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Ryszard Kowalczyk Jörg P. Müller
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Series Editors

Jaime G. Carbonell, Carnegie Mellon University, Pittsburgh, PA, USA
Jörg Siekmann, University of Saarland, Saarbrücken, Germany

Volume Editors

Ryszard Kowalczyk
CSIRO Mathematical and Information Sciences
723 Swanston Street, Carlton, Victoria 3053, Australia
E-mail: ryszard.kowalczyk@cmis.csiro.au

Jörg P. Müller
Siemens AG
CT IC 6, Munich, Germany
E-mail: joerg.mueller@mchp.siemens.de

Huaglory Tianfield
Glasgow Caledonian University, Department of Computing
City Campus, 70 Cowcaddens Road, Glasgow G4 0BA, Scotland, UK
E-mail: lcsr@gcal.ac.uk

Rainer Unland
University of Essen, Institute for Computer Science
Schützenbahn 70, 45117 Essen, Germany
E-mail: UnlandR@informatik.uni-essen.de

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Preface

Net.ObjectDays (NODe) has established itself as one of the most significant events on Objects, Components, Architectures, Services and Applications for a Networked World in Europe and in the world. As in previous years, it took place in the Messekongresszentrum (Fair and Convention Center) in Erfurt, Thuringia, Germany, this time during 7–10 October 2002. Founded only three years ago as the official successor conference to JavaDays, STJA (Smalltalk and Java in Industry and Education) and JIT (Java Information Days), NODe has grown into a major international conference that attracts participants from industry, research and users in equal measure since it puts strong emphasis on the active exchange of concepts and technologies between these three communities.

Over the past few years, the NODe conference has developed a remarkable track record: a new paradigm (*Generative Programming*) was born at NODe (citation James Coplien), nearly all of the most prominent researchers and contributors in the object-oriented field (and beyond) have given keynotes at NODe, new topics have been integrated (like Agent Technology and Web-Services) and, now, for the first time, postconference proceedings are being published by Springer-Verlag. Altogether three volumes will be available. This volume is compiled from the best papers of the agent-related workshops (*Agent Technology and Software Engineering AgeS*, and *Agent Technologies for E-Services ATES 2002*) and the *3rd International Symposium on Multi-Agent Systems, Large Complex Systems, and E-Businesses* (*MALCEB 2002*). Two additional volumes will be published, one containing the best contributions of the main conference and another one with the best contributions to the workshops relating to the Web, Databases and Web-Services that were cohosted with NODe 2002: M. Aksit, M. Mezini, R. Unland (editors), *Objects, Components, Architectures, Services, and Applications for a Networked World* (*LNCS 2591*); and A. Chaudhri, M. Jeckle, E. Rahm, R. Unland (editors), *Web, Web-Services, and Database Systems* (*LNCS 2593*).

This volume contains abstracts of the keynote speeches as well as 23 peer-reviewed, original papers that were chosen from the papers accepted for the workshops and the symposium. Hence, the papers in this volume are a subset of the papers presented at the conference, which in turn were selected by the respective programme committees from the submitted papers based on their scientific quality, the novelty of the ideas, the quality of the writing, and the practical relevance. This double selection process not only guaranteed high-quality papers but also allowed the authors to improve their original contributions using comments and suggestions they received during reviewing and at the conference. Furthermore, authors were allowed to extend their papers to fully fledged versions. We hope that you will find the results as convincing as we do, and that these proceedings give you many new inspirations and insights.

The contents of this volume can best be described by excerpts from the original Call for Papers:

AgeS 2002
Over the past decade, software agents and multi-agent systems have grown into one of the most active areas of research and development activity in computing generally. There are many reasons for the current intensity of interest, but certainly one of the most important is that the concept of an agent as an autonomous system, capable of interacting with other agents in order to satisfy its design objectives, is a natural one for software designers. Just as we can understand many systems as being composed of essentially passive objects, which have state, and upon which we can perform operations, so we can understand many others as being made up of interacting, semi-autonomous agents. Recently, there has been a growth of interest in the potential of agent technology in the context of software engineering. Some researchers (mainly in the Agent-Oriented Software Engineering community) point out that agents can be looked upon as a new paradigm for software engineering, a different way of looking at and modeling complex and dynamic systems in terms of concepts such as collaboration, coordination, and negotiation; others rather stress the need to explore the usage of existing software engineering processes, instruments, and methodologies in the design of multi-agent systems; still other researchers look for an incremental way of identifying and adopting proven concepts from agent technology into existing software engineering approaches. The goal of the AgeS workshop is to foster interaction between the agents and software engineering communities, to gain a better understanding of the requirements from software engineering and the possible roles that agent technology can play in the contexts of software engineering, including but not necessarily restricted to agent-oriented software engineering. In this workshop we will seek to examine the credentials of agent-based approaches as a software engineering paradigm, and to gain an insight into what agent-oriented software engineering will look like. By colocating the workshop with a major software engineering event such as NODe, we hope to attract a strong software engineering audience, and hence to implement a fruitful forum for discussion and the identification of research needs and collaboration possibilities between the agents and software engineering communities.

ATES 2002
The workshop on Agent Technologies for e-Services (ATES 2002) was held in conjunction with Net.ObjectDays 2002 (NODe 2002) in Erfurt, Germany on 9 October 2002. It aimed at exploring and promoting the use of software agent technologies for electronic services (e-services) that can deliver information, knowledge, and decision support, perform tasks and conduct transactions, control and monitor operations, and interact and integrate with other e-services in the global, dynamic, and open environment of the Internet. Typical examples of e-services are Web-accessible resources and applications, Web-enabled business processes and relationships, and networked devices and portable information appliances. Software agents with the capabilities of autonomous reasoning, lear-

ning, adaptation, social interactions, cooperation, and mobility is a very promising technology for e-services. In particular there is growing success in a wide range of related applications including agent-based e-commerce, e-business, and mobile applications, and it is envisaged that agent technology can also be very useful in the context of e-services.

As editors of this volume, we would like to thank once again all programme committee members and all external referees for their excellent work in evaluating the submitted papers. Moreover, we would like to thank Mr. Hofmann from Springer-Verlag for his cooperation and help in putting this volume together.

December 2002

Ryszard Kowalczyk
Jörg P. Müller
Huaglory Tianfield
Rainer Unland

3rd International Symposium on Multi-Agent Systems, Large Complex Systems, and E-Businesses (MALCEB 2002)

Programme Co-chairs

Prof. Dr. Huaglory Tianfield
Department of Computing
Glasgow Caledonian University
City Campus
70 Cowcaddens Road
Glasgow G4 0BA
Scotland, UK
Tel: 0044 141 331 8025
Fax: 0044 141 331 8445
E-mail: lcsr@gcal.ac.uk

Prof. Dr. Hans Czap
Universität Trier
Wirtschaftsinformatik
54286 Trier
Germany
Tel: 0049 651 201 2859
Fax: 0049 651 201 3959
E-mail:
cz@wiinfo.uni-trier.de

Members of the International Programme Committee

Paul Alpar, Philipps Universität Marburg, Germany
Joseph Barjis, Delft University of Technology, The Netherlands
Michael Berger, Siemens AG, Germany
Hans-Dieter Burkhard, Humboldt Universität, Berlin, Germany
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Armin B. Cremers, Universität Bonn, Germany
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Karl Kurbel, Europa Universität Viadrina, Germany
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Jiming Liu, Hong Kong Baptist University, China
Julian Liu, Oxford University, UK
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Hong Zhu, Oxford Brookes University, UK

Workshop on "Agent Technology and Software Engineering" (AgeS 2002)

Organizing Committee

Bernhard Bauer
Siemens AG, CT IC 6, Munich, Germany
E-mail: bernhard.bauer@mchp.siemens.de

Klaus Fischer
DFKI GmbH, Saarbrücken, Germany
http://www.dfki.de/~kuf
E-mail: klaus.fischer@dfki.de

Jörg P. Müller
Siemens AG, CT IC 6, Munich, Germany
E-mail: joerg.mueller@mchp.siemens.de

Bernhard Rumpe
Munich University of Technology, Munich, Germany
http://www.in.tum.de/~rumpe/
E-mail: Bernhard.Rumpe@in.tum.de

Workshop on "Agent Technologies for e-Services" (ATES 2002)

Organizing Committee

Ryszard Kowalczyk
CSIRO, Mathematical and Information Sciences, Australia
ryszard.kowalczyk@csiro.au

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