

WG#4 SAAT

Working Group General Information	
Working Group Title	Simulation-assisted automation testing
Working Group Short Name	SAAT
Short Summary of the Working Group Topic	
Simulation-assisted automation testing means evaluation of digital control system (DCS) or programmable logic controller (PLC) design or implementation by running simulation experiments connected to a process simulation model. For this purpose, the automation can be simulated, emulated or stimulated.	
Short Summary of the Working Group Goals	
<ul style="list-style-type: none"> • Define the state of the art in simulation and automation technologies related to the co-use of simulation and automation software for testing purposes • Exchange experiences and ideas about using simulation to test automation design and implementation • Form networks to assist in taking the tools and technologies into use • Based on existing industrial standards and product-specific solutions, agree on the related information and communication technology (ICT) specifications, e.g. interfaces for data exchange and simulation control 	

Working Group Description

Short description of the Working Group topic
Simulation-assisted automation testing means evaluation of DCS or PLC design or implementation by running simulation experiments connected to a process simulation model. For this purpose, the automation can be simulated, emulated or stimulated.
Background. Reasons why this Working Group is needed.
<p>In industries, the use of simulation to support automation system design and implementation is seen as an attractive means to achieve shorter commissioning times and improved quality in automation system deliveries. Automation and simulation software providers have implemented tools to facilitate the co-use of automation and simulation software, and the tools have been pilot-used in industrial projects with promising results.</p> <p>This WG is needed to spread the good news about the success already achieved, and to open discussion on new working methods enabled by the new technology. From a software provider's point of view, the WG will provide use case -based requirements to development work and open discussion channels between developers and users.</p>
Working Group goals.
<ul style="list-style-type: none"> • Define the state of the art in simulation and automation technologies related to the co-use of simulation and automation software for testing purposes • Exchange experiences and ideas about using simulation to test automation design and implementation • Form networks to assist in taking the tools and technologies into use • Agree on the related ICT specifications, e.g. interfaces for data exchange and simulation control
The expected impact of the working group.
<ul style="list-style-type: none"> • Better understanding on the possibilities of the simulation technology in automation deliveries • New, more efficient working methods that lead to shorter commissioning times and higher quality • Improved co-use of simulation and automation software