Chapter 3.10
Impact of Portal Technologies on Executive Information Systems

Udo Averweg
Information Services, eThekwini Municipality & University of KwaZulu-Natal, South Africa

Geoff Erwin
Cape Peninsula University of Technology, South Africa

Don Petkov
Eastern Connecticut State University, USA

INTRODUCTION

Internet portals may be seen as Web sites which provide the gateway to corporate information from a single point of access. Leveraging knowledge—both internal and external—is the key to using a portal as a centralised database of best practices that can be applied across all departments and all lines of business within an organisation (Zimmerman, 2003). The potential of the Web portal market and its technology has inspired the mutation of search engines (for example, Yahoo®) and the establishment of new vendors in that area (for example, Hummingbird® and Brio Technology®). A portal is simply a single, distilled view of information from various sources. Portal technologies integrate information, content, and enterprise applications. However, the term portal has been applied to systems that differ widely in capabilities and complexity (Smith, 2004). A portal aims to establish a community of users with a common interest or need.

Portals include horizontal applications such as search, classification, content management, business intelligence (BI), *executive information systems* (EIS), and a myriad of other technologies. Portals not only pull these together but are also absorbing much of the functionality from these complementary technologies (Drakos, 2003). When paired with other technologies, such as content management, collaboration, and BI, portals can improve business processes and boost efficiency within and across organisations (Zimmerman, 2003). This chapter investigates the

level of impact (if any) of portal technologies on EIS. It proceeds with an overview of these technologies, analysis of a survey on the impact of Web-based technologies on EIS implementation, and conclusions on future trends related to them.

BACKGROUND ON PORTAL TECHNOLOGIES AND EIS

Gartner defines a portal as "access to and interaction with relevant information assets (information/content, applications and business processes), knowledge assets and human assets, by select target audiences, delivered in a highly personalized manner" (Drakos, 2003). Drakos (2003) suggests that a significant convergence is occurring with portals in the centre. Most organisations are being forced to revisit their enterprise-wide Web integration strategies (Hazra, 2002). A single view of enterprise-wide information is respected and treasured (Norwood-Young, 2003). Enterprise Information Portals are becoming the primary way in which organisations organise and disseminate knowledge (PricewaterhouseCoopers, 2001).

EIS grew out of the development of information systems (IS) to be used directly by executives and used to augment the supply of information by subordinates (Srivihok, 1998). For the purposes of this article, an Executive Information System is defined as "a computerized system that provides executives with easy access to internal and external information that is relevant to their critical success factors" (Watson et al., 1997). EIS are an important element of the information architecture of an organisation. Different EIS software tools and/or enterprise resource planning (ERP) software with EIS features exist.

EIS is a technology that is emerging in response to managers' specific decision-making needs (Turban et al., 1999). Turban (2001) suggests that EIS capabilities are being "embedded in BI." All major EIS and information product vendors now offer Web versions of their tools, designed to

function with Web servers and browsers (PricewaterhouseCoopers, 2002). With EIS established in organisations and the presence of portal technologies, there is thus a need to investigate the link (if any) between EIS and portal technologies.

Web-based technologies are causing a reexamination of existing information technology (IT) implementation models, including EIS (Averweg, 2003). Web-based tools "are very much suited" to executives key activities of communicating and informing (Pijpers, 2001). With the emergence of global IT, existing paradigms are being altered, which is spawning new considerations for successful IT implementation. Challenges exist in building enterprise portals as a new principle of software engineering (Hazra, 2002). Yahoo® is an example of a general portal. Yahoo® enables the user to maintain a measure of mastery over a vast amount of information (PricewaterhouseCoopers, 2001). Portals are an evolutionary offshoot of the Web (Norwood-Young, 2003). The Web is "a perfect medium" for deploying decision support and EIS capabilities on a global basis (Turban et al., 1999).

As the usage of IT increases, Web-based technologies can provide the means for greater access to information from disparate computer applications and other information resources (Eder, 2000). Some Web-based technologies include: intranet, Internet, extranet, e-commerce business-to-business (B2B), e-commerce business-to-consumer (B2C), wireless application protocol (WAP), and other mobile and portal technologies. The portal has become the most-desired user interface in Global 2000 enterprises (Drakos, 2003).

SURVEY OF WEB-BASED TECHNOLOGIES' IMPACT ON EIS

The technology for EIS is evolving rapidly and future systems are likely to be different (Sprague & Watson, 1996). EIS is now clearly in a state of flux. As Turban (2001) notes, "EIS is going through

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