

Improve Internet Efficiency with EPiServer Portal Framework

How combining information from the Internet, intranet and other systems in one Web interface can improve efficiency.

INTRODUCTION

A portal is a point for the personal gathering of information and services in different situations.

Organizations often have high demands for a flexible, robust platform for the construction of operational portals, citizen portals, intranets and public Web sites. By creating portals, information and services that are important in a given situation can be brought forward, entirely independently of which computer is used. A portal is a point for the personal gathering of information and services in different situations. As a visitor to the portal you identify yourself via a login and are then given access to the information for which you have permission. Regardless of which system or Web site the information comes from, it is given a uniform graphic appearance.

In EPiServer and the EPiServer Portal Framework module, a powerful platform has been developed with the purpose of creating efficient portals. Portals based on EPiServer can function as working tools for the company's or organization's employees and can combine information from the Internet, the company's intranet and other internal business-critical systems in one place in one Web interface.

By using Web Services for Remote Portlets (WSRP) technology, EPiServer simplifies the integration of remote applications and content into portals.

KEY FEATURES

Some of the main features of EPiServer's portal functionality are:

- full support for Web Services for Remote Portlets;
- EPiServer can act as both a Consumer and Producer;
- standard EPiServer content management functionality;
- support for Java and .NET-based portlets;
- portal is built on EPiServer Content Framework;
- possibility to mix EPiServer user controls and WSRP portlets in the same view;
- personal settings control how individual portlets are displayed;
- the user can select which portlets to display and where they should be displayed.

EPISERVER PORTAL FRAMEWORK FOR ORGANIZATION PORTALS

Imagine that you are a new employee at your organization's London office and that you will soon be making your first business trip to visit the head office in San Francisco. You have been given the tip that "everything you need to know to book the trip can be found on the intranet". You find it difficult to believe that everything for your trip could be available on one site, but decide to check it out.

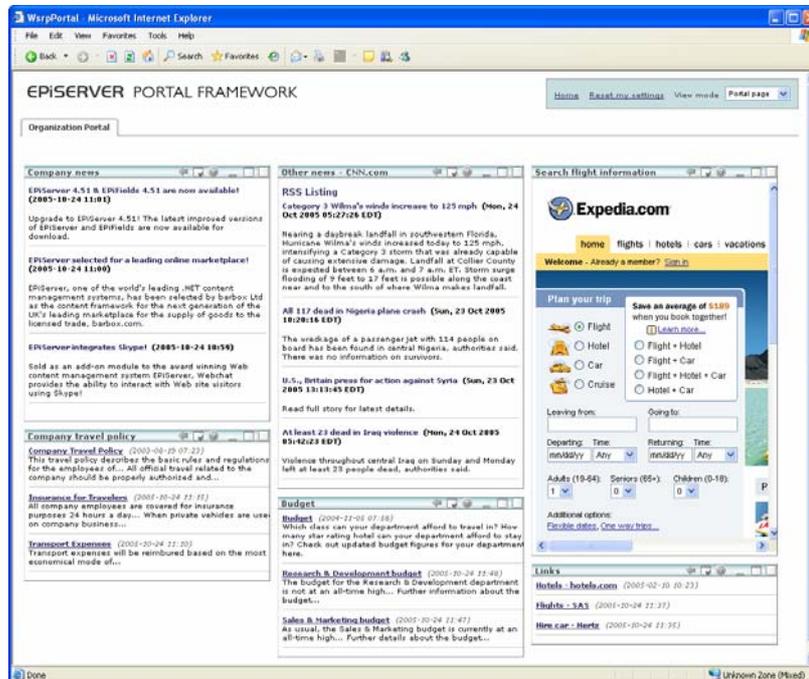
When you go to the intranet, you find a portlet containing information about the organization's travel policy. This first piece of information informs you of the policy that applies when traveling on business. As you are new at the company, this is very useful information. This information is managed through normal EPiServer editing.

You also find information about your department's budget. This is interesting, because you want to know how much your trip may cost according to the department budget. This could be the difference between business class and economy class. In the maximized budget portlet you can calculate how much the different parts of your business trip, i.e. hotel, flight, car hire, may cost.

The intranet also contains a portlet that allows you to search for flight information, allowing you to search for prices and times of flights between London and San Francisco. The maximized

portlet allows you to book not only your flight, but also your hotel room and car hire. This portlet is delivered over the Internet by the travel agency that your company uses.

EPiServer Portal Framework could be used for this solution. WSRP's main strength in this case is that no extra coding is needed for the portal – if a portlet conforms to the WSRP standard it can directly be consumed by any WSRP-compliant Consumer.



EPISERVER PORTAL FRAMEWORK FOR CITIZEN PORTALS

Imagine that you are a father of two, with child number three on the way. You live in a house with a large garden and are planning to extend your house during the summer to build an extra bedroom for the new baby.

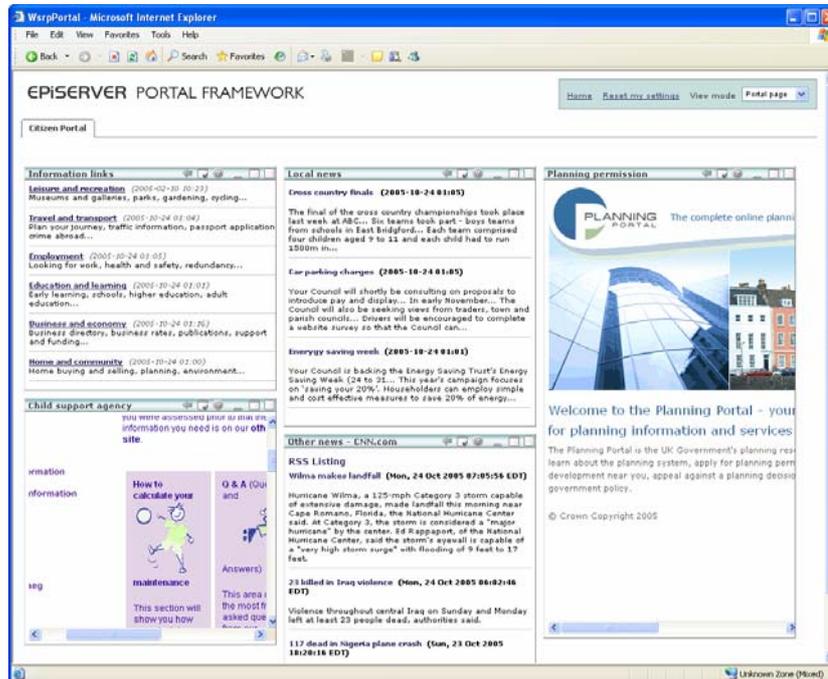
Week 1: You call City Hall to request an application form to apply for planning permission to build the house extension. You call on a Friday afternoon and the office for planning permission informs you that the office has closed for the day and will not be open again until Tuesday afternoon.

Week 2: You call City Hall again to request a planning permission application form. This time the office is open and you are informed that your application form will be mailed to you later that day. Later that week you contact the Social Insurance office to find out how many days with parental benefit you have remaining for child number two – the idea being that you use the remaining parental days when building the house extension.

Week 3: You contact the Social Insurance office again to apply for parental benefit for the new baby. You also contact City Hall again to tell them that you still haven't received your application form. You receive the application form the next day.

Week 5: You still haven't heard anything about your application for planning permission and contact City Hall to find out what has happened to the application. At the same time you ask who you should contact to complain about the bad service that you have experienced over the past couple of weeks.

Wouldn't it be easier if you could go to one portal and perform all these tasks with just a few mouse clicks? EPiServer Portal Framework makes this possible with WSRP support. EPiServer acts as a Consumer, plugging in other WSRP-compliant Producers.



In the example above the Navigation bar and information links are normal EPiServer user controls. News is fetched from another EPiServer, and the planning portal and child support agency are fetched from applications that support WSRP. All this makes it possible for you (as a father of two) to perform all your tasks using one portal, saving time and money for all involved.

WEB SERVICES FOR REMOTE PORTLETS

WSRP is a Web services standard, which enables user interfaces to be sent via a Web service.

One of the main features of EPiServer's portal functionality is its support for Web Services for Remote Portlets. But what is WSRP?

WSRP is a Web services standard created by OASIS, which enables user interfaces to be sent via a Web service. The standard enables all content and application providers to provide their Web services, so that they can easily be discovered and plugged into all compliant portals without any programming effort on the portal's side. Portal administrators can pick from a choice of WSRP-compliant remote content and easily integrate them into their portals with a few mouse clicks.

WSRP means that from EPiServer 4.50, EPiServer Portal Framework can display portlets from WSRP-compliant applications. WSRP Producer functions have been implemented so that information from EPiServer can, in turn, be displayed in a WSRP-compliant portal, for example IBM WebSphere or BEA WebLogic.

WHAT IS A PORTAL?

In order to fully understand WSRP, it is important to first understand portal technology.

Imagine that you have a savings account at a bank. As you develop a relationship with your bank, it is possible that you will make use of some of their other services, for example credit cards and mortgage loans. Some of these services may be available to you online through the

bank's Web site. These applications would typically have their own user interface, as they are individual applications serving their own purpose.

Portal technology allows all these applications to be available in a single application as modules, or mini-applications, with a common look and feel, using the same user profile with only one username and password. In this way you would be able to customize your services at the bank.

A *portal* is technically defined as a framework that allows companies to create a unified presentation mechanism that is used to deliver key applications in a personalized manner to its users. The mini-applications are called *portlets* and are a specialized view of the main application.

BENEFITS OF WSRP

WSRP enables functionality that has previously been very difficult to achieve. Some of the benefits are outlined below:

- Interoperability. Portlets can be deployed once and delivered anywhere. This means that portlets that have been developed for one portal vendor can be easily deployed in a different vendor's portal.
- Portlets can be hosted, or "produced", on physically and logically separate infrastructures from the portals surfacing, or "consuming", the portlet.
- WSRP lowers the cost of portal maintenance. Portlets can be deployed on reasonably inexpensive machines, resulting in a reduction in the cost of portal infrastructure and total downtime.
- Portlets can be produced or consumed from any WSRP-compliant application, e.g. both .NET-based applications and Java-based applications. EPiServer's portlet kit also makes it possible to consume an application that does not have WSRP support by building a Producer. This function is carried out by EPiServer Portlet Kit.
- Supported by many large players in the industry. For example Microsoft (SharePoint), IBM (WebSphere Portal), BEA (WebLogic Portal), Oracle (OracleAS Portal), and Sun Microsystems (Java Enterprise System).

WSRP CONSUMERS AND PRODUCERS

WSRP introduces the concepts of Consumers and Producers. By using WSRP, you can aggregate application functionality by integrating WSRP-compliant Producers using EPiServer Portal Framework as a Consumer. Your end users will be able to interface with Consumers to view the integrated applications.

Producers

A Producer is a Web service that offers one or more portlets and implements various WSRP interfaces/operations. Depending on the implementation, a Producer may offer just one portlet, or may provide a runtime (or a container) for deploying and managing several portlets.

With EPiServer as WSRP Producer it is possible for information from EPiServer to be displayed in other WSRP-compliant Consumers.

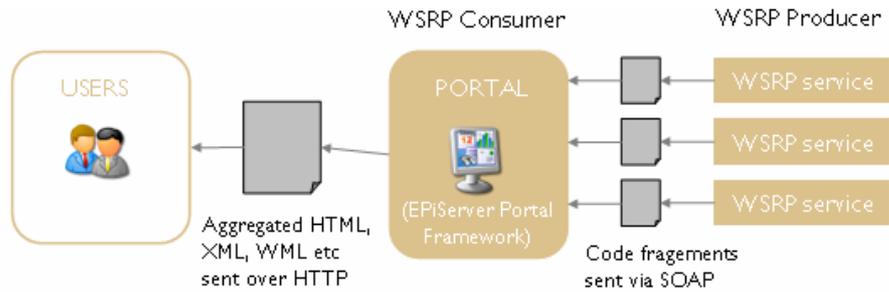
WSRP Producers are Web services that offer one or more portlets and implement various WSRP interfaces / operations.

WSRP Consumers are typically portals that aggregate information from WSRP Producers.

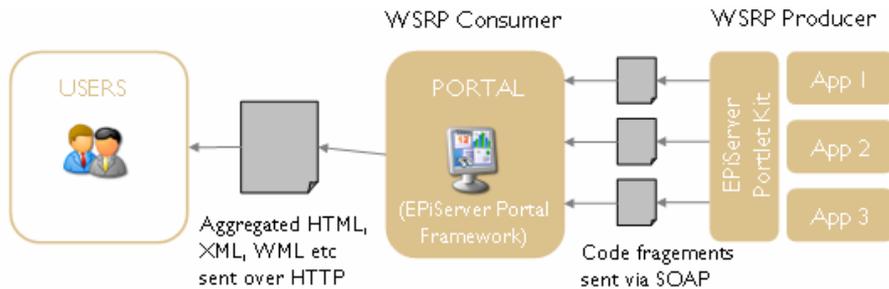
Consumers

A Consumer is a Web service client (typically a portal) that aggregates information from Producers. Consumers route requests from end users to the appropriate Producer, which, in turn processes the request and sends results back to the Consumer. The Consumer aggregates the results coming from various Producers and sends the final result back to the user. Consumers provide separation of the traffic flowing between them and the Producers ensure that all interactions are kept private to that specific user during the sessions.

Using EPiServer Portal Framework as Consumer, it is possible to display information from other WSRP-compliant Producers. This means that it would be possible for your portal to display information according to the figure below.



Using EPiServer Portal Framework as a Consumer, it is also possible to display information from portlets that do not support WSRP. In this case, the EPiServer Portlet Kit translates the Producers into WSRP Producers. This makes it possible to display any application portlets in EPiServer Portal Framework, as displayed below.



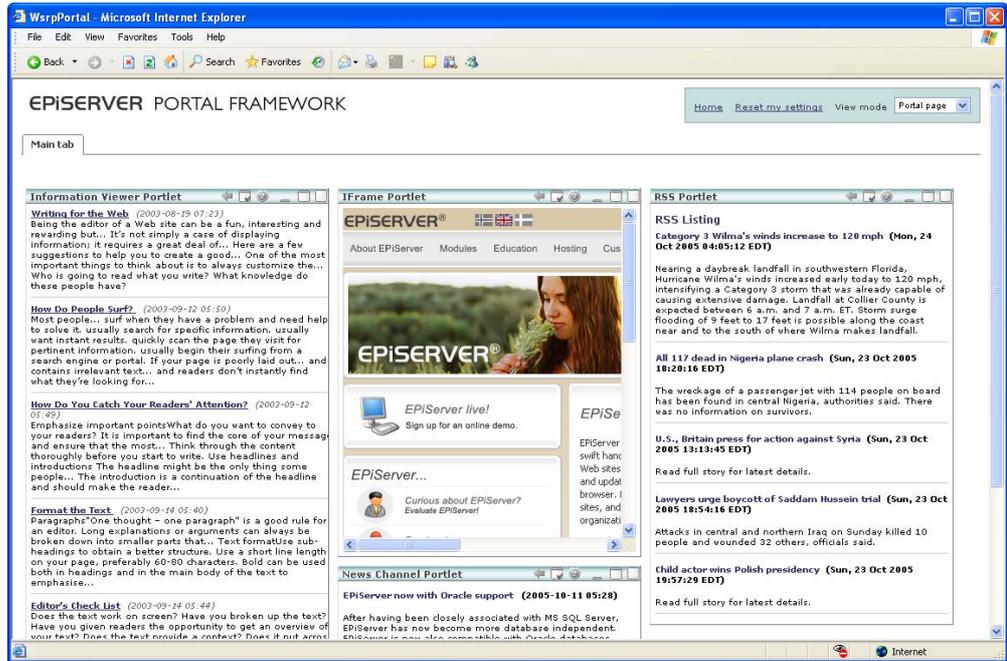
WORKING WITH PORTALS IN EPISERVER PORTAL FRAMEWORK

EPiServer Portal Framework can be customized so that a maximized portlet opens full page in the browser.

EPiServer Portal Framework contains different modes, enabling you to view and design pages so that you can customize the portal according to your requirements. For example, maximizing a portlet in EPiServer Portal Framework opens the portlet full page in the browser.

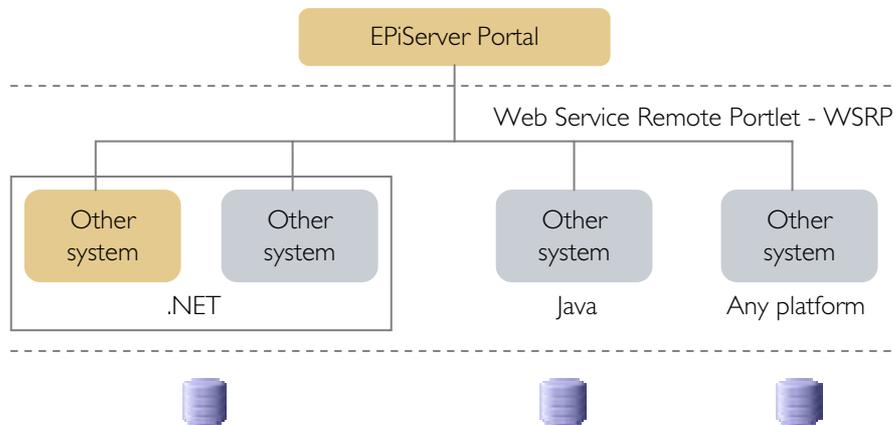
This technology makes it possible for your portal to contain: EPiServer user controls, Java-based applications that support WSRP, .NET applications supporting WSRP, and information from other EPiServers.

The image below displays the information that a typical portal based on EPiServer Portal Framework could contain.



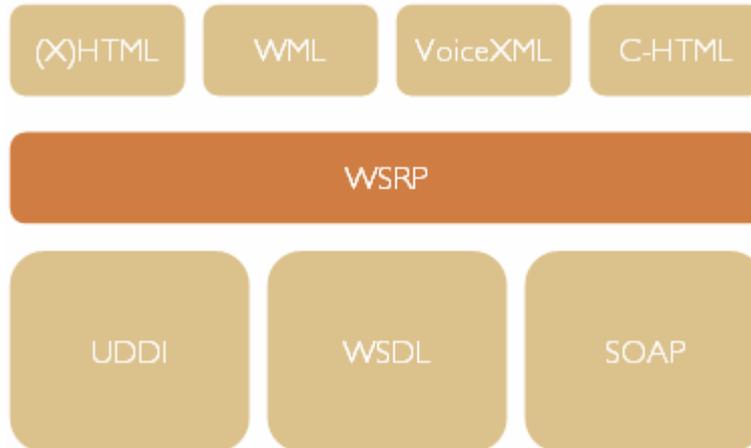
ARCHITECTURE

EPiServer's portal architecture is built around the requirement that applications from any platform can be produced in EPiServer Portal Framework. This makes it possible to have applications with different databases, on different platforms produced into EPiServer Portal Framework. The architecture also means that EPiServer can be produced to any platform.



STANDARDS

WSRP supports the following standards:



C-HTML

Compact HTML. A subset of HTML for small information devices, such as smart phones and PDA's. cHTML is essentially a pared down version of regular HTML over the Internet.

SOAP

Simple Object Access Protocol. Light-weight protocol for exchanging messages between computer software, typically in the form of software componentry. SOAP is an extensible and decentralized framework that can work over multiple computer network protocol stacks.

UDDI

Universal Description, Discovery, and Integration. A platform-independent, XML-based registry for businesses worldwide to list themselves on the Internet. UDDI is an open industry initiative enabling businesses to discover each other and define how they interact over the Internet.

VoiceXML

Voice Extensible Markup Language (VXML). XML format for creating interactive dialogs between a human and a computer. VXML features tags to instruct a voice browser to provide speech synthesis, automatic speech recognition, basic menuing, and sound file playback.

WML

Wireless Markup Language. Primary content format for devices that implement Wireless Application Protocol (WAP) specification based on XML, such as mobile phones.

WSDL

Web Services Description Language. WSDL is an XML format for describing network services as a set of endpoints operating on messages containing either document-oriented or procedure-oriented information.

(X)HTML

Extensible HyperText Markup Language. XHTML is a family of current and future document types and modules that reproduce, subset, and extend HTML 4.

LICENSE REQUIREMENTS

An EPiServer Portal Framework license is required to enable EPiServer to act as a WSRP Consumer.

An EPiServer Portal Framework license is required to enable EPiServer to act as a WSRP Consumer. All WSRP Producer functionality, plus a demonstration of EPiServer's WSRP Consumer functionality, is included in the EPiServer Professional License. Please contact your implementation partner for further information.

FURTHER REFERENCE

Further information about WSRP can be found at:

- OASIS Web Services for Remote Portlets Technical Committee Web site (http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsrp).
- Bowstreet Portlet Factory (<http://www.bowstreet.com>)
- Microsoft's press release on WSRP (<http://www.microsoft.com/presspass/press/2004/aug04/08-09webpartspr.asp>)

Reference implementation of WSRP from Apache Software Foundation (ASF) (<http://ws.apache.org/wsrp4j/>)

EPISERVER AB

EPiServer AB is a privately owned Swedish product company, founded in 1994, and is the leading company in Content Management and portal solutions through the platform EPiServer. The company is a Microsoft Gold Certified Partner and has held AAA ranking by Dun & Bradstreet since 2000.

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