

Background

Nowadays, organisations produce, during their daily activity, a huge amount of data and information, normally stored in heterogeneous information systems with diverse data formats. These companies are aware of the need of exploiting these intangible assets in order to obtain added value and competitive advantages in the market.

The convergence of **XML** - the de-facto standard format for creating, archiving and exchanging information -, with **Web Services** provides a sound basis for exploiting information and knowledge repositories. To this end, **WebSI** introduces a combination of innovative abstractions, technical solutions, interfaces, components, and design tools to support the business sector in the building of applications as composed Web services, thereby offering to a broad spectrum of enterprises a low entry cost technology, capable of collecting information and composing services from different sources.

WebSI Tools

WebSI has developed three suites of tools for developing data-centric Web applications in open architectures, including the ASP (Application Services Provision) framework, based on a twofold integration approach: XML-based data integration and web services integration:

1. **WebML Suite**, which includes a graphical interface, supporting the visual specification of Web sites in WebML, and a code generator, transforming visual specifications into application code.
2. **Active Documents Suite**, for composing complex XML documents from the assembling of pieces derived from queries, service invocations or other existing active documents under data requests and event notifications.
3. **Data Integration Suite**, for providing unified XML data access to heterogeneous information sources following a twofold approach, warehousing and mediation, through a unique API for XQuery.



Participants

Technological partners:



Spain



France



Italy

End users:



Italy



Spain



Austria

Project information

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European Commission

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An innovative approach...

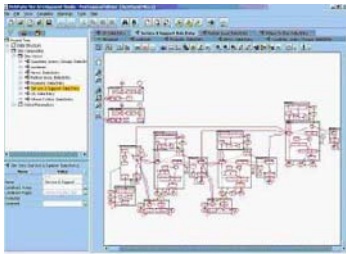
WebSI Features

Data-centric approach – supporting both entity-relationship and XML data models.

Composition of Web Services in order to materialise applications business logic.

High-level design & development graphical tools for presentation and business layers. Visual programming in WebML and automatic documentation.

Zero programming option – programming can be significantly reduced and confined within reusable components. This, along with the support of dynamic invocation of web services, reduces drastically the need for programming.



Platform independence – the WebSI methodology operates at a high level and can be applied to any technological solution.

Platform interoperability – integration with existing IS infrastructures based on XQuery, web services and XML-based events, opening WebSI to virtually any existing external systems.

Living Business XML Data – standard XML views, endowed with composition flows and reactive to events.

Unified Data Access to heterogeneous information sources through XQuery and XML/DBC API.

Double approach, Warehousing and Mediation, and data views persistence – both materialised and virtual XML views are supported, offering the freedom to choose which solution best fits a customer's constraints.

Process Automation through triggers in Data Integration Suite for more efficiency and new application domains, based on content events.

...with added value...

Added Value Benefits

Revolutionary approach to development – WebSI “turns programmers into analysts”.

Increase of productivity – shortening dramatically the phases of programming, publication, and maintenance of the solution.

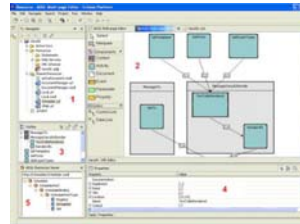
Ease of reuse – Portions of the application of arbitrary complexity can be easily disassembled and reused

Quality of the deployed application - the use of a high-level and structured approach during analysis and design induces a regular and well-organized application.

Reduced total cost of ownership – because of creating solutions at a much higher level than with competing systems.

XML business documents – facilitating use of standards within organisations as well as at markets. Immediate link of standardised XML to business logic through active documents.

Better decision making through Content Integration – transforming legacy contents, usually locked in spread formats like Word, PDF or Text files, into XML enables querying vast amounts of non-exploited information in order to make more accurate decisions (mostly made today on the 20% of the information that sits in relational databases).



Target audience

Industry sectors, including the service industry, and both the private and public sectors. Special focus on SMEs with needs on EAI, e-Business and Knowledge Management.

...to business solutions

WebSI has been used successfully for developing three prototypes belonging to three different real scenarios:

- An extension of the existing ACER's Business Portal with a set of new features able to provide, through the enhancement of its sales section, better interaction between actors, improved data exchange, and standardised reporting.



- A new application for the County Council of Huelva (Spain) to standardise and automate the current hand-made reporting service for promoters and entrepreneurs that want to create new businesses in the province, and to spread its provision all over the province.



- An extension of the existing Tiscover's Tourism Portal with new features to generate and deliver reports customised in content, layout, format and delivery conditions, including changes in contents and periodicity.

