Message from the Workshop Organizers

ESAS 2013

Welcome to the 8th IEEE International Workshop on Engineering Semantic Agents – Intelligence and Robotics (ESAS 2013), this time taking place in the Kyoto, in Japan on 22 July 2013.

The ESAS Workshops Series focus on concepts, foundations and applications of semantic agent systems and intend to bring forward better practices of engineering them. Semantic Web technologies are associated with dynamics, heterogeneity, and distribution, among others. Its shared semantic content is accessible to human beings as well as software agents. Mobile agent and MAS technologies are crucial in realizing multi-party dynamic application systems. Semantic Web technologies augment MAS by enabling agents with functioning based on the semantics of their mission and of the world around them. Agents, implemented as Web services in developing distributed control and processing applications, entail interesting consequences such as situation awareness, semantic composition of services, context sensitive long-lasting transactions, effecting service policies and quality levels, so on. Complex applications could become realizable with novel features such as factory floor automation for flexible production; collaborative discovery of uncharted geography (for example, cooperative labyrinth discovery); intelligent traffic management; info dissemination with facilitation of emergency services; financial markets forecasting with optimization of portfolio gain, and so on.

The logic behind the semantic web can be boosted and powered using the features available in four-valued logic where in addition to dyadic true and false answers to a query, incompleteness and inconsistency take place. Such a sophisticated logic also supports Negation as Failure in addition to straight OWL open-world assumptions. The intelligence based upon this logic may be applied to the new generation of robotic agents where they will be having a better and more reliable understanding of the surrounding environment.

We envisage a strong undercurrent of intelligent software agents, mobile agents, and MAS running through this workshop; side by side with the use of semantic technologies, there are several foci of interest:

- Software Agents, Mobile Agents, and MAS: issues relating to architecture, implementation, coordination, service levels, security of pervasive semantic or otherwise agents.
- Agent, MAS and Semantic Web Technologies: concomitant utilization of specific technologies in agent, MAS, and semantic Web implementations; semantic agent communities & applications; case studies of best-practice MAS applications; projects in the making;
- Ontologies for Agents and MAS: agent cooperation and coordination ontology; ontology of workflow in MAS; ontologies for distributed applications and integration; sharing and semantic interoperability; discovery and operations on ontologies; trust & security issues;
- Platforms for semantic agent and MAS implementation: languages, frameworks, tools, integrated development environments and software engineering practices supporting semantic or otherwise software agent & MAS architectures, coordination, trust & security mechanisms, description, discovery and composition of agent-based services.
- Other subjects of relevance in semantic technologies, semantic software agents, mobile agents, agent-based and multi-agent systems.

This workshop and the proceedings were made possible by the precious efforts expanded by numerous dedicated people. First of all, we thank the authors who offered their papers for consideration. We are
grateful to the members of our extensive International Program Committee for the expert opinion they provided so willingly. Each paper was reviewed by at least two program committee members. Last but by no means least we are truly indebted to the 37th COMPSAC Management Team for their support in maintaining ESAS’s association with COMPSAC again this year.

The authors of selected papers may be invited to submit an extended version of their papers for possible publication in a special issue of a relevant journal and/or an edited book. Details will be revealed pending conclusion of negotiations.


We expect to create a lively discussion and exchange medium for experts from the fronts of agent-based, ontology-based, and semantic intelligence systems. All interested researchers are invited to participate in the ESAS 2013 workshop.

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Workshop Organizers