

gvSIG case studies

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1. What's gvSIG

gvSIG is an **open source development project** to manage, use and produce geographical information.

gvSIG is a project with a very **active community**, that currently has a worldwide reach.

It is also an investment in a supportive development model, based on the **shared knowledge**. This development model is materialized in the gvSIG Association.

gvSIG invests strongly in the SDI, that are the system suitable for managing the geographical information in any organization.

1. What's gvSIG

gvSIG Desktop: Characteristics

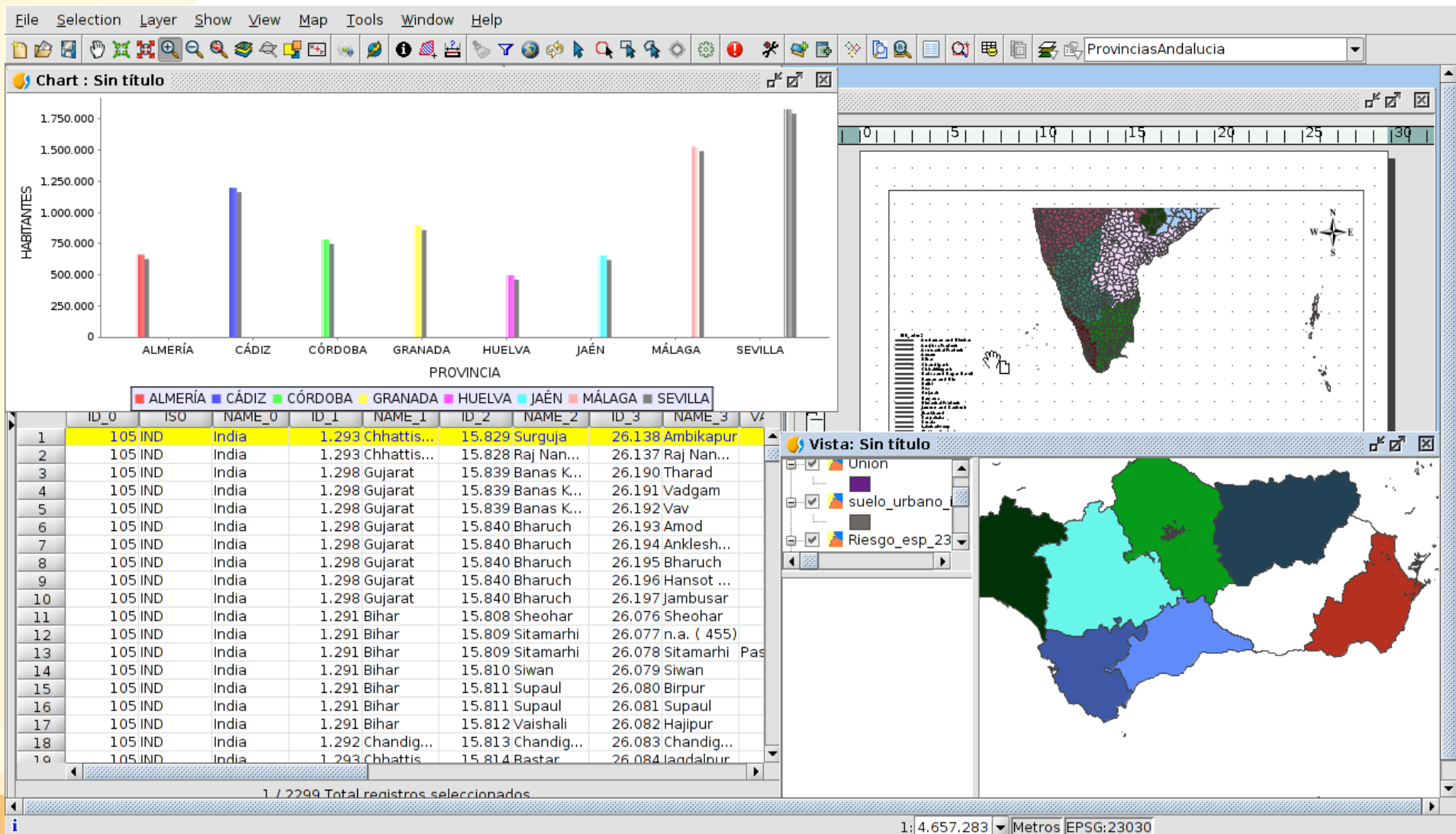
- gvSIG Desktop is currently one of the most complete GIS.

*gvSIG has nice vector data editing functions. Users can easily digitize lines by snapping vertices to existing nodes and generate correct topology. With an easy-to-configure locator map, gvSIG immediately reveals where you are in your dataset. Some GIS professionals believe that **gvSIG is becoming close to replacing ESRI ArcMap software.** (*National Geospatial Technology Center of Excellence*. 2010)*

- **Main characteristics:**
 - Multi-platform: Linux, Windows, Mac OS X
 - Multi-language
 - Simple interface: user friendly
 - Customizable
 - GIS + SDI client (Spatial Data Infrastructure / OGC standards)

1. What's gvSIG

gvSIG Desktop: Characteristics

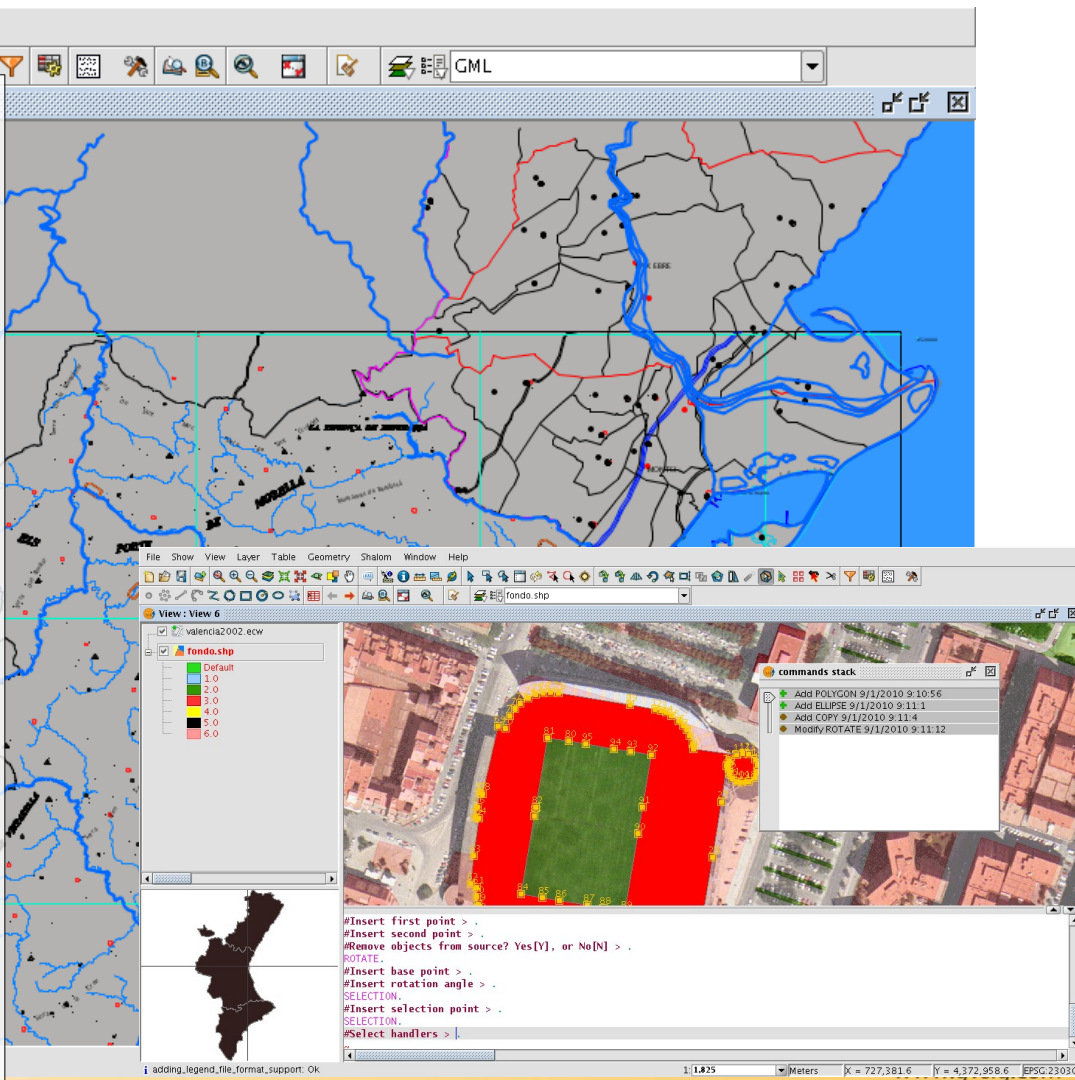


1. What's gvSIG

gvSIG Desktop: Characteristics

Vector:

- Local data loading
- Database management
- Data export
- Navigation
- Query and information
- Symbology and Labeling
- Annotations
- Geoprocessing
- Georeferencing
- Graphical editing
- Field calculator
- Layout constructor
- Layout templates
- Scripting, ...



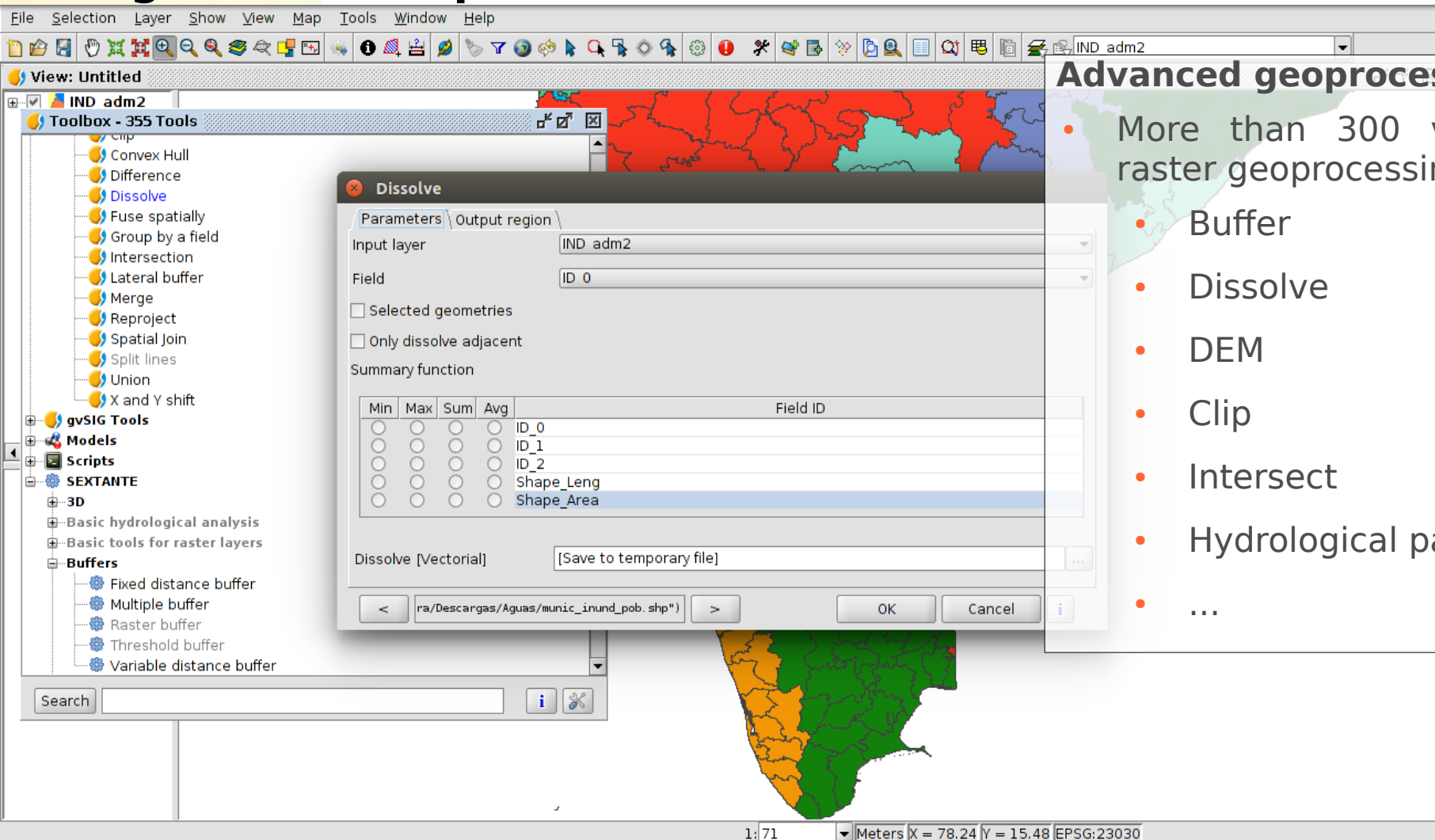
The screenshot displays the gvSIG Desktop application interface. The main window shows a map of Valencia, Spain, with various vector layers loaded. The left sidebar contains a 'View: View 1' panel with a layer list including DWG, KML, SHP, DXF, DGN, and GML. The right sidebar shows a 'View: View 6' panel with a legend for the 'fondo.shp' layer. A 'commands stack' window is open on the right, showing a list of commands such as 'Add POLYGON', 'Add ELLIPSE', 'Add COPY', and 'Modify ROTATE'. The status bar at the bottom indicates the application is started and provides coordinates and scale information.

1. What's gvSIG

gvSIG Desktop: Characteristics

Advanced geoprocessing:

- More than 300 vector and raster geoprocessing modules
 - Buffer
 - Dissolve
 - DEM
 - Clip
 - Intersect
 - Hydrological parameters
 - ...

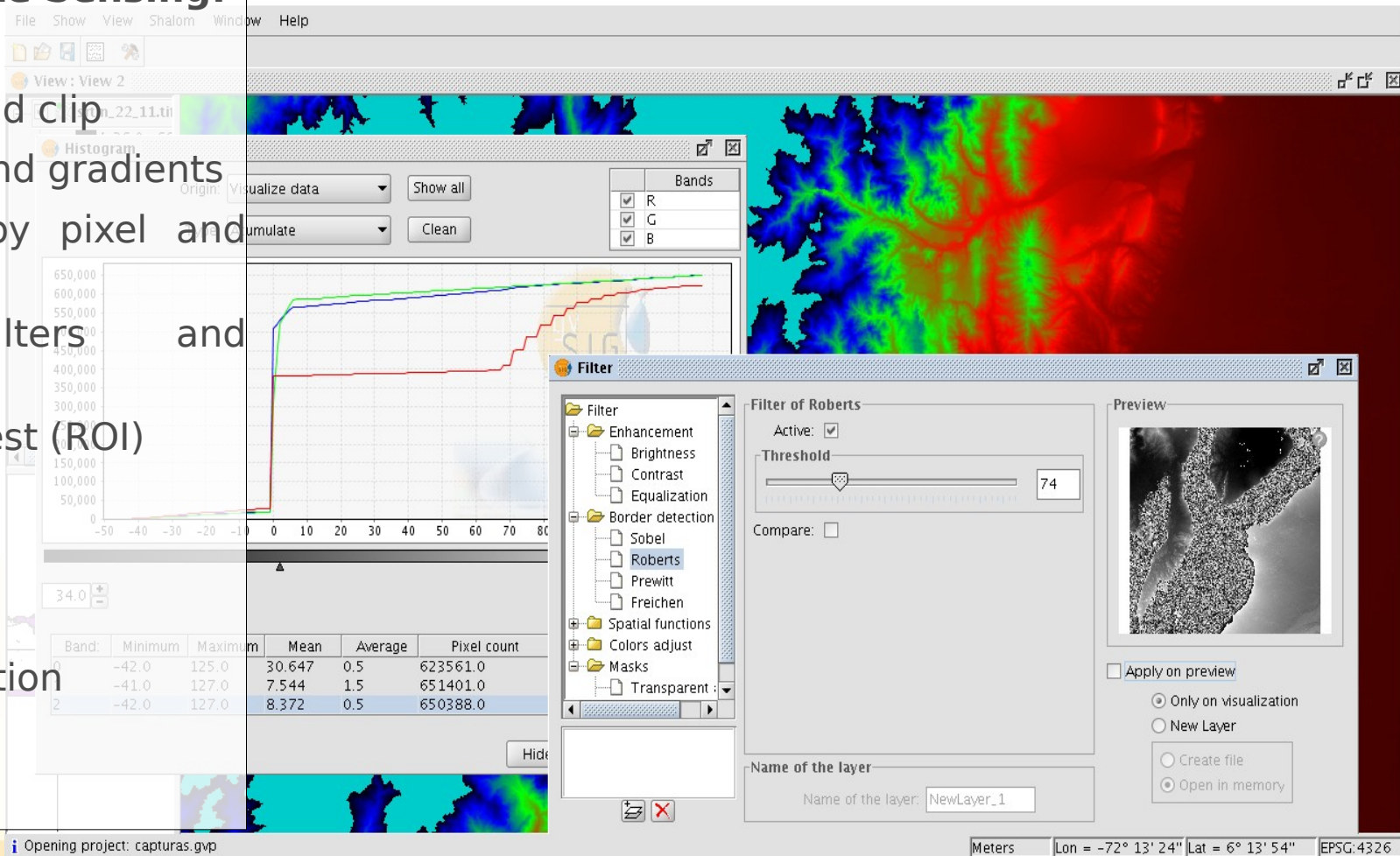


1. What's gvSIG

gvSIG Desktop: Characteristics

Raster and Remote Sensing:

- Bands
- Layer export and clip
- Colour tables and gradients
- Transparency by pixel and opacity
- Statistics, filters and histograms
- Region of Interest (ROI)
- Geolocation
- Enhance
- Vectorization
- Raster reprojection
- Mosaics
- ...

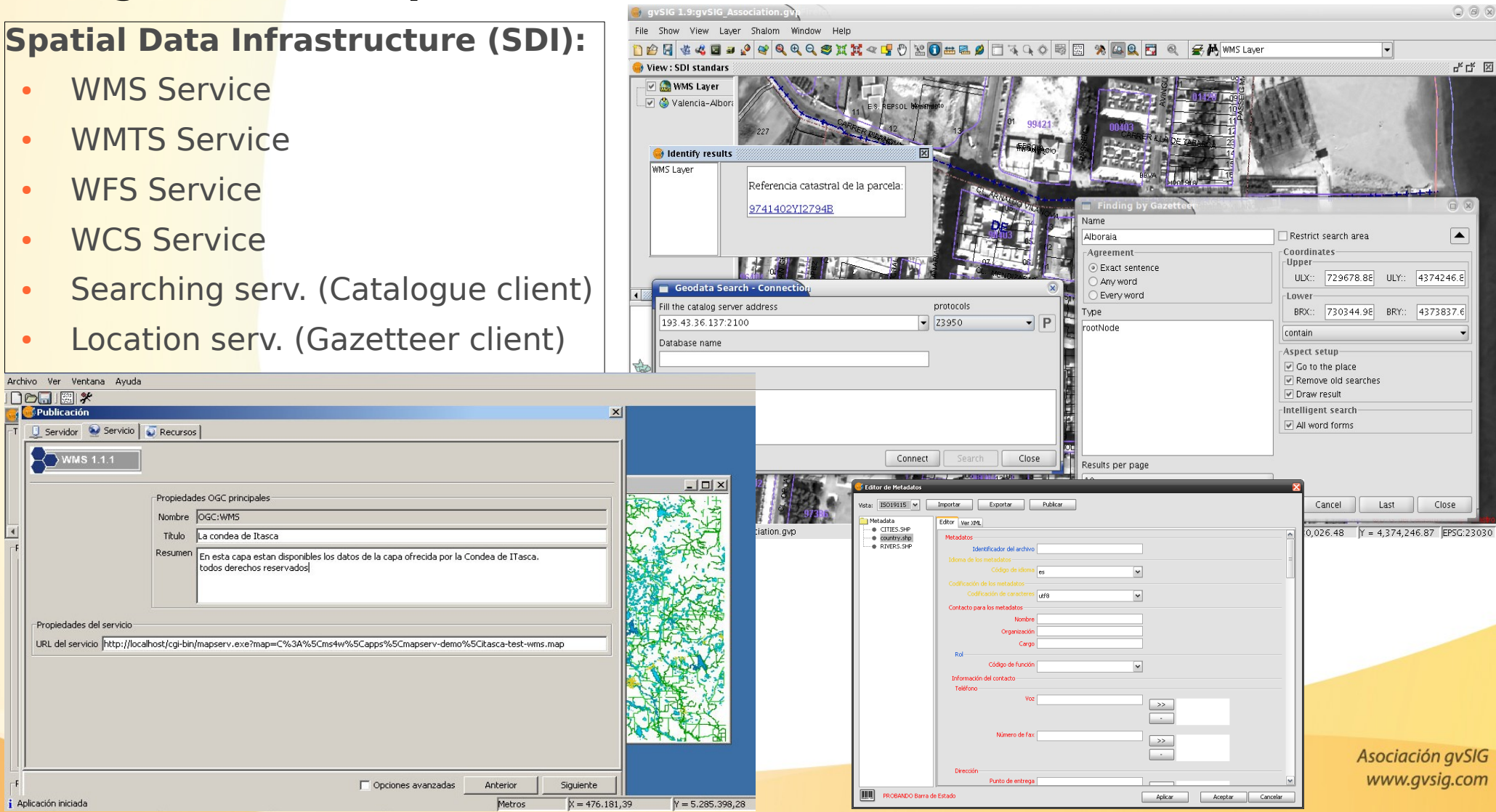


1. What's gvSIG

gvSIG Desktop: Characteristics

Spatial Data Infrastructure (SDI):

- WMS Service
- WMTS Service
- WFS Service
- WCS Service
- Searching serv. (Catalogue client)
- Location serv. (Gazetteer client)

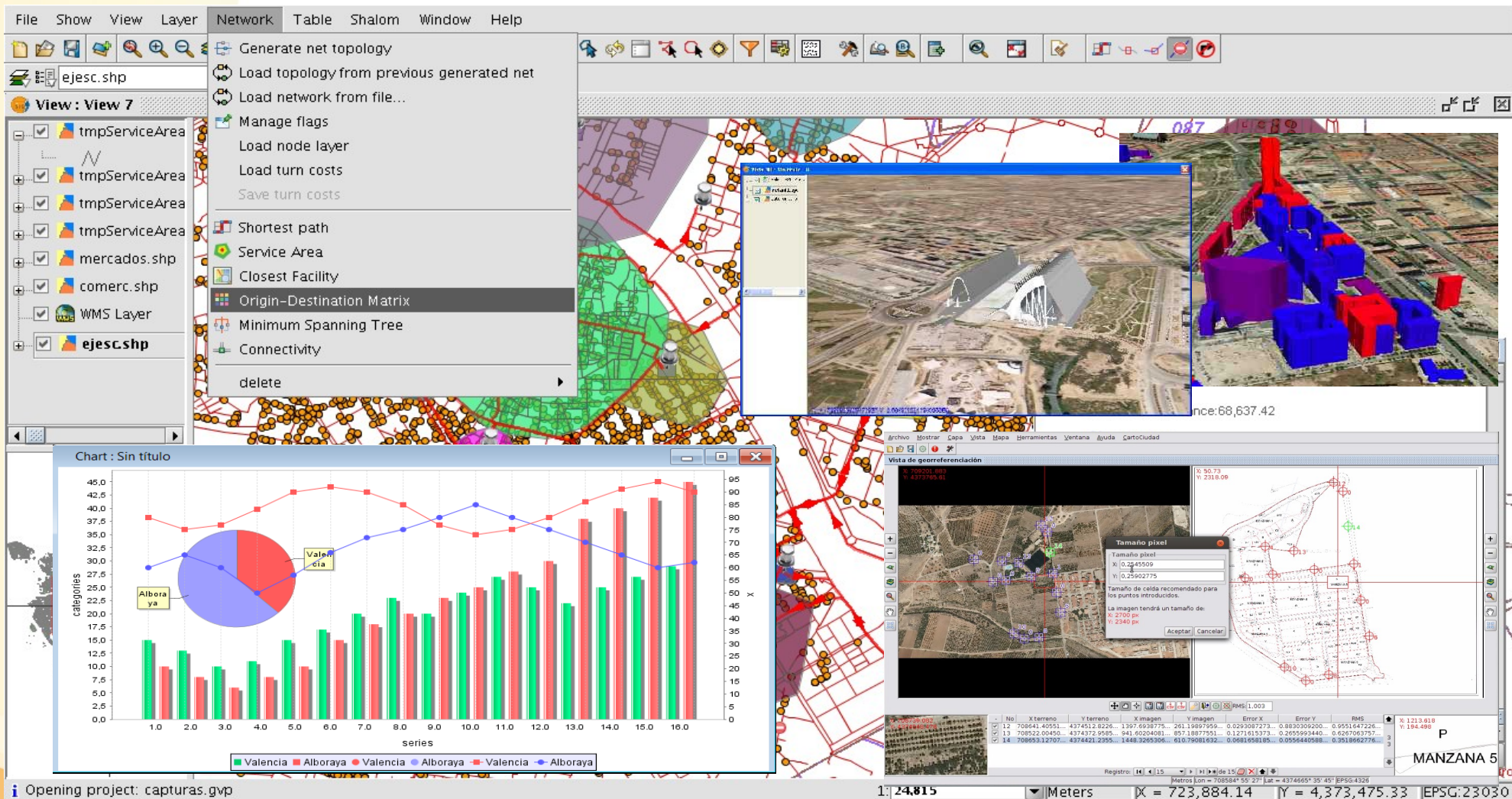


The screenshot displays the gvSIG 1.9 Desktop interface with several windows and dialogs open:

- Main Window:** Shows a map view with a WMS Layer. The 'View: SDI standards' panel on the left lists 'WMS Layer' and 'Valencia-Albor'. The 'Identify results' panel shows a 'Referencia catastral de la parcela: 9741402YI2794B'.
- Geodata Search - Connection:** A dialog box for connecting to a catalog server. It includes fields for 'Fill the catalog server address' (193.43.36.137:2100), 'protocols' (Z3950), and 'Database name'.
- Findings by Gazetteer:** A dialog box for searching by Gazetteer. It includes fields for 'Name' (Alborala), 'Agreement' (Exact sentence), 'Type' (rootNode), and 'Coordinates' (ULX: 729678.8E, ULY: 4374246.E, BRX: 730344.9E, BRY: 4373837.E).
- Editor de Metadatos:** A dialog box for editing metadata. It includes fields for 'Identificador del archivo', 'Idioma de los metadatos', 'Codificación de los metadatos', 'Codificación de caracteres', 'Contacto para los metadatos', 'Rol', 'Información del contacto', 'Teléfono', 'Número de fax', and 'Dirección'.
- Publicación:** A window for publishing a WMS service. It includes fields for 'Nombre' (OGC:WMS), 'Título' (La condea de Itasca), 'Resumen' (En esta capa estan disponibles los datos de la capa ofrecida por la Condea de Itasca, todos derechos reservados), and 'URL del servicio' (http://localhost/cgi-bin/mapserv.exe?map=C%3A%5Cms4w%5Capps%5Cmapserv-demo%5Citasca-test-wms.map).

1. What's gvSIG

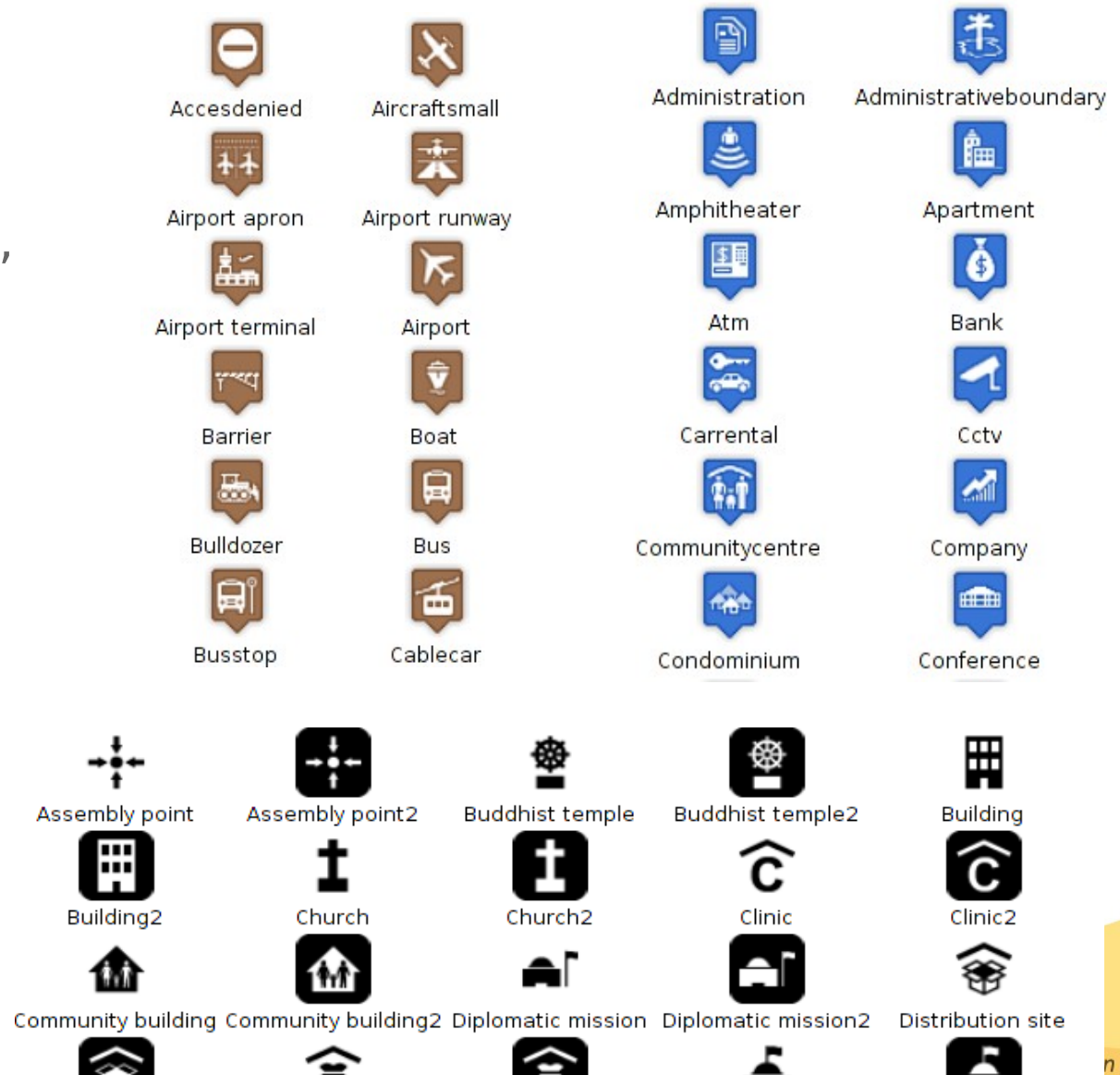
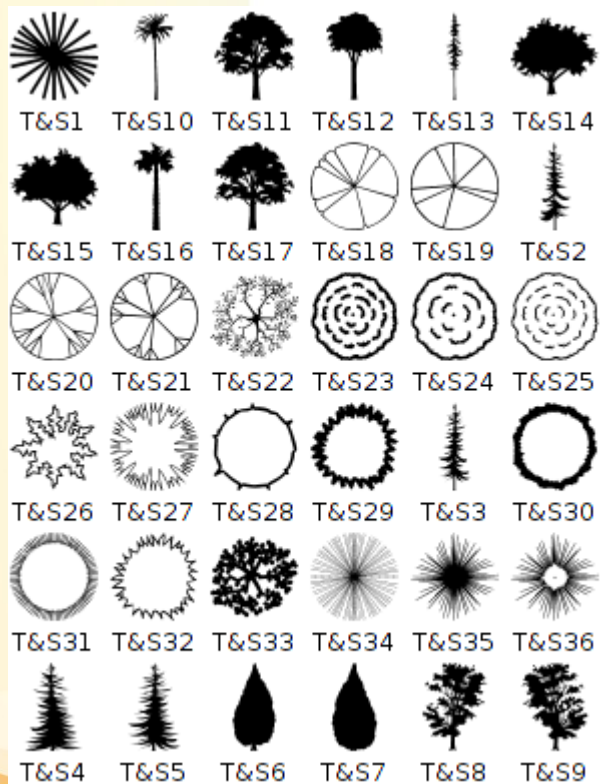
gvSIG Desktop: Characteristics



1. What's gvSIG

Symbols:

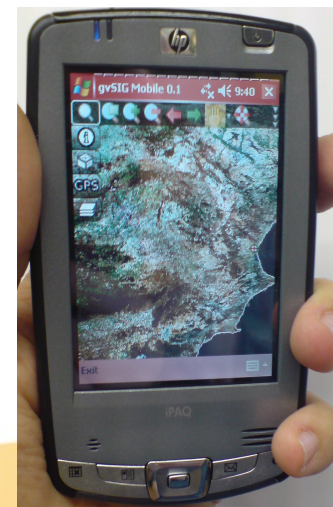
Symbols for Forestry,
Criminology, Infrastructures,
Tourism, Health, Geology...



1. What's gvSIG

gvSIG Mobile: Characteristics

- gvSIG Mobile is a GIS complement to be used on field work.
- Main characteristics:
 - Display: several formats, CRS management
 - Symbology and Labeling
 - GPS Support: manual and automatic
 - Editing tools
 - Selection and searching
 - SDI/OGC access: WMS, WFS...
 - Measurement and information
 - ...



1. What's gvSIG

gvSIG Educa: Characteristics

- gvSIG Educa is a customization of the gvSIG Desktop Open Source GIS, adapted as a tool for the education of issues that have a geographic component.
- gvSIG Educa provides educators with a tool that helps students to analyze and understand space, and which can be adapted to different levels or education systems.

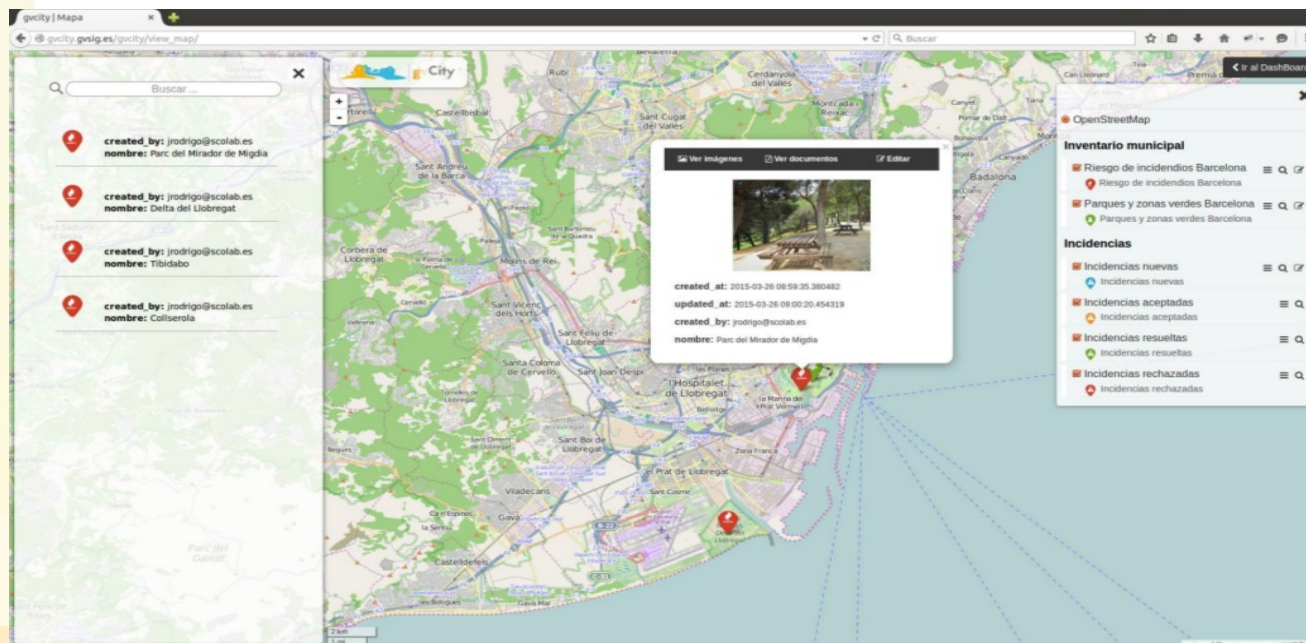


"If I can't picture it, I can't understand it (A. Einstein)"

1. What's gvSIG

gvSIG City: Characteristics

- gvSIG City is a suite for inventory, incidents and open data management.
- It includes a private mobile application for inventory data capture, and a public mobile application for incidents capture by citizens.



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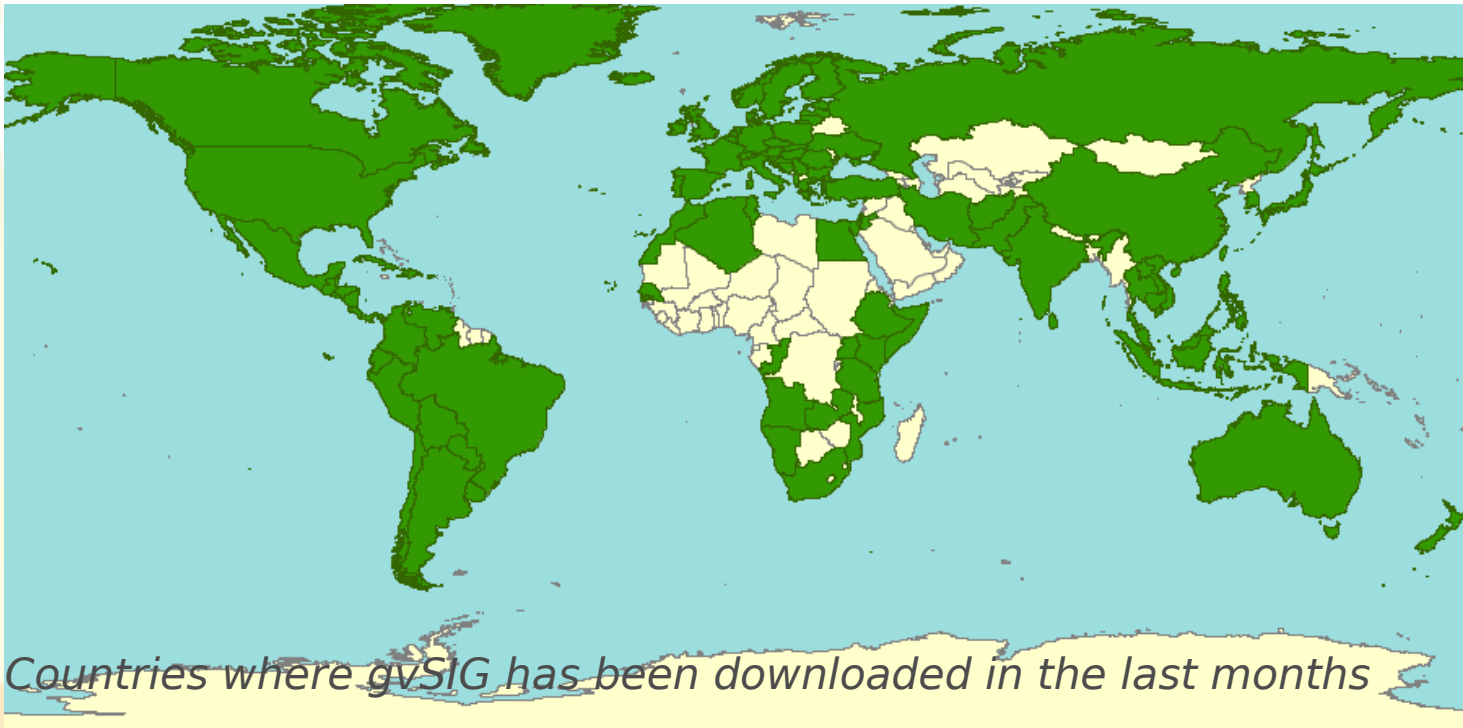
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2. gvSIG Community

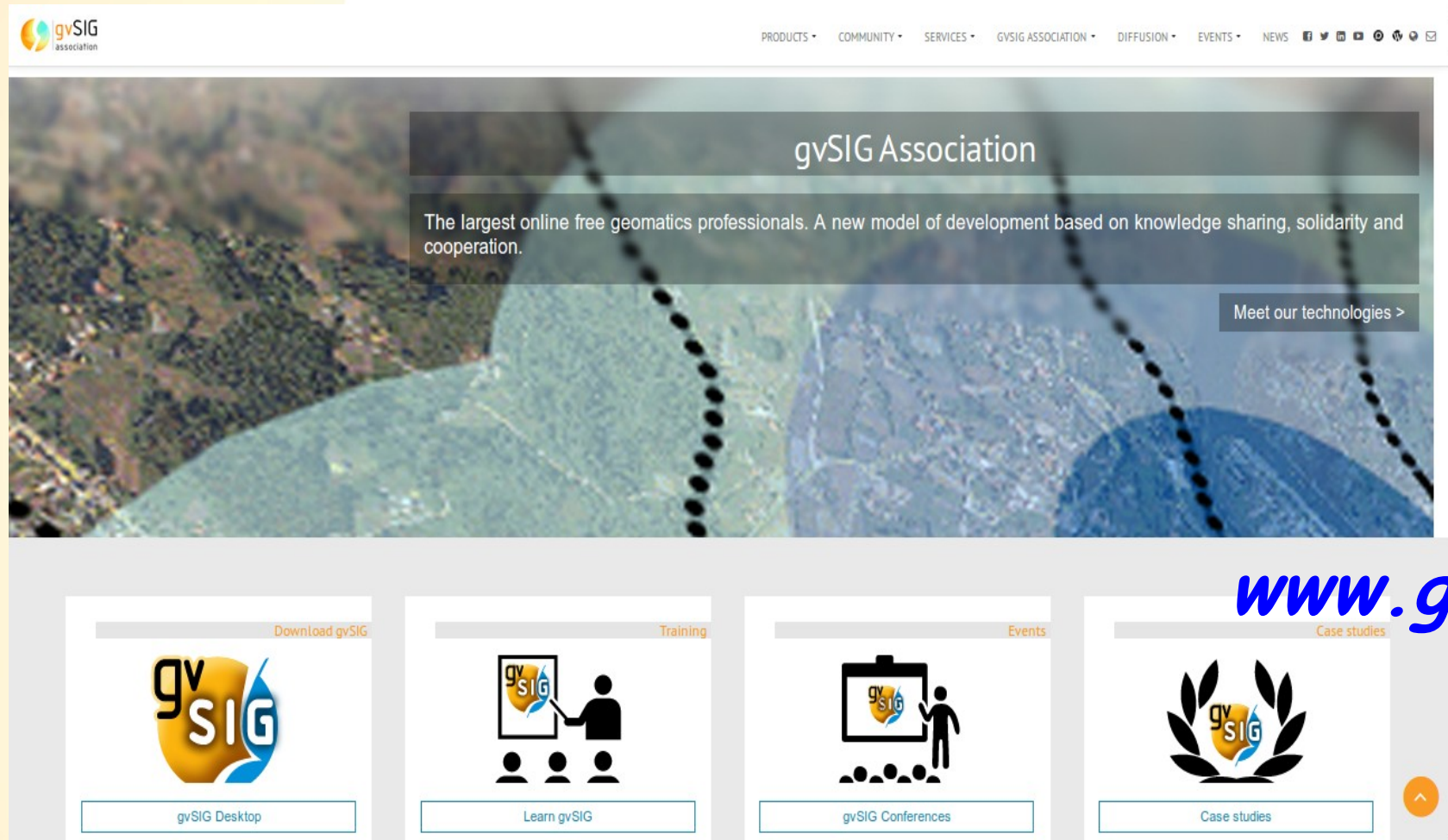
Some data...

- Translated to more than 30 languages
- Downloaded in more than 100 countries
- Several mailing lists; + 4.000 users
- Conferences in Spain, Germany, Italy, United Kingdom, Brazil, Russia, France, Argentina, Venezuela, Uruguay, Chile...



Countries where gvSIG has been downloaded in the last months

2. gvSIG Community



- Blog, Planet, Outreach, Twitter, Facebook...



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3. gvSIG Association

Who are we?

- It was born in 2009.
- Composed of companies and non business entities (universities, geographical institutes,...).
- It constitutes the biggest international network of experts in free geomatics.
- References and clients in more than twenty countries.
- Model based on the shared knowledge and the collaboration. Knowledge is transferred to the client.
- We offer **learning, consulting, supporting, developments...**

3. gvSIG Association

Clients and references: Some consulting examples

- Spatial Data Infrastructure. PDVSA (Venezuela)
- Migration from ArcGIS to gvSIG. Munich City Council (Germany)
- GIS analysis for urban areas. UN-Habitat (Kenya)
- Multimodal transport geoportal in Valencia (Spain)
- gvSIG development for cadastral management (Mexico)
- GIS for solid waste management in Basque Country (Spain)
- GIS for road management in the region of Valencia (Spain)

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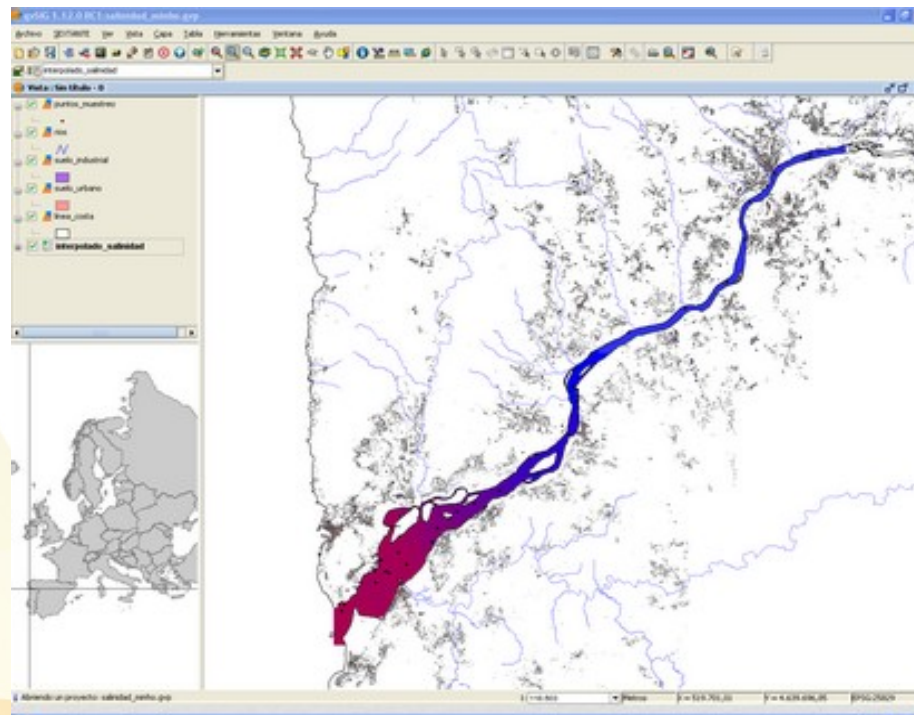
The administrations of both countries (Italy and Slovenia) collaborated and shared data and knowledge on gvSIG. They used gvSIG Desktop for office work and gvSIG Mobile for field work.



4. Case studies

Analysis of contaminants and salinity in the Minho river for the European Project

Determination of the spatial distribution of different physicochemical parameters (salinity, phosphate, ammonium, nitrate and nitrite), at both at low and high tide, at the estuary of the Minho river.

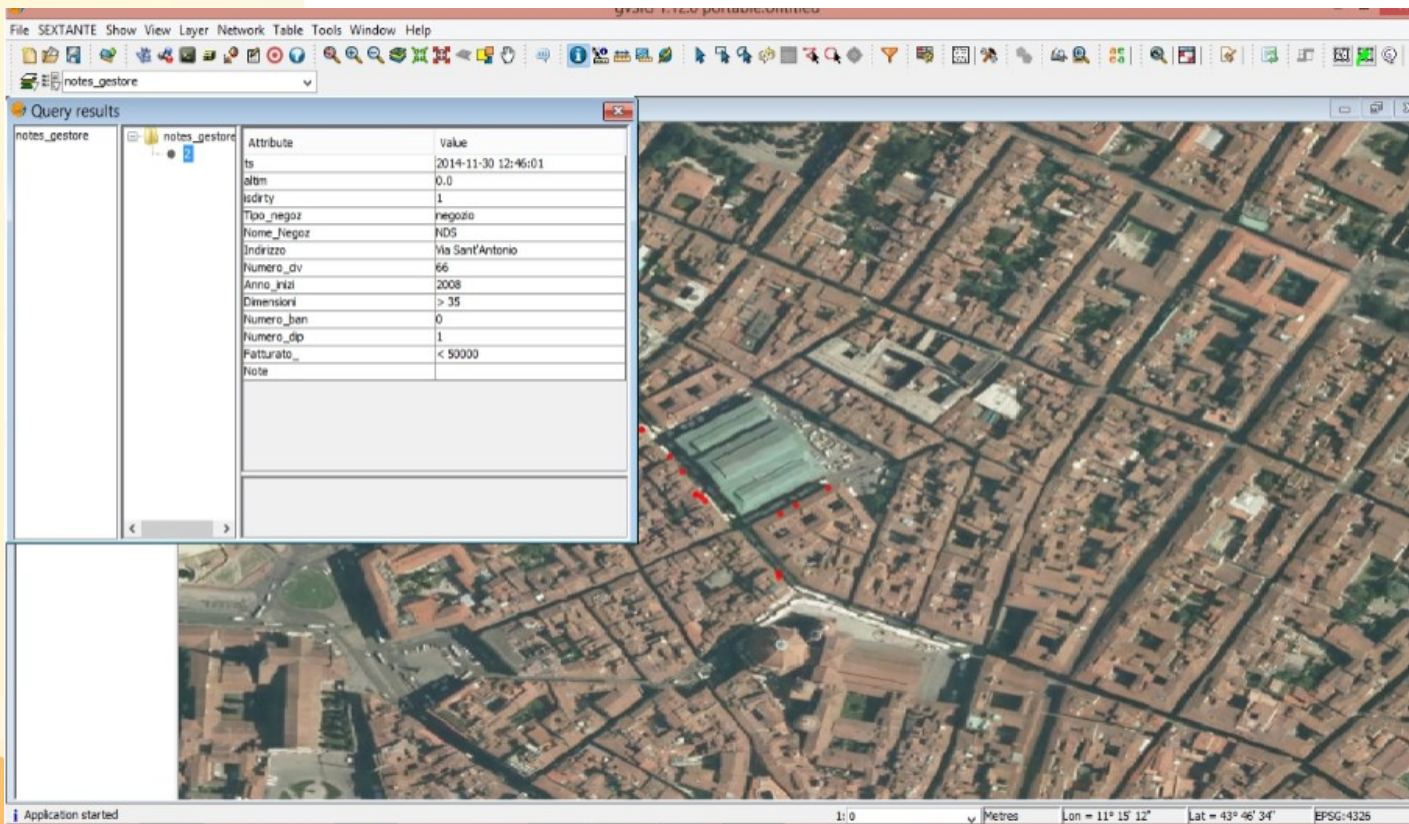


Spain

4. Case studies

Analysis of the value chain for leather products in San Lorenzo street market

Collecting field quantitative and qualitative data in order to produce a detailed census of commercial activities

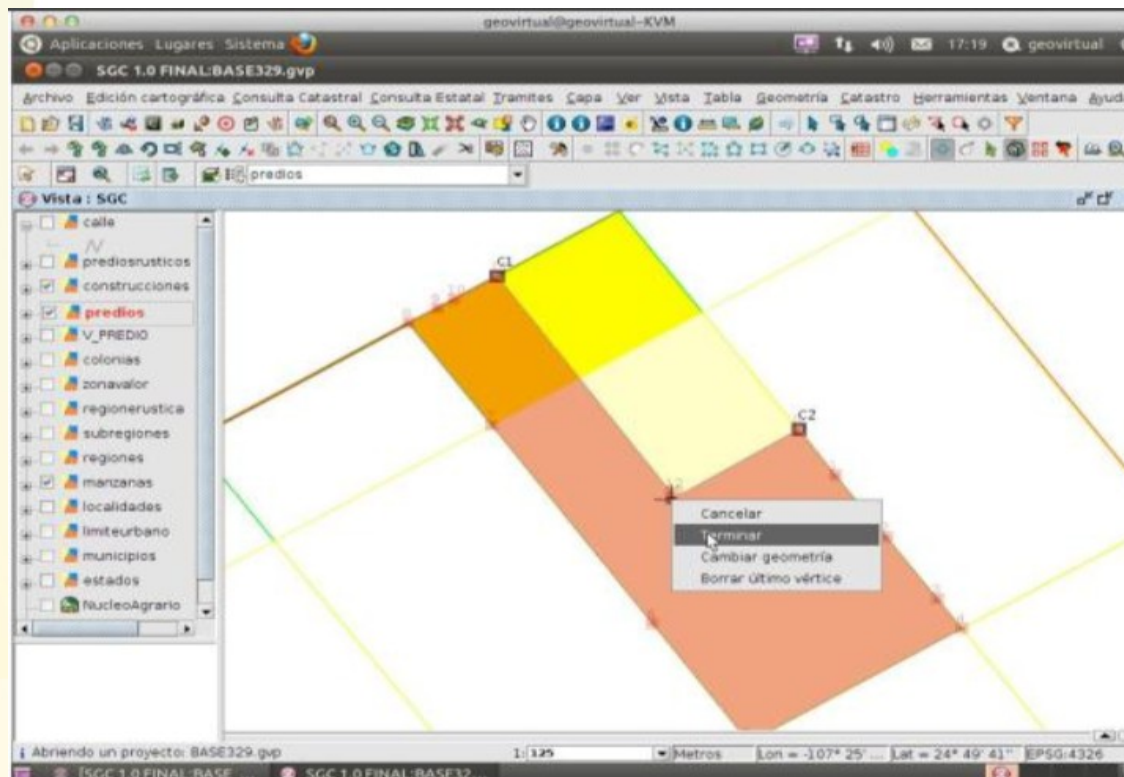


Italy

4. Case studies

gvSIG, a unified application to the Mexican municipal cadastre

Cadastre modernization and taxes collection management.

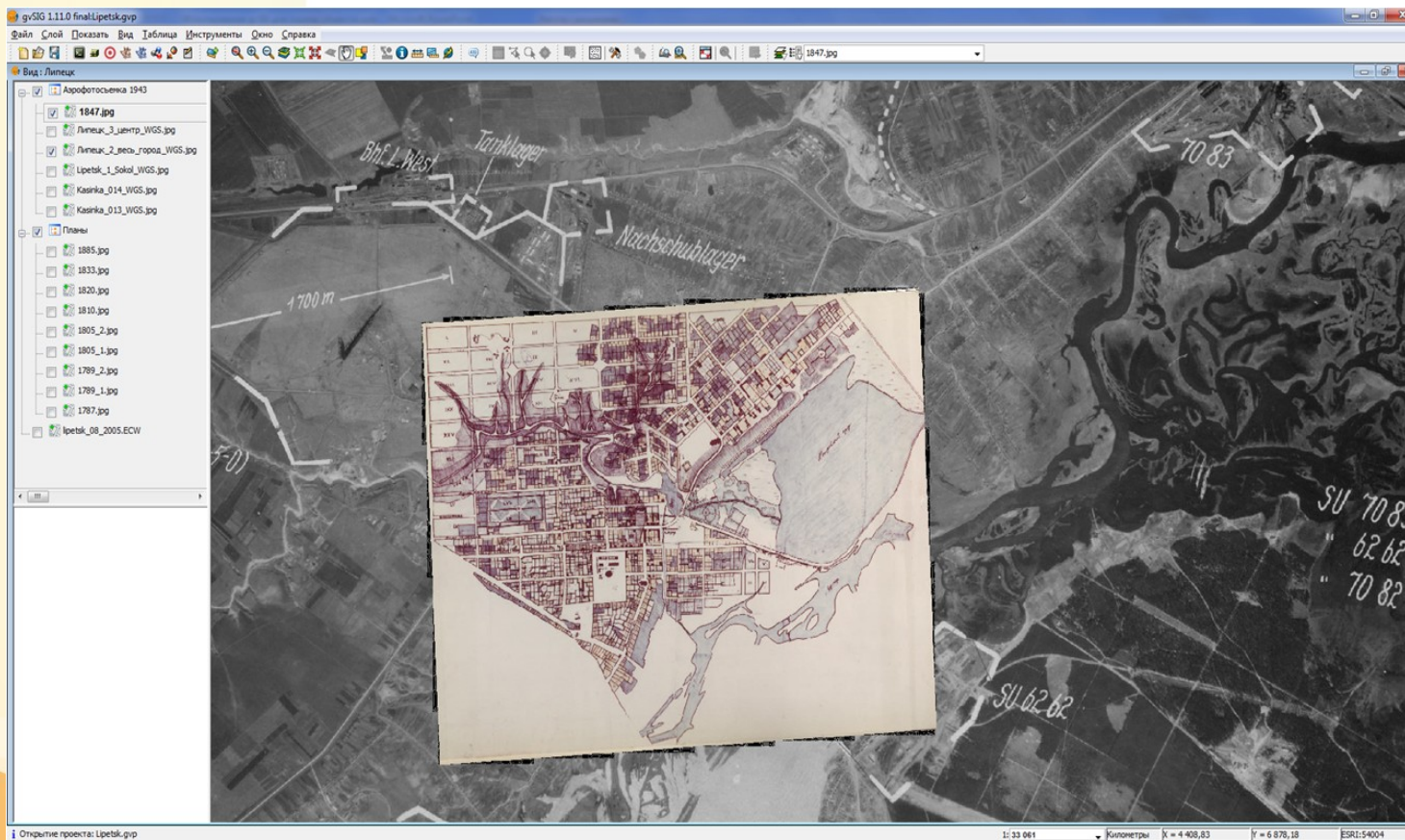


Mexico

4. Case studies

Use of gvSIG for Protection of Cultural Heritage in the Lipetsk Region, Russian Federation

Preparing a spatial information for the passport of a cultural heritage object and the land survey documentation

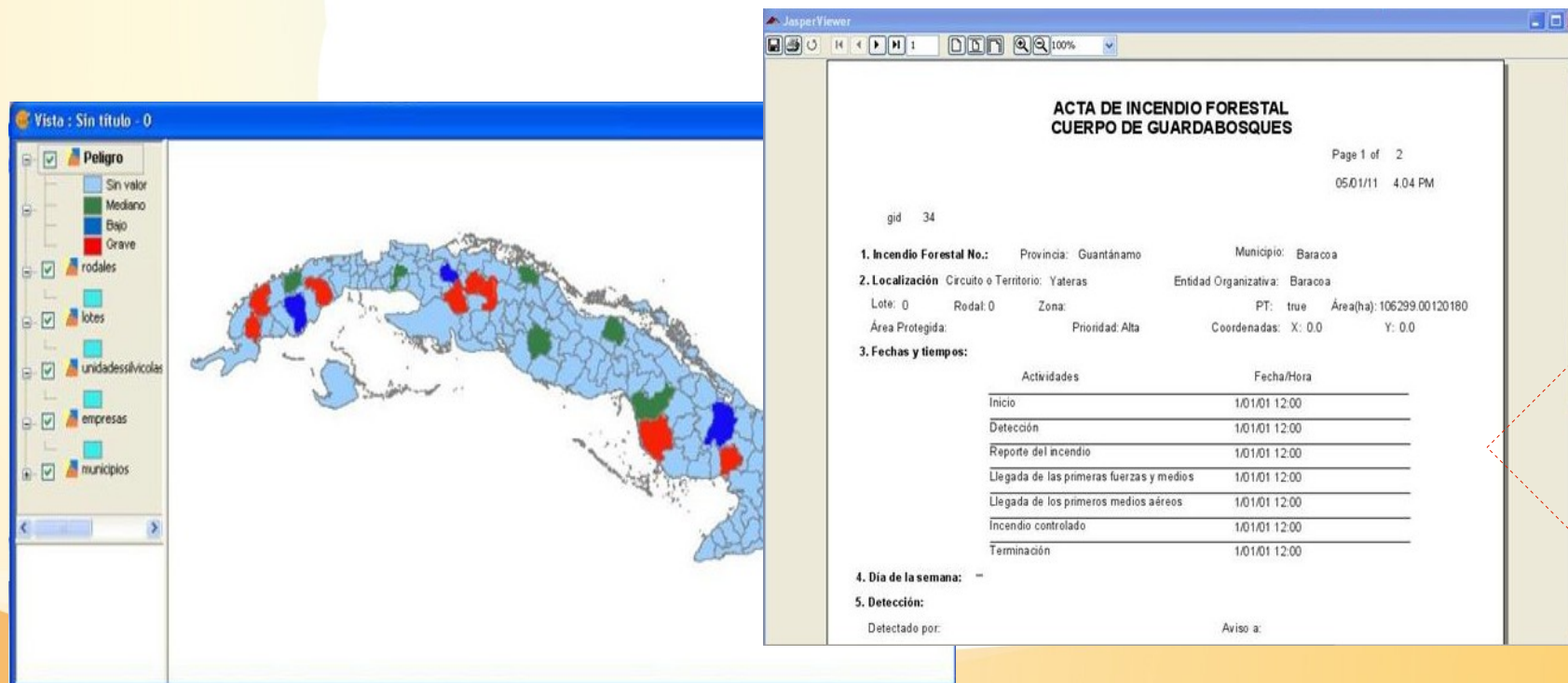


Russia

4. Case studies

gvSIG for Forestry Management: SIFOMAP 3.0

Customized applications that allow to manage, administrate, update... the forestry heritage information. It's composed of different modules, like Forestry Management Planning, Sustainable Development Indicator, Forest Fire...



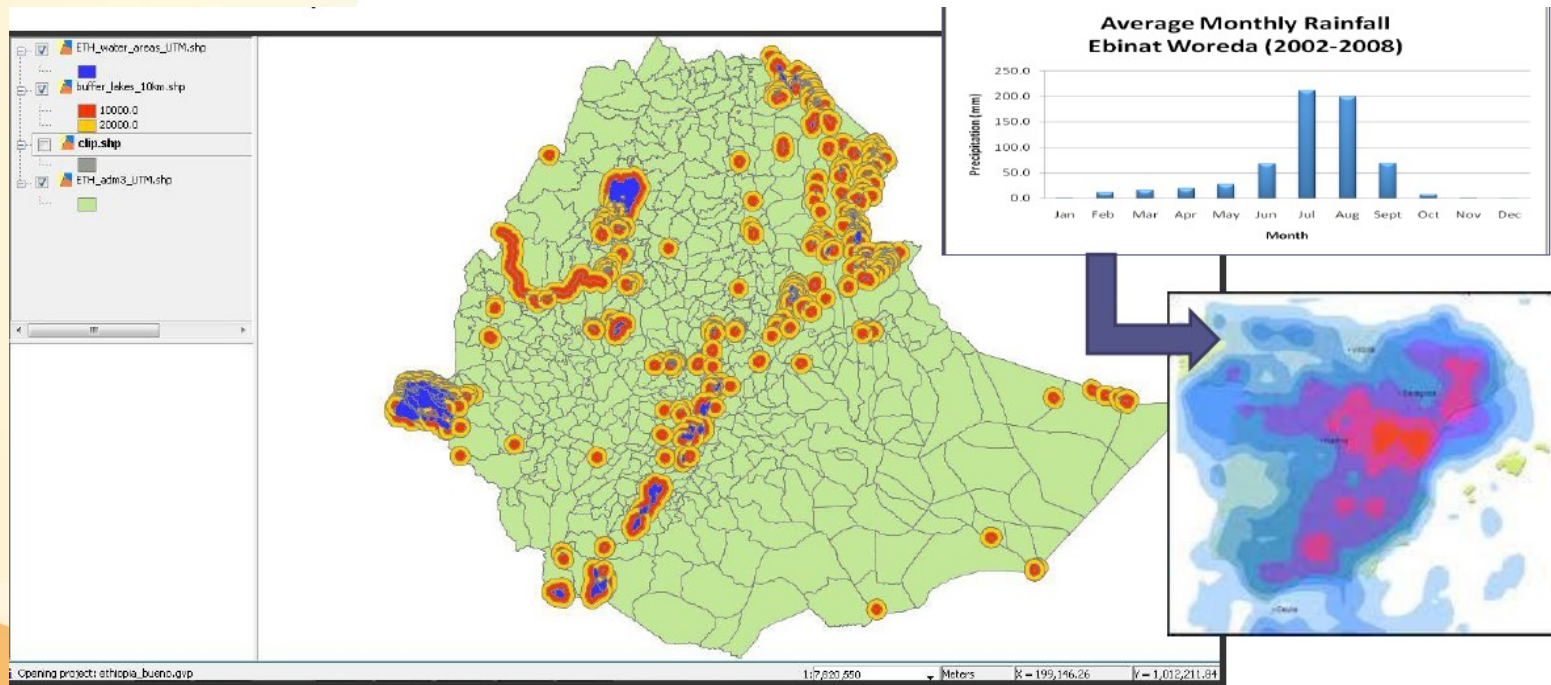
The screenshot displays the SIFOMAP 3.0 interface. On the left, a map of Cuba is shown with various regions highlighted in red, green, and blue. A legend on the left side of the map lists categories: Peligro (Sin valor, Mediano, Bajo, Grave), rodales, lotes, unidadessilvcolas, empresas, and municipios. The main window shows a form titled 'ACTA DE INCENDIO FORESTAL CUERPO DE GUARDABOSQUES'. The form includes fields for 'Incendio Forestal No.', 'Provincia: Guantánamo', 'Municipio: Baracoa', 'Localización', 'Circuito o Territorio: Yateras', 'Entidad Organizativa: Baracoa', 'Lote: 0', 'Rodal: 0', 'Zona: Prioridad: Alta', 'PT: true', 'Área(ha): 106299.00120180', 'Área Protegida', 'Coordenadas: X: 0.0 Y: 0.0', and 'Fechas y tiempos:'. A table lists activities and their corresponding dates and times. The table has two columns: 'Actividades' and 'Fecha/Hora'. The activities listed are: Inicio, Detección, Reporte del incendio, Llegada de las primeras fuerzas y medios, Llegada de los primeros medios aéreos, Incendio controlado, and Terminación. All activities are dated 1/01/01 12:00. Below the table, there are fields for '4. Día de la semana: -', '5. Detección:', 'Detectado por:', and 'Aviso a:'.

Cuba

4. Case studies

Spatial Data Infrastructures in developing countries: The climate change problem in Ebinat (Ethiopia)

Management of the geographical information related to a real problem: drought and climate change.
Analysis of the climatic conditions at the region and their relation with the type of farming.



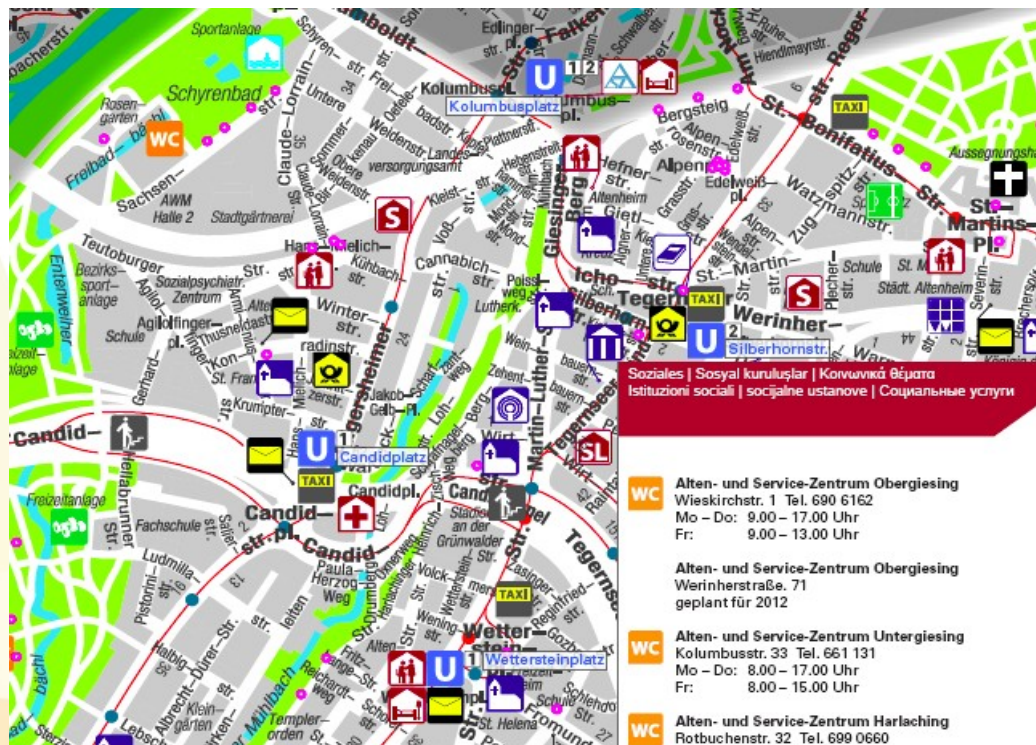
Ethiopia

4. Case studies

gvSIG as a GIS tool for creating maps for senior citizens published by the City of Munich

gvSIG is used as a platform for creating the basic map information and a pre-press version of the map.

A newly created, universally usable symbol is set to meet the requirements of the elderly regarding readability.

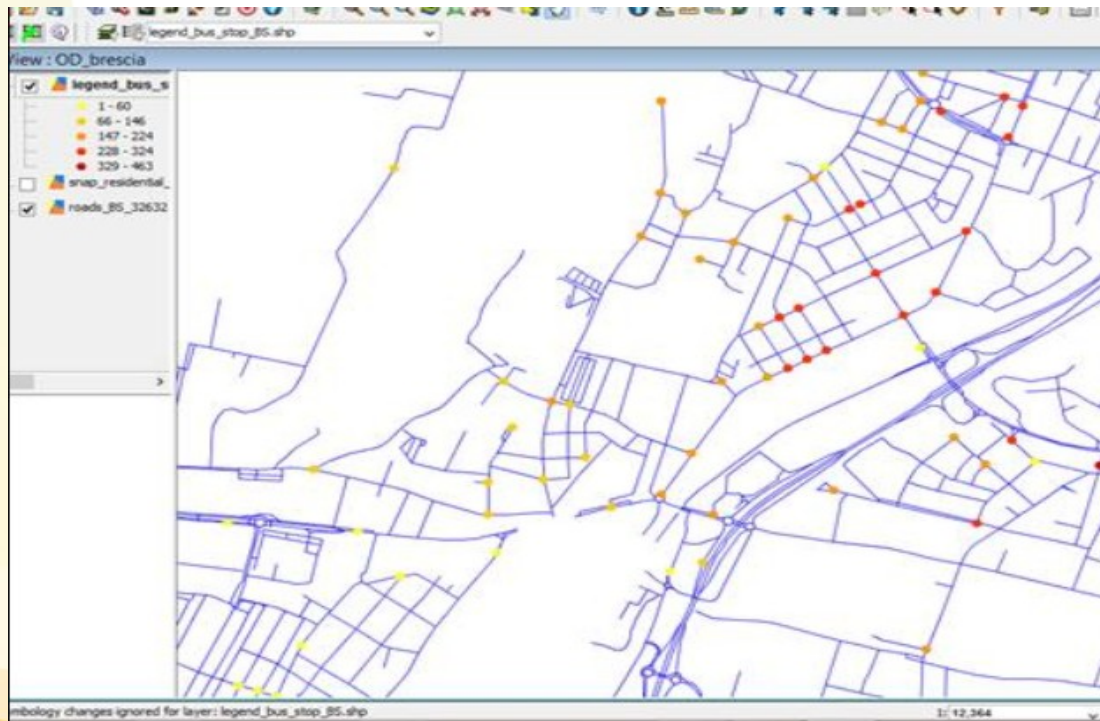


Germany

4. Case studies

Assessing urban accessibility in the city of Brescia: the impact of public transport infrastructures

Identifying where new services should be located to lower the gap between different areas and reduce the car traffic inside the city. Evaluating the impact of new public transport infrastructures, such as tramways and subways.



Italy

4. Case studies

Other related case studies

- Building business applications above gvSIG: a case study with a bus network management GIS for the Algerian Transport Minister (Algeria)
- Cohabitation Maps of the Local Police of Castellón City (Spain)
- Use of gvSIG in identifying strategic locations for the installation of a clothes shop (Brazil)
- Geomatics in the petroleum sector: Progress in the PDVSA SDI. Exploration using free technologies (Venezuela)
- gvSIG Roads - Maintenance and conservation of roads management using software with cartographic information integrated (Spain)
- ...

<http://outreach.gvsig.org/case-studies>

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