Contribution ID: **532**   Type: **Poster presentation**

Application of PROFINET IO in Neutron Scattering Instruments

Tuesday 12 June 2018 15:55 (15 minutes)

The control systems of all neutron scattering instruments implemented by the Jülich Centre for Neutron Science (JCNS) are based on Siemens PLC technology. Historically PROFIBUS has been used for the communication of PLCs with supervisory computers, decentral periphery systems and other PLCs. Today, PROFINET IO is the most commonly used industrial real time Ethernet system and naturally supported by Siemens PLC systems. As a consequence, all new neutron instruments of JCNS are based on PROFINET IO. For the interfacing to supervisory computers based on CPCI, a CPCI carrier board for PC/104-Plus mezzanines has been developed, allowing the transparent use of the Siemens PC/104-Plus PROFINET IO controller CP1604 in CPCI systems. Linux is used as the operating system for supervisory computers access and the software development employs the PROFINET IO-Base-API, commonly supported by Siemens PROFINET IO controllers. On top of this API, an application protocol for the communication with PLC-based motion systems has been implemented.

Minioral

No

Description

Profibus

Speaker

Harald Kleines

Institute

FZ Juelich

Country

Germany

Author: KLEINES, Harald (Forschungszentrum Juelich)

Co-authors: Mr ACKENS, Axel (Forschungszentrum Juelich);   Mr SUXDORF, Frank (Forschungszentrum Juelich)

Presenter: KLEINES, Harald (Forschungszentrum Juelich)

Session Classification: Poster 1

Track Classification: Control, Monitoring,Test and Real Time Diagnostics Systems