

# Preface

Welcome to the proceedings of the 6th IEEE International Conference on Mobile Agents. MA 2002 took place in Barcelona, Spain and was co-located with the 4th International Workshop on Mobile Agents for Telecommunications Applications. Both events were held at the Universitat Pompeu Fabra, October 22–25, 2002.

Mobile agents may be defined as programs that, with varying degree of autonomy, can move between hosts across a network. Mobile agents combine the notions of mobile code, mobile computation, and mobile state. Capabilities of mobile agents include:

- Supporting unreliable networks and disconnected operation
- Counteracting low-bandwidth, high-latency communication links
- Deploying new behaviour (through mobile code) and reconfiguring systems on-the-fly
- Distributing processing load across systems
- Improving survivability in the face of network and system failure.

Given the above capabilities, mobile agents (while they may not be referred to as such) are now becoming accepted as a fundamental architectural construct for the design and development of complex adaptive systems that need to operate in highly dynamic environments. Mobile agents also support applications in several domains such as ubiquitous computing, grid computing, remote sensing, data mining, system management, and agile computing.

The conference call for papers included the following areas of interest:

- Security Requirements, Implications, Algorithms, and Implementation
- Resource Control and Management
- Debugging and Visualization Tools
- Tracking, Directory, and Matchmaking Services
- Support for Small Devices
- Deployment and Interoperability
- Scalability
- End-User Configuration / Customization
- Novel Architectures and Infrastructure
- Applications
- Performance Evaluation and Metrics
- Survivable Systems
- Formal Models and Theories of Mobility
- Coordination Models

The conference received 48 submissions in total from authors in many countries. All submissions were carefully reviewed by the Program Committee, consisting of 18 highly distinguished researchers from the mobile agents community: Each

paper was reviewed by three program committee members (four in the case of a paper authored by a member of the program committee). Only 13 of the best papers were accepted into the conference and are contained in this volume. All of these papers help push the current state of the art in mobile agents to the next stage. I hope you enjoy reading them!

October 2002

Niranjan Suri

# Organization

MA 2002 was co-located with the 4th International Workshop on Mobile Agents for Telecommunication Application (MATA 2002) and was held at the Universitat Pompeu Fabra in Barcelona, Spain.

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