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Cooperative Information Agents VIII

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Preface

These are the proceedings of the 8th International Workshop on Cooperative Information Agents (CIA 2004), held at the Fair and Congress Center in Erfurt, Germany, September 27–29, 2004. It was part of the multi-conference Net.ObjectDays 2004, and, in particular, was co-located with the 2nd German Conference on Multiagent Systems Technologies (MATES 2004).

In today's networked world of linked heterogeneous, pervasive computer systems, devices, and information landscapes, the intelligent coordination and provision of relevant added-value information at any time, anywhere, by means of cooperative information agents becomes increasingly important for a variety of applications. An information agent is a computational software entity that has access to one or multiple, heterogeneous, and geographically dispersed data and information sources. It proactively searches for and maintains information on behalf of its human users, or other agents, preferably just in time. In other words, it is managing and overcoming the difficulties associated with information overload in open, pervasive information and service landscapes. Cooperative information agents may collaborate with each other to accomplish both individual and shared joint goals depending on the actual preferences of their users, budgetary constraints, and resources available. One major challenge of developing agent-based intelligent information systems in open environments is to balance the autonomy of networked data, information, and knowledge sources with the potential payoff of leveraging them using information agents.

Interdisciplinary research and development of information agents requires expertise in relevant domains of information retrieval, artificial intelligence, database systems, human-computer interaction, and Internet and Web technology. The CIA 2004 workshop aimed at providing an interdisciplinary forum for researchers, software developers, and managers to get informed about, present, and discuss the latest high-quality results in advancements of theory and practice in information agent technology for the Internet, the Web, and the Semantic Web.

The CIA workshop series was initiated in 1997; since then the events of the series have been held annually, mainly at different locations in Europe. Each event of the series offers regular and invited talks of excellence that are given by distinguished experts, and system demonstrations, and honors innovative research and development on information agents by means of best paper awards and system innovation awards. The proceedings of the series are regularly published as volumes of the Lecture Notes in Artificial Intelligence (LNAI) series of Springer.

In keeping with its tradition, this year's workshop featured a sequence of regular and invited talks of excellence given by leading experts in the field. These talks covered a broad area of topics of interest, such as information agents for

pervasive and peer-to-peer computing environments; issues of communication and cooperation; industrial applications; and recommender agents.

This year the CIA System Innovation Award and the CIA Best Paper Award were sponsored by Whitestein Technologies AG, Switzerland, and the Spanish Association for Artificial Intelligence (AEPIA), respectively. The DMR Decision Engineering Lab of the Universidad Rey Juan Carlos in Madrid, Spain provided limited financial support to students who were co-authors of accepted papers so that they could give their presentations at the CIA 2004 workshop.

CIA 2004 featured 3 invited and 18 regular papers selected from 59 submissions. The result of the peer-review of all contributions is included in this volume, rich with interesting, inspiring, and advanced work on research and development on intelligent information agents worldwide. All previous workshop proceedings were published by Springer as Lecture Notes in Artificial Intelligence volumes: 1202 (1997), 1435 (1998), 1652 (1999), 1860 (2000), 2182 (2001), 2446 (2002), and 2782 (2003).

The CIA 2004 workshop was organized in cooperation with the Association for Computing Machinery (ACM). In addition, we are very much indebted to our sponsors, whose financial support made this event possible. The sponsors of CIA 2004 were:

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We are in particular grateful to the authors and invited speakers for contributing their latest and inspiring work to this workshop, as well as to the members of the program committee, and the external reviewers for their critical reviews of submissions. Finally, a deep thanks goes to each of the brave members of the local organization team from transIT GmbH at the Fair and Congress Center in Erfurt for their hard work in providing the CIA 2004 event with a modern, comfortable location, and a social program.

September 2004

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