Web Portal Gateways

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INTRODUCTION

The term *Web portal* is overused and takes on a different meaning depending on the view of the author. This article will investigate the concept of a portal, the various types of portal, and how portals are currently being used. A Yahoo search of the Web in February 2004 revealed 85 million entries for the word *portal,* and even allowing for a considerable degree of overuse and overlap, portals are seen everywhere and span a bewildering range of topics and interest areas. It would be difficult to make any use of the Web without encountering one.

In general terms, unrelated to the World Wide Web, the *Macquarie Dictionary* defines a portal as "a door, gate or entrance" (Macquarie Library, 1981, p. 1346). More specifically, a Web portal is seen as a special Internet (or intranet) site designed to act as a *gateway* to give access to other sites (Tatnall 2005a). A portal aggregates information from multiple sources and makes that information available to various users. In other words a portal is an all-in-one Web site whose prime purpose is to find, and to gain access to other sites, but also one that provides the services of a guide that can help to protect the user from the chaos of the Internet and direct them towards an eventual goal. More generally, however, 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. In other words a portal offers centralised access to all relevant content and applications (Tatnall 2005b).

Historically, the Web-portal concept probably developed out of search engine sites such as Yahoo!, Excite, and Lycos, which can now be classified as first-generation portals. These sites, however, quickly evolved into sites providing additional services such as e-mail, stock quotes, news, and community building rather than just search capabilities (Rao 2001). Eckerson (1999) outlines four generations of portals whose focus, in each case, is: generic, personalised, application, and role. The success of a portal depends on its ability to provide a base-site that users will keep returning to after accessing other related sites. As an entranceway onto the Web (or an intranet) it should be a preferred starting point for many of the things that a particular user wants to do there. A useful goal for those setting up a portal is to have it designated by many users as their browser start-up page.

BACKGROUND

There is no definitive and generally agreed categorisation of types of portal, but Portals Community (http://www.portalscommunity.com/) offers the following list: Corporate or Enterprise (intranet) portals, e-business (extranet) portals, personal (WAP) portals and public or mega (Internet) portals. Another categorisation (Davison, Burgess, & Tatnall, 2004) offers: general portals, community portals, vertical industry portals, horizontal industry portals, enterprise information portals, e-marketplace portals, personal/mobile portals, information portals and niche portals. Unfortunately, as the categories are not mutually exclusive some portals fit into more than one while others do not fit well into any. To further complicate any attempt at categorisation some implementations can span several different portal-types blended into a form of hybrid solution. A discussion of various different types of portals follows.

- **General (or Mega) Portals:** Portals aim to provide links to sites that can be either closely related or quite diverse. In the case of general portals the intent is to provide links to all sorts of different sites of the user's choosing. Many of these general portals have developed from being simple search tools (such as Yahoo), Internet service providers (such as AOL), and e-mail services (such as Hotmail). They now try to be the one-stop port-of-call for all (or at least many) user needs. An important goal of a general portal is to become the page a user returns to each time they want to access something on the Web. It will be successful if it can provide most of the services, information and links that users want. General portals often include services such as: free e-mail, links to search engines and categories of information, membership services, news and sports, business headlines and articles, personalised space with a user's selections, links to chat rooms, links to virtual shopping malls and Web directories. General portals make their money by selling advertising material. The success of a general portal depends on it generating a large volume of visitor traffic and this involves attracting new visitors, keeping them at the site for as long as possible, and on convincing them to return. The profitability of general portals,

however, has not been high (Sieber & Valor 2002, 2005).

- **Vertical Industry Portals:** Usually based around specific industries. They aim to aggregate information relevant to particular groups, or online trade communities of closely related industries to facilitate the exchange of goods and services in a particular market as part of a value chain. Vertical industry portals often specialise in business commodities and materials such as chemicals, steel, petroleum products or timber. Some specialise in services like cleaning, food, transport, staffing or publishing. Others specialise in interest areas such as camping, hiking or fishing equipment.
- **Horizontal Industry Portals:** Portals can be described as *horizontal* when they are utilised by a broad base of users across a horizontal market. Horizontal industry portals are typically based around a group of industries, or a local area.
- **Community Portals:** Often set up by community groups such as eLaunceston (http://www.elaunceston.com/) and Cape Breton, Canada (http://www.centralcapebreton.com/) or based around special group interests such as GreyPath (www.greypath.com) (Lepa & Tatnall, 2002), iVillage (http://www.ivillage.co.uk/) and Women.com (www.women.com). These portals attempt to foster the concept of a virtual community where all users share a common location or interest, and provide many different services depending on their orientation. The extent to which some community portals represent the interests and views of their *entire* community is, of course, open to interpretation.
- **Enterprise Information Portals:** The term *enterprise* (or *corporate*) *information* portals is now often applied to the gateways to corporate intranets that are used to manage knowledge within an organisation. These are designed primarily for business-to-employee (B2E) processes and offer employees the means to access and share data and information within the enterprise (Stein & Hawking, 2005). They may include facilities such as: a categorisation of information available on the intranet, a search engine covering the entire intranet, organisational news, access to e-mail, access to common software applications, document management, links to internal sites and popular external Web sites, and the ability to personalise the page. Variations include business intelligence portals that are designed to act as gateways to decision-making processes and to provide competitive intelligence, business area portals that support specific business processes such as personnel or supply chain management, and facilities designed to support the field sales force.
- **E-Marketplace Portals:** These extended enterprise portals often offer access to a company's extranet services and are useful for business-to-business processes such as ordering, tendering and supply of goods. An example is provided by the Swiss company ETA SA Fabriques d'Ebauches (http://www.eta.ch/), a member of *The Swatch Group* that produces watches for brands including Omega, Rado, Longines, Tissot, Certina and Swatch. The group consists of a number of individual companies that focus on producing components and movements for watches. The portal was set up principally to improve cost efficiency and facilitate quicker order processing between members of the group (Alt, Reichmayr, Cäsar, & Zurmühlen, 2002). E-marketplace portals can also be used for business-to-customer transactions, and a classic example is provided by the bookseller Amazon.com (www.amazon.com). Another example comes from the Association for Computing Machinery (http://portal.acm.org/portal.cfm) digital library.
- **Personal/Mobile Portals:** Following the trends towards mobile (or pervasive) computing, personal/mobile portals are increasingly being embedded into mobile phones, wireless PDAs and the like. Some appliances are also being equipped with personal portals aimed at allowing them to communicate with other appliances, or to be used more easily from a distance.
- **Information Portals:** Although these, in most cases, can also be classified into one of the other categories, information portals can also be viewed as a category in their own right as portals whose prime aim is to provide a specific type of information. The Sports Information portal ESPN (http://msn.espn.go.com/) is one example of such an information portal. Another is Portals Community (http://www.portalscommunity.com/), a portal dedicated to providing information about portals.
- **Specialised/Niche Portals:** Designed to satisfy specific niche markets. In many cases these can also be classified as Information Portals. For example, ESPN (http://msn.espn.go.com/) is targeted towards 18- to 34-year-old males, while iVillage (http://www.ivillage.co.uk/) is targeted towards women. Other specialised portals provide detailed industry information, often available only for a fee.

WHAT IS NEW ABOUT PORTALS?

A colleague recently remarked that there is nothing new about portals. In this comment he is both partially right and completely wrong. A simple definition sees a Web