CALL FOR PAPERS

SELMAS'04

In conjunction with:

3rd International Workshop on Software Engineering for Large-Scale Multi-Agent Systems

http://www.teccomm.les.inf.puc-rio.br/selmas2004/

May 3 – 4, 2003
Edinburgh, Scotland

Motivation and Goals. With the advances in Internet technologies, multi-agent systems (MASs) are undergoing a transition from closed monolithic architectures into open architectures composed of a huge number of autonomous agents, which operate and move across different environments. Large-scale open systems involve hundreds or perhaps thousands of agents not necessarily co-designed to share a common goal. Agents can dynamically leave and enter the system. Most agents are unknown a priori, and cannot be supposed to be benevolent to each other. The dynamic arrival and exit of unknown agents needs to be taken into account, as well as the possibility of self-interested behavior in the course of the interactions. Moreover, as the multiple software agents become highly collaborative and operate in networked environments, they must be context-aware and deal with environment uncertainty. It makes their coordination and management more difficult and increases the likelihood of the occurrence of exceptional situations, such as security holes, privacy violations, and unexpected global effects.

Topics of Interest. The Workshop is intended to cover wide ranges of topics of software engineering for large-scale MASs, from theoretical foundations to empirical studies. We encourage authors to present novel ideas, critique of existing work, and practical studies and experiments, which demonstrate how software engineering techniques and methods can assist the development of large-scale multi-agent systems. We welcome the submission of papers in all aspects of agent-multi software engineering, including the following:

- Advanced separation of concerns in the context of MAS
- Comparative studies between MASs and OO systems
- Coordination architectures, infrastructures, and tools
- Design patterns, design principles, and architectural styles
- Domain-specific languages for MAS
- Exception handling and fault-tolerance techniques
- Experiments and case studies with large-scale MAS development
- Frameworks and software architectures
- MAS development and pervasive computing
- Methodologies for agent-oriented analysis and design
- Mobility and security issues in large MAS
- Modeling of large MAS
- Pitfalls and learned lessons in the construction of large MAS
- Reflective software architectures
- Requirements engineering for MAS
- Software development environments for real-life MAS
- Software engineering techniques for resource-bounded MAS
- Software engineering theories for large-scale MAS
- Software reliability engineering and MAS
- Testing and metrics for MAS
- UML application to large-scale MAS
- Verification and validation techniques for MAS

Workshop Format and Submissions. We encourage authors to present novel ideas, critique of existing work, and practical studies and experiments, which demonstrate how software engineering techniques can assist the development of large-scale multi-agent systems. Papers must conform to the proceedings publication format (please refer to SELMAS'04 website). Papers should be electronically submitted, in PDF format, at the following website: http://icse.acm.org/selmas04papers/submit/. It is the aim of the organizers to publish the Proceedings in the Lecture Notes in Computer Science series Springer-Verlag, following the tradition established for SELMAS'02 and SELMAS'03.

Workshop Organizers

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