

Contract no. 030776	Workpackage WP1	Delivery D1.6	Delivery Date 2007-07-02
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## **CASCADOSS**

Development of a trans-national cascade training programme on Open Source GIS&RS Software for environmental applications

SPECIFIC SUPPORT ACTION

PRIORITY 1.2.4.2.2: IDENTIFICATION OF NEW METHODS OF PROMOTING AND ENCOURAGING TRANSNATIONAL TECHNOLOGY TRANSFER

# **Documentation of open source GIS/RS software projects**

## **Mapguide Open Source**

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Start date of project: 2007-05-01

Duration: 24M

## Documentation table

### MapGuide Open Source

<b>Classification Type</b>	Web Services
<b>Software Description</b>	
<i>Short Description</i>	MapGuide Open Source is a web-based platform that enables users to quickly develop and deploy web mapping applications and geospatial web services. MapGuide includes an XML database for managing content, and supports most popular geospatial file formats, databases, and standards.
<i>General Use / Goal / Aim</i>	General: development and deployment of web mapping applications and geospatial web services  Type of domain where SW is used: science and education, NGOs, spatial planning, e-governance etc.
<i>Owner / History</i>	2005- Autodesk, 2006-OSGeo
<i>Variant Name</i>	-
<i>Operating System (underline OS used for evaluation)</i>	<u>Windows</u> , Mendriva Linux
<i>Programming Language / Compiler</i>	C++, JAVA, FDO, .NET - Microsoft Visual Studio .NET,
<i>Auxiliary Programmes</i>	Autodesk MapGuide Studio, Autodesk DWF Viewer
<i>Language Version</i>	English, partially Spanish
<i>National Verison</i>	<a href="#">EPSG codes</a>
<i>Current Version</i>	<a href="#">1.2.0</a>

<i>Update Frequency</i>	1/year
<i>Type of License</i>	LGPL
<i>References</i>	11 live applications: <a href="http://www.fossgis.de/wiki/index.php/Dienstag%2C_13._M%C3%A4rz_2007">http://www.fossgis.de/wiki/index.php/Dienstag%2C_13._M%C3%A4rz_2007</a> , including San Francisco Urban Forest Mapping System: <a href="http://www.sftreemap.org/">http://www.sftreemap.org/</a> .
<i>Link(s)</i>	<a href="http://mapguide.osgeo.org/home">http://mapguide.osgeo.org/home</a>
<i>Contact Person</i>	Bob Bray, chairman of PSC
<b>Main Features</b>	<p>MapGuide Open Source is a web-based platform that enables users to quickly develop and deploy web mapping applications and geospatial web services.</p> <p>Interactive Map Viewing</p> <ul style="list-style-type: none"> <li>▪ Offers an AJAX Viewer (pure DHTML no plug-in required) or a vector-based DWF Viewer (requires an ActiveX Control) with a common user interface and JavaScript API</li> <li>▪ AJAX Viewer offers a tiled map display for smooth navigation</li> <li>▪ Allows feature selection by point, rectangle, radius, or polygon with immediate feedback</li> <li>▪ Displays feature properties in multi-line tool tips</li> <li>▪ Displays properties of the selected feature in a property browser panel</li> <li>▪ Supports feature buffering, querying features that fall within selected polygons, and a tool for measuring distance</li> </ul> <p>Provides printing and plotting support</p> <ul style="list-style-type: none"> <li>▪ Quality Cartographic Output</li> <li>▪ Scale-dependent detail</li> </ul>

- Rule-driven thematic layer stylization
- Dynamic labeling with overpost detection, labels that follow the path of a line, and automatic label resizing
- Anti-aliased image rendering
- True color support
- TrueType font support

#### Built-in Resource Database for Manageability

- Provides hierarchical storage of XML resource documents that define maps, layers, data connections, symbology, and viewer layout
- Allows you to define data sources and layers once and then reference them from multiple maps
- Provides an access-based security model with inheritable permissions
- Permits metadata and binary data to be associated with resource documents

#### Uniform Data Access

- Exclusive use of the [Feature Data Objects](#) (FDO) API for vector and raster feature data access
  - Support for ESRI SHP and SDF vector file formats
  - Support for ESRI ArcSDE, MySQL, ODBC database formats
  - Support for Raster file formats via GDAL
  - Support for OGC WMS and WFS
- Exclusive use of DWF for CAD-based data access

#### Flexible Application Development

- Write your application logic once within the web server environment and it will work with either viewer on any client
- Develop your applications in PHP, .NET, or Java

#### Extensive Server-Side APIs

- Create, query, read, and write permanent and session based XML resource documents
- Query and update feature data across all supported data sources, including spatial and attribute data, and schema discovery
- Perform coordinate reprojection and great circle distance computation
- Create, manipulate, and analyze geometry with support for spatial predicates based on the DE-9IM model, overlay functions (intersection, union, difference, symmetric difference), buffer, convex hull, area, and distance functions
- Produce stylized vector and raster maps and legends
- Manipulate runtime maps and layers, add / remove / change layers, change layer and group visibility, modify the definition of a layer, and alter the current view

#### Fast, Scalable, Secure Server Platform

- Fully multi-threaded and takes advantage of multi-core / multi-processor technology
- Multiple servers can be configured as one logical site to improve scalability
- FastCGI based Map Agent loads once and stays loaded for use with both Apache and Microsoft IIS
- Database connections are pooled and shared between users, improving performance
- Tile caching ensures map image tiles are only rendered once for the AJAX Viewer no matter how many

	<p>users are viewing the map</p> <ul style="list-style-type: none"> <li>▪ Connection-oriented, role-based security</li> <li>▪ Configurable logging of client access, administrative access, authentication attempts, errors, session lifetimes, and request tracing</li> <li>▪ Web-based site administration allows remote site and server configuration, and log file access</li> </ul> <p>Multiple Platform Support</p> <ul style="list-style-type: none"> <li>▪ Deploy on Microsoft Windows or Linux</li> <li>▪ Serve applications with Apache or Microsoft IIS</li> <li>▪ Browse applications with Microsoft Internet Explorer, Mozilla Firefox, and Safari</li> </ul> <p><a href="#">Open Geospatial Consortium</a> Standards</p> <ul style="list-style-type: none"> <li>▪ Web Map Service</li> <li>▪ Web Feature Service</li> </ul>
<i>Development Libraries</i>	<b>Not Applicable</b>
<i>Database Management</i>	<b>Yes</b>
<i>Desktop Applications</i>	<b>Not Applicable</b>
<i>Server Applications</i>	<b>Yes</b>
<i>Modelling</i>	<b>Not Applicable</b>
<i>Spatial Analysis</i>	<b>Yes</b>

<i>Decision-Support Software</i>	<b>Yes</b>
<i>Other</i>	<b>Not Applicable</b>
<b>Installation</b>	Binaries precompiled for: Windows (tested on 200 Server and 2003 Server) , Linux: <a href="http://mapguide.osgeo.org/download/releases/1.2.0">http://mapguide.osgeo.org/download/releases/1.2.0</a> Source code: <a href="http://mapguide.osgeo.org/download/releases/1.2.0">http://mapguide.osgeo.org/download/releases/1.2.0</a>
<b>Software Limits / Known Issues</b>	-
<b>Manual / FAQ / Acronyms</b>	Getting Started: <a href="http://mapguide.osgeo.org/1.2/gettingstarted.html">http://mapguide.osgeo.org/1.2/gettingstarted.html</a> , FAQ: <a href="http://mapguide.osgeo.org/faq.html">http://mapguide.osgeo.org/faq.html</a>
<b>Tutorial and or Sample Data</b>	Sample Data: <a href="http://mapguide.osgeo.org/download/releases/1.2.x-samples">http://mapguide.osgeo.org/download/releases/1.2.x-samples</a>
<b>Mailing list</b>	User: <a href="http://lists.osgeo.org/mailman/listinfo/mapguide-users">http://lists.osgeo.org/mailman/listinfo/mapguide-users</a> , <a href="http://lists.osgeo.org/mailman/listinfo/mapguide-internals">http://lists.osgeo.org/mailman/listinfo/mapguide-internals</a>
<b>WIKI</b>	<a href="http://wiki.osgeo.org/index.php/MapGuide_Open_Source">http://wiki.osgeo.org/index.php/MapGuide_Open_Source</a>
<b>Community/users links</b>	<a href="http://mapguide.osgeo.org/user.html">http://mapguide.osgeo.org/user.html</a>