



What's New, What's Next?

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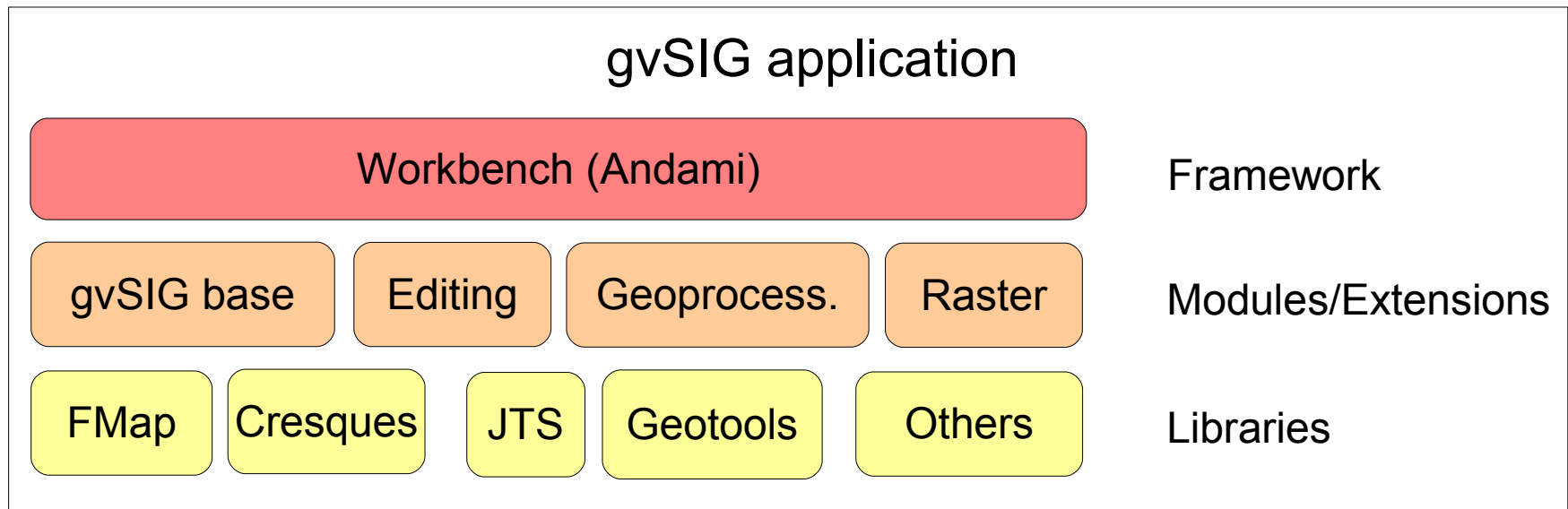
gvSIG Background

- Mainly funded by the Regional Ministry of Infrastructure and Transport (CIT) of Valencia, Spain
- Main developer is the IVER company
- GPL License
- Java. Multiplatform (Windows, Linux, Mac)
- First released (0.2) in October 2004
- Version 1.0 Release Candidate available now



gvSIG Background: Architecture

- Modular, efficient and easily extensible
 - A framework manages modules/extensions
 - Extensions build on internal and external libraries
 - Efficient memory use, fast rendering



gvSIG Background: Functionality

■ Visualizacion & query

- Visualization (zoom, pan, etc.)
- Easy layer management
- Legends (unique value, intervals).
- Spatial bookmarks, area of interest, scale dependency
- Locator (overview)
- Area and distance measurement
- Selection tools
- Link and join tables
- Event theme (from table of coordinates)
- Field statistics
- Support for spatial databases
- Advanced layout (North symbols, SVG)
- Printing



gvSIG Background: Functionality

■ Data input/output

- Reading:

- SHP
- DGN
- DXF
- DWG
- ECW
- MrSID
- JPEG2000
- JPG
- PNG
- GIF
- TIFF
- PostGIS
- MySQL

- Writing:

- SHP
- DXF
- ECW
- GeoTIFF
- Jpeg2000
- MrSID
- PostGIS

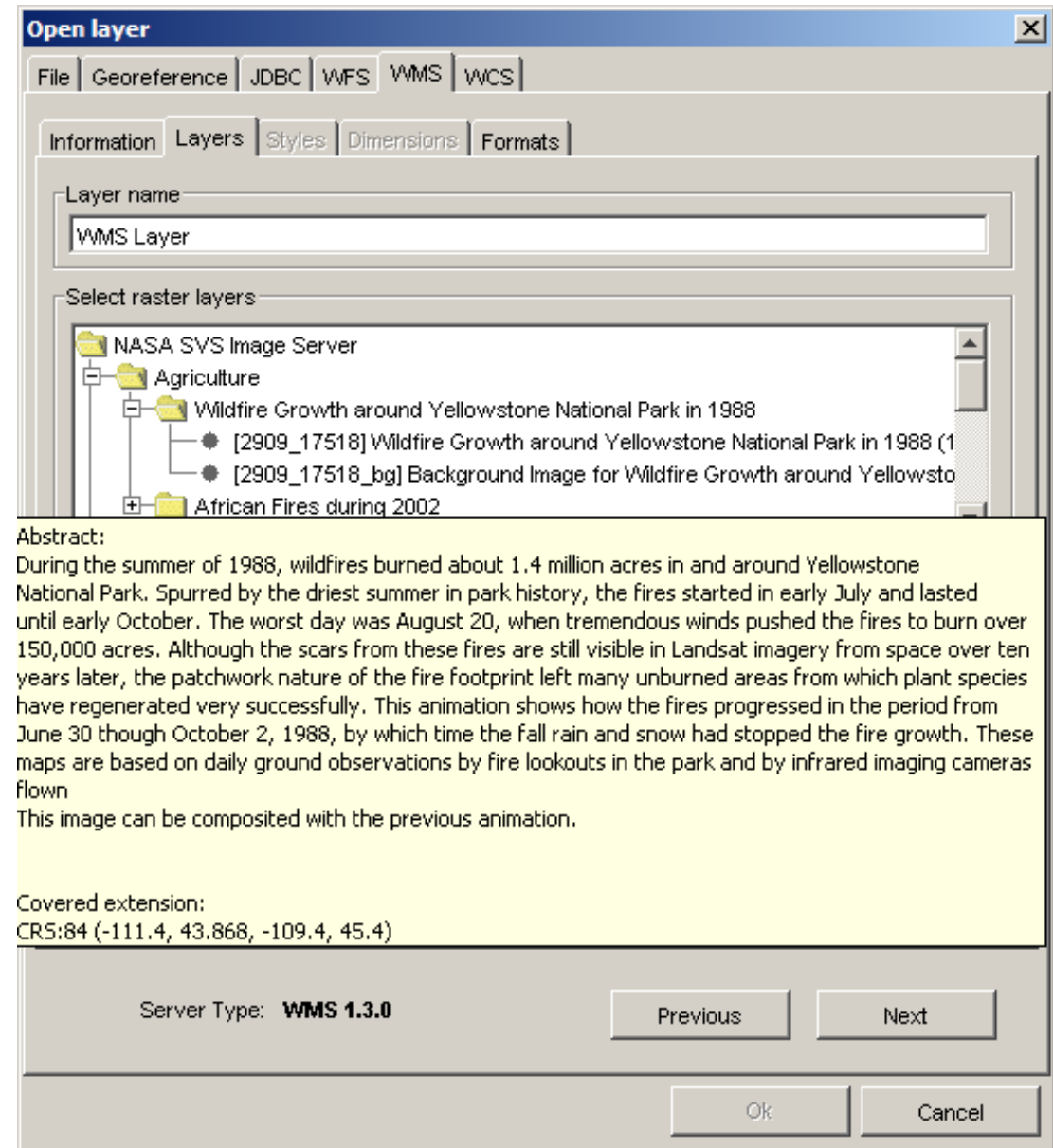


gvSIG Background: Functionality

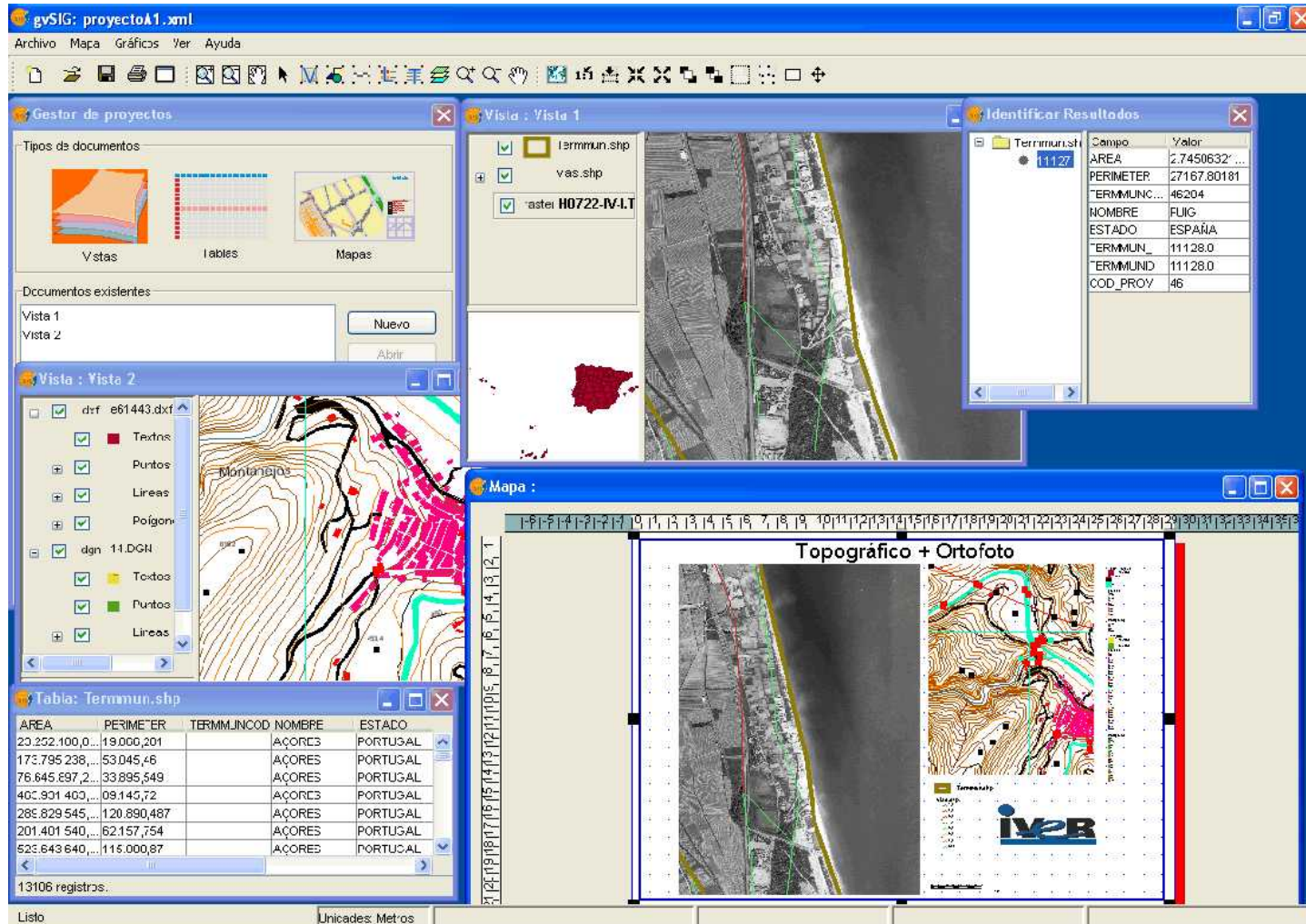
- Rich support of OGC remote services as Client
 - WMS (1.1.0 - 1.3.0)
 - WFS (1.0.0) + GML import/export (2.1.2) at 1.0
 - WCS (1.0.0)
 - Catalog search tool (OGC CSW 2.0, IDEC)
 - Gazetteer search tool (WFS 1.0.0, WFS-G 0.9, ADL)



Example: GUI for WMS access



gvSIG Background: Functionality



The screenshot displays the gvSIG interface with the following components:

- Gestor de proyectos:** Shows document types (Vistas, Tablas, Mapas) and existing views (Vista 1, Vista 2).
- Vista : Vista 1:** Displays a main map view with layers including 'Terrmun.shp', 'vas.shp', and 'aster H0722-IV-LT'.
- Identificar Resultados:** A pop-up window showing attributes for a selected feature (ID: 11127):

Campo	Valor
AREA	2.7450632'...
PERIMETER	27167.80181
TERMMUNC...	46204
NOMBRE	FLUG
ESTADO	ESPAÑA
TERMMUN_	11128.0
TERMMUND	11128.0
COD_PROV	46
- Vista : Vista 2:** Shows a topographic map with various layers like 'Textos', 'Puntos', 'Lineas', 'Poligonos', and 'dgn 11.DGN'.
- Tabla: Terrmun.shp:** A data table with columns: AREA, PERIMETER, TERMMUNCOD, NOMBRE, ESTADO.

AREA	PERIMETER	TERMMUNCOD	NOMBRE	ESTADO
23.252.100,0...	19.000,201		AÇORES	PORTUGAL
173.795.238,...	53.045,46		AÇORES	PORTUGAL
76.645.697,2...	33.895,549		AÇORES	PORTUGAL
402.931.403,...	09.145,72		AÇORES	PORTUGAL
288.829.545,...	120.890,487		AÇORES	PORTUGAL
201.401.540,...	62.157,754		AÇORES	PORTUGAL
525.643.640,...	116.000,87		AÇORES	PORTUGAL
- Mapa:** A split-screen view titled 'Topográfico + Ortofoto' showing both a topographic map and an aerial photograph.

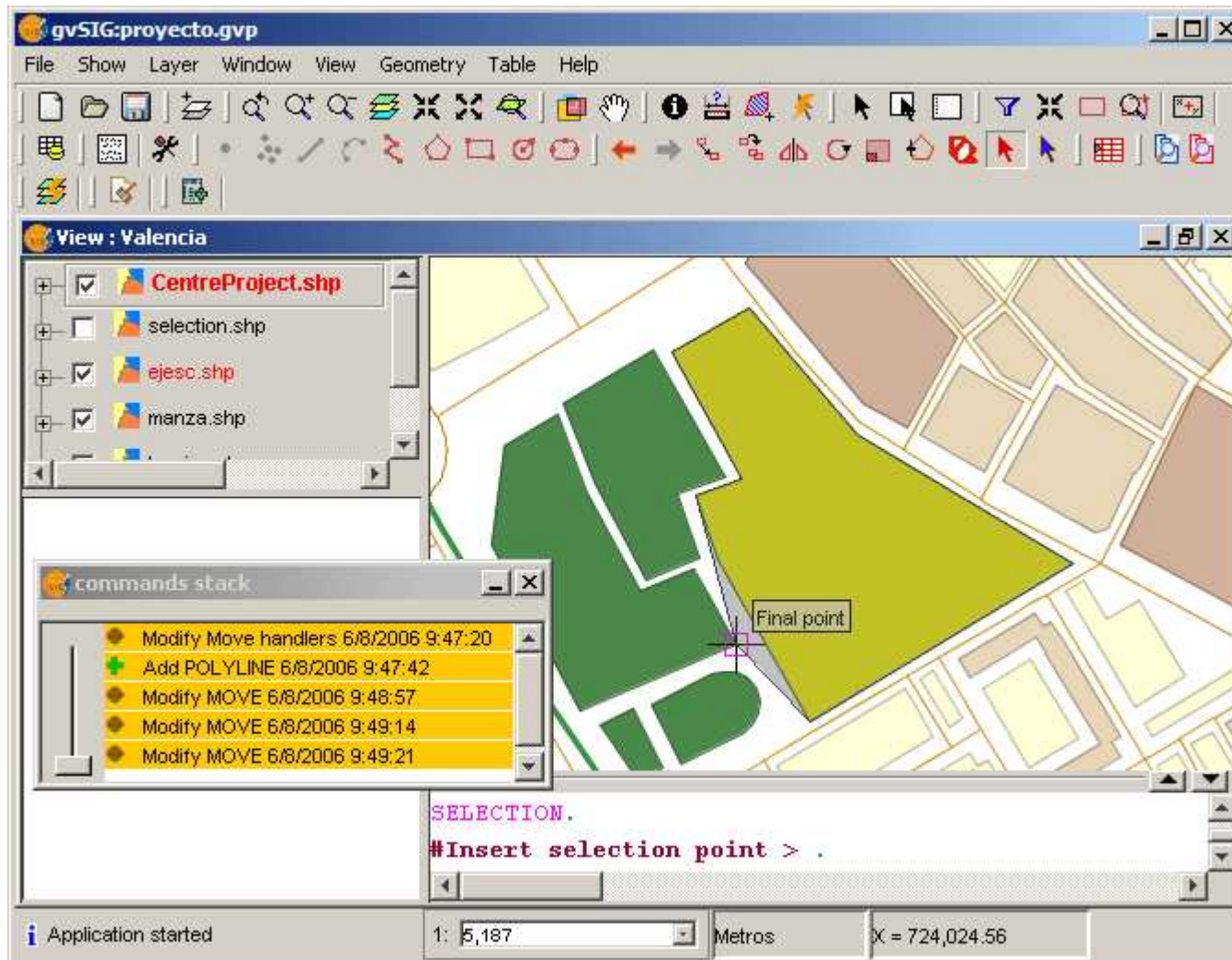


gvSIG 1.0

- Editing
 - CAD-like tools
 - Graphical and command editing
 - Table (alphanumeric) editing
 - Powerful snapping
 - Multi-layer editing
 - On-the-fly format conversion

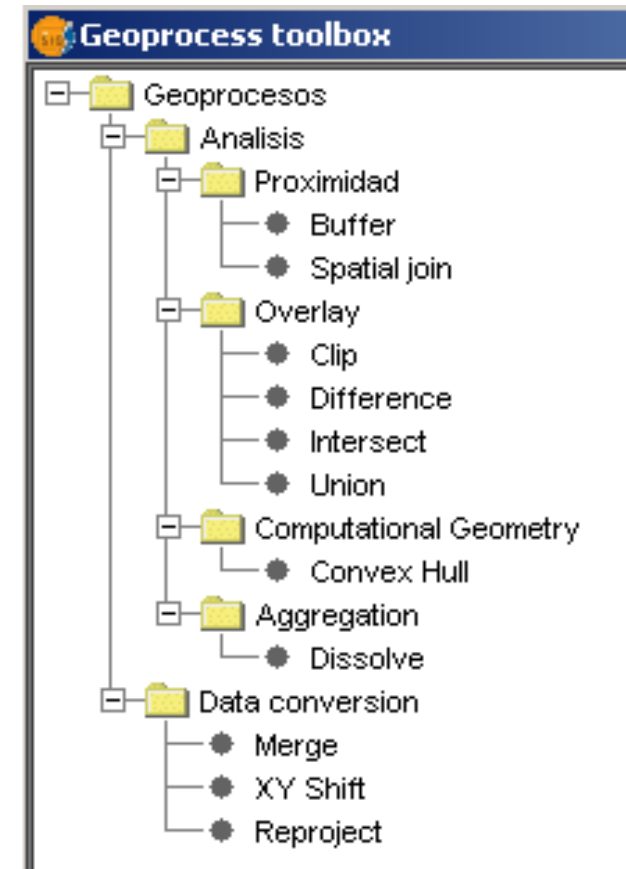
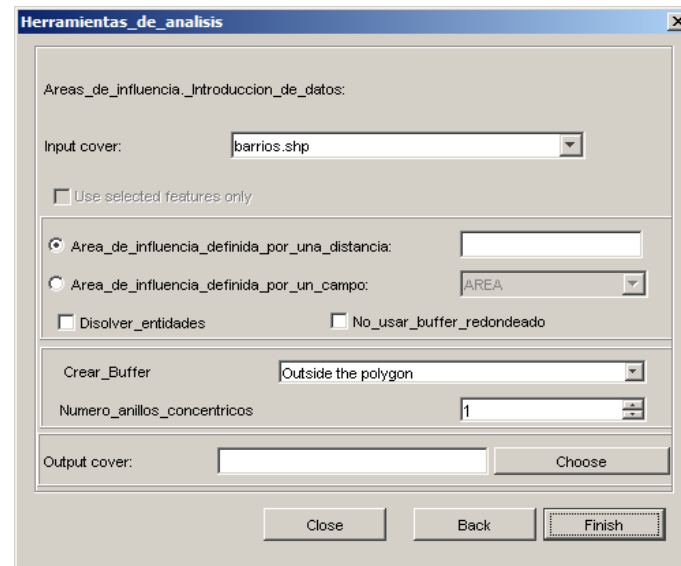


gvSIG 1.0: Editing

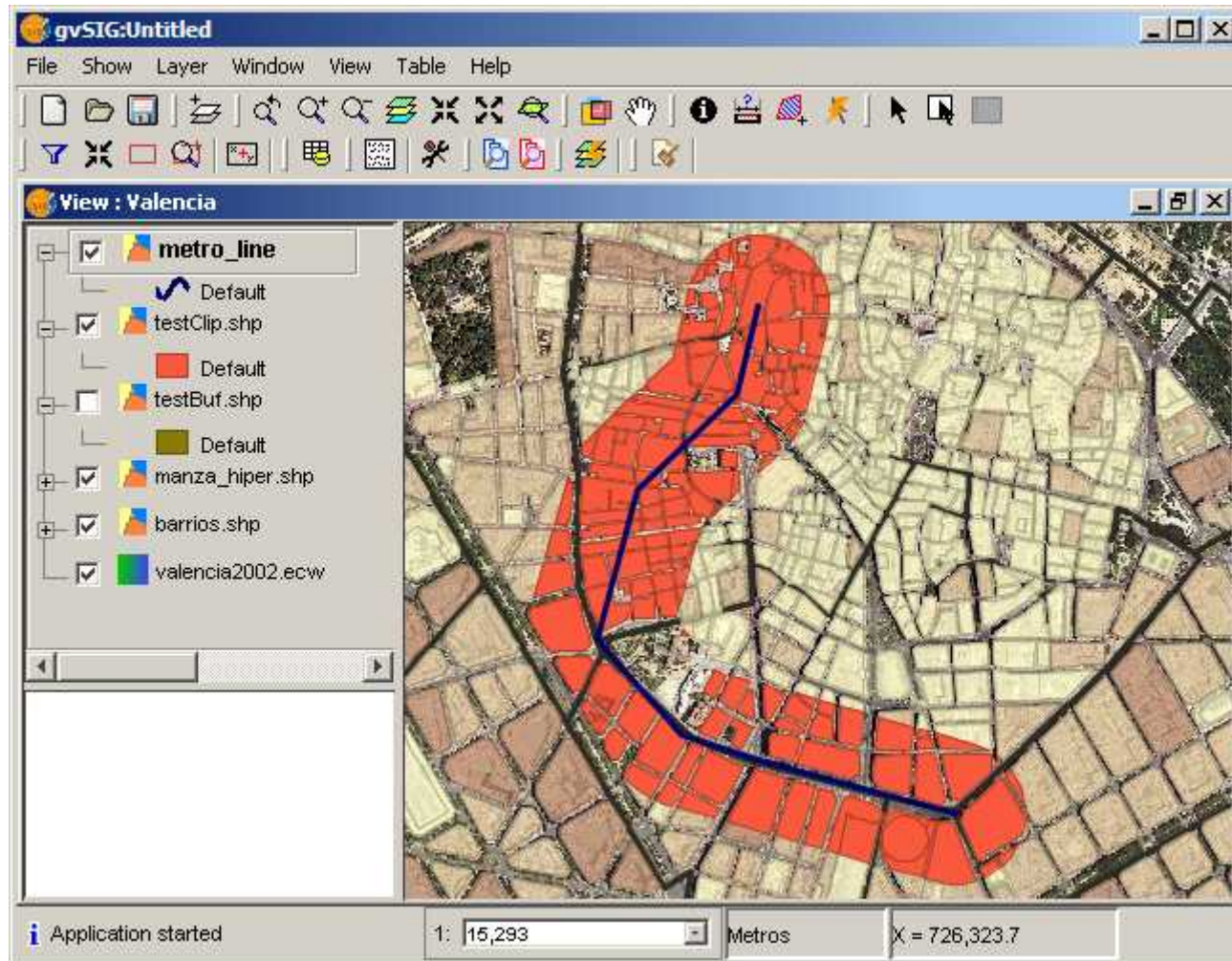


gvSIG 1.0

- Geoprocessing
 - Extensible framework
 - Vector processing operators



gvSIG 1.0: Geoprocessing

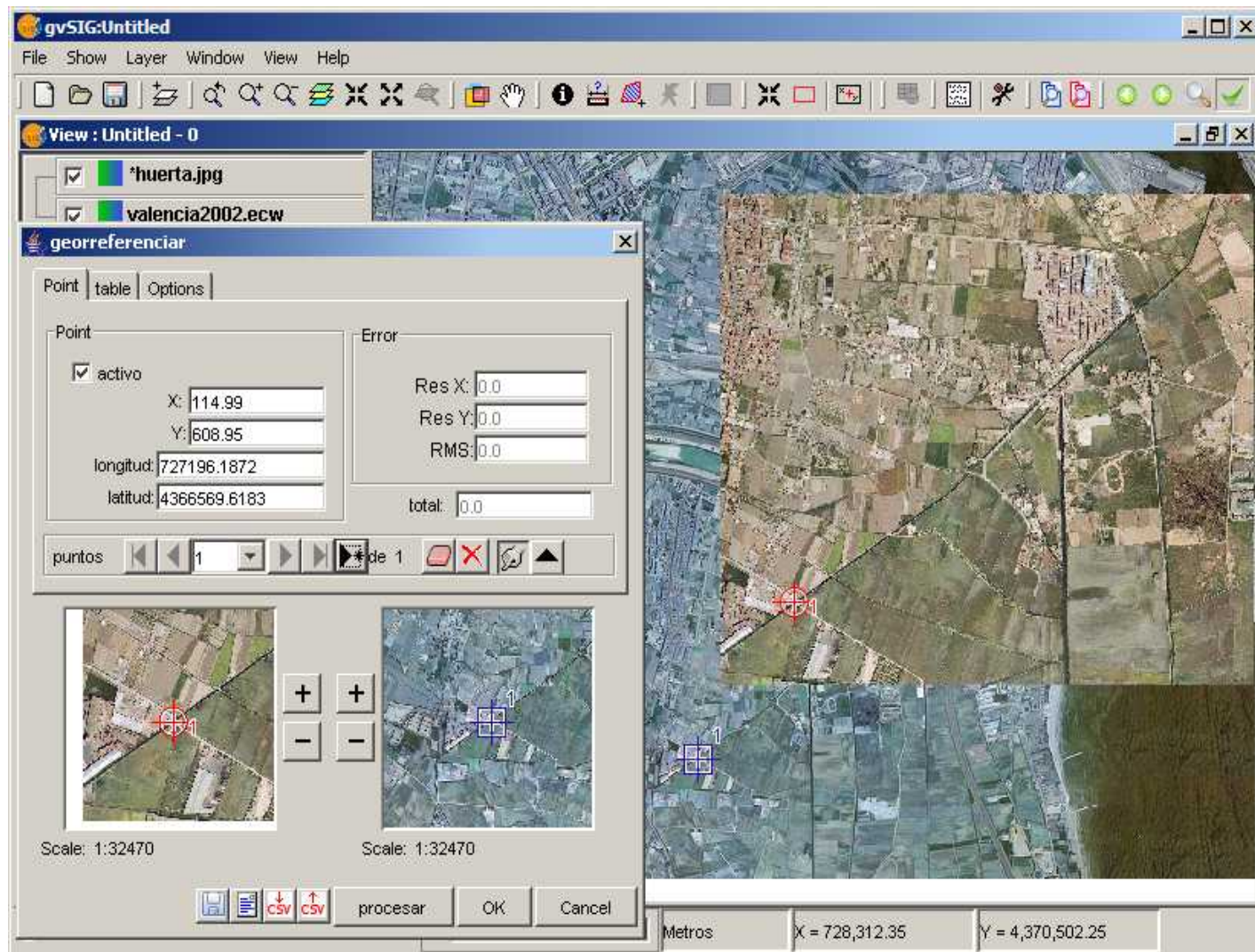


gvSIG 1.0

- Image georeferencing
 - Affine transformation
 - Easy-to-use GUI using control points
 - Adjustment preview
 - Error evaluation
 - Control point XML persistence



gvSIG 1.0: Image georeferencing



gvSIG 1.0

- Other enhancements:
 - ArcIMS Map and Feature Service client
 - Image enhancing and pan-sharpening controls
 - Support for Jython scripting, associated to simple or GUI-based tools



After 1.0: Development roadmap

- Most needs of majority of users covered with 1.0
- gvSIG becoming platform for specialized users
- Financed development projects now starting:
 - Core enhancements: symbology, labeling
 - Network and topology analysis
 - Raster analysis
 - 3D and temporal GIS
 - SDI authoring: OGC service publishing



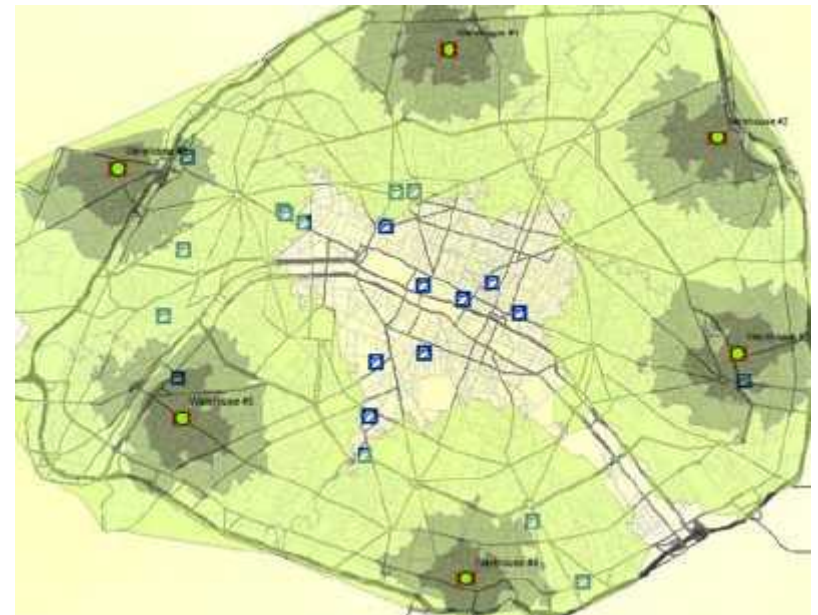
After 1.0: Development roadmap

- New functionality will be released in 1.X versions
- Completed in 18-24 months
- Coming soon:
 - More raster formats (ERDAS, ENVI, PC Raster...)
 - Image filters, histogram, look-up tables
 - Topology construction
 - 3D view for raster data
 - OGC service publishing tool



After 1.0: Network analysis

- Network generation and topology tools
- Optimal path calculation
- Service areas
- Optimal spanning tree
- Upstream and downstream event analysis



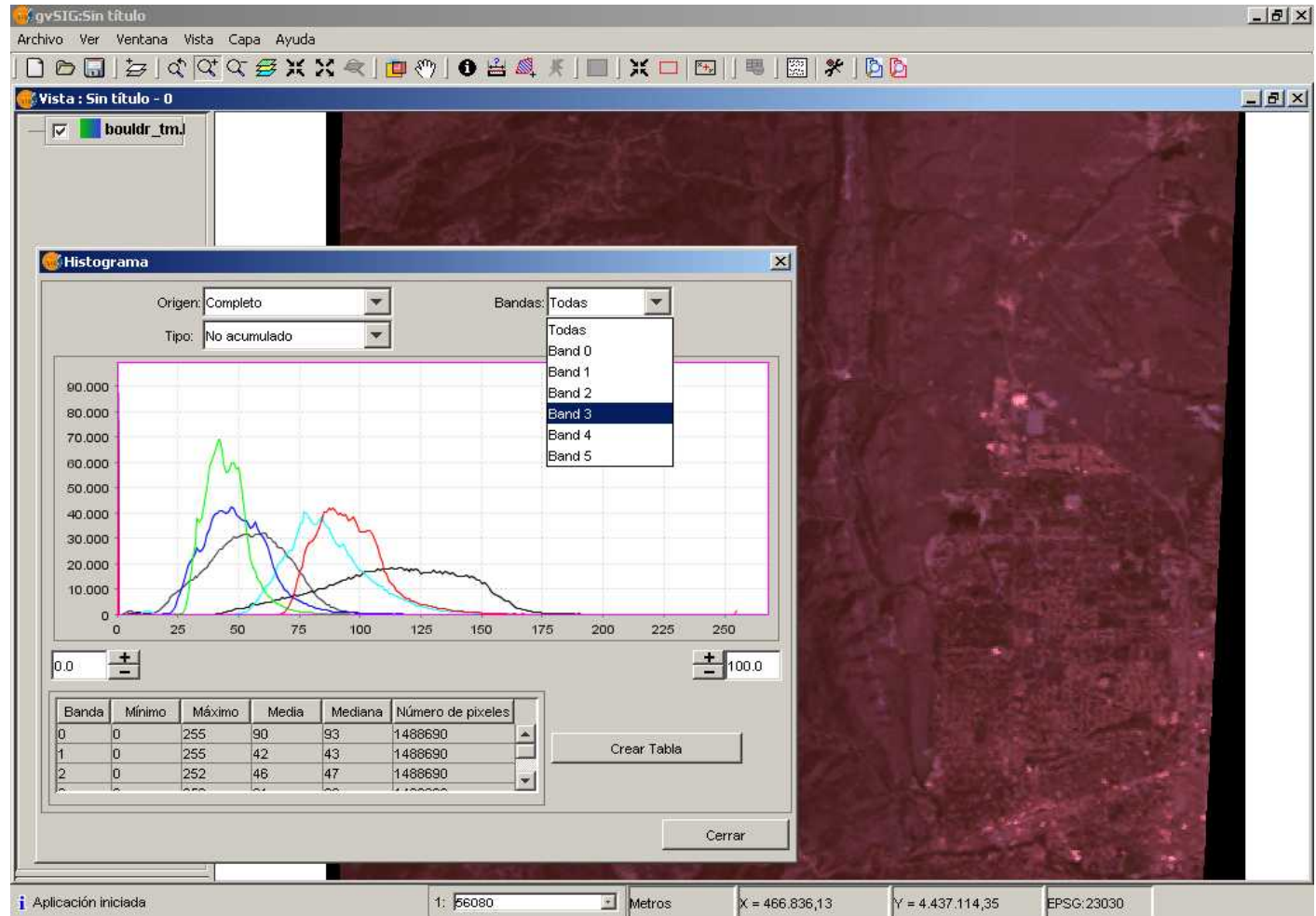
After 1.0: Raster analysis

- More I/O formats and options (e.g. by band)
- Accurate raster reprojection
- Histogram view and correction
- Mosaicing and fusion tools
- Filters
- Classification and vectorization
- Spatial analysis geoprocesses
- Surface interpolation and analysis



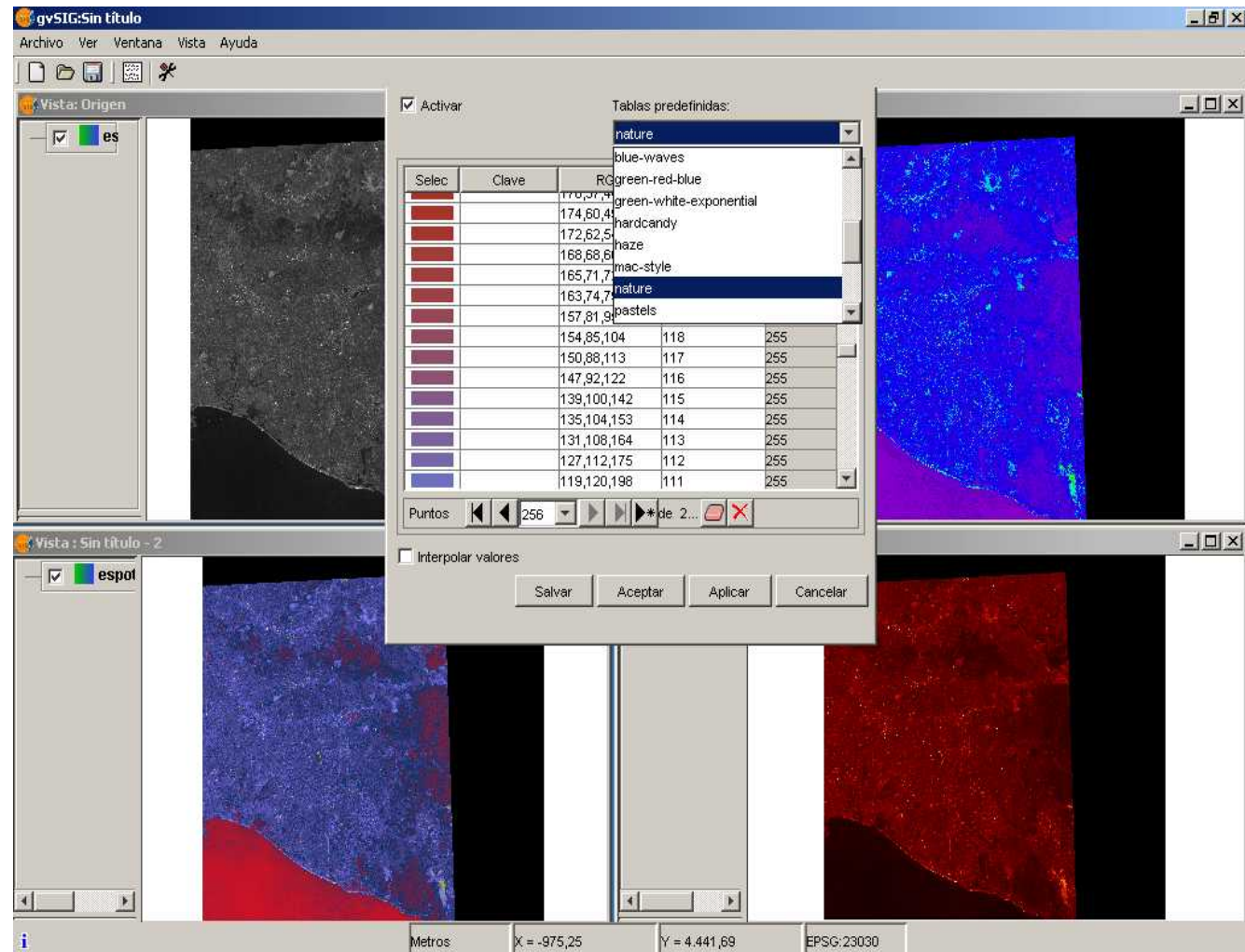
After 1.0: Raster analysis

Histogram View



After 1.0: Raster analysis

Look-up
Tables

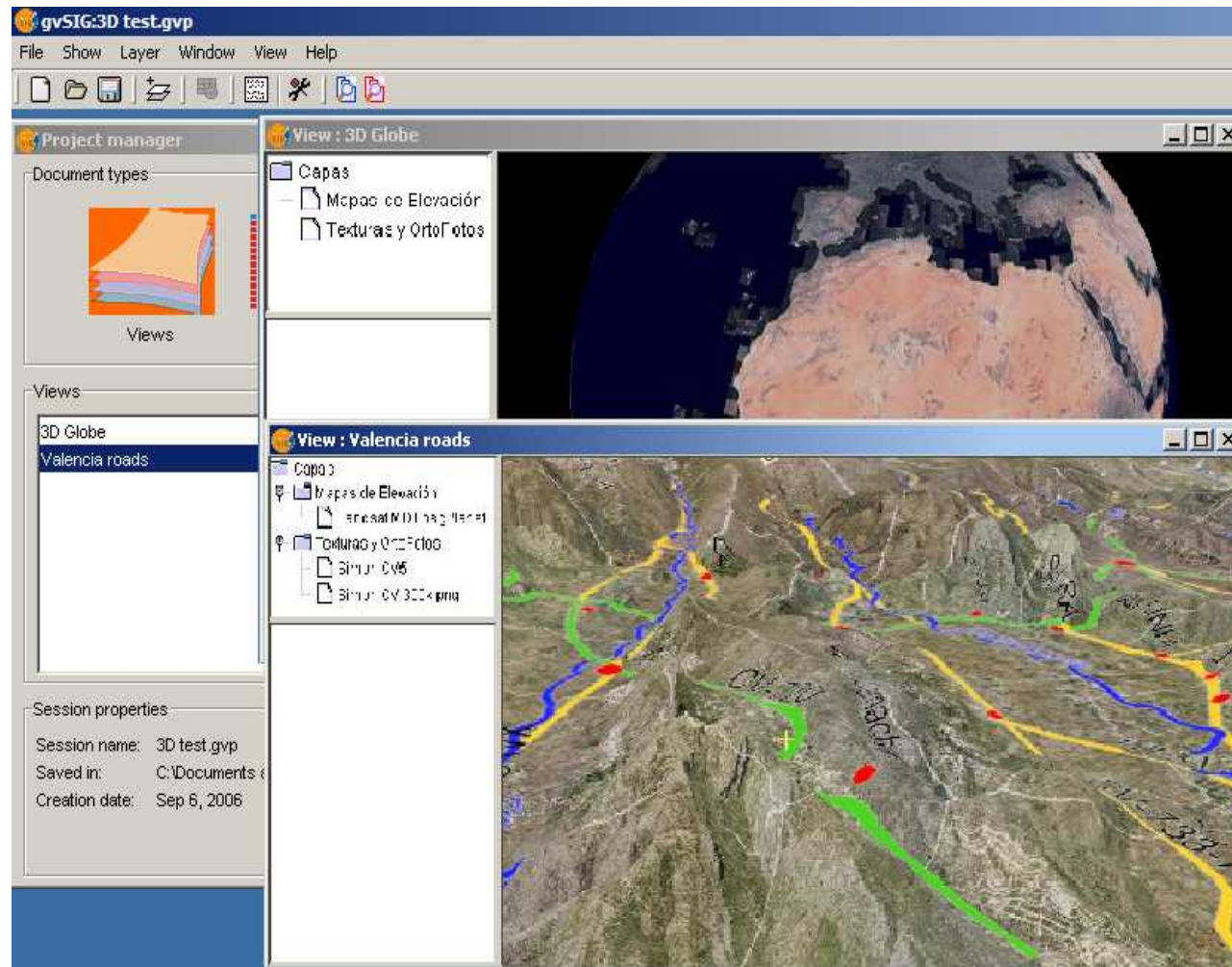


After 1.0: 3D and Temporal GIS

- 3D visualization of large datasets (raster, TIN, vector and 3D objects), in global and Cartesian views
- GIS functionality on 3D view: symbology, analysis
- View and layer animation
- Temporal data
 - Time series
 - Multidimensional data (NetCDF)
 - Dimension parameter in OGC services
- 3D and temporal geoprocesses

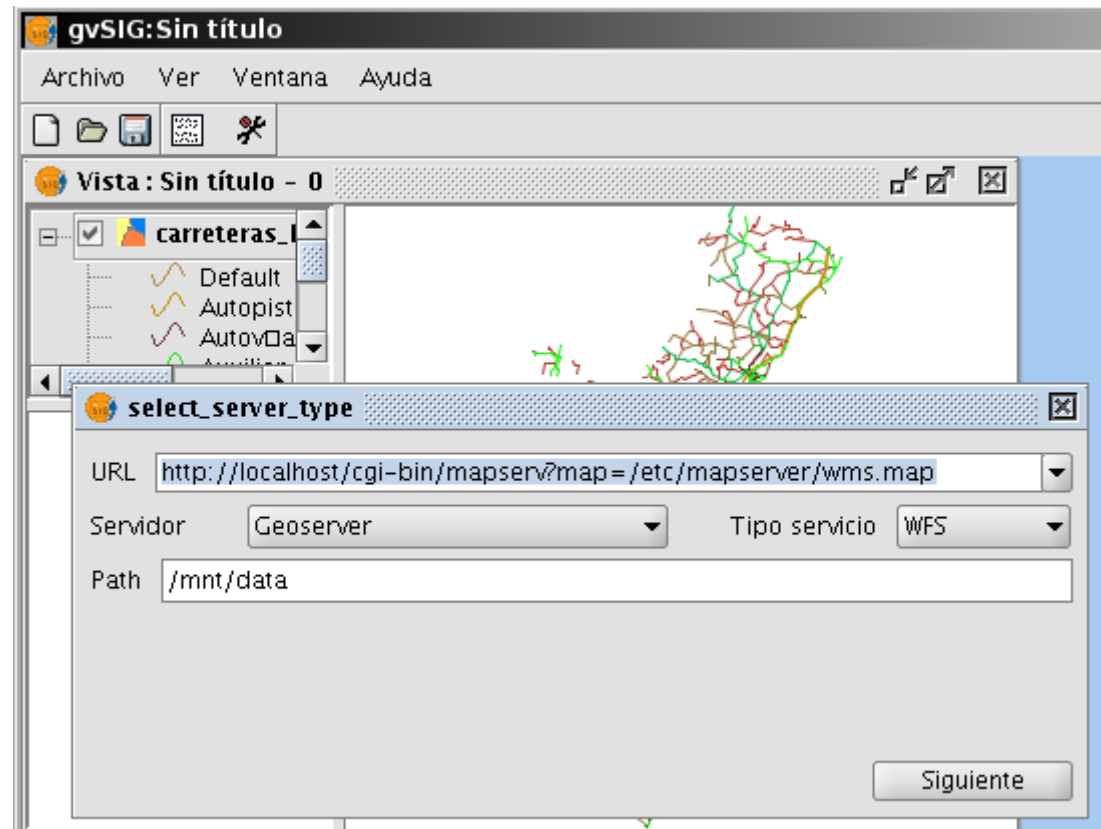


After 1.0: 3D and Temporal GIS



After 1.0: SDI authoring

- Export of gvSIG Views to WMS services
- Export gvSIG layers to WFS, WCS
- Support for multiple FOSS Servers
- Integrated metadata discovery and editing tools



gvSIG Community

- Developers:
 - CIT (Regional Ministry of Infrastructure and Transport)
 - IVER company
 - ProDevelop company
 - University Jaume I of Castellón (UJI)
 - Institute of Regional Development of Albacete
 - Confederación Hidrográfica del Guadalquivir (CHG)



gvSIG Community

- Developers (II):
 - Politechnique University of Valencia (UPV)
 - University of Palencia
 - Societé Alkante
 - Lab RESO. Université de Rennes



gvSIG Community

- **Main users:**
 - **Government agencies:** Instituto Geográfico Nacional, Ministerio de Fomento, Instituto de Estadística de Valencia
 - **Companies:** Hidroven (Water company of Venezuela)
 - **International agencies:** UN, FAO, UNSDI
 - **Regional Governments:** Valencia, Castilla-La Mancha, Extremadura, País Vasco
 - **Cities:** Valencia, Teruel, Ronda, Getafe...
 - **Universities:** Politécnica de Madrid, Patagonia, Castilla la Mancha, Jaume I de Castellón...



gvSIG Community

- gvSIG is fully open to collaboration!
 - Technical exchange and integration
 - Joint dev projects, EU-funding, CIT-funding
 - Courses and training programmes
 - Knowledge sharing and diffusion activities
 - Technical support



Thanks

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