

# Preface

Five years ago, with excitement and uncertainty, we witnessed the birth of PRIMA (Pacific Rim International Workshop on Multi-Agents). The first PRIMA in 1998 has now grown into PRIMA 2003, the 6th Pacific Rim International Workshop on Multi-Agents in Seoul, Korea. During a period of five years, the notion of agent research has grown so much that we hear the term *agent* on a daily basis. Various fields such as business, the Web, software engineering, on-line games and such are now using the term *agent* as a placeholder, just like the term *object* is used in the object-oriented paradigm. On the other hand, the research area has extended toward real applications, such as the Semantic Web and ubiquitous computing. The themes of PRIMA 2003 reflected the following trends:

- agent-based electronic commerce, auctions and markets
- agent architectures and their applications
- agent communication languages, dialog and interaction protocols
- agent ontologies
- agent programming languages, frameworks and toolkits
- agentcities
- agents and grid computing
- agents and peer computing
- agents and the Semantic Web
- agents and Web services
- artificial social systems
- conflict resolution and negotiation
- evaluation of multi-agent systems
- languages and techniques for describing (multi-)agent systems
- meta modeling and meta reasoning
- multi-agent planning and learning
- multi-agent systems and their applications
- social reasoning, agent modeling, and organization
- standards for agents and multi-agent systems
- teams and coalitions
- ubiquitous agents

PRIMA 2003 in Seoul, Korea hoped to build on the wonderful success of its predecessors, PRIMA 1998 in Singapore, PRIMA 1999 in Kyoto, Japan, PRIMA 2000 in Melbourne, Australia, PRIMA 2001 in Taipei, Taiwan, and PRIMA 2002 in Tokyo, Japan. We received 44 submissions to be considered. Each paper was carefully reviewed by three internationally renowned agent researchers chosen from the program committee (PC) members. There were 18 papers selected to be printed in this volume. We would like to thank all the authors for submitting their papers to PRIMA 2003 and the PC members for

their diligent efforts to review those papers. Also, we are so grateful to have had our invited speakers, Ronald Arkin (Georgia Institute of Technology), Edmund Durfee (University of Michigan), Nick Gibbins (University of Southampton), and Hiroshi Ishiguro (Osaka University). Last, but not least, we would like to express our thanks to the editorial staff of Springer-Verlag for publishing this volume in the Lecture Notes in Computer Science series and the Institute of Information Technology Assessment (IITA), Korea for their generous financial support for this workshop.

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Mike Barley

# Organization

PRIMA 2003 was organized by the Korea Intelligent Information Systems Society (KIISS) and the Electronics and Telecommunications Research Institute (ETRI).

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