

Microsoft Content Management Server Integration with SAP Enterprise Portal – An Overview

Keyvan Seiraffi, Product Manager, CEO Spell GmbH
Martin Ley, Senior Developer, Spell GmbH

Executive Summary

Daily tasks involve different sources of information. The integration of different sources within a single context improves the efficiency of performing diverse steps to complete a task. This paper describes an integration solution providing an easy to use facility, which enables the user to navigate over Microsoft CMS content without leaving the SAP Enterprise Portal context. The Microsoft CMS content, the postings and the channels respectively, will be displayed in a tree-based structure, with the Look & Feel of SAP Enterprise Portal. Different roots, called entry points, can be specified in the standard Enterprise Portal Navigation, that is "Top Level Navigation" or "Detailed Navigation". The entry points may differ based on their location in the navigation.

Applies to

- SAP Enterprise Portal 6.0 SP 2 or higher
- Microsoft Content Management Server 2002

Keywords

Microsoft Content Management Server, CMS, SSO, Single Sign-on

Audience

IT Executives

Level of difficulty

Intermediate

Contact

For further information please contact Keyvan Seiraffi at seiraffi@spell-gmbh.com.

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Introduction

Many SAP Enterprise Portal (EP) and SAP NetWeaver environments are utilizing Microsoft Content Management Server (MCMS) as the Web Content Management System. A seamless integration of both systems within a single context improves the efficiency of performing different steps to complete tasks.

The end-user can use information of both worlds without changing or leaving the context. Furthermore it is possible to compute the entry points dynamically based on the user's context like membership of the user in a specific organizational unit in the corporation.

Introducing the facilities provided by the *Microsoft CMS Integrator* reduces the amount of time that would be wasted while searching for specific information when switching to a separate context. Required information from both worlds is available through a single interface in the right location and required composition.

Integration Objectives

MCMS provides information based on postings and the relations between them. This information is accessed through a standard Web browser. Without any integration there will be a barrier when accessing information out of these two sources simultaneously. The primary goal is to lower this barrier by providing access to the postings and the hierarchical information between the postings of the MCMS within the EP. To achieve this goal two iViews have been developed to grant access to the content of MSMS postings and to the MCMS navigation structure.

By integrating the content of the postings and the navigation structure into the enterprise portal, the user gains access to the relevant information for his tasks. Depending on the current activity of a user, different postings may be of interest. Considering this fact, multiple Entry Points can be defined for the same user in the same session. Besides the posting itself, its location within the hierarchy improves navigation to postings of similar context. The navigation structure is represented by the navigation iView. The navigation iView can be used as "dynamic navigation" on a page. The information for presenting the navigational structure is gained by a Webservice running on the MCMS server.

Once a user has been authenticated his identification should be used for all communications and sessions. A basic Single Sign On (SSO) mechanism requires either a common directory service such as Active Directory, or an algorithm for mapping users from one system to users in another system. This solution is implemented as standard iViews on the EP side and as WebServices on the MCMS side. The iView implementation uses the standard mechanisms provided by the Enterprise Portal development framework. Thus, the EP authentication is also used within the iView. On the MCMS side, the Webservice runs as a Webservice component of IIS. An authenticated IIS user is also authenticated for the Webservice. This solution has already been used in an environment using SS02KerbMap ISAPI module of SAP to map EP users to AD users.

In a multi language environment MCMS provides the mechanism of “Connected postings”. The appearance of postings may differ depending on the user’s language settings. However, MCMS does not provide a standard algorithm to implement multi-language support for the posting’s label. Therefore many enterprises have implemented their own solution supporting multi-language labels. This integration provides additional interfaces that can be realized with custom code to support multi-language posting’s labels.

System Architecture

SAP Enterprise Portal provides a standard iView allowing the integration of a static URL. The static iView is not aware of any context. For a simple front-end integration without dynamic calculation the URL iView may be sufficient. Additional Navigation information can't be integrated in the user's context. For further requirements this solution would be insufficient.

This solution consists of two different iViews residing on the Enterprise Portal. They communicate with each other via an event mechanism, provided by the Client Framework of Enterprise Portal. Both components communicate with the MCMS. The Content iView uses HTTP-Requests to access the content of the postings. The Navigation iView communicates with a new WebService providing the navigational information. The following diagram shows the involved components.

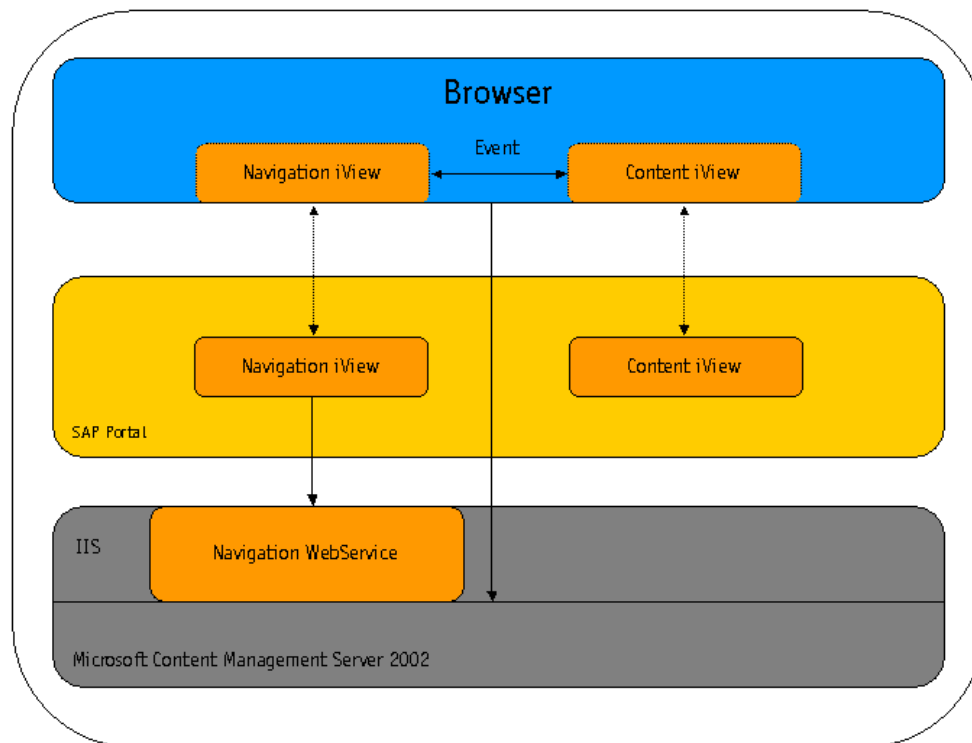


Figure 1 Overview of the integration components

Content iView:

The Content iView is used to view MCMS WebPages within the SAP Enterprise Portal. Multiple iViews may be defined. An iView's configuration attribute defines the start-up webpage. Normally there are two different ways to browse over the MCMS content. It is possible to activate links inside the Content iView, like usual Internet browsing. Each time a link is activated the navigation iView is automatically updated accordingly, which results in the highlighting of the corresponding tree node. If the actual position in the navigation tree is not visible yet, the Navigation iView sends a request to the MCMS and reloads the necessary sub tree.

Navigation iView:

The Navigation iView is used for comfortable browsing over the MCMS content. The root node of the iView is configured by a configuration parameter. All other tree nodes will be reloaded dynamically via the WebService as needed. The Navigation iView has two different tasks to manage. First of all, it presents a hierarchically view of the MCMS content which will be automatically expanded as needed. The Look & Feel is adapted from Enterprise Portal. Furthermore it provides an easy-to-use interface to browse over the MCMS content. The nodes in the navigation tree are links. The links can be activated. The activation reloads the content iView with the content of the referenced MCMS posting. The Navigation iView and the Content iView use an event-driven mechanism to update each other.

Navigation WebService:

This Component is an extension of the MCMS. The WebService provides all necessary information needed by the Navigation iView for displaying a hierarchic view of the MCMS Content structure.

This WebService supports SSO mechanism implemented by the SS02KerbMap ISAPI module. Furthermore, in combination with Navigation and Content iViews, it is possible to define which kind of SSO should be used. Various methods, such as windows authentication or SAP Logon ticket, are supported.

Dynamic Router Extension:

The Dynamic Router Extension provides a more flexible approach to specify the Entry Points for the Navigation and the Content iView programmatically.

A more detailed description of this feature can be found lower down in this paper.

EPDevice Detector:

This module resides on the MCMS and allows the detection of the device as Enterprise Portal. During the implementation of the MCMS templates this module can be used to influence the appearance of the page.

Features

The solution provides several features allowing a seamless integration of both Systems.

Single Sign-on

To improve the efficiency of the daily work, it is essential to support most of the single sign-on mechanism. The implementation takes this into account and uses the authentication mechanism provided by IIS. This simple approach provides the possibility to use the SS02KerbMap ISAPI module. Furthermore, it is possible to set an additional user/password in the configuration to allow a fallback mechanism for users that are not registered on the other directory service (that is the Active Directory used by MCMS/IIS). It is also possible to define the priority between the windows authenticated user and SAP logged on user (defined in SAP Logon ticket). For e.g. if the windows authentication has a higher priority and the Windows authenticated user is not a member of the MCMS AD and SS02KerbMap ISAPI is in place, the SAP Logon ticket would be used. The settings may differ for different Entry Points.

Look & Feel

One of the main goals is to provide a consistent appearance to the user, so that he can't recognize the different origins of data sources. To achieve this goal, it is necessary to adapt the appearance of the MCMS pages to the existing ones of the Enterprise Portal. Using MCMS templates allows the creation of pages containing the same information with different appearance. MCMS allows different presentation variations of its content. So, it is possible for the Enterprise Portal to view the MCMS content aligned to its own pages. For example, it is possible to mask out certain parts of a page (like branding and Navigation), to ensure a seamless integration of MCMS content into the Enterprise Portal context.

Figure 1 shows the standard content of a webpage that is generated for IE. Using the EPDevice Detector it is possible to influence the appearance of the page.

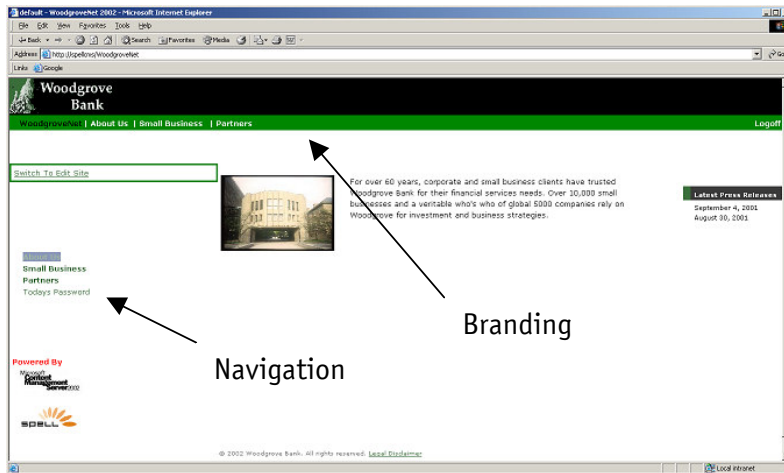


Figure 2 Standard view of MCMS Content

The appearance of the page is defined during the template development. The template may use the EPDevice detector to influence the appearance of the page. In figure 2, the appearance of the page has been modified. The Branding and the navigation structure has been masked out.

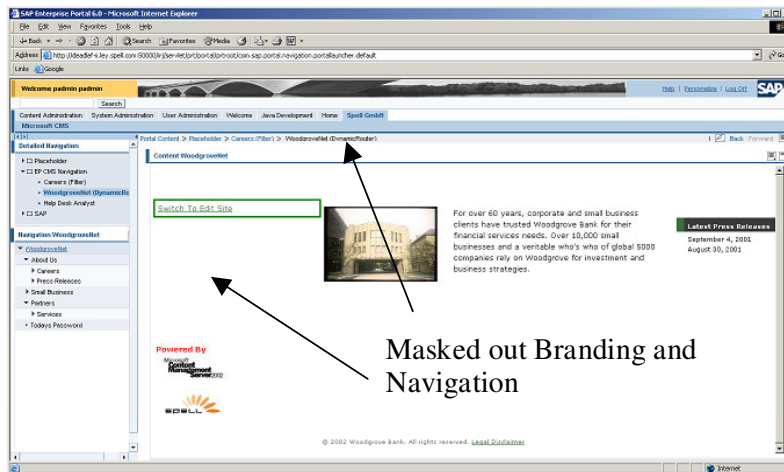


Figure 3 EP View of MCMS Content

Furthermore, it is possible to personalize the appearance of the Enterprise Portal pages for each user. Therefore the Enterprise Portal provides a large amount of different "Themes". Additionally, every user can create new Themes, so everyone can obtain a satisfying Look & Feel while working with the Portal.

Dynamic Routing

The Navigation iView and the Content iView respectively have their own Entry Points. In the Navigation iView's case the Entry Point defines the initial root node of the navigation tree, and in the Content iView's case the Entry Point defines the Webpage (CMS-Posting) that is shown at startup. Normally these Entry Points are configured in the iView's property page statically.

The Dynamic Routing Extension provides a more flexible approach to configure these “Entry Points” programmatically. It is possible to calculate these “Entry Points” based on the current user context.

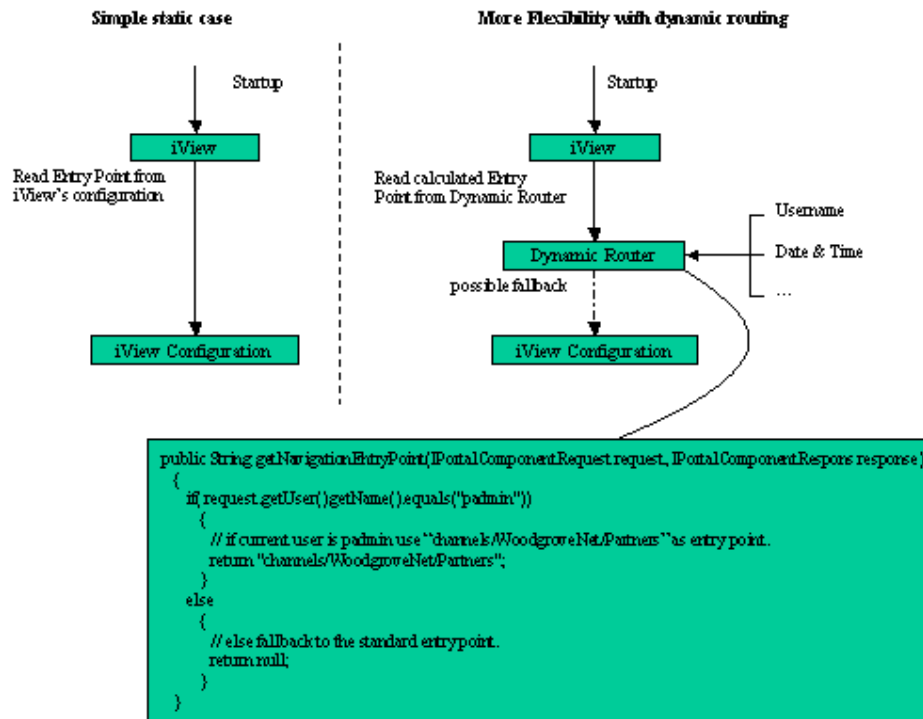


Figure 4 Dynamic routing

To activate the dynamic router Extension, it is required to deploy the corresponding iView to the Enterprise Portal. Within the same portal, multiple dynamic routers may be deployed. Along with deployment, the according navigation or content iView has to be configured to use the desired dynamic router.

As shown in the above example, it is possible to use dynamic and static routing at the same time. The static routing would be the fallback entry point. The above sample code shows the calculation based on logged on user’s name. If the name does not match, the configured static entry point will be used.

Summary

This paper describes an existing solution implementing the integration between SAP Enterprise Portal and Microsoft Content Management Server. The solution provides several key features such as SSO, EP Look & Feel and multiple Entry Points that are necessary for large-scale environments. The extensibility by custom code provides additional flexibility without changing the existing implementation.

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