

# Preface

It is now no longer necessary to argue the importance of agent technology. Besides numerous conferences and workshops on specific aspects of agent technology there are also many companies that are exploring its exploitation possibilities. In the light of these developments and in order to foster the transfer of agent technology from research labs to business, the EU has funded a “network of excellence” devoted to agent technology. This network of excellence, called AgentLink (<http://www.agentlink.org/>), aims at bringing together research groups from different countries and industrial developers. The ultimate goal is to create synergy among the different projects and groups to improve the competence of European industry and the excellence of academia. In order to achieve this goal, Agent-Link organises educational activities (summer schools), builds agent-related literature repositories, and facilitates collaboration between member nodes. One of the main activities related to the last point are the regular meetings of “Special Interest Groups” (SIGs). At this moment six SIGs are functioning, focusing on topics ranging from agent based social simulation to intelligent agents for telecommunications applications and telematics.

The current book combines two results from the activities of the SIG on “Agent Mediated Electronic Commerce”. This SIG gathers the main research groups and industrial partners interested in the use of agent technology in electronic commerce.

First and foremost the book contains a roadmap of research and current technological developments in the area of agent-mediated electronic commerce. This roadmap is a direct result of the discussions between the participants of the meetings conducted by this SIG. Probably the most interesting part of this roadmap is the (joint) perspective on future developments in this area for research in Europe. This perspective is built on the foundation of current research and development in Europe.

The book also contains a number of papers that fill in parts of this roadmap in a European context. Some of these papers describe significant current developments in this area while other papers indicate some clear directions for future research. Together they compose an interesting overview of the area as it stands in Europe at this time. We have structured the book around four themes: Negotiation, Markets, User Preferences, and Security.

The book contains four papers around negotiation. The paper by A. Lomuscio, M. Wooldridge, and N. Jennings gives a classification scheme for negotiation and thus can function as a framework in which different research topics on negotiation can be placed. The paper by J.-L. Koning discusses one such issue, namely the designing and testing of negotiation protocols. Also the paper by S. Paurobally and J. Cunningham focuses on the specification of negotiation proto-

cols (using an alternative specification mechanism). In the paper by E. Oliveira and A. Rocha the features of the agents partaking in a negotiation are discussed.

The section on markets also contains four papers. The paper by F. Dignum discusses the general advantages of using agents in electronic markets and draws some conclusions about the desirable properties of agents operating on these markets. The papers of M. Viamonte et al. and M. Esteva et al. both give formal descriptions of electronic market places. The last paper in this section, by M. Vetter and S. Pitsch, describes an actual market place, CASBA, that supports flexible trading using agents.

The section on user preferences contains one paper on user preference modeling (by M. Dastani et al.). Besides this paper there is also a paper describing how agents can be used to build adaptive web stores, by L. Ardissono et al. This section concludes with a paper from M. Torrens et al., which uses techniques from constraint satisfaction in order to build scalable catalogs.

The last section of this book contains only one paper on the topic of security. In this paper V. Roth and V. Conan describe how encrypted Java archives can be used to ensure security for mobile agents.

Hopefully this book will be an inspiration for researchers and will encourage them to take up the challenges indicated in the papers and for practitioners to start using some of the technology described in their new systems.

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