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On the Design and Construction of Agent-mediated Electronic Institutions

Juan A. Rodríguez-Aguilar

Foreword by Pere Garcia and Carles Sierra

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Foreword

The work on Electronic Institutions has become a focus of attention for the Multi-Agent Systems research community as it provides a structured methodology to build agent societies. Juan Antonio Rodriguez has notably advanced the state of the art on this topic by giving clear operational semantics to all the concepts of an Electronic Institution. His Ph. D is a natural continuation of the work started in the IIIA with Pablo Noriega's Ph. D. in which the basic concepts of Electronic Institutions were laid out. Juan Antonio's Ph. D. extends some of these concepts as an outcome of his intense interaction with other scientists interested in the topic. Special merit deserves all the technical decisions taken by the author to bring Electronic Institutions into life, specially its infrastructure, based on precisely defined notions of conversations and mediation through inter-agents. The author has devoted many efforts to the support of several agent competitions using a tool derived from the main application in his Ph. D.: an agent-mediated test bed. This is a very original and quite unique piece of software that has had an important educational impact on many Artificial Intelligence students that had the opportunity to compare and test their agent design skills and their imaginative buying strategies. All details of this activity are thoroughly reported in this book. It accounts for a period of very exciting research made at the IIIA. This Ph. D. shows how important it is for Ph. D. students to be integrated in a group where the work is structured around leading ideas and where the reward they receive from the immediate impact their work produces is high. The personal qualities of Juan Antonio, friendship, generosity, and his sharp ideas and capability to bring them into reality have made our job as Ph. D. advisors very easy. We hope the readers will enjoy this book as much as we did.

Bellaterra, March 2002

Pere Garcia and Carles Sierra
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