



Call for Papers / Invitation to Special Session SS04

MIDDLEWARE SOLUTIONS FOR AUTOMATION SYSTEMS

Special Session Organizers

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Sponsored by: Paul Sabatier University and IEEE Industrial Electronics Society

Aim: Today's automation systems consist of many components and applications. Due to optimization activities, the vertical and horizontal integration of these components and applications increases. The widespread availability of internet technologies and standards as well as the raising capabilities of single components (e.g. field devices) proliferate the trend of networking. Traditional structures in the automation pyramid migrate to a distributed system, which could be developed, implemented and controlled with models and techniques from the information technology. Process and production plants and their automation systems have special requirements for such a distributed system. E.g. real-time capabilities and homogeneous data-access representation need to be developed, as well as basic functions for communication and organization of a distributed and reliable system. A Middleware approach supporting the different unique requirements of automation systems would support this trend and enforce compatibility and flexibility as required by today's changing markets. The session wants to discuss benefits and shortcomings of current solutions and to identify still open issues. Contributions to the session may address, but are not limited to:

- middleware applications in control, monitoring and operation
- service oriented middleware architectures
- abstraction, information modeling and application of industrial standards
- automation specific security technologies, processes and metrics
- methods and metrics for function allocation between middleware and agent frameworks
- automation specific Quality of Service Management
- requirements engineering and decision criteria for the selection of middleware technologies
- integrated processes and workflows for engineering, configuration and maintenance of middleware in automation
- middleware and semantic technologies in automation systems

The program committee of the special session consists of distinguished members of the GMA 5.16 Task Force

SUBMISSION OF PAPERS

Papers are to be submitted electronically. For further details, please consult the conference web pages.

AUTHOR'S SCHEDULE

Deadline for submission of papers:

April 21, 2011 (firm deadline)

Notification of papers acceptance:

May 23, 2011

Final manuscripts due:

July 8, 2011

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