Panel: Agent-Mediated E-Commerce: *Agents, Mobility, Workflow and XML*

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Panel Position

Effective large-scale E-commerce will require significant coordination and intelligent mediation between independently developed, dynamically composed E-services. Agents, workflow, mobile code, publish/subscribe communication, XML and HP E-Speak are key technologies in HP Laboratories research and development for next-generation e-commerce systems and e-service management.

Multiple agents work together to represent users and organizations, and mediate interactions, negotiations, brokering and management. These environments are highly dynamic, heterogeneous and federated. People, agents and computing platforms may be mobile or fixed; and commercial partnerships may be short-term or long term.

XML serves as the *lingua franca* for data, description, vocabularies, communication and negotiation. Workflow can play a significant role in choreographing the interactions and conversations between agents; agents can help make business process workflow more flexible and robust in a dynamically federated world. The management of dynamically composed e-services and of business process workflow enacted by the e-service environment are closely related, and can support each other in an agent-mediated world. Agent behavior can be modified and controlled by dynamic downloaded scripts and code representing commands, tasks, conversation protocols, workflow steps and ontology interpreters.

This talk describes our experiences and several of the issues that must be addressed concerning mobility, service composition, naming, management, communication and security.

Biography

Martin L. Griss is a Principal Laboratory Scientist at Hewlett-Packard Laboratories, Palo Alto, California. At HP since 1982, he has researched software engineering processes and systems, systematic software reuse, object-oriented development and component-based software engineering. He is currently working on model-driven, agent-based application and e-service management systems. He created the first HP corporate reuse program, and led HP efforts to standardize UML for the OMG. He was previously director of the Software Technology Laboratory at HP Laboratories, and an Associate Professor of Computer Science at the University of Utah. He is co-author of the book "Software Reuse: Architecture, Process and Organization for Business Success". He has written numerous articles on software engineering and reuse, and lectures widely on systematic reuse and software process improvement. He is a member of the ACM SIGSOFT Executive Committee, and of the joint IEEE/ACM software engineering education project. He is a member of the SSR steering committee, the ICSE99, UML99, OOPSLA99, TOOLS99, ICSR 2001 and ICSE2001 program committees, and the ICSE2002 organizing committee.