

# Web-Enabled Portals for E-Business Workplace

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## INTRODUCTION

Portals are information systems that support the user in his or her individual process with information production and communication. The term portal, in information technology terms, appeared in late 1990s at a time of the widespread use of the Internet by individuals and organizations (Finkelstein & Aiken, 1999; Dias, 2001; Bristow, Dickinson, Duke, Henry, & Makey, 2001; Collins, 2001, 2003).

There are many types of portals on the Internet: portals for general consumer use and entertainment (my.yahoo.com), for specialized information (www.brint.com), for specific communities (Austrian Academic Portal at www.portal.ac.at/), for business enterprises (NEC global portal at www.nec.com, NEC US portal at www.necus.com/, NEC European portal at www.neceurope.com). In general, portals can be divided into two categories: public and enterprise (Goodman & Kleinschmidt, 2003; Forrester, 2003).

Public portals started as Internet directories (Yahoo!) or search engines (Excite, Lycos, AltaVista, and InfoSeek). Services that require user registration such as free e-mail, customization features, and chat rooms were added to allow repeated use, and to make users stay longer at the site.

Enterprise portals started as intranets and extranets, the “enterprise webs” that were intended to provide easy-to-use, secure, and personalized sites that may extend to an organization’s employees as well as to its customers and business partners. Enterprise portals evolved to include collaboration tools so that customers, business partners, and employees are empowered to maximize their value to the organization. Portals that combine Web communications and thinking inside large enterprises are considered as both a labor-saving and a cost-saving technology. Enterprise portals are also referred to as corporate portals. Some corporate analysts predict that portals spending will be one of the top five areas for growth in the Internet technologies sector.

## BACKGROUND

While there are multitudes of enterprise portal deployments, each can be assigned to one of three distinct

groups. These groups, in increasing order of complexity, are classified as fundamental, integrated, or collaborative (Strauss, 1999; Terra & Gordon, 2002; Moore, 2002; Plumtree Software, 2005; *Portals Magazine*, 2005).

### Fundamental Portals

Fundamental portals are those that offer a framework where users can find Web applications from a single entry point. They provide very little functionality and are essentially a means to connect legacy applications. Portals of this type do not attempt any type of enterprise process integration and typically function as a list of links.

### Integrated Portals

Integrated portals integrate the applications and the delivery of customized, role-based content, while providing access to information across the organization.

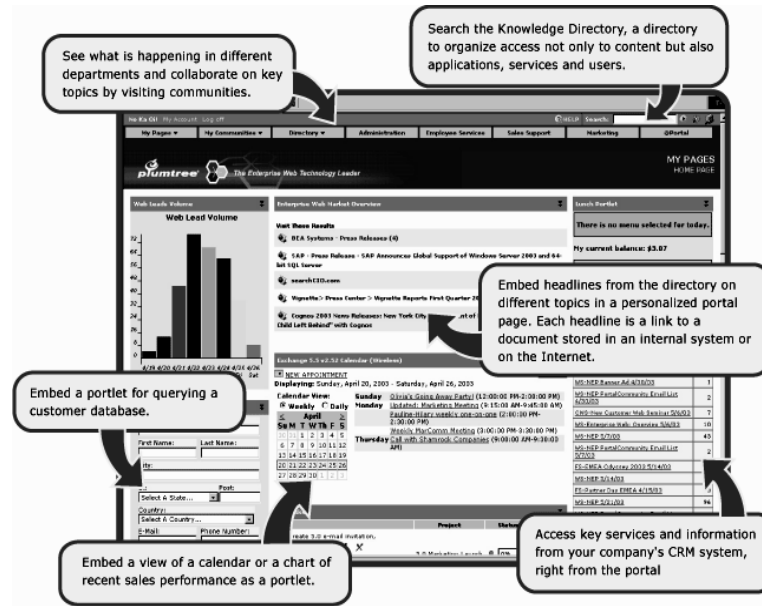
Integrated portal initiatives in organizations focus on providing access to information and to streamlining information technology and business operations. However, these types of solutions are not able to integrate fully people, processes, content, and applications.

### Collaborative Portals

Collaborative portals integrate users, content, and collaborative tools. Collaboration services such as presence awareness, instant messaging, Web conferencing, and third-party applications in the context of business processes are integrated into the portal. The user of the collaborative portal can tap into different resources throughout the enterprise, leveraging various collaborative tools through a consistent interface.

A collaborative portal requires that an enterprise looks at itself as a collection of business processes (financial management, product development, etc.) rather than functional departments (marketing, manufacturing, or human resources) or simplified segments (business-to-employee or business-to-customer). Collaborative portals offer more than just access to applications and content. The most evolved collaborative portals enable key business processes, appear integrated and personalized for each individual’s roles in the organization, and allow access to

Figure 1. Plumtree portal page example



people and expertise through collaboration (Plumtree, 2005).

## FEATURES OF ENTERPRISE PORTALS

The features of enterprise portals include (Sribar & Lynn, 2003; Pushmann & Alt, 2004):

- **Single Touch Point:** The portal is the delivery mechanism for all business information services.
- **Collaboration:** Portal users can communicate synchronously, through chat or messaging, or asynchronously, through e-mail and blogs.
- **Content and Document Management:** Services that support the full lifecycle of document creation and provide mechanisms for authoring, approval, version control, scheduled publishing, indexing, and searching.
- **Personalization:** The ability for portal members to subscribe to specific types of content and services. Users can customize the look and feel of their environments.
- **Integration:** The connection of functions and data from multiple systems into new components.

Figure 1 shows an example of the customized and personalized component of an enterprise portal from

Plumtree Software (2005). Through a personalized portal page such as this one, the user is able to access services and content (both static and dynamic), as well as aggregate disparate applications (these are identified in Figure 1 with heavy arrows and boxes containing explanatory text).

Since the enterprise portals are now designed to allow collaboration, a portal's content (or part of it) should be accessible on multiple platforms such as personal computers, personal digital assistants, and cell phones (Portals Community, 2005). Generic portal ecosystem components are shown in Figure 2.

## The Working of a Portal

When a user requests actions, such as searches or information retrieval, the portal server locates and initiates the appropriate gadget. These gadgets perform the requested task and send the results back to the portal server, which formats and sends the reply back to the client. Gadgets can be a simple pass-through to an HTML page or they can be complex applications. Both the portal itself and the gadgets run on a servlet engine inside an HTTP Web server. An HTTP Web server is software that renders and presents HTML pages to browser applications.

A servlet engine is a computer program that runs within an HTTP Web server and takes specific requests from the Web server, processes them, and then hands them back to the Web server in HTML format for it to render.



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