Workflow Automation: Applications, Technology and Research

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Abstract:

With increasing global exposure, today's enterprises must react quickly to changes, rapidly develop new services and products, and at the same time improve productivity and quality and reduce cost. *Business process re-engineering* and *workflow automation* to coordinate activities throughout the enterprise are recognized as important emerging technologies to support these requirements. Rosy estimates of a multi-billion dollar marketplace for workflow software has resulted in significant commercial activities in the area, with nearly hundred products now claiming to support workflow automation. While many help to automate document- and image-driven office applications, therefore helping to improve the productivity of small groups, most current products fail to support:

- mission critical and enterprise-wide applications with requirements such as failure handling and recovery, and
- interoperability with existing heterogeneous information systems.

In this tutorial, we will discuss requirements for applications involving workflow automation, present an overview of the current state-of-the-art in products, and present some of the research efforts that are attempting to respond to unmet challenges.

Instructor:

Dr. Amit Sheth directs the Large Scale Distributed Information Systems (LSDIS) Lab and is an Associate Professor of Computer Science at the University of Georgia. Earlier he worked for nine years in the R&D labs at Bellcore, Unisys, and Honeywell. He has lead projects on heterogeneous DDBMS, factory information system, integration of AI-database systems (BrAID), transactional workflows (PROMT and METEOR), federated database tools (BERDI and TAILOR), multidatabase consistency, and data quality (Q-Data). LSDIS lab maintains very active collaboration with industry, and has won significant projects in the areas of interoperable information system and workflow management (under the Healthcare Information Infrastructure Program awarded by NIST) and global information system and management of heterogeneous digital data (awarded in the Massive Digital Data Systems initiative). Prof. Sheth has published over 70 papers, given over 45 invited talks and 13 tutorials, and lead two international conferences and a workshop as a General/Program (Co-)Chair. He has also served twice as an ACM Lecturer, has been on over twenty five program and organization committees, and is on the editorial board of four journals. http://www.cs.uga.edu/LSDIS.