gvSIG: OPEN SOURCE, CARTOGRAPHY AND NEW MARKETS

gvSIG Project

Migration to Open Systems Project.

Conselleria d'Infrastructures i Transport

I. S Optimization → Technology Independence → Sustainable and Balanced Development

- Migration to Open Systems under LINUX (late 2002)
- Study Areas:
  - Office software
  - Operating Systems and Communications
  - Conselleria's Corporative Developments
  - GIS and CAD

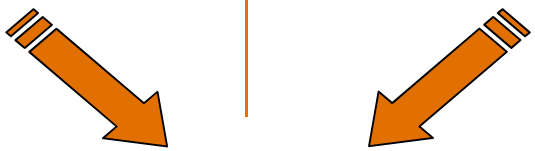
→ GIS Client Development SIG: gvSIG

Work Area GIS-CAD. Procedure.

Analisis of the CIT user's needs using surveys and interviews.

Analisis of existing GIS and CAD software in the market.

- Visualization
- Querying
- Edition
- Spatial Analisis
- Topology
- Printing



Initial Requisite Definition

- ArcView
- ArcGIS
- Jump
- Grass
- AutoCAD
- MicroStation
- IntelliCAD

gvSIG Project

Public Contest.

- Public Tender: Exp. 2003/01/0090

  "Desarrollo de aplicaciones SIG (Sistema de Información Geográfica) para la C.O.P.U.T. Utilizando software libre."

  (Development of GIS Applications using free software).

- Language Election: C++ vs Java.

- Evaluation Prototype. Final Election: Java.

gvSIG Project

Supported by:

-Conselleria d'Infraestructures i Transport as the project starter.

-Universitat Jaume I. Standard supervision.

-IVER Tecnologías de la información. The tender winner company that holds the main development.

gvSIG Features

- Multiplataform (java).
- Free Software (GNU/GPL).
- Standard Compliant (OGC).
- Friendly Interface.
- International (Spanish, Valencian, Euskera (Basque), English, French, Italian, Portuguese, German, Czech, and much more..).

gvSIG Project

gvSIG goals:

In short time:

Implement those functionalities that are present in a CAD system:

public tender "SERVICIOS INFORMÁTICOS DE INCORPORACIÓN DE FUNCIONALIDADES DE GEOPROCESAMIENTOS, TOPOLOGÍA Y CAD EN EL PRODUCTO GVSIG" (Exp: 2004/01/228).

Global Goal:

Offer a definitive solution to **each need** related with the management of the Geographical Information, keeping in mind that we are integrating **free technologies**.

2. gvSIG as a GIS Client

- Visualization.
- Layer Management.
- Legent Management.
- Browsing Tools.
- Locator.
- Bookmarks
- Area and Distance measurement.
- Selection Tools.
- Map Builder.
- Printing.
- Transparency (vectorial / raster)
- Re-projection

- Readable Formats:
  - SHP
  - DGN
  - DXF
  - ECW
  - SID
  - TIFF
  - JPG
  - PNG
  - GIF
- Writable formats:
  - SHP
- WMS Client.
- Export to image files.

2. gvSIG as a GIS Client

- Link and Union operation between tables operation (v0.4).
- Table Edition.
- Buffer Generation.
- Stats Generation (v0.4).
- Interval, Interval by quantile (normal and equidistant) legends (v0.4).
- Access to DB through JDBC (PostGis and MySQL).
- Access to ArcSDE.
- WCS Client(v0.4).
- WFS Client.
- Catalogue Client.
- CAD.
- Geoprocessing.
- Topology Generation.
- Readable formats:
  - DWG
  - IMG (v0.4)
  - GRASS
  - JPEG2000
- Writable formats:
  - DXF
  - ECW (v0.4)
  - GEOTIFF (v0.4)

3. The Spatial Data Infrastructure and gvSIG.

New Paradigm: Spatial Data Infrastructure

Goal: to maximize and facilitate the access to G.I.

Using the net (Internet/intranet).

Extended Client-Server Model.

Decentralized Net: More than one server.

3. The Spatial Data Infrastructure and gvSIG.

gvSIG evolution:

GIS Client → SDI Client

Implementing web services (Open Geospatial Consortium):

- Web Map Service (WMS): Query and Visualization.
- Web Feature Service (WFS): Deeply Access to the G.I.
- Web Coverage Service (WCS): Deeply Access to the G.I.
- z39.50, CSW y SRW: Catalogue Access (Search of G.I.).

6. Free GIS: Enterprise Model

THE COMPANY

- The company depends on other companies that are the owner of the software.
- No access to the source.
- Software Distributors
- High prices: services + licenses
- Low interoperability
- Experts in Brands

- Technological Independence
- Source is available. Freedom of modify it.
- Technology Creator
- Nice Prices: services
- High Interoperability
- Experts in technology

6. Free GIS: Enterprise Model

USERS / CLIENTS

- Dependency on several companies.
- No access to the sources.
- Unique Provider.
- High Prices: services + licenses
- Standard Updates
- Low Interoperability
- Impossible to share technology.

- Technological Independence
- Access to the source. Freedom to modify it
- Wide range of suppliers. Local Industry.
- Productive Investment.
- Freedom when updating.
- High Interoperability
- Sharing Technology and Knowledge.