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# Objects, Components, Architectures, Services, and Applications for a Networked World

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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 Messe-kongresszentrum (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 main conference. Two additional volumes will be published, one containing the best contributions of the workshops relating to the Web, Databases and Web-Services and another one with the best contributions to the agent-related workshops and the MALCEB symposium (*Symposium on Multi-agent Systems, Large Complex Systems, and E-Businesses*) that were cohosted with NODE 2002: R. Kowalczyk, J. Müller, H. Tianfield, R. Unland (editors) *Agent Technologies, Infrastructures, Tools, and Applications for E-Services (LNAI 2592)* 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 26 peer-reviewed, original papers that were chosen from the paper accepted for the main conference. This means that the papers in this volume are a subset of the papers presented at the main conference track, which in turn were selected by the programme committee out of 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 the high quality of the papers but also allowed the authors to consider comments and suggestions they had received during the conference and to integrate them in their final version. Furthermore, authors were allowed to extend their paper to a fully fledged version. We hope that the results will convince you as much as they did us and that these proceedings give you many new inspirations and insights.

The contents of this volume can best be described by an excerpt from the original Call for Papers for NODE 2002. Ever evolving and increasingly powerful information and communication technologies have substantially changed the nature of global relation-

ships, the sources of competitive advantage, and the opportunities for economic and social development. The Internet, portable computers/devices and wireless communication technologies have turned the globe into an interconnected network of individuals, firms, organizations and governments communicating and interacting with each other through a variety of channels.

NODE 2002 especially focuses on topics such as object-oriented (distributed) technologies, concepts and systems, agent-related technologies and concepts, advanced database systems and the Web, and E-commerce, including both the engineering and the use of Web-based application systems. Since Java and Smalltalk play a key role in the above-mentioned areas, we considered them to be of particular interest for the conference. As systems ought to be engineered well to be able to cope with the influx of the above-mentioned technologies in a positive way, the integrative factor of software architectures and component-driven technologies, especially their demands with regards to structures (patterns and architectures) and processes (enhanced life-cycles and workflows), form additional focuses of NODE 2002. However, as in the years before, NODE 2002 was open to questions and aspects of object-oriented and Internet-based technology in general and invited submissions related to a wide variety of topics in these areas.

As editors of this volume, we would like to thank once again all programme committee members, as well as 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

Mehmet Aksit  
Mira Mezini  
Rainer Unland

**3rd International Conference Net.ObjectDays (NODE)**  
**2002**  
***Objects, Components, Architectures, Services, and  
Applications for a Networked World***

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