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Have questions about PROFIBUS or PROFINET?  
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## PI Network

## PROFINET AND MES: CLOSING THE COMMUNICATION GAP

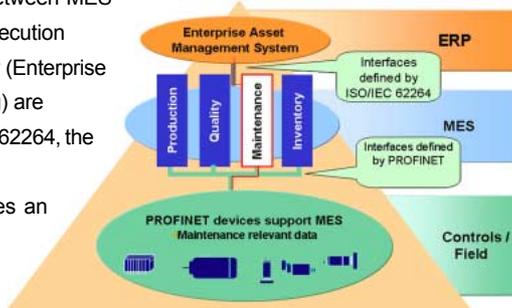
PI has released the 'PROFINET and MES Maintenance Operations' guideline, which describes interface functions supporting maintenance systems and facilitating consistent communication from the field up to top management.

While interfaces between MES (Manufacturing Execution Systems) and ERP (Enterprise Resource Planning) are defined in ISO/IEC 62264, the new PROFINET specification defines an open interface between MES and automation

systems for maintenance. This has closed a communication gap, as no standards previously existed relating to how the automation information should be provided.

Another MES-relevant PROFINET

standard is the guideline 'Identification and Maintenance Functions' (I&M functions). I&M functions contain the so-called 'electronic type plate' which is saved in a device and used for selecting spare parts, procuring and storing products, planning device updates and establishing



a direct link to the device vendor.

The guideline 'PROFINET and MES Maintenance Operations' can be downloaded from the PI Web site at

[www.profinet.com](http://www.profinet.com)

## PROFINET LINKS TO FIELDBUSES AND HART TO SUPPORT PROCESS USERS

PI is encouraging widespread use of PROFINET in process automation by defining how PROFIBUS PA, HART and FOUNDATION Fieldbus can be integrated with it.

The PI Working Group 'DCS Requirements' is working with NAMUR to define the requirements, which will then be implemented by other Working Groups.

The integration of PROFIBUS PA is complete. HART is nearing completion and work has begun on FOUNDATION Fieldbus - with expected completion in 2007.

Then, HART, PROFIBUS PA and

FOUNDATION Fieldbus process instruments will be able to operate unchanged under PROFINET. PI working groups will also consider system redundancy, time synchronization and stamping, and engineering.

In conjunction with the MES interfaces (above), this promises powerful management capabilities for process plants.



## TCI: TOOL CALLING INTERFACE

PI has completed the TCI (Tool Calling Interface) specification after less than a year of development work.



TCI is a manufacturer-independent interface for engineering. It allows dynamic parameters to be loaded to PROFIBUS and PROFINET devices from a variety of vendor-specific engineering tools via a common interface, making it much quicker and easier for users to configure systems and machines.

With TCI, PI has defined the interface for a range of device and automation-system tools, thus supporting standardized communications with field devices over network boundaries.

From the user's point of view, integrating TCI is as simple as installing a printer on a PC. The manufacturer of an intelligent field device defines the functionality in

*Continued on Page 2*

## FUNCTION BLOCK WHITE PAPER

James Powell has written a nice white paper about the Function Block capability of PROFIBUS compared with other fieldbuses. Many people still believe that PROFIBUS does not use Function Blocks. Here's your chance to know the truth.

**Download the White Paper**

## PI News

## PMA - PROCESS MANAGEMENT ACADEMY



PNO supported the January Process Management Academy (PMA) at Neuss, Germany, as an 'industry association' sponsor.

The PMA, organized by the ARC Advisory Group, is a series of events for professionals from the process industries. Over 300 decision makers attended this time to network and gather intelligence about the latest developments in process automation.

Effective management and optimization of production plants using collaborative manufacturing concepts and technologies were the focus of the presentations.

Executive speakers from end users, manufacturing companies and universities presented

topics such as Plant Asset Management, Industrial Networks and Fieldbuses, PROFINET for Process Automation, Process Safety Applications and Explosion Protection, Plant Safety, and Innovative Tools for Engineering, Wireless, and RFID.

**More information here**

## PROFINET DEVELOPERS' WORKSHOP

PROFIBUS Switzerland and Zurcher Hochschule Winterthur together with PNO Germany hosted the recent PROFINET developers' workshop at Zurich, Switzerland. The workshop on Jan. 23, 2007, was very practically oriented. It is part of an international series of PROFINET developers workshops that meets great interest among manufacturing companies. Participants learned about the development paths of PROFINET IO and PROFINET CBA products, got to know available development environments/kits, and leading technology companies presented their options for development support. **germany@profibus.com or switzerland@profibus.com.** Find PROFINET products here

## COMBINING THE BENEFITS OF EDDL, FDT AND OPC UA



The Institute for Information Technology in Mechanical Engineering (itm) has developed a possible way of integrating the advantages of both EDDL and FDT into one universal OPC UA-based Client/Server Architecture package designated 'FDD UA'.

The novel concept combines description and programming technologies into one solution for device engineering.

Presenting the concept during a recent NAMUR general meeting, itm's Prof. Bender (pictured above), one of the founders of PROFIBUS, received positive feedback from users and vendors.

The PI booth will have a demonstration of OPC with EDDL at the Hanover Fair in April. itm: **Bender@itm.tum.de or Grossmann@itm.tum.de**

## PASSED WITH SUCCESS!

With the accreditation of the first PI Training Centers (PITC), PI has added another valuable piece to its global support network. PITCs ensure the quality of training for PROFIBUS and PROFINET, and of the institutions offering courses.

PITCs offer 'Certified Installer' or 'Certified Engineer' training courses through which participants can achieve a recognized professional qualification in industrial networking.

Many installers and engineers for PROFINET have been certified at the PI Training Center at Mannheim, Germany. In fact,



26 engineers have been certified there since December 2006! Other PITCs in Germany, the Netherlands, Switzerland and North America, and other countries have had similar success certifying installers and engineers for PROFIBUS and for PROFINET. See **list here** or contact **info@profibus.com**

## TCl: TOOL CALLING INTERFACE

*Continued from Page 1*

an XML file. This can be configured to be used with different field devices.

The interface does not require the system engineer to have any specific communication knowledge. The engineer can establish contact with the device and parameterize and diagnose PROFIBUS/PROFINET devices

without much effort. An associated feature is a standardized storage path within an automation project. This enables parameters and programs stored during engineering to be archived and/or reloaded.

The TCl specification has been developed in collaboration with AIDA (Automatisierungsinitiative Deutscher Automobilhersteller - Automation Initiative of German Automobile Manufacturers).

AIDA also expressed its desire that the TCl be introduced as quickly and consistently as possible.

The functionality of TCl was demonstrated at the PNO stand at the SPS/IPC/DRIVES 2006 using various device engineering tools.

The TCl specification can be downloaded (free of charge for PI members) from **this address.**

## DEVELOPERS' WORKSHOP FOR TCl

Find out more about TCl by attending PI's **half-day TCl Developers' Workshop** on Wednesday, March 14, 2007, in Karlsruhe, Germany. Topics will be:

- > Presentation of the concept
- > From parameterization to device
- > Examples: PROFIBUS/PROFINET

**Contact: germany@profibus.com**



## New Products

### EDD DEVELOPMENT

A new EDD test system has been introduced by



itm which automatically derives a device specific test suite from an EDD. The tester can optimize this test suite in a clear graphical representation. The PNO-owned test cases cover IEC conformance tests as well as testing of the device description. To help manufacturers pass the certification tests smoothly, different methods and tools for an efficient EDD-development are available.

itm: [zirkler@itm.tum.de](mailto:zirkler@itm.tum.de)

### IO-LINK KIT

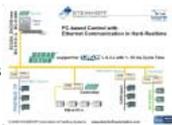
This IO-Link Starter Kit from MESCO permits development of a master and slave implementation. The included IO-Link Monitor analyses the communication process against existing standards and specifications. It's also available separately. The kit also includes the IO-Link Diagnosis Box. All components support Physics 2 (three-wire system), all baud rates and all data protocols. Connection of a Fieldbus gateway is provided, plus support for PC communication via USB.



**Mesco Engineering:**  
[www.mesco-engineering.com](http://www.mesco-engineering.com) or  
**+49 7621 89031 42** or  
[info@mesco-systems.com](mailto:info@mesco-systems.com)

### REAL-TIME IRT SUPPORT

STEINHOFF Automation & Fieldbus Systems now offers IRT support for the CP1616 and CP1604 PROFINET Controllers for the reliable RTOS QNX 6.3. The resource manager and the API implementation are fully compatible with the API version 2.0.1 defined by Siemens. Configuration masters and networks can be performed with the SIMATIC NCM PC from Siemens.



**Steinhoff Automation: +49 6431 529366** or [info@steinhoff-automation.com](mailto:info@steinhoff-automation.com) or [www.steinhoff-automation.com/Profinet.htm](http://www.steinhoff-automation.com/Profinet.htm)

### AIRLINE-EX VALVE

Burkert has a new Type 8650 AirLINE-Ex solenoid valve manifold system



designed to integrate directly into the Siemens ET200 iSP PROFIBUS DP-V1 distributed I/O system. It's suitable for Zone 1/21, with electronic I/O and actuation air connection possibilities into Zone 0/20. Numerous options of valve functionality, size and fluidic connection are possible, along with 'Hot -Swapping'. Up to 48 valves (11mm) or 32 valves (16.5mm) or a combination of both can be fitted in a single assembly.

**Burkert: +44 1453 731353** or [www.burkert.com](http://www.burkert.com)

### SPUR BLOCKS

TURCK has a versatile, low-cost way to distribute field devices for PROFIBUS PA. JRBS spur blocks provide the convenience of DIN-rail mounting in an IP 20 design. Several versions offer features that enhance usability and simplify wiring in a variety of industrial applications. A selector switch determines segment termination. Some versions also have short circuit protection. An aluminum housing provides a temperature rating of -13 to +158°F. The products are available in 4, 6 or 8-port configurations, and contain LED indication of spur status and segment power.

**Turck: www.turck-usa.com**

### CONNECTORS & CABLES

Rde USA has a new generation of M23 and M40 circular power connectors setting a "new standard in reliability and performance". There's also a color-coded M23 series in red, green, yellow, blue and black which greatly aid in reducing connection errors in applications requiring multiple connections of similar configurations on control centers, hubs, and boxes.



**Rde USA: www.rde-usa.com** or **+1 800 511 7184**.

### SINGLE-AXIS DRIVE

Siemens has announced the Sinamics S120 AC Drive with PROFIBUS and



PROFINET interfaces. A modular concept separates power and intelligence allowing the user multiple choices to select the right controller while protecting existing investments. This flexibility also opens up fresh possibilities for innovative modular machine designs in applications such as automatic assembly machines and material handling systems.

**Siemens: www.siemens.com**

### PROCESS CAT 5

LAPP GROUP have introduced a PROFINET cable for process automation in the Off-Shore industry.



ETHERLINE Marine FRNC FC UL/CSA(CMG/PLTC) Cat. 5 2x2x22AWG/7 is approved for Marine and Offshore Applications by Germanischer Lloyd, Lloyds Register of Shipping, ABS Europe Ltd, Bureau Veritas and Det Norske Veritas (DNV).

**LAPP: www.lappusa.com**

### TOUGH PA CABLE

DataCELL FIELD PROFIBUS PA cables are specifically designed for tough plant environments. They are Instrument Tray Cable (ITC)/Power Limited Tray Cable (PLTC) exposed run-rated, CSA listed FT-4 and CSA recognized CMX-Outdoor-CMG, they can eliminate conduit and are approved for Class 1 and 2, Div 2 hazardous use. They are also available in arctic versions and are oil-, sunlight-, ozone-

and water-resistant, in standard or custom colors. Northwire: +1 800 468 1516 [www.northwire.com/pa](http://www.northwire.com/pa)



### DIAGNOSIS AND MANAGEMENT

abacon-IT and Trebing & Himstedt have jointly developed an integrated diagnostic concept spanning fieldbus installation, planning, maintenance, servicing and commissioning. The fusion of the PROFIBUS Scope and the abacon-IT AN&PI system for planning and documentation opens up "untapped potential" for asset management, documentation, and diagnosis.

**Trebing & Himstedt : +49 385 39572 0** or [info@t-h.de](mailto:info@t-h.de) or [www.t-h.de](http://www.t-h.de)

### PROFINET IO KIT

Softing's PROFINET IO Evaluation Kit contains everything needed to get started with PROFINET, including an evaluation board, development tools, sample application, PLC demo projects and a manual. The Kit includes Softing's PROFINET IO device stack running under Linux and a sample application. **Softing North America: +1 978 499 9650** or [Ken.Hoover@softing.com](mailto:Ken.Hoover@softing.com) or [www.softing.us](http://www.softing.us)



Find more than 2400 PROFINET and PROFIBUS products online here.

## Member News

### MIDDLE EAST TRAINING

A group of Siemens engineers from a number of Middle East countries successfully completed a Certified PROFIBUS Engineer training session that took place in Dubai recently, run by



PROCENTEC from the Netherlands. For 5 days participants were trained by PROCENTEC experts in all aspects of PROFIBUS DP/PA, and available troubleshooting tools like ProfITrace and the Handscope. Almost everybody passed the exam and is now ready for operations in the Middle East region. The next open session will take place in April. **dboom@procentec.com** or [www.profinet.com](http://www.profinet.com)



## PI World

### BRAZIL

During the ISA Show Brazil in November, the Brazil Latin America RPA organized another Case Study Seminar. This kind of event has been one of the main ways of showing successful PROFIBUS applications. Four case studies were presented this time. The first Case Study was by Coester who showed the integration of PROFIBUS and Modbus using an HMS gateway. The second was by



Smar, Sense and Siemens and showed the application of PROFIBUS in Usina Sao Francisco, a Sugar and Alcohol Mill in Brazil. The third was presented by Altus and it was related to an application of PROFIBUS in a petroleum platform of Petrobras, Namorado 2 platform. The last Case Study was related to an application of PROFIBUS in a Sugar and Alcohol Mill in Brazil, Usina Alto Alegre, Alta Floresta unit, using the System302 from Smar. During seminars the main focus is on technical issues and case



studies. Up to now, more than 2500 persons have attended. The main goal for Brazil Latin America is to show how PROFIBUS can be used to aid progress in automation. [cesarcass@smar.com.br](mailto:cesarcass@smar.com.br) or [brazil@profibus.com](mailto:brazil@profibus.com)

### NORTH AMERICA

For the fifth consecutive year the PTO and PROFIBUS Interface Center (PIC) are holding FREE one-day training classes throughout North America. There are 26 cities in the initial schedule, but more will be added during the year. These are educational events with three curricula centering on PROFIBUS, PROFIBUS in the



### POLAND

PNO Poland recently organized a 2-day PROFIBUS/PROFINET Conference in South Poland, which more than 60 delegates attended. The main topic was 'PROFINET / PROFIBUS in Poland – data, news, applications'. In parallel with the conference, members of PNO Poland presented their own products, solutions and reference

process industry, and PROFINET. Dates and venues are selected at least 30 days prior. **The Tentative Schedule is here.** Please visit often to keep up to date with confirmations, and to find a class location near you. PTO also reports massive growth in visitors to **its web site**. Launched in February 2006 it has passed the 6000 visitors per week figure. Efforts with Search Engines, the bi-monthly **email Newsletter** and **Carl Henning's PROFIBlog** are achieving substantial monthly gains. In December 2006, the site had 25,000 visitors and, in January, over 31,000!

### UK

A special presentation for process users has been announced as part of the ongoing training and educational program organized by the PROFIBUS Group. Back by popular demand is the FREE seminar called 'Practical Aspects of PROFIBUS PA in Process'. The date is 9th March 2007 and it's to be hosted by ABB Ltd at Daresbury, Warrington, Cheshire. For more information visit [www.uk.profibus.com](http://www.uk.profibus.com) or email [admin@uk.profibus.com](mailto:admin@uk.profibus.com). The Group tells us that its annual Conference, scheduled for June at Coombe Abbey near Coventry,

installations. Delegates found the most interesting presentations to be 'PROFIsafe in automation – theory and practice' and 'MES together with PROFINET CBA'. Several new members of PNO Poland received their Certificate of Membership at the event. Slide presentations and more photos from the conference can be found at [www.profibus.org.pl](http://www.profibus.org.pl)

promises to be even more successful than 2006. It is now taking registrations here

### SOUTH EAST ASIA

With a total of over 3500 visitors at all locations during 2006, RPA SEA achieved its target of reaching 300+ customers per country in its second PROFIBUS RoadShow. More events have already been defined for the first six months of 2007: they include Workshops in Singapore; The Industrial Automation Fair in Penang; Industrial Machine Automation and Control Fair in Bangkok; the SMBTech (Machine Automation), also in Bangkok. Workshops are planned for Bangkok and Rayong in June and the busy program doesn't stop there! If you'd like to take part in this promotional campaign please email: [southeastasia@profibus.com](mailto:southeastasia@profibus.com)



### CHINA

PROFIsafe has been nominated as a pre-standard by the Chinese Standardization Authorities, under GB/Z 20830 - 2007.

## PI Network

- Australia** - Mr. John Immelman  
Tel.: +61 3 9761 5599; Fax: +61 3 9761 5525  
Email: [australia@profibus.com](mailto:australia@profibus.com)  
[www.aus.profibus.com](http://www.aus.profibus.com)
  - Belgium** - Mr. Herman Looghe  
Tel.: +32 2 706 80 00; Fax: +32 2 706 80 09  
Email: [belgium@profibus.com](mailto:belgium@profibus.com)  
[www.be.profibus.com](http://www.be.profibus.com)
  - Brazil** - Mr. Cesar Cassiolato  
Tel.: +55 16 3946 3519; Fax: +55 16 3946 3595  
Email: [brazil@profibus.com](mailto:brazil@profibus.com)  
[www.br.profibus.com](http://www.br.profibus.com)
  - China** - Mrs. Wang Jun  
Tel.: +86 10 62 02 92 18; Fax: +86 10 62 01 78 73  
Email: [china@profibus.com](mailto:china@profibus.com)  
[www.cn.profibus.com](http://www.cn.profibus.com)
  - Czech Republic** - Mr. Zdenek Hanzalek  
Tel.: +420 2 2435 7610; Fax: +420 2 2435 7610  
Email: [czechrepublic@profibus.com](mailto:czechrepublic@profibus.com)  
[www.cz.profibus.com](http://www.cz.profibus.com)
  - Denmark** - Mr. Kim Husmer  
Tel.: +45 40 78 96 36; Fax: +45 44 07 77 36  
Email: [denmark@profibus.com](mailto:denmark@profibus.com)  
[www.dk.profibus.com](http://www.dk.profibus.com)
  - Finland** - Mr. Taisto Kajjanen  
Tel.: +358 9 5307 259; Fax: +358 9 5307 360  
Email: [finland@profibus.com](mailto:finland@profibus.com)  
[www.sf.profibus.com](http://www.sf.profibus.com)
  - France** - Mrs. Christiane Bigot  
Tel.: +33 1 45 74 63 22; Fax: +33 1 45 74 03 33  
Email: [france@profibus.com](mailto:france@profibus.com)  
[www.fr.profibus.com](http://www.fr.profibus.com)
  - Germany** - Mr. Peter Wenzel  
Tel.: +49 721 96 58590; Fax: +49 721 96 58589  
Email: [germany@profibus.com](mailto:germany@profibus.com)  
[www.de.profibus.com](http://www.de.profibus.com)
  - Ireland** - Mr. Hassan Kaghazchi  
Tel.: +353 61 202 107; Fax: +353 61 202 582  
Email: [ireland@profibus.com](mailto:ireland@profibus.com)  
[www.ir.profibus.com](http://www.ir.profibus.com)
  - Italy** - Mr. Maurizio Ghizzoni  
Tel.: +39 030 3384030; Fax: +39 030 396999  
Email: [pni@profibus.com](mailto:pni@profibus.com)  
[www.it.profibus.com](http://www.it.profibus.com)
  - Japan** - Mr. Shinichi Motoyoshi  
Tel.: +81 3 54 23 86 28; Fax: +81 3 54 23 87 34  
Email: [japan@profibus.com](mailto:japan@profibus.com)  
[www.jp.profibus.com](http://www.jp.profibus.com)
  - Korea** - Mr. Cha Young Sik  
Tel.: +82 2 523 5143; Fax: +82 2 523 5149  
Email: [korea@profibus.com](mailto:korea@profibus.com)  
[www.rk.profibus.com](http://www.rk.profibus.com)
  - Netherlands** - Mr. Dolf van Eendenburg  
Tel.: +31 33 469 0507; Fax: +31 33 461 6638  
Email: [netherlands@profibus.com](mailto:netherlands@profibus.com)  
[www.nl.profibus.com](http://www.nl.profibus.com)
  - Norway** - Mr. Ivar Sorlie  
Tel.: +47 2272 8972; Fax: +47 904 05509  
Email: [norway@profibus.com](mailto:norway@profibus.com)  
[www.no.profibus.com](http://www.no.profibus.com)
  - Poland** - Mr. Dariusz Germanek  
Tel.: +48 32 371365; Fax: +48 32 372680  
Email: [poland@profibus.com](mailto:poland@profibus.com)  
[www.pl.profibus.com](http://www.pl.profibus.com)
  - Russia** - Mrs. Olga Sinenko  
Tel.: +7 095 742 68 28; Fax: +7 095 742 68 29  
Email: [russia@profibus.com](mailto:russia@profibus.com)  
[www.rus.profibus.com](http://www.rus.profibus.com)
  - Slovakia** - Mr. Richard Balogh  
Tel.: +421 7 6029 1411; Fax: +421 2 6542 9051  
Email: [slovakia@profibus.com](mailto:slovakia@profibus.com)  
[www.sk.profibus.com](http://www.sk.profibus.com)
  - South-East Asia** - Mr. Volker Schulz  
Tel.: +65 6490 6464; Fax: +65 6490 6465  
Email: [southeastasia@profibus.com](mailto:southeastasia@profibus.com)  
[www.sea.profibus.com](http://www.sea.profibus.com)
  - Southern Africa** - Mr. Dieter Dichert  
Tel.: +27 11 201 3200; Fax: +27 11 609 5950  
Email: [southernafrica@profibus.com](mailto:southernafrica@profibus.com)  
[www.rsa.profibus.com](http://www.rsa.profibus.com)
  - Sweden** - Mr. Peter Bengtsson  
Tel.: +46 4 51 49 460; Fax: +46 4 51 89 833  
Email: [sweden@profibus.com](mailto:sweden@profibus.com)  
[www.se.profibus.com](http://www.se.profibus.com)
  - Switzerland** - Ms. Karin Beyeler  
Tel.: +41 32 672 03 25; Fax: +41 32 672 03 26  
Email: [switzerland@profibus.com](mailto:switzerland@profibus.com)  
[www.ch.profibus.com](http://www.ch.profibus.com)
  - UK** - Mr. Bob Squirell  
Tel.: +44 20 7871 7413; Fax: +44 870 141 7378  
Email: [uk@profibus.com](mailto:uk@profibus.com)  
[www.uk.profibus.com](http://www.uk.profibus.com)
  - USA & CANADA** - Mr. Michael Bryant  
Tel.: +1 480 483 2456; Fax: +1 480 483 7202  
Email: [usa@profibus.com](mailto:usa@profibus.com)  
[www.us.profibus.com](http://www.us.profibus.com)
- Addresses of PI Competence Centers and Test Labs can be found at [www.profibus.com](http://www.profibus.com) and [www.profinet.com](http://www.profinet.com)
- Editor: Geoff Hodgkinson  
1 West St. Titchfield, Hants, UK PO14 4DH.  
Tel.: +44 (0) 1329 846166; Fax: +44 (0) 1329 512063  
[geoff@ggh.co.uk](mailto:geoff@ggh.co.uk)
- Published by: PNO  
Haid-und-Neu-Str. 7  
D-76131 Karlsruhe, Germany