contractors as well as high end visualization systems located at CALIT2 and the Arizona State University Decision Theater.



Figure 1: Urban Models with ossimPlanet (Washington DC)

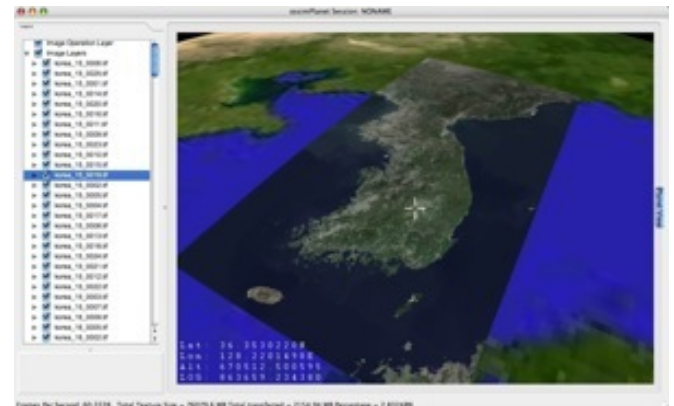


Figure 2: Mosaic of Korea with ossimPlanet

OMAR is a web based ossim service that rapidly provides new products to end users.

Areas for Improvement

OSSIM is currently in incubation awaiting final graduation. Work is continuing on documenting the wiki and improving the communications from the Program Steering Committee to the developer list.

Quantum GIS

Period covered by report: Jan-Dec 2007

Contact name: Gary Sherman

Key Accomplishments

- Released versions 0.8, 0.8.1, 0.9, and 0.9.1
- The refactoring of libraries (starting at 0.8) allows the development of standalone GIS applications using the QGIS API
- Version 0.9 introduced Python bindings, opening up QGIS development to a larger audience
- Improved project management by establishing roles with the Project Steering Committee (PSC):
 - Release Manager
 - Technical Advisor
 - Community Advisor
 - Financial/Marketing Advisor
- Entered OSGeo incubation in February
- Funds management was transferred to OSGeo

Areas for Improvement

- The QGIS project continues to improve its internal processes for development and release of packages.
- There are a number of key shortcomings (labeling, map composition) that need to be addressed for the release of version 1.0 in 2008

Opportunities to Help

QGIS is in need of additional developers to close existing bugs and implement new features.

Outlook for 2008

Version 1.0 will be released in 2008, providing a stable API for the development of both C++ and Python applications

Google Summer of Code

OSGeo participation in Google Summer of Code 2007

Period covered by report: May-Aug 2007

Contact name: Wolf Bergenheim

Last summer, from May 1st 2007 to August 31st 2007, OSGeo participated in the Google Summer of Code. This article sums up that experience and gives a short presentation of each Summer of Code project.

What is SoC?

Quoting [Google FAQ](#):

Google Summer of Code is a program that offers student developers stipends to write code for various open source projects. Google will be working with a several open source, free software and technology-related groups to identify and fund several projects over a three month period. Historically, the program has brought together over 1,000

students with over 100 open source projects, to create hundreds of thousands of lines of code. The program, which kicked off in 2005, is now in its third year, following on from a very successful 2006.

While the majority of past student participants were enrolled in university Computer Science and Computer Engineering programs, GSoCers come from a wide variety of educational backgrounds, from computational biology to mining engineering. Many of our past participants had never participated in an open-source project before GSoC; others used the GSoC stipend as an opportunity to concentrate fully on their existing open source coding activities over the summer. Several of our 2005 students went on to become mentors in 2006.

What projects participated?

First of I'd like to congratulate the students on a job well done. A lot of cool and very useful projects were completed in SoC 2007. We did lose a student or two, who were overtaken by other priorities. But the overall success of projects is something we should be proud of. Good work! Hope SoC 2008 will be at least as good. Now on to present the Projects of Summer 2007:

GDAL

GDAL2Tiles

Student: Klokan Petr Pridal

Mentor: Howard Butler

This project is to allow easy publishing of raster maps on the Internet. Raster maps (like TIFF/GeoTIFF, MrSID, ECW, JPEG2000, JPEG, PNG) are converted into a directory structure of small PNG tiles (TMS compatible), which can be copied to a web server. Simple web pages with viewers based on Google Maps and OpenLayers are also generated as well. This tool makes publishing even large maps without needing to install or configure any special software (like mapserver) and the map displays very fast in the web browser. GDAL2Tiles also generates necessary metadata for Google Earth (KML SuperOverlay), if the supplied map uses EPSG:4326 projection. The gdalwarp utility can be used to convert raster maps with another projection. World files and embedded georeference is used during tile and KML generation, but proper georeference is not mandatory.

Tile structure follows recommendation from OSGeo Tile Map Service Specification⁵⁹

Manual page for utility is part of the solution, as well as a document describing several existing tile structures with links to further documentation. Analysis of rotated SuperOverlay KML is done as well.

For more info look at the [project page](#)

This project was accepted by GDAL community as ticket #1763. This utility is distributed with the new stable version of GDAL 1.5.0.

KML read support for the existing driver

Student: Mateusz Loskot

Mentor: Jens Oberender

This project added KML vector read support.

For more information read the [Wiki page](#)

This project is included in the new version 1.5.0 of OGR

Web Map Services GDAL driver

Student: Adam Nowacki

Mentor: Daniel Morissette

Development of a OGC Web Map Services GDAL driver, with support for the following Web Map Services:

- OGC WMS and WMS-C cache
- WorldWind TileService

The new driver has been included in the official GDAL codebase and included in the 1.5.0 release. [Driver documentation is available](#) and the [Wiki page](#) has more information.

This project is included in the new version 1.5.0 of OGR

GRASS

v.generalize

Student: Daniel Bundala

Mentor: Wolf Bergenheim

v.generalize is a project which does line simplification as described by McMaster. The original plan was to implement Douglas-Peucker and a few more line simplification algorithms. Daniel Bundala (the student) surprised his mentor by working a lot more efficiently and as a result GRASS 6.3 now includes a brand new generalization module which is capable of not only simplification but also smoothing and displacement. There is also a method for network simplification in the module.

For more information see the [module documentation](#) v.generalize is included in the new 6.3.0 release of GRASS (as of RC4).

The module has also been used to substantially speed-up and improve quality of interpolation from contour data [when computing digital elevation models](#).

v.net.visibility

Student: Maximilian Maldacker

Mentor: Wolf Bergenheim

v.net.visibility builds a visibility network around some obstacles. The created network can then be further analyzed with existing v.net.* modules. It can also be merged with an existing network, like a road network, and this enable plotting shortest paths beyond an existing road network, say for emergency vehicles.

For more information see the [module documentation](#) v.net.visibility is included in the new 6.3.0 release of GRASS (as of RC4)

⁵⁹Tile Map Service: http://wiki.osgeo.org/index.php/Tile_Map_Service_Specification

uDig

Caching data

Student: Christophe Rousson

Mentor: Ian Turton

A feature cache. A RAM cache might use the LRU algorithm and have a maximum amount of RAM to consume setting. A local disk cache and local disk cache might use a size-only and/or maximum age based algorithm. Ideally as items fall out of RAM, they would be written to disk. At session close, remaining items in RAM would also be written to disk (much like Google Earth). Upon startup, cache could be polled to see if anything already exists within the current spatial window (if it hasn't expired).

For more information see the [data Wiki page](#)

This project is on the trunk/development version of uDig.

Transformation Algorithms

Student: Jan Jezek

Mentor: Jesse Eichar

GeoTools Referencing module has been becoming one of the most powerful tools focused on coordinate system transformations in JAVA GIS world in recent years. Referencing module in conjunction with Coverage module presents a really strong tool for raster operations like re-projecting and transforming. One of the frequently required operations in GIS is to fit rasters like scans of maps or remote sensing images that have unknown coordinate reference system into the real world coordinate reference system. In GeoTools there are already few possibilities to do so. The aim of this project is to add other algorithms for that purpose and then to make a simple GUI for uDig to apply these new functions.

These new algorithms are:

- New interpolation-based methods - inverse distance weighted (IDW) interpolation, bilinear interpolation.
- Thin-plate Spline method (TPS).
- More general piecewise transformation.

For more information see the [Wiki page](#)

This project is on the trunk/development version of uDig.

Interactive GeoRSS Tool

Student: Rui Li

Mentor: Richard Gould

As a user focused geographical information system, one of its goals is to satisfying system users by providing sufficient information to their specific needs. In many cases like traveling or moving, a traveler would like to find Places of interest close to his/her hotel, or a student wants to find an apartment within feasible walking distance to school. The traditional way contains two separate steps which are looking for potential locations and then confirming the distance by the user him/herself. This project combines the two steps together.

For more information see the [Google Summer of Code abstract](#).

Geoserver

JTileCache

Student: Chris Whitney

Mentor: Justin Deoliveira

Implemented a WMS-C server (similar to TileCache of MetaCarta) as a Java servlet, including support for existing cache libraries in order to support memory, disk, and distributed caches. The Open Planning Project (TOPP) is continuing development on the project. In particular, Arne Kepp contributed significant new features and bug fixes, including releasing a 0.5 version under a more suitable name, GeoWebCache. The project currently lives at <http://geowebcache.org>. The GeoServer [demonstration](#) site now uses GeoWebCache for serving WMS tiles to the client.

Style Editor

Student: Anthony Manfredi

Mentor: Andrea Aime

To design and implement an editor for SLD files with using JavaScript.

- Standalone - editor is not tied to a particular program (uDig, MapBuilder, GeoServer)
- Visual - users can preview the results of changes as they are made.
- Intuitive - easy to learn but not cumbersome or limiting for the advanced user.

For more information see the [Wiki page](#)

GeoTools

Multi-Dimensional Raster Data Sources

Student: Daniele Romagnoli

Mentor: Simone Giannechini

This is a set of Java Image I/O plugins capable of providing a starting point for building GeoTools plugins to manage multidimensional data formats such as NetCDF, HDF, GRIB1.

- NetCDF. Quoting from (<http://www.unidata.ucar.edu/software/netcdf/>), “NetCDF (network Common Data Form) is a set of software libraries and machine-independent data formats that support the creation, access, and sharing of array-oriented scientific data.”
- HDF (Hierarchical Data Format) is a library and a multi-object file format created and developed by NCSA (<http://www.ncsa.uiuc.edu/>).
- GRIB1 is a data format standardized by the World Meteorological Organization’s Commission (<http://www.wmo.ch/>) for Basic Systems, which is commonly used in meteorology to store historical and forecasted weather data.

For more information see [Wiki page](#)

3D Rendering Pipeline

Student: Hans Haggstrom

Mentor: Jody Garnett

The 3D Renderer provides a three dimensional view of GeoTools geographical data. It uses the normal 2D renderer for rendering the surface texture. It implements a level of detail based loading and caching system for the geographical data to speed up rendering, and allow perspective views showing both nearby and far away features at the same time. Possible future improvements are rendering elevation data based on height coverage data. In addition, there could be support for some common 3D rendering styles that can be used for features consisting of points, lines, and areas.

For more information see [Rendering Pipeline for GeoTools Wiki page](#).

PostGIS

Coverage Model and Operations

Student: Xing Lin

Mentor: Timothy Keitt

This project includes a raster data model and its storage in PostGIS. Import and export tools are also available for popular image formats. There is a paper about this project available at http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=1370128

For more information see the [Google Summer of Code abstract](#).

Mentor Summit

Some (well behaving, meaning turning in their surveys in time etc.) projects were asked to send a mentor to the SoC Mentor summit. OSGeo sent me (Wolf Bergenheim from the GRASS project). Mentors from over 100 projects joined forces at Google HQ in Mountainview CA, and discussed varied aspects of the SoC. The summit was arranged as an unconference, meaning that the participants generated the program. A wiki with the talks is set up at <http://googlesummerofcode.jot.com/>

Lessons learned

Many lessons were learned in the SoC 2007 (at least by me), both as a mentor, but also general points on how to attract more developers and how to “keep” SoC students with the projects. First let me talk about how to attract students.

How to attract students?

We did get about twice as many projects proposals as we had slots available, but compared to other projects it was actually quite slim. I will now discuss how we could maybe attract more students this year.

Promise fame and glory

With this I mean that it should be clearly indicated that the students will be given “media time”. This means spotlights at the OSGeo website, maybe even a news item telling about their progress. And similar exposure within the project that they work.

Show that you appreciate their work

The code that the students produce should end up in the main code repository, and it should be made clear from the start that this will happen. Also We should promise to include their project in the next release after it is completed. If we promise that their code will become part of the project it should motivate the students even more.

Have interesting but a vague ideas list

When we compose a project idea list we should leave room for innovation. Let the students fill the gaps. That way we will attract maybe the more correct types.

Work with the student from day 0

This means that when you see an interesting application, take the time to set up a wiki page to flesh out the idea with the student. Last year there was plenty of time to talk things with the would be students. Chatting on IRC is also good. When the students see that we are committed to the SoC and that we listen to them they should become more interested.

Integration to the community

Once we have selected the best students to work on the coolest projects we should integrate them into the community to hopefully get new eager committed developers (fresh blood, as I like to call it). How do we accomplish that?

Have the student talk on public mailing lists and IRC channels

Most, if not all project communication should be on the main project development list and IRC channel. If the student is shy, one trick is to say "I don't know, try the developers list" Once they get used to sending mail there (and see that nobody bit their head off) they should have no problem in becoming integrated, maybe they might even answer some unrelated emails.

Make sure that the whole project knows about and is aware of the SoC

If the whole project knows about the student, they will help you make him feel welcome.

Help them finish successfully

If the student struggles, chances are that he won't finish the project. If he is provided with help and a whole community of supportive developers, he won't have to struggle as much, and he will most likely finish.

Keep the student happy

A happy developer is a productive developer. If the student feels welcome and liked he will probably enjoy being part of the community, and thus will most probably stay with us.

Cross-project cooperation and cooperation outside OSGeo

There was also talk about collaborating with other organizations over the SoC. For us this means either that we could come up with SoC projects which involve more than one OSGeo project, or it could mean that we collaborate with a non OSGeo project like Drupal. Drupal has shown interest in collaborating with PostGIS regarding geo stuff. This means that we could give them one mentor to help with geo things while they would give us a mentor to help with the PHP. It could be one or two projects.

Wrap-up

Last year SoC came a bit like a surprise for us at GRASS, so we were not really able to organize ourselves to bring more SoC project ideas, but in the end we were able to finish two students. Also last year was a bit confusing and maybe not as organized as it could have been. Mentors from other projects didn't seem to talk together and it felt a bit like a fragmented effort. This year I hope to be able to use the knowledge gained from last year to make it easier and less confusing to new mentors, and maybe have a more united OSGeo SoC experience.

Some words from Our students

Two students, Chris and Daniel, felt like sharing their SoC experience with us.

Chris Whitney

I enjoyed participating in Google Summer of Code. The project was my first experience working on a GIS software project, and definitely my first exposure to many of the open-source GIS projects. Fortunately, the Geoserver community was a very knowledgeable and friendly environment for starting my project. I was sponsored by Google to attend FOSS4G 2007, which was an exciting opportunity for me to present my project and learn more about OSGeo-related technologies.

Daniel Bundala

Here, I would like to make some comments on my experience with GRASS, Summer of Code and such. This is not very official, however, I hope that some people may find this quite useful and/or interesting.

When I applied to SoC, I had absolutely no experience with GRASS or any other GIS. Actually, my only experience with any digital maps/geography/whatever was via Google Maps. I had never had a need to use anything else before and so I had thought that it is basically the only thing one may ever need. It did not take a long to realize how wrong I was...

In general, I was very satisfied with my work on GRASS; definitely, it was much better than I expected. I learned many new algorithm and methods that I implemented into GRASS. Also, the courses on linear algebra and calculus I have taken were quite handy at some point. Finally, I am now a more experienced and refined user of GRASS. I recall that during the first few weeks I did everything with mouse and worked almost solely with GUI. But at the end of the summer I discovered the beauty and effectiveness of command line and so I run GRASS in text mode only now...

One particular event I still remember is that Wolf, my mentor, once sent me a paper concerning some vector generalization I worked on. This would not be a big deal if it were not in German. I really believe that my German teacher would be proud of me as I read it and understood what was it about. Well, maybe not, as after 4 years of "intensive" study I was able to understand not even every other word.

To sum up, I have to say, that I spent the last summer very productively. I still read GRASS mailing list almost every day. Partially, because I want to know about any possible bugs in my module, but mostly because I am still interested in the project itself. Also, it was great programming/linguistic experience and I hope I will be able to repeat it at some point in the future.

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