Chapter XIV


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ABSTRACT

Process information sharing is a beneficial tool through which a company can monitor and control its outsourced business process transparently, as if the outsourced business process is performed locally. However, autonomy and agility of insourcing companies providing outsourcing services have placed limitations in the development of process information sharing, which the previous research has not satisfactorily addressed. This chapter proposes a federated process framework and its system architecture that provide a conceptual design for effective implementation of process information sharing supporting the autonomy and agility of the insourcing companies. First, in terms of autonomy, the federated process framework supports a flexible sharing policy to control the amount of shared data so that the framework can be applied to a wide variety of practical situations, from loosely-coupled cases to tightly-coupled cases. Second, in terms of agility, the system architecture based on the federated process framework supports the entire life cycle of business process outsourcing by allowing sufficient adaptability to the changes of business environments. We develop the framework using an object-oriented database and Extensible Markup Language to accommodate all the constructs and their interactions within object-oriented message exchange model in a distributed computing environment.
INTRODUCTION

Researchers and business consulting firms increasingly emphasize the importance of effective outsourcing in terms of revenue increase and cost reduction (Gartner, 2002; Hafeez, 2002). To accommodate such goals effectively, the outsourcing target requires including the business processes as well as IT infrastructure (Berfield, 2002), and such a type of an outsourcing model is called business process outsourcing. Specifically, by outsourcing a part of local business processes with its supporting systems, a company could reduce the cost related to human resource and system development, while focusing on its core business without bothering about the outsourced part. However, Gartner’s recent survey (2003) of corporate executives across Asia/Pacific shows that the fear of loss of control is one of the most prominent reasons for not outsourcing. To remove the concern for the control, a company should be able to monitor its outsourced business process transparently, as if the outsourced one is executed internally. By enabling this transparent process monitoring, the company could streamline and coordinate the internally-executed business processes with the outsourced one in its value chain. The key technique for achieving the transparent process monitoring is process information sharing (Alonso, 1999; Ball, 2002; Georgakopoulos, 1999). Process information sharing means that participating organizations in business process outsourcing provide visibility of their internal process information to each other in order to enhance process monitoring capabilities.

In the example of an online store case, most online stores outsource their delivery operations to external transportation companies for the purpose of cost efficiency, and then focus on their core business functions, such as marketing and order processing. Then, if an on-line store receives detailed delivery process information from its collaborating transportation company, it can effectively carry out and monitor full steps of order fulfillment processes, from order capturing through picking and packing, and finally to product delivery. In terms of the customer satisfaction, such process information sharing allows the online store to provide customers an extended order tracking service to monitor the overall process status for their orders. In terms of the service quality control, the online store can check the quality of the transportation company’s services by monitoring the status of the delivery process.

Most of the previous research on process information sharing has focused on demonstrating such benefits (Ball, 2002; Lee, 1997; D’Amours, 1999; Zhou, 1998) and providing appropriate underlying system architecture or design for process information sharing (Alonso, 1999; Georgakopoulos, 1999; Kuechler, 2001; Mori, 1999; Workflow Management Coalition, 2000). However, research efforts considering the issues caused from the autonomy and agility that are the inherent properties of modern organizations are few, even though these issues make it difficult to accommodate process information sharing in many real situations.

Motivation and Research Questions

Autonomy means that an outsourcing service provider, called an insourcing company, can decide whether to and how much of its local data to share with an outsourcing service requester, called an outsourcing company. In spite of outsourcing agreements, most insourcing companies are usually reluctant to expose their core business information on their internal business logic and full process status to outsourcing companies (Bolcer, 1999; Georgakopoulos, 1999; Merz, 1999). Such unwillingness often conflicts with the need to share data,
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