Abstract

This chapter introduces a generic modeling approach that explicitly represents the perspectives of stakeholders and their evolution traversing a collaborative process. This approach provides a mechanism to analytically identify the interdependencies among stakeholders and to detect conflicts and reveal their intricate causes and effects. Collaboration is thus improved through efficient knowledge management. This chapter also describes a Web-based information system that uses the perspective model and the social network analysis methodology to support knowledge management within collaboration.
Introduction

The ability to effectively manage distributed knowledge and business processes is becoming an essential core competence of today’s organizations. Various knowledge management theories and approaches have been proposed and adopted (Earl, 2001). These include ways to align knowledge processes with strategies (Spender, 1996), to leverage organizational learning abilities (Nonaka & Takeuchi, 1995), and to build IT infrastructures to support knowledge activities (Lu, 2000; Zack, 1999). Knowledge management systems (KMSs) can be viewed as the implementation of the KM strategy. KMS improves the knowledge processes through IT infrastructures and information-processing methodologies (Tanriverdi, 2005). Although the importance of knowledge management has been well recognized, organizations are still facing the problems of how to successfully implement knowledge management. In order to effectively utilize these theories and technologies to support teamwork, it is necessary to gain more fundamental understandings of the characteristics of knowledge management within collaboration processes.

Background

Previous knowledge management approaches can be generally classified into two categories (Hanson, Nohira, & Tierney, 1999). The strategies supporting knowledge replication provide high-quality, fast, and reliable information systems implementation by reusing codified knowledge. The strategies supporting knowledge customization provide creative, analytically rigorous advice on high-level strategic problems by channeling individual expertise. The codification approaches view information technology as the central infrastructure of knowledge-based organizations. KMSs are thus treated as system-integration solutions or applications that retain employees’ know-how. The major concern of these approaches is how to help organizations monitor the trends of rapidly changing technologies and inventions in order to recognize new applications that may provide competitive advantage (Kwan & Balasubramanian, 2003). However, IT is just one of the elements of KMS. As knowledge management involves various social and technical enablers, the scope, nature, and purpose of KMS vary during the collaboration processes. Researches from the knowledge-customization perspective focus on
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