

# A Generic Model of an Enterprise Portal

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## INTRODUCTION

With the rapid development of Internet technology, the portal has been envisioned as one of the greatest opportunities to improve the management of enterprise information. A number of portals associated with enterprise information management have been developed and implemented, for example, custom portal, employee portal, e-market portal, business portal, enterprise collaboration portal, enterprise knowledge portal, enterprise portal or enterprise information portal, etc. As one of the most important applications of portals, an enterprise portal is more attractive because it could be used not only to improve information management and business processes management (Collins, 2002; Detlor, 2004; Terra & Gordon, 2003), but also to promote business collaborations and interactions both internally and externally (Dias, 2001; Detlor, 2000).

Although research publications related to enterprise portals are multitudinous, most studies have been concentrated either on enterprise portal design (Ben-Arieh & Pollatscheck, 2002; Bock, 2001; Detlor, 2000), or enterprise portal application (Collins, 2002; Daniel & Ward, 2003; Detlor, 2004; Dias, 2001; Terra & Gordon, 2003). There seems to be a lack of a generic model on depicting an enterprise portal. To fill the gap of the enterprise portal research, a generic model is presented to clarify both connotation and extension of an enterprise portal, which will be conducted based on a number of recent publications. The model presented in this article could contribute to a comprehensive understanding of an enterprise portal from several perspectives, for example, the fundamental concept of an enterprise portal, various applications of an enterprise portal, and plentiful benefits of implementing an enterprise portal. The clarified connotation and extension of an enterprise portal could also contribute to both enterprise portal study and enterprise portal management.

## BACKGROUND

The word portal has been around for many years and just means that it is a doorway to a building (Tatnall, 2004). According to Dias (2001), a portal can be referred to as a search engine a few years ago, whose main goal was to facilitate access to information contained in documents spread

throughout the Internet. The search engine enabled Internet users to locate documents with the use of Boolean operators or associative links between Web pages. To promote search capabilities, some search engines were developed further to include categories, filter sites, and documents in preconfigured groups according to their contents, for example, sports, meteorology, tourism, finances, news, culture, etc. Subsequently, many other functions were integrated, such as membership in virtual communities, real time chats, personalized search engine interfaces like My Yahoo and My Excite, and access to specialized commercial contents. Accordingly, a portal should be seen as providing a gateway not just to sites on the Web, but to all network-accessible resources, whether involving intranets, extranets, or the Internet (Tatnall, 2004). In other words, a portal is a Web-based interface into the world of heterogeneous and incompatible information sources distributed across the network.

The evolution of portal applications has attracted the business world because the same technology can be adopted to manage, structure, and facilitate access to enterprise information. Currently, portals as new tools are being used by enterprise individuals and teams to identify, capture, store, retrieve, or distribute great amount of information from multiple internal and external information sources.

## THE PROGRESS OF DEFINING AN ENTERPRISE PORTAL

The most fundamental characteristic of an enterprise portal found in literature is that it provides a single point of access to information and applications available in the organization utilizing a consistent user interface (Koulopoulos, 1999; Raol, Koong, Liu, & Yu, 2002; Tsui, 2003). However, there is no standardized, agreed-upon definition regarding the term of an enterprise portal although many scholars put tremendous efforts on specifying an enterprise portal. Some definitions regarding enterprise portals as various milestones are presented to illustrate the progress of defining an enterprise portal.

- An enterprise portal is defined for the first time as an amalgamation of software applications that enable companies to unlock internally and externally stored information, and provides users a single gateway to

personalized information needed to make informed business decisions (Shilakes & Tylman, 1998). It is clear to see that the functionality of an enterprise portal should support business decision making.

- White (1999) views an enterprise portal as a tool that provides business users with a single Web interface to enterprise information scattered throughout the enterprise. Additionally, he classifies enterprise portals into two categories: decision processing and collaborative processing. Comparing to the first definition above from Shilakes and Tylman (1998), the functionality of an enterprise portal was developed further for collaborative process that organizes and shares workgroup information, such as e-mail, reports, and memos.
- Murray (1999) considers an enterprise portal more than a gateway to enterprise information. He states that an enterprise portal that focuses only on content is inadequate for the enterprise community, and that an enterprise portal must connect not only with everything we need, but with everyone we need, and provide all the tools we need to work together. According to Murray, an enterprise portal could fulfil all expectations of enterprise users, supporting their job activities, and not only a gateway to content or decision support.
- Viador (1999) defines an enterprise portal as applications that enable companies to provide access to internally and externally stored information, and offer users internally and externally of the enterprise a single window to personalized information needed to make informed business decisions. This definition extends the scope of users group within an organization to the outside.
- Brio (2000a, 2000b) defines an enterprise portal as a tool that provides users with broad access to information, no matter where it is stored, and enables information delivery to all users, wherever they work. In a sense, it means that an enterprise portal could deliver information ubiquitously.
- Plumtree Software (2000) sees an enterprise portal as a system that is able to bring together in one simple, personalized Web page, all the information and productivity tools relevant to enterprise users, hosting dynamic applications, such as online reports, e-mail, schedules, calendars, business services, and so on. In contrast with previous definitions, the definition of Plumtree software seems more complete because it emphasizes an enterprise portal's intrinsic capacity to provide access to enterprise information. Additionally, it includes supporting both decision making process and collaborative business process.
- Davis (2004) recently defines an enterprise portal that provides multiple partners with easy access to shared documents in order to exchange information. It could

even be linked to the improved effectiveness of mergers and acquisitions, acting as a bridge that can quickly bring together applications in different organizations and allow them to act as a single unified entity, something that traditionally has often taken many years to achieve.

Based on various definitions and explanations above, an enterprise portal in this article could be generally specified as follows:

An enterprise portal means any combination of Web-based collaboration, content management, communication, and knowledge management tools intended to facilitate communication, improve workflow, streamline administrative processes or enhance overall collaboration. It should provide customized, personalized, and integrated access to dynamic content from different information resources for all the roles involved including employees, business partners, suppliers and customers.

## **A GENERIC MODEL OF AN ENTERPRISE PORTAL**

To elaborate on the concept of an enterprise portal specifically, a generic model of an enterprise portal is presented in Figure 1. Additionally, various applications and benefits of implementing an enterprise portal are introduced subsequently.

As a substantial part of enterprise information systems, an enterprise portal is based on the Internet platform offering a comprehensive and seamless integration of back-office and front-office application. First, the enterprise portal in the Figure 1 delineates the internal collaborations and interoperability through a flexible bridge to interface functional departments within the enterprise, such as, the purchase department, research and development department, manufacture and production department, finance department, as well as sales and marketing department. Since an enterprise portal offers a single point of entry, a single point of access, and a single point of information interchange (Hazra, 2002), Figure 1 represents that an enterprise portal could integrate business events across existing information systems and departmental boundaries thus facilitate the internal collaborations and promote interoperability among the different departments within the enterprise.

Second, the Figure 1 presents that the enterprise portal as a single gateway is a seamless single point of access to all enterprise information resources that include business-specific relevant information in the context of helping employees to be highly productive and competitive. Those capabilities of an enterprise portal give employees a resourceful and aspiring role in the organization because they

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