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Record Turnout at SPS/IPC/Drives EPSG Booth

At the SPS/IPC/DRIVES 2011 show last November, the Ethernet POWERLINK Standardization Group EPSG recorded the best attendance to its booth ever. "Visitor interest in POWERLINK und openSAFETY at our eighth appearance at the Nuremberg show rose along the lines of growing market demand, with recorded professional contacts growing by more than 100%", EPSG Chairman Stefan Schönegger said. "Visitor magnets were a Multi Vendor Tripod Robot and an exhibit with a rotating assembly holding drive and safety controls connected via slip ring as well as a live openSAFETY demo. The integration of POWERLINK in Anybus® modules by HMS showcased on the EPSG booth also boosted visitor awareness."

Advantech APAX-5000 controller speaks POWERLINK

Through the integration of Colalp's IEC 61131-3 Soft SPS straton T5 Runtime into the current generation of Advantech's APAX-5000 controllers, the product portfolio of this world market supplier of industrial automation solutions established in 1983 now completely supports the industrial Ethernet solution POWERLINK. Due to this support the Advantech PAC (Programmable Automation Controller) gains simple access to the broad lineup of available sensors and actors. This includes the B&R X20 line of I/O equipment as well as the drive products of the ACOPOS series by the same manufacturer.



100% POWERLINK-able: The current generation APAX-5000 of the modular control units by Advantech.

"We perceive POWERLINK as one of the fastest growing standards for industrial communication", says Stéphane Blanc. As the IO & Control Product Sales Manager with Advantech Europe, he is in charge of the entire European market. "It is the ideal addition to our compact and modular PAC Platform."

Due to the integration of POWERLINK, this platform not only features independence from system topology as well as an open architecture but also outstanding attributes such as hot-swappable I/O modules that can be replaced during operations.

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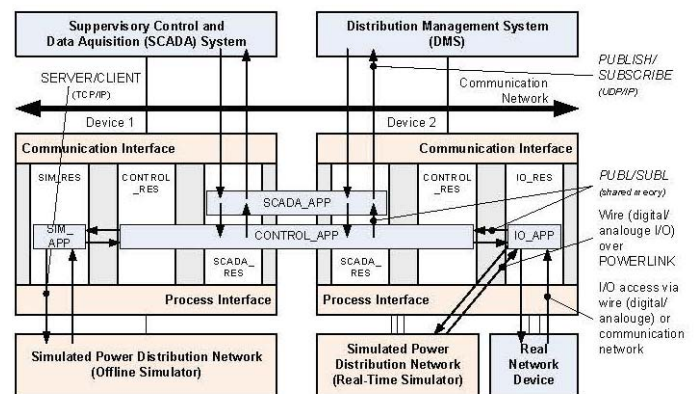
The Energy Department of the AIT Austrian Institute of Technology is working towards the future of energy supply. This includes automation concepts for intelligent power distribution in so-called smart grids as a prerogative of the massive deployment of renewable forms of energy.

As these are distributed systems featuring a heterogeneous hardware structure, implementation strategies for IT-based energy systems recommend adopting the international IEC 61499 standard. Aiming at the creation of hardware-independent, portable control applications, it defines a universally valid model for

distributed control systems. Based upon the IEC 61131, it replaced the cyclic execution model of the older standard by an event-triggered version using an object-oriented approach with function blocks.

Due to its independence from topologies, its capability of direct cross communication and its availability as an open source, POWERLINK is best suited for communication with remote input and output units in decentralized architectures. Its integration with an open control system in compliance with IEC 61499 was achieved by Filip Andrén and Thomas Strasser of the AIT by simply introducing object classes for Master and Slave nodes and for the conversions between time and event dependent processes.

There are practical applications for this integration in a validation and test environment for automation, control and communication concepts in smart grids designed at the by a project team with the two scientists and Christian Landsteiner. Using Service Interface Function Blocks according to IEC 61466 for communication over POWERLINK, renders it easily and quickly adaptable to various hardware without requiring modification of the software itself.



IEC 61499 compliant architecture of the test environment for automation concepts in Smart Grid applications designed at the AIT by Filip Andrén, Thomas Strasser and Christian Landsteiner

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POWERLINK synchronizes tripod robot with a mixed drive system from B&R, KEB and YASKAWA



The fast and synchronous behavior of the tripod robot equipped with drive components from three different manufacturers highlights POWERLINK's speed, accuracy and hardware neutrality.

Tripod robots are mainly used for fast pick & place applications. The high demands on dynamics and accuracy call for fast and precise synchronization of the three built-in servo drives.

A tripod robot equipped with servo motors and drives from three different manufacturers was showcased by the Ethernet Powerlink Standardization Group EPSC at the Nuremberg SPS/IPC/Drives 2011 trade fair. Connecting the drives supplied by KEB, Yaskawa and B&R using POWERLINK guarantees the real-time synchronization and improved dynamic properties that are essential for the high level of accuracy that is required.

"This multi-vendor tripod robot highlights POWERLINK's excellent dynamic capabilities and complete freedom of integration," says EPSC director, Stefan Schönegger, "Just use POWERLINK and vendor independence is ensured, broadening the choice of components for even the most challenging applications."

POWERLINK at the embedded world in Nuremberg

With the open source solution openPOWERLINK in 2008, the EPSC created a manufacturer-independent standard for real-time communication over Ethernet suitable for Windows, Linux and VxWorks.

Companies integrating technologies on board-level find components and subsystems for M2M communication at the embedded world Exhibition & Conference in Nuremberg. It is open February 28 to March 3, 2012. Living proof of POWERLINK's continued openness is the fact that ten partners exhibit POWERLINK components and solution on their own booths in addition to EPSC, who will be present with booth No. 4A-524 in exhibition hall 4A.

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POWERLINK & Partners Successful on European Tour

About 1,000 machinery, plant, system and component designers attended the European Industrial Ethernet Conferences 2011 at 11 venues in five European countries. Organized by B&R, Stäubli, Cognex and ASCO Numatics together with the Ethernet POWERLINK Standardization Group (EPSC), the final conference was held on November 16, 2011. Information centered on how stable and solidly integrated interaction between industrial robots, image processing, fluid and control technologies can substantially improve automation performance and open up new possibilities.



EPSC chair Stefan Schönegger describes possibilities to improve performance and reduce costs using POWERLINK and openSAFETY. This topic dominated the successful European Industrial Ethernet Conferences, which was held in the fall of 2011.

The potential of POWERLINK and openSAFETY for performance improvement and cost reduction were topical in the keynote delivered by EPSC chairman, Stefan Schönegger. How POWERLINK helps integrate the core technologies of industrial automation to form comprehensive solutions was illustrated by representatives of the organizing companies in their presentations and exhibits.

Presentations by independent experts such as Stefan Krug from the Institute of Assembly Machinery and Business Management at the Munich University of Technology (TU Munich) regarding Plug & Produce robot plants and Dr. Peter Wratil of Innotec GmbH regarding ways to implement the new machine directive and its subordinated standards were especially well received.