Portals for Workflow and Business Process Management

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INTRODUCTION

A growing number of portal software vendors offer functionality to allow users to manage business processes and workflows. This functionality is offered either out-of-the-box (integrated into the portal software) or as a plug-in component that may be added at a later stage as the need for it arises, or through interfaces for linking the portal to specialised business process or workflow management software.

This article discusses the present landscape of the management of business processes or workflows through portals, focusing on the major features of the available technologies, their applications, and trends.

BACKGROUND

A business process is an identifiable set of activities that transforms some tangible or intangible raw material into a product that is valuable to a customer or to another process. The process is executable at definable times and places by human or other actors, has a clear beginning and end, is signified by events, and can communicate with other processes (Dalmaris, 2006). In other words, a business process involves a number of steps that are executed so that a wanted product is produced. Every organisation executes at least one business process that produces a tangible or intangible product from which the organisation generates revenue. Usually, organisations must execute secondary supportive business processes such as payroll or recruitment. Over the last 10 years, there is a trend of outsourcing these processes to external specialists. The importance of business processes has been highlighted by authors such as Davenport (1993), Hammer (1996), and Harmon (2003), who regard an organisation as a system of business processes.

The term “workflow” generally denotes a smaller or simpler (than a typical business process) document-based business process. Harmon (2003, p. 482) defines workflow as “a generic term for a process or for the movement of information or material from one activity (worksite) to another.” The workflow management coalition also describes the term as being equivalent to a business process, albeit involving more documents or information than a general business process does (Fischer, 2000, p. 15).

Because of the similarity between the two terms, the term business process will be used to represent both in this article. This is not to say that the two are the same, but that they are concepts, which are related closely enough so as to be examined together for the purpose of this article.

As a business process is the engine by which revenue is generated for the organisation, there are two areas of business management that are of critical importance: the efficient and effective execution of the business process each time it runs, and the swift change of its configuration to meet new demands or conditions. What is generally known as business process management is the managerial activity that is predominately concerned with these two areas.

Over the last 10 years, software vendors have produced applications that allow managers to improve their ability to manage their business process. Typically called business process management systems (BPMS), these applications provide tools for the design, execution, control, and evaluation of processes.

Most design tools are graphical, allowing the process manager to connect icons representing process resources such as process members, data repositories or functions, thus, producing the execution pattern and configuration of the process. This is known as the process model.

Often, the graphical design tools can automatically generate computer-executable code from the process model. The code can be submitted and executed by the BPMS’s execution engine. This software engine can communicate with other systems of the organisation (HR databases, e-mail servers, document server, printers, etc.) or even external resources (various Web services are the most popular). The execution engine runs the business process, provides notifications of various events (i.e., completion, interruption), keeps logs of intermediate results, and transacts with other systems if required. A user can interact with the business process using a variety of methods. Predominately, either a Web interface is used or a client software application that runs on the desktop.

The process manager can use the control tool to inspect the progress of the process. At any given point, information about the past and present status can be shown in a graphical environment. In some cases, the process manager can intervene and alter the configuration of the process during run time, with the new configuration being committed to the execution server and incorporated in the currently running