gvSIG: Open Source for handling Geospatial Information

Status Report

Towards an Open Organization

Gabriel Carrión Rico
carrion_gab [AT] gva [DOT] es
gvSIG Project Leader
Conselleria de Infraestructuras y Transporte
Generalitat Valenciana

Miguel Montesinos
mmontesinos [AT] prodevelop [DOT] es
gvSIG PSC Member
CTO PRODEVELOP
Agenda

- Project Origin
- What gvSIG provides
- What we are working on
- Project dimension
- Towards an open organization
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- Project Origin
  - What gvSIG provides
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• Part of a project: “Full open systems migration of the Regional Government of Infrastructures and Transport of Generalitat Valenciana”.

• Gap Analysis of suitable open source for systems.

• No advanced GIS client → Just do it

• C++ / Java Pilots

• Java, GNU/GPL, INSPIRE, Modular design

• Fast evolution
Project Origin

EU R & D & I Project

EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND
"A way to build Europe"
Agenda

- Project Origin
- **What gvSIG provides**
  - What we are working on
  - Project dimension
  - Towards an open organization
What gvSIG does (as of 1.1.2)

- **Vector Formats**
  - Read: SHP, GML, KML, DXF, DGN, DWG.
  - Write: SHP, GML, KML, DXF

- **Raster Formats** (ECW, MrSID, GeoTIFF, others through GDAL)

- **Geodatabases** (PostGIS, Oracle, mySQL)

- **SDI** (WMS, WMC, WFS, WCS, CSW, ...)

- **Reprojection framework**

- **Layouts**

- **Editing**

- **Geoprocessing**
What's new in gvSIG (as of 1.1.2)

- KML 2.1 support
What's new in gvSIG (as of 1.1.2)

- GML 3.1.1
- WFS 1.1.0
- New north symbols
- New geoprocesses

This geoprocess creates a new polygon layer, with polygon buffers of the geometries of the input layer. Input layer geometries could have any geometry type (point, line or polygon). For each input geometry, you could create one or many equidistant polygon buffer rings. Also, if input geometry type is polygon, the buffer could be internal, external or both.
What's new in gvSIG (as of 1.1.2)

- Field calculator
What's new in gvSIG (as of 1.1.2)

- Export to Annotation
- Annotation Enhancements
What's new in gvSIG (as of 1.1.2)

- Network analysis
  - Shortest path
  - Stop points
  - Route Information
  - Topology generation
What's new in gvSIG (as of 1.1.2)

• 3D pilot
What's new in gvSIG (as of 1.1.2)

- gvSIG Mobile pilot
  - SHP, ECW, WMS viewer
  - GPS support
  - Measurements, attributes info
  - Layer management
  - Data exportation from gvSIG
What's new in gvSIG (as of 1.1.2)

- Metadata prototype
  - SHP metadata extraction
  - ISO 19115 metadata editor
  - Publish to GeoNetwork OS
What's new in gvSIG (as of 1.1.2)

- Publishing Extension

  - UMN MapServer 5.X : WMS 1.1.0, WFS 1.0.0, WCS 1.0.0
  - GeoServer 1.5.4 : WFS 1.0.0
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What's going on?

OGC support improvement

- gvSIG supports now:
  - Web Map Service (WMS)
  - Web Feature Service (WFS)
  - Web Coverage Service (WCS)
  - Web Map Context (WMC)
  - Gazetter- Service (ADL, WFS, WFS-G, IDEC)
  - Catalog- Service (Z3950, SRW, CSW/ISO 19115, CSW/ebRIM)
  - Geography Markup Language (GML 1.1.3)
  - Keywhole Markup Language (KML 2.1)

- Under construction
  - Web Feature Service Transactional (WFS-T)
  - Style Layer Descriptor (SLD)
What's going on?

Advanced Symbology (I)
• Symbol Editor
What's going on?

Advanced Symbology (II)

- Hierarchy
- Conflict resolution
What's going on?

Advanced Symbology (III)

- Symbol Gallery
- Graphics
- Adv. Labelling
What's going on?

Raster + Remote Sensing

- Histograms
- Filters
- Clipping
- Classification
- Profiles
- Fussion
- ROI's
- Transformation functions
- Image enhancement
- Formats (Erdars, Ilwis, Envi, HDR, Raw, Idrisis,...)
- Band selection
- Save to Raster
- Geolocating
- ...

FOSS4G 2008. Cape Town. 29/9 - 3/10
What's going on?

Network Analysis

- Travelling Salesman Problem
- Service Area
- Minimum Spanning Tree
- Distance Matrix
- Closest Facility
What's going on?

Topology

- Topology definition, validation and fixing
- Topological editing tools
- Geoprocessing tools
What's going on?

3D

- 2,5 D & 3D
- Animations
- Navigation
- Time-series on 2D & 3D
- TIN – raster integration
- Geoprocessing on 3D
- 3D on layouts
- ...

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What's going on?

gvSIG Mobile

- Compatibilization of gvSIG core
- GPL Java ME VM support
- Editing
- Custom forms
- More formats (KML, GML, GPX,...)
- libLocation
- Geosynchronization
- More OGC support
- Porting to OpenMoko, Android,...
Topography Tools

- Field survey tools
- Topographic calculus
- DTM's
- Stations
- Corrections
What's going on?

SWE (Sensor Web Enablement)

- SensorML support
- SOS client
- Integration on desktop & mobile
- Animation rendering
- Graphics
- Sensor discovery
What's going on?

More modules

- LIDAR support
- SQL Server driver
- Roads access through WPS
- Codec BXML
- Normalization & Geocodification
- Reports & Graphics integration
- OSM
Agenda

• Project Origin
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Project dimension
• Towards an open organization
Some figures

- First version: 0.2 (oct-2004)
- Countries with downloads: ~60
- Users in mailing lists: + 2,300
- Active developers: 30-40
- Contributors & Collaborators: ~200
Collaborations

More than 100 public and private organizations, from Spain, Europe and Latin America.

- 47% Public Administration
- 23% Companies
- 16% Universities
- 14% Research Centers
Collaborations

Companies

- Prodevelop (Spain)
- Iver (Spain)
- Software colaborativo (Spain)
- DiSiD (Spain)
- LogEX (Spain)
- Dielmo (Spain)
- Creativa (Venezuela)
- Alkante (France)
- Etc.
Collaborations

- **Research Centers**
  - EU-Joint Research Center (Milan-Italy)
  - ITI (UPV-Spain)
  - LISSIT (UV-Spain)
  - IDR (Spain)
  - Ai2 (UPV-Spain)
  - ...

- **Participation in UNSDI (UN-SDI)**
Collaborations

- Universities
  - U. Jaume I (Spain)
  - U. Polytechnic Valencia (Spain)
  - U. Valencia (Spain)
  - U. Laussanne (Switzerland)
  - U. Polytechnic Madrid (Spain)
  - U. California (Santa Barbara)
  - U. Oxford (UK)
  - U. Polytechnic Catalunya (Spain)
  - U. Alicante (Spain)
  - U. Rennes (France)
  - U. Extremadura (Spain)
  - U. Patagonia (Argentina)
  - Etc.
gvSIG conference evolution

1st Jornadas gvSIG: “Comparte el conocimiento”
2nd Jornadas gvSIG: “Construyendo realidades”
3rd Jornadas gvSIG: “Consolidar & Avanzar”
4th gvSIG Conference
1-5 dec. 2008. Valencia (Spain)

gvSIG Conference
+ OGC Technical Committee Meeting
+ Eclipse Day
Agenda

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- Towards an open organization
Towards an open organization

- The project is growing. More and more different stakeholders
- The complexity grows
- We need to organize ourselves to enable development of our objectives, dimension and evolution.

How do we organize ourselves?
Towards an open organization

Open Organization

A project aimed at the creation of an infrastructure for easing the work in a collaborative way, open to any organization willing to collaborate with gvSIG and promote gvSIG.
Towards an open organization

Put the project in the hands of the community

What tools and actions are we taking for ensuring project quality?
Towards an open organization

- Collaborative Infrastructure
  - http://gvsig.org
Towards an open organization

Code Implementation with LibCompat

Next the follow steps to develop J2ME compatible code using the library are explained.

Linking the JAR

- First of all, have to get the correct binary file, which is named org.gvSIG.compat-mobile.jar if the J2ME code compatibility is preferred, or the binary called org.gvSIG.compat-desktop.jar to get off the maximum performance to the J2SE virtual machine.
- Once have the right binary file to the compatibility needed what is project is developing, it has to be added to the project
  CLASSPATH as a one more dependency.

LibCompatMobile is an unique library but with two different implementations:

1. org.gvSIG.compat-mobile.jar : Is the optimized component for gvSIG Mobile, so that inside J2ME are non-existent methods found or that they have to been optimized to run on it.
2. org.gvSIG.compat-desktop.jar : Is the optimized component to gvSIG Desktop, so that it's optimized using libraries that they're only into J2ME and they don't work correctly into J2ME but add performance to J2ME.

Instantiating the classes

To use the library, have to import it into the class which will use any method that the library adds. Both of compilations are instantiated likewise, as the classes and packets hierarchy is the same in both cases, only the implementation is different.

```java
import org.gvSIG.compat.Mobile;
...
```

Also is possible want import only a few classes instead of all the packet, to avoid memory leaks.

EXAMPLE: Only is needed uses utilities and methods related with the java.lang.String that isn’t available into J2ME

```java
import org.gvSIG.compat.Mobile.StringUtil;
...
```

Callings to Available Methods ---------------------------------

The library methods are static because of it won’t have to instantiate the class with objects and will be able to use it as a tools in a more efficient way. Next it’s the library method list and an example of how to use them. The next table shows the equivalent method from libCompatMobile that substitute a J2SE one.

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>form.set()</td>
<td>Set the form state</td>
</tr>
<tr>
<td>form.undo()</td>
<td>Undos the last action</td>
</tr>
<tr>
<td>form.redo()</td>
<td>Redoes the last undo action</td>
</tr>
</tbody>
</table>

- "form.isModified()" e "form.isCancelled()"
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- Open subversion repository
  - http://subversion.gvsig.org/gvSIG/
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- Open FTP repository for builds, and other stuff
  - ftp://gvsig.org
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- Plugin repository for the community

  https://gvsig.org/web/plugins/downloads
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- On-line L10N tool: an open gate for new communities of users

Document has been created.

Edit Page

by Manuel Madrileñ — last modified 2008-02-20 15:01

Translating from Español to English

Titulo
Introducción

Descripción
Una breve descripción del contenido.

Cuerpo del texto
En la filosofía de creación de gvSIG se incluye la implementación de estándares abiertos para el acceso a datos espaciales. Por ello, gvSIG incluye un cliente de WMS que cumple el estándar actual de la OGC (Open Geospatial Consortium, http://www.opengeospatial.org).

Title
Introduction

Description
A short summary of the content

Body Text
Part of the gvSIG philosophy in its creation included the implementation of open standards for access to spatial data. Thus, gvSIG includes a WMS client which complies with the current OGC (Open Geospatial Consortium, http://www.opengeospatial.org) standard.
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- Mailing lists for the community
- Provide infrastructure for new users communities
- Under gvSIG umbrella
- Self-moderated lists
Towards an open organization

- We look forward an organization
  - Gathering companies, universities & administrations
  - A common space: If everyone contributes, everyone wins
  - Build a quality business model that can be adopted by companies (spec. SME's)
  - Working for technology independence
  - Light structure easy to sustain
  - Looking for collaboration points with other organizations and projects, related to open-source and in the Geo world
Towards an open organization

- We'd like gvSIG to be seen as a project/organization that
  - Promotes a framework for business agreements with mutual benefit.
  - Provides quality seals to new developments.
  - Promotes collaboration & participation.
  - Everyone respecting its principles is welcome.
  - Keeps equal terms among participants.
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As a final thing

- In an open-source project come together:
  - Technical aspects → Science
  - Commercial aspects → Economics
  - Organizational aspects → Politics

A whole vision of all those aspects must exist, in order to be able to have a global view, and to be able in any moment to interpret, analyze and take decisions.
gvSIG Status Report
Towards an Open Organization

“Did I perform something useful for the community?
Hence, I got benefit from it”
Marco Aurelio, 180 AC

Gabriel Carrión Rico
carrion_gab [AT] gva [DOT] es
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