

Preface

International Workshop on Multi-Agent Systems as Middleware and Architectures for Business Systems

MAS²

Lars Braubach, Daniel Moldt, Alexander Pokahr

Department of Informatics
Faculty of Mathematics, Informatics, and Natural Sciences
University of Hamburg
Vogt-Kölln-Str. 30, D-22527 Hamburg

<http://vsis-www.informatik.uni-hamburg.de/events/mas2/>

The workshop MAS² "Multi-Agent Systems as Middleware and Architectures for Business Systems" intends to be a medium for bringing together researchers and practitioners interested in agent-orientation and business systems. The underlying idea of the workshop consists in viewing business systems as complex layered applications that can be built on generic middleware services. If business systems exhibit specific properties such as a high complexity, independent decision makers or demand highly agile responses, this requires new application architectures and advanced middleware components which could exploit the agent metaphor in that direction. Therefore, the workshop aims at discussing the applicability of multi-agent systems as middleware and architectures for business systems. The abstraction and the merging of domain and technical perspectives under a common conceptual metaphor therefore receive a special attention in this workshop going beyond the common technically centered treatment.

The traditional point-of-view that considers middleware as solution for classical problems of distributed systems is in many cases not sufficient when complex business applications need to be built, because advanced functionalities, e.g. from software engineering, artificial intelligence and service orientation, need to be taken into account. The construction of software using architectures inspired by agent-oriented concepts has the clear advantage that domain-centered metaphors such as groups, actors, objects and services can be directly transferred to the technical side as they are supported on this level as well. This is an essential point regarding the realization of organizational structures and workflows within the software architecture. The agent-oriented paradigm exhibits an especially high degree of concept continuity from the domain to the technical perspective. Multi-agent systems offer important concepts and technical solutions for the analysis, design and construction of business systems, especially regarding more and

more complex company structures. Therefore, multi-agent systems represent a conceptual and technological foundation for solving typical problems of distributed systems such as communication, conflict resolution, cooperation and concurrency.

In this respect, multi-agent systems can be seen as the underlying paradigm for the architecture of software systems as well as providing a technical middleware for their realization, ultimately addressing the question how middleware and architecture can reflect the business system entities.

The first edition of MAS² is being held as part of the "Multikonferenz Wirtschaftsinformatik (MKWI) 2008" in Munich, Germany. This volume contains the papers selected by the Program Committee for presentation at the workshop and an additional invited talk by Prof. Dr. Wolfgang Renz from the University of Applied Sciences Hamburg focusing on "Models and Multi-Agent Simulations of Logistics Networks". Submissions were evaluated in a rigorous reviewing process and acceptance of papers was based on at least 3 reviews. We would like to thank all authors for their contributions and the members of the Program Committee for their constructive work during the reviewing phase.

Hamburg, December 2007

Alexander Pokahr,
Daniel Moldt,
Lars Braubach
(Workshop chairs)

Program Committee

Torsten Eymann	Universität Bayreuth
Rainer Herrler	Universität Würzburg
Otthein Herzog	Universität Bremen
Benjamin Hirsch	TU Berlin
Franziska Klügl	Universität Würzburg
Karl-Heinz Krempels	RWTH Aachen
Gabriela Lindemann	HU Berlin
Jörg Müller	TU Clausthal
Matthias Nickles	TU München
Jens Nimis	FZI Karlsruhe
Peter Novák	TU Clausthal
Paolo Petta	Universität Wien/OFAI
Birna van Riemsdijk	Universität München
Franz Rothlauf	Universität Mainz
Ingo Timm	Universität Frankfurt