

WHITE PAPER

GEO-EVERYTHING. AN INTRODUCTION
TO COLLABORATIVE MAPPING

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View your business world on one map



As the business value of location data has been realized - in achieving productivity gains, removing inefficiencies, improving coordination etc. – the number of people and processes requiring geo-spatial technology has grown substantially. No longer is it affordable or sensible to purchase dedicated and prescriptive geo-spatial solutions for each specific application that could benefit from it. Today, some organizations operate 3, 4 or 5 different geo-spatial information systems creating a complex and inflexible IT infrastructure.

Extract value from data across the enterprise

Encanvas Map Data Integrator (MDI) powers location intelligence through a single tightly integrated technology component for geo-database management. It federates data from across the enterprise and presents personalized information experiences for staff, customers and partners. Encanvas MDI supports the three core disciplines capturing, visualizing and analyzing of location-based data as part of a formalized information flow.

Enterprise scalable, MOSS Ready

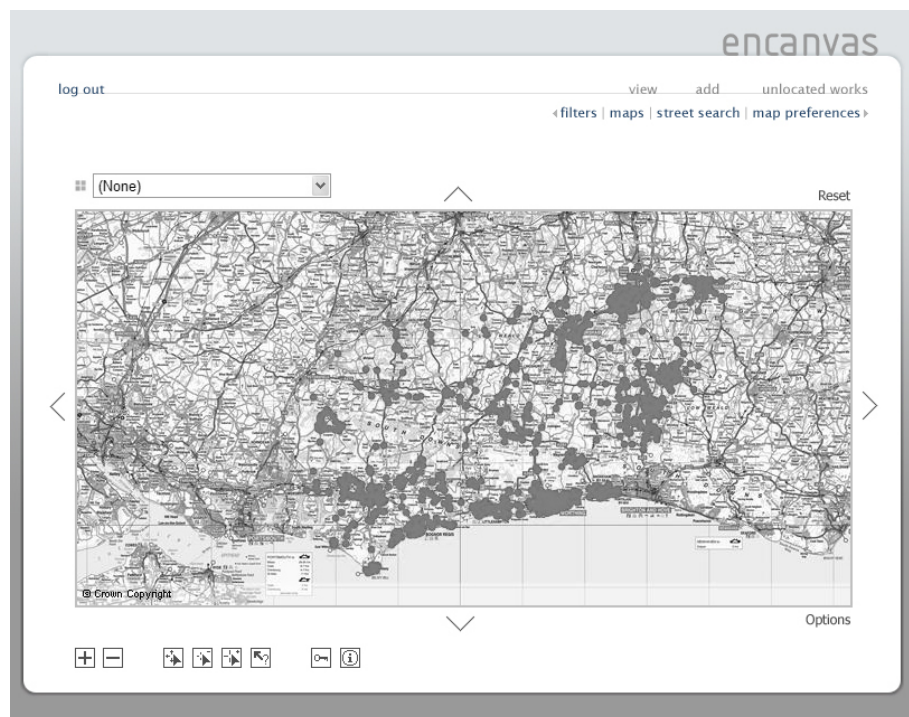
It is a corporate-ready solution that works seamlessly with Microsoft® Office Sharepoint Portal Services (MOSS) so everyone across the enterprise can exploit the fullest value from geo-spatial information across the enterprise and beyond.

Encanvas MDI capabilities

Use Encanvas MDI to:

1. Capture, analyze, visualize and share geo-spatial data as part of integrated information flows.
2. Efficiently build and deploy enterprise-wide or multi-agency geo-spatial portal applications.
3. Provide a series of community specific views of the same core data (ie. public, partner, administrator, super-administrator etc.).

Simple example of an Encanvas MDI data mashups application



Using geo-spatial maps across every new business application without exposing the enterprise to additional software costs

Unlike traditional 'black-box GIS' technologies that specialize in providing process-specific solutions, Encanvas MDI brings together a series of technology components within an integrated development environment (IDE) that requires no coding to produce geo-spatial applications that support workforce productivity. Encanvas MDI manages spatial information and can capture location data from virtually any source. It is database independent and can be configured to operate with popular relational database management systems (DBMS) such as Microsoft® SQL Server™ and Oracle 9i™. The broader use of geo-spatial information aids coordination, energizes enthusiasm, stimulates creativity and empowers the fulfilment of activities that are more worthwhile and measurable.

Capture it, visualize it, analyse it with Encanvas MDI.

Access to location data from anywhere

Encanvas MDI provides access to the many advantages of applying location data to information flows. Spatially enabled data stored in a database management systems (DBMS) benefits businesses by allowing spatial query, aggregation, and display of information held in relational databases. Adding location information to existing business applications can reveal patterns and trends in information that might otherwise have been missed. These scenarios apply to a wide variety of departmental and multi-agency information capture, analysis and visualization uses. Encanvas MDI employs a series of integration tools to form a robust bridge to Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems. Geo-spatial resources such as vector and raster map data (eg. OS StreetMap, OS MasterMap, ESRI shapes, MapInfo TAB etc.) are easily imported.

A new standard in affordability

Encanvas MDI is supplied either on a perpetual licence agreement or as a hosted managed service. Without limitation of contract or deployment, employ Encanvas MDI to support the broader use of location data across your enterprise to automate manual processes, streamline data capture and increase workforce collaboration and productivity.

Business applications for geo-spatial maps

Common applications include transport and street-works, urban regeneration, civil defence and contingency planning, asset management, risk management and customer service.

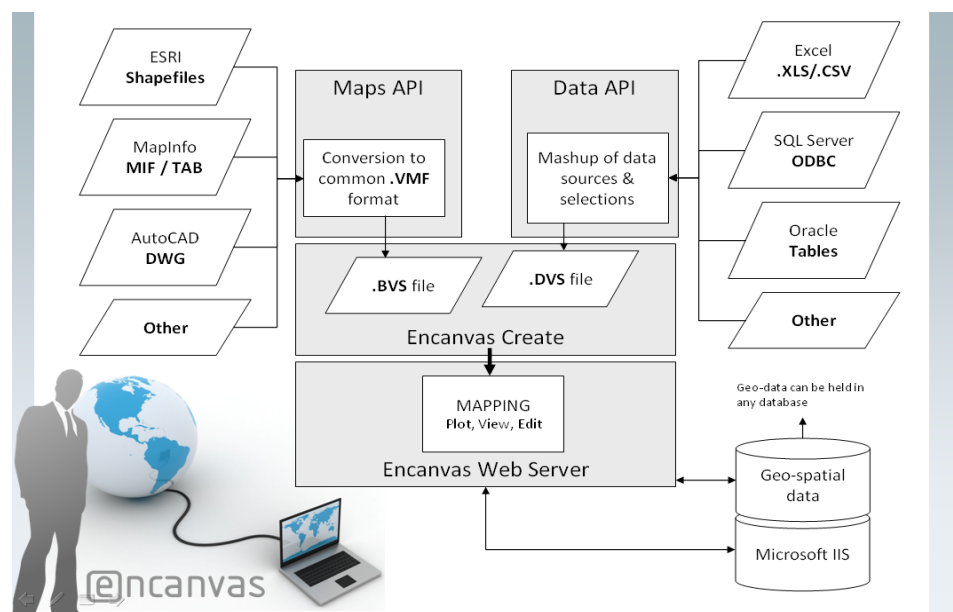
Encanvas MDI provides geo-spatial intelligence everywhere



How Encanvas MDI Works

All imported map resources (see left side of illustration below) are formatted using the Maps API, and converted into Vector Map Format. A map description file (.BVS) is generated. Data is selected from various sources (see right side) and purposed for import using the Data API. A data description file (.DVS) is generated. Encanvas Create (code-free Integrated Development Environment) is used to create a portal application and include the mapping feature. Map and data resources are selected and published as part of the deployed ASP.NET application. Map resources must be present on Encanvas Web Server and selected in the web.config file.

Illustration of Vector map Format base mapping with Encanvas MDI



Encanvas MDI has been architected to provide flexibility in deployment. Authors have the option to operate industry standard geo-databases modelled around GML or Oracle Spatial, or alternatively can use a binary code format geo-database that adheres fully to good practice data management standards that are embraced by market leading relational database management systems providers. Use of binary code format geo-database to manage location data means that:

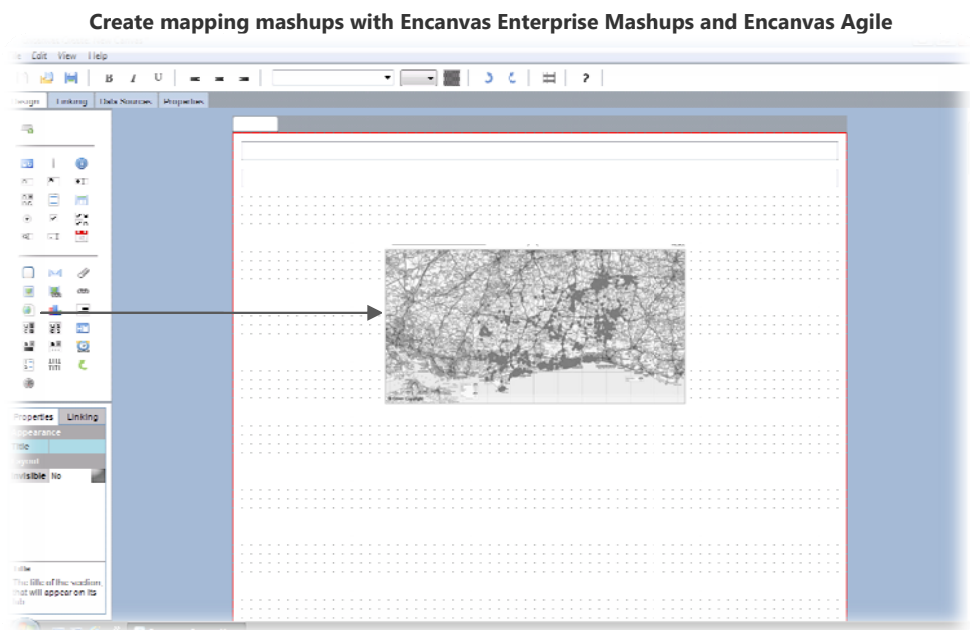
- No downloads or plug-ins are required to capture, analysis and visualise geo-spatial content via a web browser.
- The amount of layers and data volumes that can be maintained by the system is limited only by the performance criteria of the DBMS in use and operating systems infrastructure.
- Data is held in the most efficient and transportable format to simplify information sharing and harmonisation across systems, departments and agencies sharing the content.

- Clever use of tiling of web pages to display digital maps provides a rapid response to web-queries.
- Encanvas MDI delivers unprecedented query response times over the web using standard web browsers.
- IT infrastructure is simplified by having the ability to scale a single GIS solution across all enterprise processes that require location data capture, analysis and visualization.
- Encanvas MDI does not prescribe a type of geo-database or RDBMS – it works with practically any popular database system.

Unparalleled usability

Encanvas MDI produces a user-friendly, 'instant-on' intranet, extranet or internet WORKSPACE supported by a geo-spatial database that enables information workers to fully leverage location capture, visualization and analysis capabilities as part of formalized information flow for their many different communities of use.

Each user can be enrolled into communities of use that define the privileges made available to the user and their workspace experience (ie. Level of access to communities, data and processes, collaborative tools, formatting of content etc.). Any number of different privilege levels can be provided including 'super-users' who are able to access and monitor systems usage without being visible to the workgroup administrative log.



Comparison between Encanvas MDI and major GIS Vendors

What follows is a technical comparison of Encanvas and enterprise market leading GIS software products based on facts captured through published materials.

	Encanvas MDI™	ESRI 9.1	MapInfo Envinsa
COMMERCIALS			
Licensing Basis	Site / As a Service	CPU	Server
Software Innovation and Maintenance Charges	Annual	?	Annual
DATA MANAGEMENT			
Oracle 9i Spatial and 9i Locator	Call	✓	✓
Microsoft SQL Server (Binary, Blob)	✓	✓	✓
Informix Spatial DataBlade	To-order	✓	✓
IBM DB2 Spatial Extender	To-order	✓	✓
Drag-and-drop multi-sourcing of data	✓	-	-
Drag-and-drop database creation	✓	-	-
Orthophotos	To-order	✓	-
Multispectral	To-order	✓	✓
Binary	✓	✓	✓
CAD (.DWG) Documents	✓	✓	✓
Elevations	To-order	✓	✓
Grids	✓	✓	✓
Access and store raster images	✓	✓	✓
Access and store vector files	✓	✓	✓
Live feeds	✓	✓	✓
CSV and XML files	✓	✓	✓
Binary Code Data Management	✓	-	-
ESRI Shapefiles	✓	✓	✓
MAPinfo TAB	✓	✓	✓
OS StreetMap	✓	✓	✓
OS MasterMap	✓	✓	✓
LDAP	✓	✓	✓
DEVELOPMENT			
Single development environment	✓	-	-
Simple installation	✓	-	✓
Plug and play data packages	To-order	To-order	✓
Training Materials	✓	✓	✓
Training Courses	✓	✓	✓
INDUSTRY STANDARDS			
Open GIS Consortium, Inc.	-	✓	✓
Open Location Services (Open LS)	-	✓	✓
Web Services™ (SOAP, WSDL, UDDI)	✓	✓	✓
Open Mobile Alliance™ (OMA)	-	✓	✓
Simple Network Management Protocol (SNMP)	✓	✓	✓
FEATURES			
Solution development for mobile, desktop and web using a single authoring environment	✓	-	-
Zooming and panning	✓	✓	✓
Identifying	✓	✓	✓
On-the-fly filtering of views	✓	-	-
Advanced date and time filters	✓	?	?

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Filtering and automated or prescriptive classification of field contents with key	✓	?	?
Unlimited numbers of data 'layers'	✓	-	?
Geo-code capture, analyse, visualization	✓	✓	✓
Reverse geo-coding	✓	✓	✓
Polygon plotting	✓	✓	✓
Point plotting	✓	✓	✓
Line plotting	✓	✓	✓
Redlining	To-order	✓	✓
Notations	-	✓	✓
Polygon, Point and Line in a single tool?	✓	-	-
Unique records for polygons, lines and points	✓	-	?
Routing	Active-X	✓	✓
Mapping	✓	✓	✓
User administration and profiling	✓	✓	✓
Mobile device position acquisition	To-order	?	✓
Position refinement	✓	✓	✓
Route matrix	-	?	✓
Thematic mapping	✓	✓	✓
Content Management	✓	✓	✓
Soft and downloadable reports	✓	✓	✓
Downloadable			
DEPLOYMENT			
WORKSPACE Authoring	✓	-	-
Multi-User	✓	✓	✓
Support for multiple community portals	✓	-	-
Mobile platform support	✓	✓	✓
Desktop platform support	✓	✓	✓
Web platform support	✓	✓	✓
Active Directory and LDAP	✓	✓	✓
Integration with ERP and back-office systems	✓	✓	✓
Out-of-the-box support for hundreds of location-enhanced applications	✓	-	✓
Scalable architecture (multi-server)	✓	✓	✓
Mission critical use	✓	✓	✓
Architected for large volumes of data	✓	✓	✓
Stand-alone Internet Explorer deployment (no plug-ins or application extenders)	✓	-	?
Platform Support for ASP.NET	✓	✓	-
Platform Support for Java	-	✓	✓
Platform Support for Web Services	✓	✓	✓

Important note.

Appreciating that publicly available materials and content from vendors may include inaccuracies beyond the control or knowledge of Encanvas Inc., the company accepts no liability for the accuracy of information provided in this document, nor any consequential costs that may result from decisions made based on the information provided.

About Encanvas

Encanvas[®] software makes the workplace work better.

We bring added value to the Microsoft[®] enterprise platform by creating the technologies organizations need to spend less and receive more from their software investments.

We've created the world's first Integrated Software Platform; digital equivalent of the micro-chip. Our Secure&Live[™] platform enables the design, deployment and operation of applications without coding or scripting all made possible by a single tightly coupled architecture. It facilitates the massive scaling of portal architectures; so users can communicate, share information and their applications in real-time while operating in 'secure spaces' that protect systems, data, identity and intellectual property.

Similar to the influence of the micro-chip in electronics, our integrated software platform is creating a mushroom of innovation around the world as individuals and organizations realize they now have the tools to design and publish right-first-time software applications to cloud computing platforms at very low cost and risk – serving the long-tail of business applications needs.

Encanvas also creates Social Operating Systems (see Encanvas Squork[™]). In the digital era a network is a group of people tied by relationships, not a set of computer systems strung together by wires. User-centric computing enables web workers to 'work efficiently anywhere' while organizations can achieve a step-change in productivity by harnessing the enthusiasm, skills and collective intelligence of social networks.

Intellectual property

All information of whatever kind and which is contained in any documentation, drawings, specifications, diagrams, plans, notes, data, patterns, models, samples, software, software applications, computer outputs or other materials or records or other information whether written or oral of a business, financial or technical nature which is marked or otherwise indicated or known to be of a confidential or proprietary nature shall be called for the purposes of this project 'Confidential Information' and remains the property of Encanvas Inc.

Encanvas Inc.'s appointed data controller is Mr Nick Lawrie. Further information is available on request.

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