Chapter 8.5

Next–Generation IT for Knowledge Distribution in Enterprises

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ABSTRACT

From the Knowledge Management perspective, Knowledge distribution is a critical process in organizations. As many of the other Knowledge-related processes, it has received basic support from Information Technologies in the form of databases and repositories, client-server systems and other standard IT. Nevertheless, most basic IT tools fail to provide the flexible environment Knowledge distribution needs to be effective in many organizations. In this chapter we review some very advanced IT that are being proposed for supporting Knowledge distribution processes. Even though they are not mainstream technologies nowadays, they show actual trends that are expected to materialize in future generations of IT for Knowledge distribution.

INTRODUCTION

The key factors that determine success in companies and national economies rely on effectiveness in gathering and managing knowledge nowadays (United Nations, 2000). In economies based on knowledge, creation, distribution, and use of information to generate knowledge increases opportunities for development. In this context of increasing economic importance of knowledge, Knowledge Management (KM, Beckman, 1999) has emerged with the goal of taking advantage of information and knowledge every company owns. Most authors in

KM agree with the need for executing the processes of generating, storing and distributing knowledge.

The process of generating knowledge encourages continuous improvement and growth through innovation, generation of new ideas, pattern recognition and development of new processes (Ruggles, 1997). Storing process implies keeping information in the organization repository; this is the organizational memory of the company. Finally, distribution has the goal of making available useful information to the members of the company in the shortest time. This fact allows users to access the information no matter where they are.

One of the strongest catalysts of KM has been the necessity for managing large amounts of information efficiently (Carrillo, 1999). Aside from the importance of generating and storing the necessary information in order to generate knowledge, the efficient distribution of such information has become a relevant subject last years. In companies, sharing knowledge resources via distribution is essential for two reasons: first, because it avoids duplicating efforts to obtain and maintain knowledge. Second, because it encourages consistent decision-making since all employees have access to the same knowledge (Probst, Raub & Romhardt, 1999).

In spite of its importance, most of the information stored in a company repository is never used since it is not distributed efficiently. Nowadays, one of the most challenging issues is the time spent by employees searching for information already stored in their repositories (Dalkir, 2005). Introduction of IT in every aspects of society has allowed storing and generating gigabytes of information, however, it hardly reaches relevant people at the right time. According to Sarnikar (2007), in order to accomplish an efficient information flow, proactive KM technologies are required; these technologies should automate and control distribution of information. Although many techniques of distribution and filtering have been developed last years, providing the right knowledge to users in the right context, continues being a complex issue (Sarnikar, 2007).

We can safely conclude that IT has not supported in a satisfactory way Knowledge Distribution (KD) processes. In this situation, solutions could come from several fronts:

- Develop and refine KM strategies that could improve KM processes efficiency with the current IT sophistication level;
- Introduce more flexible and sophisticated IT tools that could provide a more flexible and better support to KM processes.

In this chapter we investigate the second possibility, though having in mind that KM strategies refinement is also an essential issue, which is being explored by researchers and practitioners (Liebowitz, 2005).

BACKGROUND

Many IT tools and strategies have been used for supporting KD. For the sake of classifying them, we could identify two "pure" strategies for sharing knowledge that they support (Albino, 2004)

1. *Codification*: Tries to "encode" that is, make explicit knowledge. This could take the form of manuals, guides, filled forms eventually stored in a database, or any symbolic information that encodes knowledge available to all or some individuals in the organization.
2. *Socialization*: Leaves knowledge in people instead of expressing it with symbols. This kind of knowledge is sometimes called "tacit" knowledge. The associated way of transferring it is by meetings or any other form of people interaction.

Current support for socialization strategies is very limited. It is restricted to manage the conditions required for people's interaction, such as calendar or schedule management. Nevertheless,

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