

Implementation of process management system based on active object-oriented database

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Abstract

As the environment around organizations has rapidly changed, traditional organizational structure is required to be redesigned from vertical and hierarchical structure to horizontal and networked. New management tool called Business Process Reengineering (BPR) and information technology (IT) like groupware or workflow management system are therefore introduced to define and control the changed structure and procedures of organizations. When modeling the horizontal and networked organizations, we must consider that the processes in them have multi-layered hierarchy and asynchronous interactions between subprocesses. Hence, a systematic approach is required to transparently manage complicated process structures. Most current tools and associated methodologies do not provide an integrated framework of process management for reusing processes and defining business rules between them.

This paper proposes a framework of a process management system based on an active object-oriented database. The framework provides a template-process by which the process modeler can model and analyze processes. We define a class for multi-layered processes using an object-oriented organizational procedure modeling. The multi-layered process class consists of activities, subprocesses, and rules that define relationships between processes. A set of activities for BPR such as process modeling, analysis, and implementation, can be integrated in the process management system.

Keyword : process management system, active object-oriented database