In This Volume

Real World Implementations of Open Source software

Introducing Mapbender, deegree, openModeller ...

Understanding Spatial Relationships

Examining the Web Processing Server (WPS) Specification

Package Interaction - GRASS-GMT, Tikiwiki, PyWPS, GRASS-R ...

Software Updates

News, and more...

OSGeo
Your Open Source Compass

Developer Announcements

Developer Updates

For First Quarter of 2007

Omniverdi Livecd

by Luca Casagrande

What is a LiveCd

As Wikipedia reports, Livecd is a "generic term for an operating system distribution that is executed upon boot, without installation on a hard drive. Typically, it is stored on bootable media such as a CD-ROM (Live CD), DVD (Live DVD), USB flash drive (Live USB), among others." By using this technology, users can get a "taste" of a full GNU/Linux box without fighting with any setup or installation. Once the LiveCd has been booted, everything is loaded in RAM, keeping the hard disk safe. Of course, once the machine shuts down, every change is lost.

Applications

There are many applications that can be satisfied through the use of a livecd:

1. Running your favorite system anywhere you can find a PC. With a Pen Drive to save your data, you will have a perfect survival kit.
2. For teaching purposes: During a workshop, your audience can have anything you think is appropriate to increase the learning process.
3. Using an old machine: liveCd can be run on an old machine and also without a HD!
4. Spreading data: it's a very cool way to distribute your work. You deliver your work and all the applications that are needed and configured to appreciate it best! For example, delivery of a comprehensive solution including all data and applications.

Limitations of a Livecd

Inside a livecd we have the kernel, drivers, WM, and all the applications required for a working environment. Of course, it is rather impossible to put all the drivers that would suit all the machines that have been created. It can happen that, during boot, the CD stops or something else goes wrong (e.g. missing lan detection). Thanks to the work of a lot of people

(in primis Knoppix) we have very good software that detects hardware during boot but, like every software application, there can still be bugs. As you can understand, the idea of having a universal machine is a high expectation and the road to achieving this is still long.

On the other hand, no information is saved while working in the LiveCd environment. If this is a favorable aspect (e.g. keeping your hard disk safe), it can be tedious from another point of view. A solution is to use a Storage Device (like a USB HD, for example) to store all your output. This approach can also be used to save configuration files, so that you can keep your settings after rebooting.

LiveCd and open source geospatial software

LiveCd can be a valid tool if applied to open source geospatial software.

An example of an application of liveCd and GIS FLOSS is to run a workstation that will allow users to explore data inside it or, for example, in a remote Postgis DB. Old machines can be used to make access points to the database and can be set up with a viewer that is always available (as Internet Points do with a browser), allowing the saving of data on a storage device.

During the FOSS4G 2007 at Lausanne, we used 2 LiveCds during seminars (ka-Map and Grass 3d). We also allowed participants to immediately test what they had just see in the slideshow. Once the workshop ended, they were able to keep their liveCd and use it at home or at their office. This is a good example of the great potential of a liveCd deployed for Educational purposes.

Objective

Our liveCd will always try to offer users the following:

1. Up to date software with every main official release
2. Included guides, documents and tutorials
3. Good hardware compatibility

Technical development

We decided to use Catalist: the same tool that the Gentoo Release Engineering Team uses.

---

[1]LiveCD: http://livecd.ominiverdi.org
[2] http://www.gentoo.org/proj/en/releng/catalyst/

This choice is based on 2 main reasons:

1. To use a system that will keep the updating stage fast and safe
2. To allow the customization of everything inside the CD

Desktop 2007.0

Our first release for 2007 contains this software:

- QGIS 0.8
- GRASS 6.2.1
- PostgreSQL 8.1.5
- PostGIS 1.1.4
- GDAL 1.3.2

The system runs a 2.6.18 Linux kernel and uses GNOME as a Desktop Manager.

While writing this abstract, we are waiting for the release of the 2007.1 Qgis 0.8.1.

Future Development and Tasks

Our goal is to keep the CD updated by creating new versions on a regular schedule, or at least as soon as major updates or included software will be released.

At the moment we are working on two tasks:

1. An Installer for the livecd
2. A server edition with mapserver and some webgis applications

LiveCD installer

The installer will be accessible through an icon on the desktop. The installation process will guide the user to the setup of the GNU/Linux distribution on his/her computer. Hard disk installations will allow better performance and the possibility to update all packages, thanks to the core of the Gentoo Linux (http://www.gentoo.org/)system.

Server Edition

The server edition will target a server machine with minimal graphical support but with a fully-featured set of applications to offer OCG Web Services and UMN Mapserver frontends (ka-Map, Open Layers, p.Mapper, ecc.).

More Info

- Ominiverdi Livecd Project [1]
- Gentoo Catalyst Project [2]

GDAL Status Update

by Frank Warmerdam

1.4.0 and 1.4.1 Releases

The year 2007 started with the GDAL/OGR 1.4.0 release. This release included new raster drivers for WCS (Web Coverage Server protocol), PDS and ISIS (mars). It included new vector drivers for Informix, KML and E00 formats and many feature improvements to the existing drivers.

By the time you read this, the 1.4.1 release should be in general availability, and it includes on the order of 40 bug fixes. The 1.4.1 release is the first GDAL stable release. That is, it is the first time the GDAL project has split off a stable branch and focused only on bug fixes in that stable release branch, while new development goes on seperately. This should make it possible to produce bug fix releases on short notice without the risk of introducing new bugs due to new development.

Infrastructure

The last few months have also seen changes in several aspects of GDAL/OGR infrastructure.

- Migration from the CVS to the Subversion source control system, with hosting now at OS-Geo.
- Migration from the Bugzilla to the Trac bug tracking system, with hosting now at OSGeo.
- Introduction of wiki facilities for the project via Trac.
- Migration of the web site, and download facilities to OSGeo / Telascience servers, from my personal server.
- Use of central LDAP authentication for Subversion and Trac shared with other OSGeo projects.

I would especially like to thank Howard Butler who was intrumental in making the Subversion and Trac migration painless while preserving the nearly decade of history in the old systems.

Sponsorship

The last few months have also seen the launch of the GDAL/OGR Sponsorship program operating through OSGeo. Our first sponsors are Analytical Graphics, Applied Coherent Technology, SRC, Safe Software, Cadcorp, Waypoint and MicroImages.

With the generous financial support of our sponsors the project has been able to contract Mateusz Loskot to perform general maintenance and support tasks for the GDAL/OGR project from March to August. With the help of Mateusz and other members of the GDAL/OGR development team, the 1.4.1 release has seen a record number of old bug reports cleaned up. Contracting Mateusz has put the project in a stronger position to get needed tasks done regardless of whether it is a current itch for any of the developers.

Many thanks to Mateusz and our sponsors! I believe this will be a model for sustaining needed work on many OSGeo projects. For information on our sponsors, and the GDAL/OGR sponsorship program, visit: http://www.gdal.org/credits.html

---

GeoNetwork Open Source

by Jeroen Ticheler

Introduction

Work has been concentrated on a couple of aspects of the project lately. They are:

- Development of GeoNetwork opensource version 2.1 resulting in beta releases
- Upgrading of the Community website
- Work related to the OSGEO incubation process

Development of version 2.1

A lot of development has been going over the last 9 months. Many new functions have been added and existing ones have been enhanced. The plan is to release a final version 2.1 of the catalog software towards the end of April 2007. Here's a summary of what has been developed for this release:

- Support for the ISO-19115 metadata standard, formatted and validated against the ISO-19139 implementation schema. Read more and also refer to the ISO19115 / 19139 confusion for more details on those standards.

- Support for the OGC Catalog Services for the Web (OGC-CSW 2.0.1) base specification, based on the ISO application profile. Read more
- Web based harvesting configuration, scheduling and monitoring between GeoNetwork opensource nodes and from Web accessible folders Read more
- Embedded thesaurus support, both in the metadata editor and in the search
- Simplified installation, upgrade and migration with functionality moved to the Web based configuration and to the stand alone GeoNetwork Administration Survival Tool (GAST)
- Improved multi-lingual support with online translation functionality for categories, regions etc...

Upgrading of the Community website

The community website has been moved to a telascience server with the assistance of John Graham. The focus of the website will be on the users of the GeoNetwork opensource software. More work has to be done to clean up the content and remove developer related content.

The Plone based website was upgraded and the content moved. The site now allows for multi-lingual content, PDF output of pages and a cleaner structure. A Documentation Center and a Download center form the basis of the website.

For developers, a Trac-based site `http://trac.osgeo.org/geonetwork` will be the central website, providing a bug track mechanism and a WIKI. The intention is to also move the SVN repository to this server to benefit from trac-svn integration. Developer related content from the Community website has to be moved here.

OSGEO incubation process

The project is working on the incubation process to OSGEO. The code review has been completed, web pages have been updated to reflect the OSGEO connection. A review of the software's dependencies is about to be completed without foreseen problems.

GeoTools Steering

This report is written in the first quarter of 2007, and outlines community development and research goals

by Jody Garnett

Users Community

GeoTools has started up production of monthly milestone releases again. The publication of milestone releases makes progress visible and accessible to the user community. We have not been sending announcements out beyond the user list, as milestone releases are strictly for "early access".

- 2.4-M0
- 2.4-M1

We have also updated our Module Matrix page (and development policies) to reflect how well different modules are supported.

Development

This time around we are balancing between several paid projects (with deadlines) and Martin's presentation to the GeoAPI working group (summer OGC meeting?).
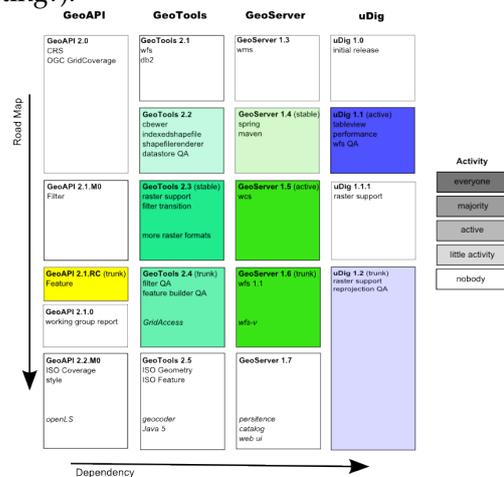

Figure 1: The above diagram is color coded based on project and developer activity (the amount of colour indicates the rate of change).

Development Policies

Since 2006 Q4 the GeoTools project and GeoServer projects have made development policy changes:

- GEOT:GeoTools change proposal - Changing an existing API
- GEOT:Supporting your module - Adding a new module to GeoTools
- GEOS:GSIP 6 - Track GeoTools Trunk

The above policies aim to have a uDig and GeoServer branch available based on GeoTools trunk, without this support we are left with a development community scattered across different versions (all trying to be active).

There is one planned development policy change:

- When a contributor agreement is available (after negotiations with OSGeo) we will require each developer to sign something.

Research Goals

There are several tracks of ongoing research, and a few unresolved design problems:
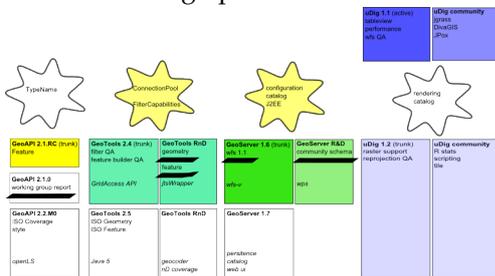
Research Policies

The GeoTools project and geoserver project made policy changes with respect to new research.

- [GEOT:Creating your own Module](#)

The establishment of an "unsupported" module space in GeoTools has succeeded in making visible research that was previously "out of sight out of mind". The uDig and GeoServer projects already and community sections meeting this need.

Known Deadlines

In the above diagram the following known deadlines are underlined.

Here are the dates as near as have been made public:

- GeoAPI Report for June 11th (May 11th code freeze)
  - Report to be reviewed during [July 9th Meeting](#) working group meeting
  - The report must be submitted for June 11th (ie one month before)
  - Last time this report took a month to prepair so assume a code freeze on May 11th
- GeoTools ISO Geometry implementation for Mid March

- Either jtsWrapper or geometry to be brought up to supported status
- Module may not be included in download until Java 5 is available

The following are research goals only (no formal release required):

- GeoTools Feature / GeoServer Community schema for Mid March
  - the implementation is being made available as an unsupported module, actual intergration happens later

Outstanding Problems

The following problems are listed as design problems that should be addressed. Often these problems are holding up existing paid work, but due to the amount of collaboration involved lack specific funding.

- **GeoAPI TypeName** - We are caught between the ISO definition of GenericName (in which the Schema in which the name needs to be known prior to construction) and the need to have a quick "id" when looking up feature content. This is an example of a usibility tradeoff .. hard to resolve. The Java class QName is an example of a good compromise (based on the same ISO specification).
  - GeoAPI TypeName interface has been defined in a manner similar to QName, this is in conflict with the interface for GenericName
- **GeoTools ConnectionPool** - GeoTools is starting to be used in more serious J2EE applications, as such we need to use a JNDI look up for our DataSource (Use of an oracle ConnectionPool is most often requested on the user list).
  - We need to define an approach, document it, and roll it out into the database epsg authorty plugins and datastores.
- **GeoTools FilterCapabilities** - We have switch over to use GeoAPI Filter interfaces. The interface "Function" does not list the number of required parameters; instead that information is captured as part of the FilterCapabilities information (which we currently do not use).
  - We need to split out the description of avaialble functions from the data structure used to define an expression.

- **GeoServer Persistence** - The ability to persist GeoServers state (currently to an XML file) is hard to maintain, and not extensible.
  - We have several sources of inspiration (using an XML to bean technology), some restrictions (allowing for programatic configuration) and some acceptence tests (ability to add additional configuration elements without changing the object model).
- **GeoServer Catalog** - A catalog is used to manage your resource connections, and allow for additional kinds of resources over time. The existing approach (cut & paste) is not scaling well for GeoServer.
  - We need to bring the GeoTools interfaces up to the level in which they are used by GeoServer and uDig. There are lots of negative examples (on what we don't want to do) and a few good ideas. GeoTools should strive for the minimum common ground.
- **GeoServer J2EE** - GeoServer needs to become a better J2EE application
  - Pay attention to DataSources retrived via JNDI lookup
  - support external configuration and clustering
- **uDig Rendering** - The uDig rendering system has seen enough real world use that we can start to simplify based on experience. Depending on where the line is drawn in the sand we may be able to add OpenGL to our list of targets (currently SWT and AWT are supported).
  - While the work can be backported to GeoTools we need to ensure that there is a good reason (measured in developers) to make the effort worthwhile.
- **uDig Catalog** - The uDig catalog system has seen enough real world use that we can start to simplify based on experience.
  - While the work can be backported to GeoTools we need to ensure that there is a good reason (measured in developers) to make the effort worthwhile.

GRASS GIS

by Markus Neteler

About GRASS

GRASS (the Geographic Resources Analysis Support System) is a vector and raster GIS, image processing system, graphics production system, and spatial modelling system. It contains many modules for raster and vector data manipulation, rendering images on the monitor or paper, multispectral image geocoding and processing, and attribute management. It is published under the GNU General Public License. GRASS is written in the C language with a prototype GRASS-SWIG interface and further Python based WebGIS applications. The data management capabilities also include 3D raster (voxel) modelling as well as vector network analysis. Through the R interface geostatistical analysis can be performed. GRASS is portable multi-platform software running on Linux, MacOS X, Posix compliant Unixes and MS-Windows (through Cygwin, and major parts now also working natively).

Recent Events

- Spring 2006: GRASS Quality Assessment (QA) source code navigator online
- 22 Feb 2006: GRASS GIS 6.0.2 released - bugfix release
- 12 April 2006: Experimental native winGRASS 6 version integrated with QGIS
- 11 August 2006: GRASS 6.1.0 released - this is a technology preview release
- 31 Oct 2006: GRASS 6.2.0 released - The stable version is published
- 12 Dec 2006: GRASS 6.2.1 released - This release fixes several bugs discovered in the 6.2.0 source code
- 20 Dec 2006: GRASS GIS / OSGeo Newsletter Published - The first combined GRASS-News / OSGeo-News volume is available
- 10 Feb 2007: GRASS GIS 6.2.1 winGRASS/Cygwin binaries available
- 12 Feb 2007: New GRASS bug and wish tracker - Gforge based
- Italian GRASS and GFOSS Users Meeting - GRASS and GFOSS Users Meeting, Palermo (Italy), 14-16 Feb 2007

Under Development

Besides hard testing and bugfixing, several major projects are underway:

- native winGRASS port to be completed

- GRASS GIS 6.3.0 to be published (draft announcement)
- new Python based graphical user interface in progress
- Work related to the OSGeo incubation process (code vetting and addition of missing copyright statements)

Statistics

- In the first three months of 2007, the main server statistics show (there are more than 20 mirror sites, not included here):
    - more than 5000 GRASS 6.2.1 source code downloads
    - more than 2000 MS-Windows/Cygwin downloads
    - more than 1000 Linux downloads
    - 11100 Spearfish sample dataset downloads
- grassuser mailing list
    - more than 800 members
    - averaging about 15 messages/day
- grass-dev mailing list
    - more than 450 members
    - averaging about 20 messages/day
- twelve additional mailing lists exist plus several national GRASS user lists
- Over the last 8 months, every 1.16 hours a change is committed to the GRASS source code repository (source)
- More useful stats can be found on the Ohloh site: http://www.ohloh.net/projects/3666

Mapbender Project Update

by Christoph Baudson

About MapBender

MapBender is the software and portal site for geodata management of OGC OWS architectures. The software provides web technology for managing spatial data services implemented in PHP, JavaScript and XML. It provides a data model and interfaces for displaying, navigating and querying OGC compliant map services. The Mapbender framework furthermore provides authentication and authorization services, OWS proxy functionality, management interfaces for user, group and service administration in WebGIS projects.

Recent Events

January 2007

- Mapbender 2.4.1 rc1
- adoption of coding conventions
- establishment of module maintainers

February 2007

- new issue tracker
- establishment of a release owner

March 2007

- weekly developer IRC meeting
- Mapbender 2.4.1
- face-to-face developer meeting in Berlin

New Mapbender features

- **New administration tools**: metadata handling, new administration interfaces.
- **New treefolder module**: enhanced usability by centralizing controls in one module. Controls in pop-up windows are now obsolete. Also features a WMS status indicator.
- **Metadata gazetteer**: a text search in WMS/layer metadata and keywords. Retrieves WMS or single layers by an AJAX-query.
- **Improved WFS-T configurability**: enhanced user interface for easier and richer manipulation of WFS-T data.
- **Improved digitizing module**: a completely new design following an AJAX-approach. Improved usability and performance.

Future Development

- **Integration of OpenLayers**: an integration of OpenLayers as an optional Mapbender module is scheduled for 2007.
- **WFS-T / Digitizing enhancement**: handling of complex geometries.
- **wider use of AJAX /JSON and OO technology**: improvement of module interfaces to do justice to wider development audience.
- **evaluation of packing algorithms**: due to traffic minimization, there are few source code comments. JSDoc and PHPDoc will be used to comment in the future. The traffic issue will be

resolved by extracting the comments prior to deployment and by packing JS-code.

Statistics

- **Increase in developer mailing list participation**: 2006 Q3: 40 posts, 2006 Q4: 121 posts, 2007 Q1: 209 posts (until March 19)
  Take a look at Mapbender statistics at Ohloh. Here are some excerpts:
- **Project worth**: $2,436,378. "This calculator estimates how much it would cost to hire a team to write this project from scratch."
- **17 developers**: "Over the past twelve months, 10 developers contributed new code to Mapbender. This is a relatively large team, putting this project among the top 5% of all project teams on Ohloh. For this measurement, Ohloh considered only recent changes to the code. Over the entire history of the project, 17 developers have contributed."
- **Increase in activity**: "Over the last twelve months, Mapbender has seen a substantial increase in activity. This is probably good sign that interest in this project is rising, and that the open source community has embraced this project."

MapBuilder Project Update

Strategic Direction March 2007 *by Cameron Shorter*

Status

MapBuilder is a powerful, standards compliant and FREE geographic mapping client which runs in a web browser. It renders raster maps from WMS, Google Maps and more, and vector layers from WFS, GeoRSS and GML. It even offers feature editing to WFS-T. Mapbuilder is often described as a web based toolkit, or framework, that allows a developer to insert a selection of widgets into a web page. Eg: MapPanes, FeatureLists, Navigation tools, Style Editors and more.

Over the last year, the three leading browser based mapping clients, Mapbuilder, OpenLayers and MapBender have been actively working together sharing ideas and code. In particular, OpenLayers is currently being inserted into Mapbuilder as a rendering engine. Our latest release, mapbuilder-1.5apha1 includes an OpenLayers renderer and our next release will complete the integration by linking Mapbuilder and Openlayers tools.

OpenLayers focuses on rendering a MapPane. Mapbuilder extends this to offer extra widgets like Style Layer Descriptor (SLD) Editors, Time Series Web Map Services, processing Web Map Context (WMC) documents and more.

Mapbuilder developers are now contributing to the OpenLayers codebase when adding core Mapping functionality.

Merging code between projects is difficult emotionally as much as technically. The catalyst for the Mapbuilder/OpenLayers merge was that there were four different projects developing vector rendering using SVG/VML at the end of 2006. After much discussion we agreed to work together on the same code base. This meant that each of us had to throw away $\tilde{3}/4$ of our original code. In the short term, this meant some extra effort from all of us, but in the long term, we will all benefit from the merger. We will have more developers maintaining the same code base and users will be less confused when trying to pick a client.

Developers who throw away code feel a strong sense of loss of status and credibility. Credit goes to those who were flexible enough to throw away their code and also to the developers who were generous in their acknowledgments of past works.

Internally, Mapbuilder stores its map data inside a Context document. Initially we used to use a Web Map Context (WMC) document which describes a list of WMS layers. However, the WMC doesn't allow you to insert other layers, like WFS, GML, GeoRSS, Google Maps, etc.

In mapbuilder-1.5alpha1 we support OWS Context (currently an OGC draft document) which extends WMC to include multiple layers types. This improves the structure of our code and configuration files, as well as continuing with our support of OGC Standards. The 1.5 branch will stablise over the next few months with release candidates and then final release.

Mapbuilder graduated through the Open Source Geospatial Foundation (OSGeo) incubation process in October 2006 making the second and most recent project to graduate. Graduation turned out to be a lengthy process involving auditing code and tidying up development processes. However compared to other projects going through graduation, Mapbuilder is young and had less history to dig through, which is why were one of the first projects to graduate (after Mapbender).

Association with OSGeo was a positive move for Mapbuilder popularity. Mapbuilder downloads doubled in the month after OSGeo was created with Mapbuilder as one of the founding projects.

In summary, Mapbuilder continues to have a healthy developer and user base, it has a stable code-base, good development processes and a healthy future ahead of it.

Download Metrics

This graph shows a steady growth in interest since the start of the project, with a doubling of downloads when the OSGeo Foundation was founded (with Mapbuilder a founding project) in March 2006. There was a dip over Christmas 2006, then back again early 2007 (the gml-viewer and mapbuilder-1.5alpha1 was released at the end of December 2006).
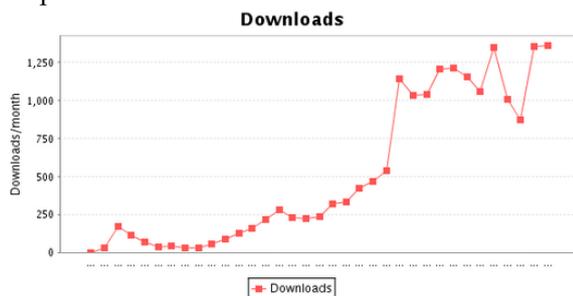
Subversion Commit Metrics

This graph tracks the number of lines of code in the Mapbuilder repository. The graph shows a that mapbuilder has been steadilly growing since December 2003. We have had consistent support from a community of developers which includes a constant core, as well as a number of fring developers who join the community, develop for a while, then move on.
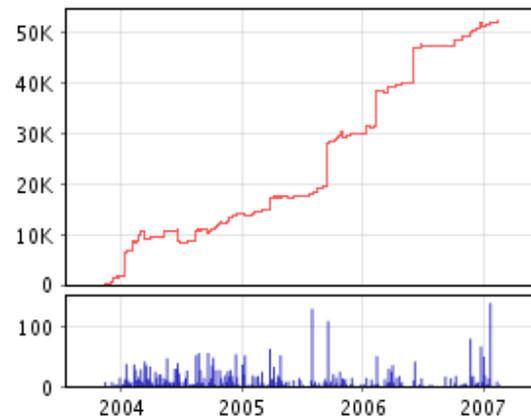

Figure 2: Source data http://fisheye.codehaus.org/browse/mapbuilder/trunk/mapbuilder/mapbuilder/lib

Email Traffic Metrics

This graph shows the monthly number of emails for Developer and User email lists. Developer emails spiked at the end of 2005, beginning of 2006 during the development of release 1.0 before leveling back. The stabling of email traffic can be put down to:
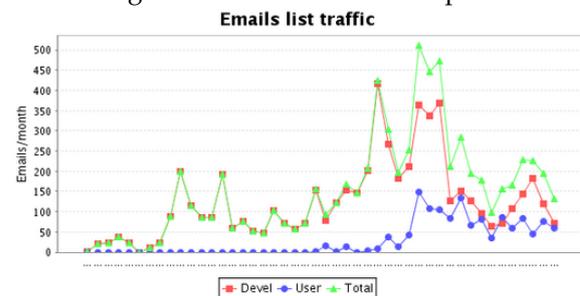
1. A reasonable effort has been put into documentation. Often newbie questions are simply answered by pointing at existing documentation. This is not to say our documentation is great, it is just getting a bit better.
2. The Vector rendering work done from mid 2006 was done in conjunction with outside developers. Much of the communication moved to other email lists, or IRC channels. (In particular, irc://freenode.net#openlayers
3. April - October 2006, a reasonable amount of developer effort was focused on getting OSGeo Graduation rather than development. A drop in email activity over the last few months is probably due to:

Gml Viewer Download Metrics

In December 2006, we released GML Viewer version of Mapbuilder which can be distributed with a GML Dataset. It was distributed on CD as one of the artifacts of the Open Geospatial Consortium Testbed 4. It was also made available for download and download statistics are available below. The number of downloads is 1/10 of the mapbuilder-lib downloads above which suggests that the target market are getting their gml viewers from the CD, or that people are more interested in other features from Mapbuilder.

Date	Downloads
Dec-06	75
Jan-07	104
Feb-07	115

Data Source: [3]

About the author

Cameron Shorter is on the Project Management Committee of the Mapbuilder project

---

MapGuide Project Update

by MapGuide Project Steering Committee

About MapGuide

MapGuide Open Source is an advanced platform for web-based geospatial application development, data update, and publishing. MapGuide incredibly flexible, being cross-platform (Windows and Linux) and cross-language (PHP, Java, and ASP.Net). It includes a strong geospatial processing API, and a large number of output formats, such as image (PNG, JPG, etc), WMS, WFS, and KML. In addition, by leveraging the flexible FDO Open Source data abstraction library, MapGuide can access multiple data sources, such as MySQL, PostGIS, Oracle, ArcSDE, Shape Files, SDF, WMS, WFS, and many image formats.

Recent Events

Since its initial release, there have been several significant events

- November 2005
  - Autodesk announces that new MapGuide code will be released as open source.
  - Technology preview release of MapGuide Open Source (under the ill-fated name MapServer Enterprise)

- February 2006
  - MapGuide code is made available through the Open Source Geospatial Foundation
  - MapGuide Open Source 1.0.0 is released
  - MapGuide development team starts using public issue tracking and feedback mechanisms

- July 2006
  - MapGuide Open Source 1.0.1 is released

- September 2006
  - Provenance review is completed

- October 2006
  - MapGuide Open Source 1.0.2 is released
  - MapGuide Open Source Project Steering Committee is formed. MapGuide Open Source is now controlled by a group of developers and users, the majority of which are not Autodesk employees.
  - First official RFC (Request For Change) is posted for review

- January 2007
  - MapGuide Open Source 1.1.0 is released
  - Open source GDAL Raster provider replaces proprietary Autodesk Raster Provider
  - A flexible development tracking system (Trac) is implemented. This allows users to more easily submit bug reports and enhancement requests.

- March 2007
  - MapGuide graduated from OSGeo Incubation, showing an acceptable level of participation, freedom from code encumbrances, and use of standard open source development methodologies.

---

[3]GML Viewer downloads: http://sourceforge.net/project/stats/detail.php?group_id=35246&ugn=mapbuilder&type=prdownload&mode=alltime&package_id=116388

Under Development

In the past months, several exciting new features have been added to MapGuide Open Source

- Native KML publishing, including support for regions, view-based scale ranges, and extrusion.
- Introduction of a highly configurable stylization engine, allowing for complex custom point and line styles

Statistics

- In the first three months of 2007, statistics show approximately
  - 2300 Windows downloads
  - 900 Linux downloads
  - 1200 PHP developer sample downloads
  - 1200 .Net developer sample downloads
  - 750 Java developer sample downloads
- mapguide-users mailing list
  - 470 members
  - averaging about 20 messages/day
- mapguide-internals (core development) mailing list
  - 130 members
  - averaging about 8 messages/day
- 17 RFCs (Requests for Change) submitted and adopted
- More useful stats can be found on the Ohloh site: http://www.ohloh.net/projects/4656

MapServer Project

by Daniel Morissette

About MapServer

MapServer is a development environment for building spatially-enabled web mapping applications and services. It is fast, flexible, reliable and can be integrated into just about any GIS environment. It supports many popular spatial data formats including OGC web services.

MapServer features MapScript, a powerful scripting environment, that supports PHP, Python, Perl, C#, Java and more. Using MapScript makes it fast and easy to build complex geospatial web applications.

Recent Events

October 2006

- MapServer 4.10.0 release

February 2007

- MapServer 4.10.1 release

Future development - MapServer 5.0

The MapServer development team plans to release version 5.0 by the end of summer 2007. The 5.0 Release Plan outlines a number of planned updates, including:

- Support for AGG, an up and coming image renderer as an alternative to GD
- Upgrade of WMS support to version 1.3.0
- Improved OGC SOS Server support
- New OGC OWS Common support version 1.0.0
- Dynamic charting capability
- Label prioritization
- MapScript memory management fixes
- Redesign of the LOG/DEBUG output mechanism
- ... and much more ...

Statistics

Mapserver-Users list statistics (for 2007-Q1):

- Number of subscribers: 2344
- Number of countries represented: 67 (In all continents but Antarctica)
- Number of posts per month: 415 (average for Jan-Mar 2007)

Also take a look at MapServer Development statistics at Ohloh. Here are some excerpts:

- **27 developers:** Over the past twelve months, 12 developers contributed new code to MapServer. This is a relatively large team, putting this project among the top 5% of all project teams on Ohloh. For this measurement, Ohloh considered only recent changes to the code. Over the entire history of the project, 27 developers have contributed.

- **Mature, well-established codebase:** The first lines of source code were added to MapServer in 2000. This is a relatively long time for an open source project to stay active, and can be a very good sign. A long source control history like this one shows that the project has enough merit to hold contributors's interest for a long time. It might indicate a mature and relatively bug-free code base, and can be a sign of an organized, dedicated development team.

Note: The source code for MapServer is actually older than the source control history. The project started around 1996 but started using CVS only in 2000.

Quantum GIS Project Update

Gary Sherman

Current and Upcoming Release

The QGIS development team released version 0.8.0 on December 29th 2006 after a long development period. Much of the time was spent in porting the code base from Qt 3.3 to Qt 4.2.x. With that effort complete, the project is staged to release new versions in a more timely fashion. Version 0.8.1 is scheduled to be released by the end of the first quarter of 2007. While primarily a bug fix release, there are will be a few minor enhancements, including an expanded set of tools in the GRASS toolbox.

Change in the Build System

The QGIS project has migrated to using CMake rather than the GNU autotools. This will become official with the 0.9 release, but the changes have been backported to the 0.8.1 branch as well. CMake has proven to be easy to use, flexible, and actually results in faster compilation times of the QGIS code base.

What's Ahead in Version 0.9

At version 0.9, Python bindings are included for most classes in the QGIS API. This means you can write both plugins and standalone programs using Python and PyQt. A number of folks are already developing plugins and the famous "Tim Sutton C++ tutorials" have been ported to Python as well by Martin Dobias. Check out the QGIS blog [4] for the tutorials and more information.

There are a number of substantial changes in 0.9, including a refactoring effort to support the use of the QGIS libraries in your custom programming projects. The development team is still working on the details of the 0.9 release. Keep an eye out for more details on the website as the work proceeds.

If you are adventurous, you can try out the new features and the Python bindings by checking out the development (that means unstable) code using svn [5]
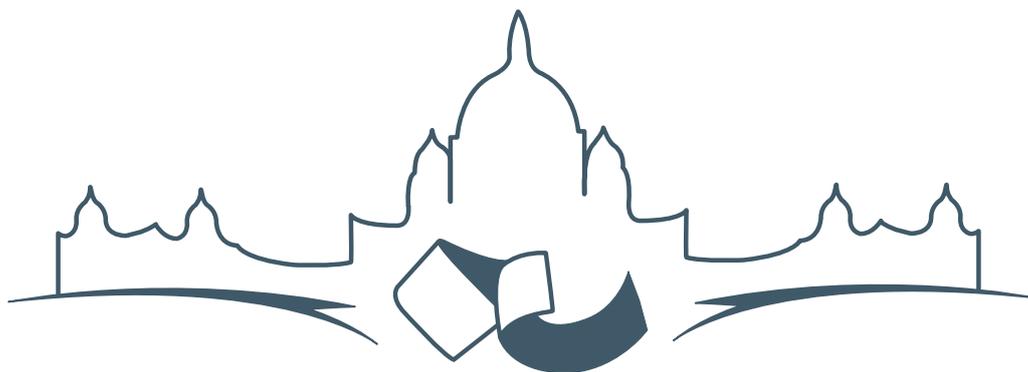
QGIS Enters OSGeo

QGIS applied for and was accepted into incubation as an OSGeo project in late February. A poll of the community indicated that most people were in favor of membership. We now start the process of working with the OSGeo mentor to become a full fledged OSGeo project.

---

[4] qgis blog: http://blog.qgis.org
[5] qgis svn: https://svn.qgis.org/repos/qgis/trunk/qgis

FOSS4G - Conference Registration Open

We are pleased to announce that online registration for the 2007 Free and Open Source Software for Geospatial conference (FOSS4G 2007) is now open. FOSS4G 2007 is the annual event bringing together the people and companies who create, use, and support open source geospatial software. Register now online.[6]

Register prior to the July 27th Early Bird Deadline to save on your registration fees! Take advantage of the opportunity FOSS4G 2007 offers to network with fellow geospatial data professionals, renew old acquaintances and make new ones.

For up-to-date information, registration and/or to submit a presentation, please visit the conference website.[7]

EXHIBITOR & SPONSORSHIP OPPORTUNITIES

For information on exhibitor and sponsorship opportunities, see the sponsors page[8] or contact Paul Ramsey, Conference Chair via email.[9]

SUBMIT A PRESENTATION

You can submit a presentation online.[10] The deadline for submissions is June 29th 2007.

FOSS4G presentations are 25 minute talks, with 5 minute question and answer sessions at the end. Presentations cover the use or development of open source geospatial software. Anyone can submit a presentation proposal and take part in the conference as a presenter. More information is available on the presentations page on the website.

We hope to see you in Victoria, Canada in September!

---

[6]Register online at: http://www.foss4g2007.org/register/
[7]Conference website: http://www.foss4g2007.org/
[8]Sponsors page: http://foss4g2007.org/sponsors
[9]Email Paul Ramsey at: pramsey@foss4g2007.org
[10]Submit a presentation at http://www.foss4g2007.org/presentations/