The recently-completed OPC Day Europe 2014 focused on consistent communication from the sensor to IT cloud level, all with integrated security

OPC UA as the link between automation and IT worlds

VERL, Germany, June 11, 2014 - "IT meets Automation" was the motto of this year's OPC Day Europe, which took place on May 14 and 15, 2014 in a wonderful conference environment at Festo company offices in Esslingen, Germany. A total of 190 participants from 16 countries were able to catch up on OPC UA technology as well as its distribution and application. A pre-conference provided information about the OPC UA technology and its benefits: experts gave presentations on interoperability in data and information exchange that is independent from the manufacturer, operating system and language, in conjunction with integrated security functions and access rights to a wide range of information models.

The main conference kicked off with a keynote speech by Prof. Detlef Zühlke, DFKI (German Research Center for Artificial Intelligence), on the subject of Industry 4.0 and standards. "Industry 4.0 needs OPC UA" was his theme. An analysis of participant feedback revealed Prof. Zühlke's comprehensive keynote as the most valuable contribution of the conference.

Jens Wiesener, representing the German Federal Office for Information Security (BSI) reported on the start of the security evaluation of OPC UA at the specification and reference implementation levels, indicating that this cross-vendor technology is regarded as key for German Industry 4.0 interests. Security is also an important aspect for the increasing number of mobile devices that are used in automation and IT applications today: the topic of the second highest scoring presentation in the voting was "Browser-based OPC UA integration". TU Dresden and the company, Ascolab demonstrated web pages based on HTML5 and JavaScript, combined with secured OPC UA communication standards, as platform-independent operating concepts.

Stefan Hoppe from Beckhoff Automation presented the OPC UA client function blocks, which were adopted by PLCopen in April 2014: they enable the controller to initiate horizontal or vertical communication automatically from the field level right into the cloud. He also introduced SoA-PLC, which combines the IEC61131-3 programming languages with OPC UA transport: it enables the PLC to offer services externally, which can be called up directly by the IT world, thereby offering high performance and data consistency. Rüdiger Fritz, an expert from SAP reported on experience with direct interfacing of SAP MES with the machine world via OPC UA. Angelo Bindi from Continental Teves, and member of the Board of the MES D.A.CH association, stressed the significance of modeling capabilities: "The UMCM data profile (Universal Machine Connectivity for MES) interprets the main data points as an MES profile - in combination with transport via OPC UA this resembles the principle of a USB connector linking machines and the MES world in a straightforward manner."

The OPC UA modeling capabilities were also examined in the context of CNC machines and RFID technology. Dr. Jan Regtmeier from Harting, representing the AIM group (Automatic Identification and Mobility), presented an ambitious schedule: AIM and OPC Foundation (OPCF) intend to define the semantics for the AutoID industry within one year. Semantic interoperability was also the key theme of the presentation by Dr. Olaf Sauer from the Fraunhofer Institute IOSB: in his capacity as initiator of the cooperation between AutomationML and OPCF he reported on the current status in the joint working group. The group aims to optimize the data flow in engineering processes with information models and OPC UA interoperability.

The presentation by Dr. Johannes Schmitt from ABB focused on various aspects of IT cloud and security with connectivity based on the OPC UA standard. Information flow from the smallest sensor right into the IT cloud level is already available for implementation. Silvio Merz from ZWAV Vogtland

presented user reports with concrete examples of embedded devices that are intelligent, local and autonomous in the water industry: as the first user of PLCopen OPC UA blocks worldwide, he reported cost savings in the area of 90 % in the initial software costs per device.

Festo's atrium in Esslingen provided a unique conference environment. In his presentation, Dr. Michael Hoffmeister from Festo reported on the integration of OPC UA in Festo controllers and subsystems and on their application in the Festo production environment. Participants were able to get a glimpse of the production facilities via a live feed and were offered further insights as part of a guided tour.

OPC UA as the link between the automation and IT worlds was the theme of this successful two-day conference. Organizer and moderator Stefan Hoppe, President OPC Europe, regards the concept as a success: "The presentations, which focused exclusively on technology and applications, provided proof of the high acceptance among participants - no-one is able to sponsor their way onto a presentation platform." Thomas Burke, President OPC Foundation, added: "This event series started in 2011 at SAP in Walldorf, Germany, followed by the 2012 event at Endress+Hauser in Switzerland and the 2013 event at a Yokogawa facility in the Netherlands. With the 2014 event here at Festo in Esslingen, OPC Day Europe has become the world's premier information forum on the subject of OPC interoperability."

"IT meets Automation" - quite often these two groups seem to talk with differing agendas. During this year's OPC Day Europe held at Festo's facility, however, these groups definitely shared a wealth of information with each other and found a common language as a way forward for interoperability in communication.

PDF version of all 18 presentations can be ordered for USD $99.00 + VAT via email from info@stroblgmbh.de

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