### Chapter 14

# Web-Based
# Knowledge Management

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*The importance of knowledge management has been recognized both in academia and in practice. Meanwhile, the web technology is being used as a new and common medium to support the collective nature of knowledge management. In this chapter, 4 types of web-based knowledge management models are identified and discussed. It is believed that more models exist and could be identified. Nonetheless, these 4 models are believed to be able to reflect the current level of web-based knowledge management, which can be basically described as content-based information retrieval and topic-oriented information association and organization. This chapter concludes that the current web-based knowledge management is at a lower level, and, the potential of the web technology based knowledge management has just started to be realized. The study of the models identified in this paper would provide insights on leveled knowledge management, what should be contained in a higher level of knowledge management system, and how knowledge management support systems can be technically implemented.*

## INTRODUCTION

In the recent years, the importance of knowledge management has been recognized both in academia and in practice. Organizations have started talking about knowledge management, organizational learning, organizational memory, and in-

tangible assets. As an example, in the second Microsoft's CEO summit, which was held in May 99 and attracted more than 120 CEOs and other corporate executives from Fortune 1000, the keynote speech delivered by Bill Gates focused on the theme of "knowledge management." Gates outlined his vision through a term he coined - Digital Nervous System, which is an integrated electronic network that gives people the information they need to solve business and customer problems. According to Gates (1999), an effective Digital Nervous System should include access to the Internet, reliable e-mail, a powerful database and excellent line-of-business applications.

However, knowledge management, as a conscious practice, is still young (Hansen et al., 1999). Existing studies about knowledge management are often non-empirical and fail to provide practical guidelines to the development of knowledge management systems. How to support knowledge management is largely a research topic, and the roles of information technology in supporting knowledge management are not clearly recognized. As an MIT survey revealed, companies tend to overlook intangibles when they evaluate information technology (Brynjolfsson, 1994). Using information technology to support knowledge management is still in its infancy.

But with the web technologies are becoming sophisticated, this picture is quickly changing in the most recent years. Preliminary or lower level knowledge management systems have been developed and deployed. The emerging Internet and Web technologies are not only changing the landscape of competition and the ways of doing business, but also the ways of information organization, distribution and retrieval. Web-based technology is enabling the management of information at the document management level, in contrast to the record-level information management. For example, we solve everyday problems through communicating with each other by using documents and exchanging ideas or perspectives about an issue, rather than dealing with fields or records. We are transiting from record-level information management to document-level information management, with the latter is viewed as a lower level of knowledge management by the author in this paper.

In this chapter, web-based knowledge management is explored. Web-based technology is making effective knowledge management a reality, which can make a company gain an advantage over its competitors. Specifically, in this chapter, four representative types of the current web-based knowledge management models are studied. The study of these models will shed light on what should be contained in a knowledge management system, the levels of knowledge management support, and how knowledge management support systems can be technically implemented. The results of this study would also give some directions to the effective knowledge management. This chapter is organized as follows. In the next section,

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