

3D web visualization of bidimensional data stored in a centralised standard geodatabase

DbMAP® Web 3D

the best solution for 3D visualization of territorial data

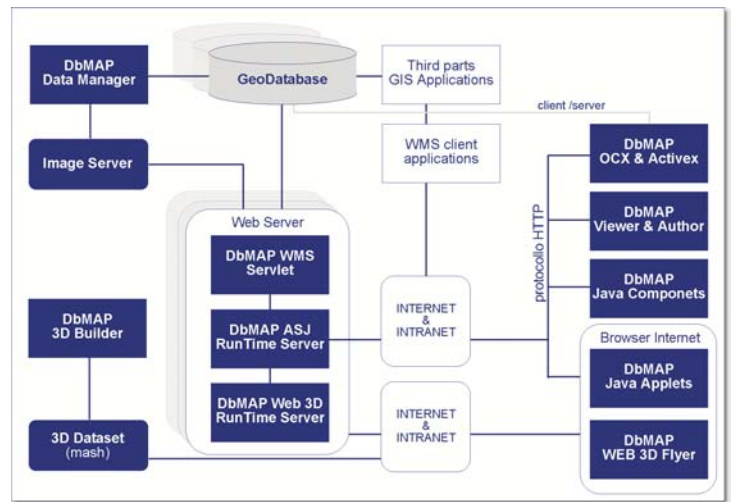
- Easily projecting, creating and publishing 2D and 3D integrated Web-GIS portals at very low costs
- Using the existing bidimensional territorial data for 3D visualization and consulting
- Taking advantage of the centralised GeoDatabases capabilities in order to receive the informative layers to use as textures for real time rendering
- Independent and scalable, thanks to the powerful multi-platform components and totally integrated with DbMAP ASJ



For further information call +39 (0)376 222181
or visit <http://www.abacogroup.com/eng/dbm3d/>

It is an extension of DbMAP ASJ software: it easily allows to create 2D and 3D integrated Geographic Information Systems

The innovative tool **DbMAP Web 3D** introduces an **additional point of view in using bidimensional GIS data** stored in centralised geodatabases. It takes advantage of all DbMAP ASJ features, and consequently of the existing Web-GIS, in order to establish a connection with any geodatabase. DbMAP Web 3D allows users to manage, publish and consult, on the internet and in 3D, the total amount of territorial data the database contains. Users can in fact **"fly" over a tridimensional model** of land published on the web, so as to question it interactively and to select informative layers for **real-time rendering**.



Main architecture of Web-GIS solution integrates 2D & 3D based with DbMAP ASJ and DbMAP Web 3D.

In order to let users better analyse how DbMAP Web 3D works and how its models easily integrate in a Web-GIS architecture, a detailed description follows.

DbMAP 3D Builder, the necessary tool to build a set of 3D data, starting from DTM files of various formats. The obtained dataset will be directly available for DbMAP Web 3D Flyer, the client component.

It is provided with user licence per number of work station (number of users) and according to the area of territory to deal with (dimension of the 3D dataset).

DbMAP Web 3D Runtime Server, the server component, providing all the functionalities to find the textures and the alphanumeric data proper of the informative layers, taking advantage of DbMAP ASJ Runtime Server services.

DbMAP Web 3D Runtime Server is provided with free user licence specific for unlimited creation and distribution (Royalty Free) of the client applications produced. Those who have created the client applications produced and distributed on the web server must have their own DbMAP Web 3D Runtime Server user licence, possibly supplied by the authorised developers themselves.

DbMAP Web 3D Flyer, the client component to be inserted on a web page, works out in real time the bidimensional data coming from DbMAP Web 3D Runtime Server and those deriving from the tridimensional dataset;

DbMAP Web 3D Flyer is provided with user licence per number of configurations of the web server on which it is installed and according to the area of territory to deal with (dimension of the 3D dataset). In both cases, no direct dependence on the number of applications managed by the web server.

DbMAP Developer Kit, SDK providing a multi-platform solution for the development of GIS applications interacting with a centralised geographic database accessible via web and taking advantage of the same development environments already used for managing applications. OCX, ActiveX and Java components and Java applets are available.

DbMAP ASJ Runtime Server, an extremely powerful server component offering Map and Image Server services (multi-source data), which allows to directly access to the GIS data sources to publish, whichever database they are contained in and whichever format the raster and vectorial files (ECW, TIFF and DWG) one has to manage.

DbMAP Viewer & Author, connecting with the DbMAP server component via http (internet or intranet), allows maximum control on data, on the choice of the informative layers, on the services, on the lay-outs and on the editing of the geometries. It takes advantage of the chosen spatial engine and also ensures the interaction with the functionalities offered by the relational database used.

DbMAP Data Manager, connecting with the chosen centralised database to import and export Shape files and to create and import background images in Shape format.

DbMAP 3D Builder

It is compatible with the following Input DTM:

- Arc/Info ASCII Grid (.grd, .asc);
- Arc/Info Binary Grid (.adf);
- GeoTiff (.tif);
- USGS ASCII DEM (.dem);
- Surfer Grid (.grd).

The operator may take advantage of:

- A graphic interface;
- 2D navigation (zoom, pan) of the imported **DTM**;
- **Merge** of more DTM in the same project;
- Creation of a 3D **dataset** for DbMAP Web 3D Flyer;
- Advanced **correction** of the Input DTM points which are not valid;
- Resolution of **T-Junction** and **Crack** by algorithms of saturation.

DbMAP Web 3D Flyer

The main capabilities are:

- **Multi-resolution** texture compatibility;
- Via http **Data Streaming** of the 3D dataset created by DbMAP 3D Builder;
- **Independence** from specific servers, because the 3D dataset is directly downloaded from a virtual web directory;
- **Multi-language** configuration;
- Use of Macromedia Shockwave Player for web pages;
- **Compatible** as .exe for Windows;
- Visualization of the texture composed of more informative layers, vectorial maps and raster images;
- No pre-processing required by the textures, because they are obtained in real time by DbMAP Web 3D servlet;
- Possibility of dynamic 3D projects;
- Visualization of projects distributed **via web** or by **CD/DVD**.

The operator may take advantage of:

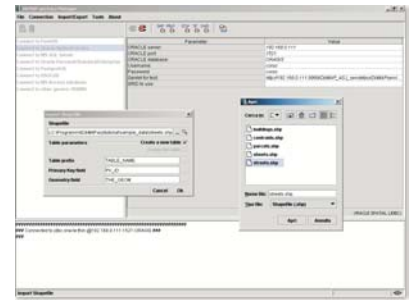
- **Realistic 3D navigation** with collision control;
- **Analysis of the territory** to know in real time slopes, direction, difference in altitude, areas and 2D and 3D distances;
- **Interrogation** (also in motion) of the informative layers;
- Navigation by **place-names** associated with specific geometries deriving from **SQL queries** directly run on the centralised **database**;
- **Personalizable** data forms compatible with DbMAP ASJ;
- Dynamic **localization** of the initial point of view;
- **GIS Layer** list coming in real time from the centralised database.

DbMAP Web 3D Runtime Server

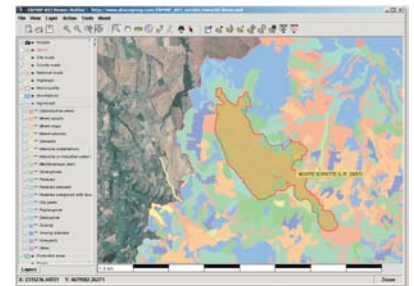
The main capabilities are:

- Compatibility with the web servers and **Java/J2EE** containers of the most common operative systems like **Windows, Linux** and **MacOS**;
- The **textures** are all obtained from DbMAP ASJ Runtime Server, so:
 - The vectorial data are of **Oracle Spatial, Oracle Locator, PostGIS** and **SDA** types;
 - The raster images are **ECW, GeoTIFF** and **DWG** types or may derive from external Image Servers like **ErMapper IWS**.

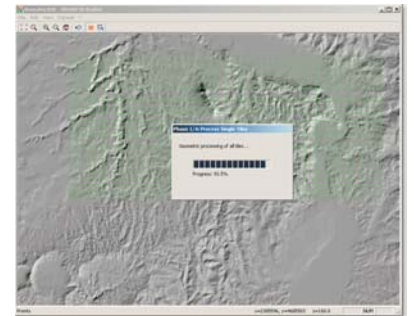
A few steps to visualize bidimensional data in 3D on the web



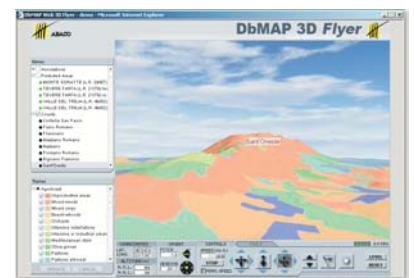
Use DbMAP Data Manager to import the territorial 2D data in a centralised database.



Use DbMAP ASJ Viewer & Author to build a project to visualize bidimensional data to publish on the web.



Create a 3D dataset to publish in the virtual directory with DbMAP 3D Builder.



Use DbMAP Web 3D Flyer to navigate and consult on the web the 3D model of the territory generated in real time.

SHORTCUTS

ON-LINE DEMOS

<http://www.abacogroup.com/dbm3d/engdemos.htm>

DOCUMENTATION

<http://www.abacogroup.com/dbm3d/engdoc.htm>



Technical Features:

Among the main technical features of the system are:

- Conformity with OGC (Open GIS Consortium) requisites;
- OpenGIS® Web Map Service Implementation Specification, Version 1.1.1;
- Compatibility with all the most common operative systems (Windows, MacOS, Linux)
- DbMAP ASJ web components are usable with any internet browser; no installation or additional plug-in required; Java 1.1 (or later) virtual machine is enough;
- DbMAP Web 3D Flyer requires Macromedia Shockwave Player;
- Server components require Java 1.4 or later and are compatible with the most common web servers and Java/J2EE containers, like Oracle AS, Apache Tomcat, IBM Websphere, ecc.

Specific for:

- Developers and technicians of those companies that use Web-GIS portals to distribute territorial data;
- Database Administrators of those companies that need to centralize and administrate GeoDatabases;
- Developers and technicians of those companies whose purpose is to integrate their own solutions.

ABACO is an Italian company specialized in the research and development of basic technologies which have made it one of the leaders, in Italy and worldwide, for GIS, mapping, Global Positioning System, Computer Aided Design, Facility Management and Technical Documentation System.

PRODUCTS	Listino Prezzi
DbMAP Developer Kit	€ 2.400
DbMAP Web 3D Extension Kit	€ 2.400
DbMAP Viewer & Author	€ 500
DbMAP Web 3D Flyer	Free
DbMAP Web 3D Runtime Server*	
S100 (for a maximum area of 100 Km2)	€ 3.800
M3000 (for a maximum area of 3000 Km2)	€ 6.000
NoLimit (for an unlimited area of territory)	€ 12.000
DbMAP 3D Builder*	
S100 (for a maximum area of 100 Km2)	€ 2.200
M3000 (for a maximum area of 3000 Km2)	€ 3.800
NoLimit (for an unlimited area of territory)	€ 5.000
(*) Including an embedded DbMAP ASJ Runtime Server licence (**) Special discounts for partners; (***) Special price for the server component, if sold as integrating part standard applications.	



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