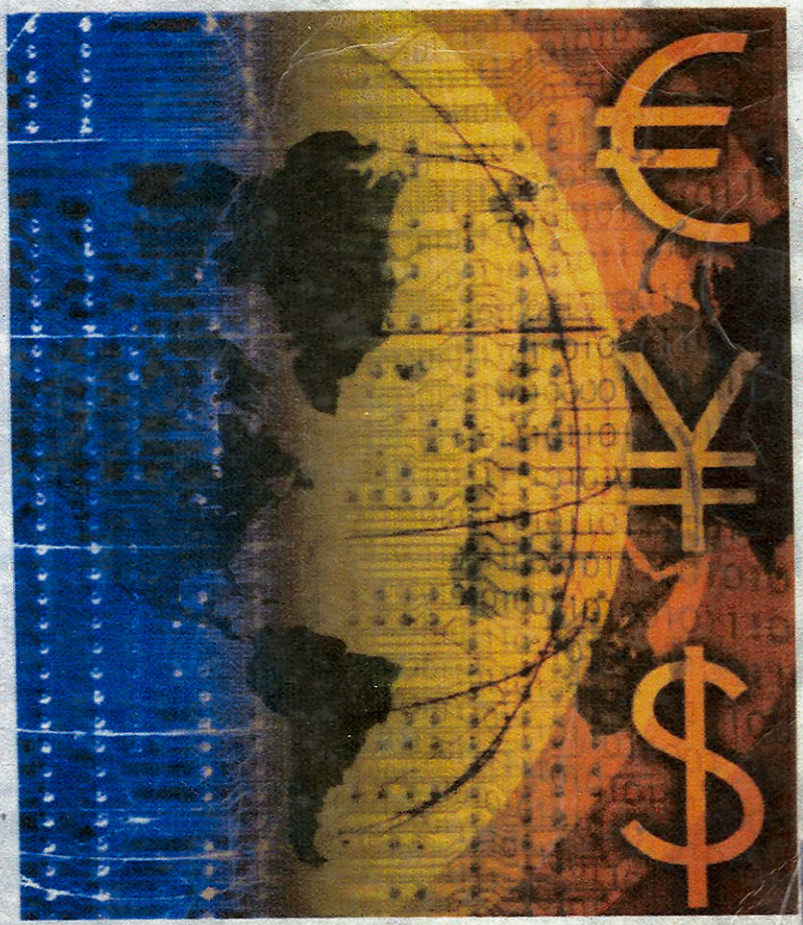
Eastern Economy Edition

ELECTRONIC COMMERCE

From Vision to Fulfillment

THIRD EDITION

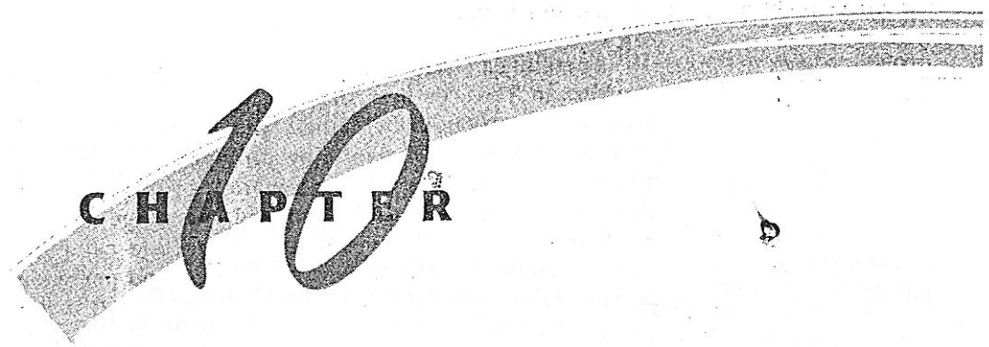


ELIAS M. AWAD

3. In what way(s) is promoting a product on the Web different from using mass media (TV, radio, newspaper, and so on) and word of mouth? Explain.
4. How can passive and aggressive (pull/push) ads work together for a given firm? Discuss.
5. What managerial implications can one draw regarding Internet marketing?

Web Exercises

1. As a network administrator of Shenanigan's, a retailer of children's products, you have seen the business expand from one specialty store in a downtown location to 11 stores throughout the Commonwealth of Virginia. The company hired a marketing research firm that found that most of its customers are females between 23 and 30 years of age who are avid users of the Internet. These customers would not mind ordering children's products (clothing, toys, and so on) on the Web.
   a. Design a business plan that can be used as a step for Shenanigan's to go on the Internet. In the plan, make sure to consider the elements covered in the chapter.
   b. Write a memo to Shenanigan's CEO, explaining things like customer tracking, banner advertising, and the like, that relate to the recommended site.
2. Interview a senior manager of a company that uses electronic marketing or e-commerce about his or her experience in this area of operation. Is the company making money? How costly has the building and maintenance of the electronic system been? What performance criteria does he or she use to determine success or poor performance? Write a short news release to your college newspaper to report your findings.
3. Go on the Internet and evaluate three companies that have recently announced their first Web site. How much e-marketing is there? How effective do you predict it will be?
4. Access two business Web sites and review their homepages. Evaluate the goals of the sites. Are they primarily used for advertising new products? General awareness? Special product sales? Career opportunities? How much overall e-marketing does each Web site offer?
5. Look up the following Web site and evaluate the uses and issues related to banner ads: Doubleclick.net (www.doubleclick.com).



WEB PORTALS AND WEB SERVICES

Learning Objectives

The focus of this chapter is on several learning objectives:

- The concept of a Web portal
- How portals transform a business
- The main techniques and functionalities of an enterprise portal
- Knowledge portals and their uses
- Web services and portals
- Who is building and sponsoring enterprise portals
- How to select a portal product

IN A NUTSHELL

One of the most important contributions of the Internet is information access via Web portals. Companies are fast learning that certain information or applications can become available more quickly and reliably via portals. Portals are among the leading success stories of e-business. They are the most powerful tools that help achieve communication goals. An e-commerce solution employs a portal for capturing information wherever it exists (in documents, managers' minds, databases, and historical data). Another important tool is a user interface that makes information available to a larger community of employees and knowledge workers. By providing an integrated framework for linking together people, processes, and information, portals play a central role in simplifying managerial complexity, increasing operational productivity, and adding value to a company's business operations.

content management: also referred to as content management system (CMS); a system used to manage the content of a Web site.

personalization: software system that allows an Internet site to provide the user with a Web page that reflects the interests, needs, and actions of the user.

Portals can be valuable tools for enhancing business processes. They employ distribution channels such as the Internet, intranets, and extranets that allow companies to take advantage of information lying dormant in their databases. Portals evolved from pure information providers to sophisticated interfaces containing knowledge management features such as **content management** for knowledge categorization, collaboration tools for knowledge sharing, and **personalization** capabilities to facilitate the search function. Box 10.1 is a summary of one area where portals have been useful.

THE BASICS

WHAT ARE PORTALS?

"Content is king" is the traditional credo of media firms on the Web. The goal of companies in portal services centers on content, helping people find a needle in a haystack, that is, achieve a particular task taking place in a complex setting. A **portal** gives access to relevant information, knowledge, and human assets delivered in a highly personalized manner. It is a Web site featuring common services as a starting point. It can refer to virtually any type of Internet entry point. Examples are corporate Web pages, Yahoo!, and state portals for renewing driver's licenses.

portal: a Web page that offers links to other Web sites. Portals can be broad or narrow, specific or general.

vertical portal: electronic exchanges that combine upstream and downstream e-commerce activities of specialized products and/or services.

A portal is a complex piece of software that delivers functionality and information coming almost exclusively from outside the portal. It provides coherent delivery and integration across the content sources. It also ensures a secure and reliable interface to participants in a business process and collaborates with users through the integration of external Web-based applications or internal back-office systems. Such a site is a frequent gateway to the Web (Web portal) or a niche topic (a **vertical portal**).

Portals are considered virtual workplaces for the following functions:

- Promoting knowledge sharing among different categories of end users such as customers, partners, and employees
- Providing access to structured data that are stored in data warehouses, database systems, and transactional systems
- Organizing unstructured data such as electronic documents, paper documents, lessons learned, stories, and the like
- Offering varieties such as portals on intranets, customer-facing information portals, supplier-facing information portals, and enterprise portals

Portals are emerging as the most promising tool for simplifying the access to data stored in various application systems, facilitating collaboration among employees, and assisting the company in reaching its customers. Other benefits include reduced cost, better quality, keeping pace with technology, improved customer satisfaction, and attracting skilled staff.

BOX 10.1

Role of Portals in the Insurance Industry

While Web portals have been around for a while, the trend now is toward ones specifically designed to meet the demands of an industry, and insurance is among those adopting this **knowledge management** (KM) strategy. Although insurers face the same basic needs as any organization—customer service, human resources, and accounting—the industry also has some distinctive **workflow** requirements that can be met through a tailored Web portal.

knowledge management: the process of gathering and making use of a firm's collective experience wherever it resides.

workflow: order in which work is performed.

For example, a claim that has come in for processing might take one route if the dollar amount is under a certain figure, and another route if the claim is above a certain figure. An application must be reviewed by a number of people in the organization before it is approved, and the group of people reviewing an application might vary, depending on the type of insurance the applicant is seeking and the level of documentation required.

The need for more effective communication and improved service spurred Humana (humana.com) to look for a Web-based KM system. Louisville, Kentucky-based Humana launched a Web-based community "hub" for doctors, patients, employers, and insurance brokers called Emphesys. The insurer deployed technology from InSystems. Electronic certificate delivery provides a dramatic reduction in the time it takes to put benefit plan information in customers' hands, as well as improved efficiency and customer satisfaction.

Certificate revision is also paperless. With InSystems' Calligo, new versions can be generated, delivered, and maintained in the repository without having to reissue everything on paper. If a state mandates a change, for example, the system can generate and deliver the revised document electronically, as well as highlight the differences for customers to see. The potential to do changes and put the documents in the hands of the insured quickly is a tremendous benefit and enhances company relationships with customers.

Source: Excerpted from Kim A. Zimmerman, "Portals Help Insurers and Their Customers," *KM World*, September 2002, 23.

From a business perspective, portals provide the company's employees with task-relevant information. They also can supply partners and customers with knowledge quickly. The goal of such a portal is the transparent enterprise, reducing the complexity of reaching needed information. For example, Hewlett-Packard has an employee portal on the Internet that lets an employee quickly look up a colleague's phone number, track product information, file expenses, book travel arrangements, and get daily updates on what is going on within the firm, all by clicking the mouse. Everything is right there on the portal. It is the best way to create a sense of community among employees and save on costs.

Portal disadvantages include the following:

- Difficulty integrating with other applications
- Organizational and financial costs
- Culture shock
- The need for additional investment in technology

- The difficulty of retaining skilled staff
- Uncertainty of benefits
- Expense of technology
- Unprepared suppliers
- Incompatibility with existing IT infrastructure (Pickering 2002)

Evolution of Portals

The original purpose of a portal was to consolidate a company's disparate data and allow ready access to that data. Web portals were mere search engines for news, e-mail, maps, stock quotes, shopping, and the like. They employed simple search technology for locating information on the Web applied to HTML documents. The first Web portals were online services such as AOL. They provided access to the Web and were one-stop destinations for advertisers and marketers, offering a variety of choices and options. Advertising formats included banners and buttons, text links, and multiformat sponsorships.

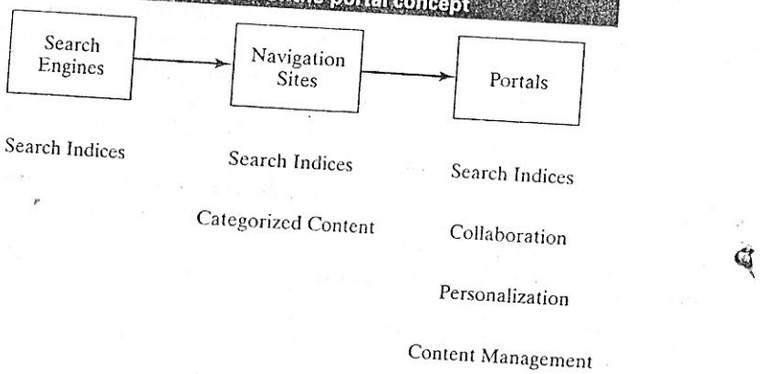
The next phase transformed today's portals to navigation sites; this describes the functions available at sites such as Quicken, MSN, and Yahoo!. Such portals categorize personal interests into groups (e.g., news, sports, finance, education, science, and others).

Portal Categories

A portal may focus either on many subjects (a **horizontal portal** like Yahoo! or MSN) or a specific subject (a vertical portal like WebMD). Portals also can be enterprise or Internet public portals. To facilitate access to a large accumulation of information, portals evolved to include advanced search capabilities and taxonomies. With an emphasis on information, they were called information portals. The evolution of the portal concept is shown in Figure 10.1.

horizontal portal: electronic exchange that focuses on many subjects (e.g., Yahoo!).

FIGURE 10.1 Evolution of the portal concept



Enterprise Information Portals. These portals provide the next step in the portal technology evolution. In November 1998, Christopher Shilakes and Julie Tylman of Merrill Lynch's Enterprise Software team introduced the concept of the **enterprise information portal.** The concept was described as "applications that enable companies to unlock internally and externally stored information and provide users a single gateway to personalized information needed to make informed business decisions." They are an amalgamation of software applications that integrate, manage, analyze, and distribute information across and outside an enterprise (including business intelligence, content management, data warehouse and data mart, and data management applications).

enterprise information portal: a portal that ties together multiple, heterogeneous internal repositories and applications, as well as external content sources and services, into a single browser-based view that is individualized to a particular user's task or role.

Companies are becoming more aware of the potential value of information lying dormant in various repositories. Integration and consolidation are important goals of enterprise portals. Applications are integrated by combining, standardizing, analyzing, and distributing relevant information and knowledge to the end user—customers, employees, or partners. (See Box 10.2.)

A step forward in enterprise portal services (EPS) is globalizing a company's portal site. It is a process of positioning a company's people, processes, and technologies to communicate and operate in the world marketplace. This is quite a challenge, considering the cultural, language, and ethnic differences within U.S. firms. It is the direction more and more international firms take in an effort to capitalize on international revenue and knowledge-sharing opportunities.

Knowledge Portals. We have learned quickly that successful companies in the twenty-first century will be those who do quality work in the way they capture, store, and leverage what their employees know. It is important, then, not to focus solely on technology, because the large number of unsuccessful knowledge management projects was unable to deploy technological potentials to establish long-term solutions for efficient knowledge transfer or skill management.

Today's trend is to build applications that combine the search, analysis, and dissemination of information through knowledge portals. In **knowledge portals,** the focus is less on information content and more on improving knowledge worker productivity. The knowledge portal is a key component in knowledge management architecture and the central piece that allows producers and users of knowledge to interact. It provides a variety of information on various topics and can be customized to meet a user's individual needs online. Two types of interface are provided:

knowledge portal: a Web page or a facility that offers a single, uniform point from which all of an enterprise's data sources can be accessed.

- Knowledge producer interface allows the knowledge worker to gather, analyze, and collaborate with peers or colleagues to generate new knowledge.
- Knowledge consumer interface facilitates the dissemination of knowledge across the enterprise. A key feature is a sophisticated personalization facility that takes into account the consumer profile before providing customized results.

Historically, portals started as Web-based applications, providing a single point of access to distribute online information like documents stemming from a search

BOX 10.2

The Emerging Next Generation Portals

The first generation portal strove to make sense of government for the external customer—it served as a thin "lid" stretched to cover multiple government stovepipes. The next generation portal provides a new interaction point for government's key stakeholders:

- Citizens—anticipates constituent needs and delivers content, services, and transactions on their terms
- Businesses—reduces the cost in time and resources to establish, operate, and manage a fully compliant business
- Government employee—provides one-stop access to people, applications, and content from across organizations to save valuable time and support key processes and customer service
- Government entities—combines services from multiple organizations to provide integrated delivery to the end customer and to create effective interagency process.

The next generation portal infrastructure goes beyond a single Web site—it positions underlying content and systems to create multiple Web portals for specific categories of stakeholders. It also creates specialized Web portals for various types of channels—such as the interactive voice response (IVR) and mobile device portals—to extend government's ability to serve customers on their terms.

The list below presents the digital government portal value proposition as it relates to the six essential factors of the Value Measuring Methodology, a framework presented by the Social Security Administration and the General Services Administration:

- Strategic/political value—leadership representation of elected officials; highly visible, constituent-focused improvements near term
- Direct customer value—simple navigation to cross-agency information and services; personalized services
- Government financial value—minimize total costs, achieve economies of scale, and provide end-to-end architecture
- Social/public value—transparency and accountability, consistent security/privacy
- Government operational/foundation value—increase employee effectiveness/productivity, accelerate deployment of new online services
- Risk—reduce deployment risk of new online services, decrease IT risk through common infrastructure, enhance security

Specialized portals include ones for homeland security, health and human services partnership, business, voice, and authentication portals; each with its own unique benefits, services, and customization.

Source: Excerpted from Mark Youman and Matthew Thompson, "Know-how," *AMS,* 2004.

and links to specialized Web sites. They quickly evolved to include advanced search capabilities and organizing schemes like taxonomies. Because of their emphasis on information, they were called information portals or first-generation portals. Yahoo! was one of the first and continues to be one of the most popular information portals on the Internet.

Information portals used by knowledge workers are referred to as knowledge portals, to distinguish the unique role a knowledge worker plays in analyzing and evaluating

knowledge worker: a person who transforms business and personal experience into knowledge through capturing, assessing, applying, sharing, and disseminating it within the organization to solve specific problems or to create value.

information for problem solving. A **knowledge worker** is a person who transforms business and personal experience into knowledge through capturing, assessing, applying, sharing, and disseminating it within the organization to solve specific problems or to create value.

Knowledge portals provide a flexible knowledge climate to a potentially large number of users. The goal is not only to provide a library-like pool of information, but to actively support the user in complex problem solving at the time needed in the format requested. Companies will have the ability to build technology around knowledge requirements (not the other way around), customize desktop access around individual requirements, make better decisions as a result of quick access to crucial information, and maximize speed, efficiency, accuracy, and flexibility of knowledge transfer. (See www.amanet.org/books/ catalog/0814407080.htm.)

KEY CHARACTERISTICS

Enterprise knowledge portals distinguish knowledge from information. They provide a facility for producing knowledge from data and information. They also provide a better basis for making decisions than do other portals. Gaining knowledge means competitive advantage over those with mere information. A summary of the key characteristics of enterprise information and enterprise knowledge portals is shown in Table 10.1.

enterprise knowledge portal: an electronic doorway into a knowledge management system.

To illustrate, take the case of the army knowledge online portal. The objective of this portal is to transform the army into a networked organization that leverages its intellectual capital to better organize, train, equip, and maintain a strategic land combat force. More specifically, the army needs quick access to its enterprise information at a low cost, and it must be able to use information technology to leverage army-wide innovation in services, processes, and knowledge creation.

TABLE 10.1 Knowledge portals versus information portals

Enterprise Information Portals	*Enterprise Knowledge Portals*
• Use both "push" and "pull" technologies to transmit information to users through a standardized, Web-based interface. • Integrate disparate applications including content management, business intelligence, data warehouse/data mart, data management, and other data external to these applications into a single system that can "share, manage, and maintain information from one central user interface." • Access external and internal sources of data and information and support a bi-directional exchange of information with these sources.	• Goal-directed toward knowledge production, knowledge acquisition, knowledge transmission, and knowledge management. • Focus on enterprise business processes (e.g., sales, marketing, and risk management). • Provide, produce, and manage information about the validity of the information it supplies. • Include all EIP functionalities.

Source: J., Firestone, "Enterprise Knowledge Portals," White Paper 8, www.dkms.com. Accessed March 2003.