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Service-Oriented Computing: Agents, Semantics, and Engineering

AAMAS 2008 International Workshop, SOCASE 2008
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Proceedings

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Preface

The global trend towards more flexible and dynamic business process integration and automation has led to a convergence of interests between service-oriented computing, semantic technology, and intelligent multiagent systems. In particular the areas of service-oriented computing and semantic technology offer much interest to the multiagent system community, including similarities in system architectures and provision processes, powerful tools, and the focus on issues such as quality of service, security, and reliability. Similarly, techniques developed in the multiagent systems and semantic technology promise to have a strong impact on the fast-growing service-oriented computing technology.

Service-oriented computing has emerged as an established paradigm for distributed computing and e-business processing. It utilizes services as fundamental building blocks to enable the development of agile networks of collaborating business applications distributed within and across organizational boundaries. Services are self-contained, platform-independent software components that can be described, published, discovered, orchestrated, and deployed for the purpose of developing distributed applications across large heterogeneous networks such as the Internet.

Multiagent systems are also aimed at the development of distributed applications, however, from a different but complementary perspective. Service-oriented paradigms are mainly focused on syntactical and declarative definitions of software components, their interfaces, communication channels, and capabilities with the aim of creating interoperable and reliable infrastructures. In contrast, multiagent systems center on the development of reasoning and planning capabilities of autonomous problem solvers that apply behavioral concepts such as interaction, collaboration, or negotiation in order to create flexible and fault-tolerant distributed systems for dynamic and uncertain environments.

Semantic technology offers a semantic foundation for interactions among agents and services, forming the basis upon which machine-understandable service descriptions can be obtained, and, as a result, autonomic coordination among agents is made possible. On the other hand, ontology-related technologies, ontology matching, learning, and automatic generation, etc., not only gain in potential power when used by agents, but also are meaningful only when adopted in real applications in areas such as service-oriented computing.

This volume consists of the proceedings of the Service-Oriented Computing: Agents, Semantics, and Engineering (SOCASE 2008) workshop held at the International Joint Conferences on Autonomous Agents and Multiagent Systems (AAMAS 2008). The papers in this volume cover a range of topics at the intersection of service-oriented computing, semantic technology, and intelligent multiagent systems, such as: service description and discovery; planning, composition and negotiation; semantic processes and service agents; and applications.

The workshop organizers would like to thank all members of the Program Committee for their excellent work, effort, and support in ensuring the high-quality program and successful outcome of the SOCASE 2008 workshop. We would also like to thank Springer for their cooperation and help in putting this volume together.

May 2008

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