

PROFINETS

North American Edition

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GENERAL NEWS



TRANSITIONING FROM PROFIBUS TO PROFINET: Our 2012 program of FREE One Day Training Classes is shown below. Some dates are still 'tba' so watch [THIS PAGE](#) for updates. The PROFINET classes for 2012 include new PROFINET features, new demos, new products, and new application stories. We've also added a section on transitioning from PROFIBUS to PROFINET; why not keep your existing

PROFIBUS networks running as normal and integrate them with PROFINET? Since you already made the investment in PROFIBUS we figure there's no point in replacing it if its working fine, so we're making it quick and easy to transition using a low-cost module. Learning PROFINET is easy too if you already know PROFIBUS. Find out more at one of the following venues:

2012	PROFIBUS	PROFINET
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SPONSORS



Feb		Birmingham, AL Feb 14
Mar	Dallas, TX Mar 1 Greenville, SC Mar 29	Atlanta, GA Mar 13
April		St Louis, MO Apr 12
May	Milwaukee, WI May 12	El Paso, TX tba Detroit, MI May 16
June	Boston, MA	NYC, NY tba Montreal tba
July	Kansas City, MO tba	Indianapolis, IN Jul 12
Aug	Dayton, OH Aug 23	Portland, OR
Sept	Seattle, WA tba	Chattanooga, TN tba
Oct	Memphis, TN tba	Minneapolis, MN Oct 25
Nov		Baltimore, MD tba
Dec		Los Angeles, CA

Recent classes have been over-subscribed, so the advice for 2012 is: **book early!**

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2012 CERTIFIED NETWORK TRAINING CLASS PROGRAM: Beginning in 2012, PROFIBUS PA classes will be held in Peterborough, Ontario at the new Siemens PI Training Center as well as in the PIC at Johnson City, Tennessee. This is the 12th year of these fee-based classes which are designed to provide a detailed grounding in PROFIBUS and PROFINET. Students who pass the theoretical and practical exams are granted Certified Engineer Status and their names are listed on the PI North America web site. The confirmed class list is shown below:

2012	PROFIBUS DP	PROFIBUS PA	PROFINET
Jan		Peterborough, ON Jan 24-26	
Mar	Johnson City, TN Mar 5-9		Johnson City, TN Mar 26-30
May	Johnson City, TN May 14	Peterborough, ON May 15-17 Johnson City, TN May 21-23	
June			Johnson City, TN June 11-15
Aug	Johnson City, TN August 13-17	Johnson City, TN August 20-22	
Sept			Johnson City, TN September 17-21
Nov	Johnson City, TN November 5-9		
Dec			Johnson City, TN December 3-7

On-site classes are increasingly popular. Companies desiring this more 'personal service' are invited to contact the PI North America office, or email: CertifiedTrainingManager@PInorthamerica.com.

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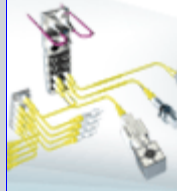
netx
ASIC



Gateways



Expand your network architecture with IO-Link



BALLUFF

WEB NEWS: A quick overview of what's happening on Social Media and elsewhere.

- Have you see our new video? Watch [I Am PROFINET](#) here.
- [All Things PROFINET](#) has a new section explaining how easy it is to transition from PROFIBUS (and other fieldbuses) to PROFINET without obsoleting your working PROFIBUS equipment. There's even a list of devices to help you achieve this at low cost.
- Posts to the [LinkedIn PROFINET group](#) include a recent one on redundancy. .

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SPS/IPC/DRIVES HITS THE MARK! "With Automation fairs in North America non-existent, it's a pleasure to visit one that works!" So said Michael Bryant, Executive Director of PI North America, on his return from SPS/IPC/Drives in Nuremberg, Germany, which was attended by more than 56,000 visitors. The Fair, traditionally a discrete automation event, was bigger than ever, with its organizers claiming that the fair is now

representing the process automation industries too.



Said Bryant: "I was personally delighted with one announcement at the PI press conference held on Day 2 - the awarding of the 500th PROFINET compliance Certificate to GE Intelligent Platforms. This is a PI North America success story in which I had a role to play." To celebrate we took Mike's picture (left) with GE's Mr van Helten, who collected the certificate during the press conference.

This development is all part of the rapidly accelerating progress of PROFINET which, by the way, is expected to have passed 4 million nodes by the end of 2012. Jörg Freitag, Chairman of PI, said at the press conference that he expects the 10 million mark to be exceeded by 2014. Meanwhile, PROFIBUS continues to add nodes at an undiminished rate, with the total now passing 40 million.



PI showed technologies including PROFIBUS, PROFIenergy, PROFIdrive, PROFIsafe and of course, PROFINET. The PROFINET Wall was larger than ever: here's PI North America's Carl Henning (right) and Michael Bowne out in front. There was news of even more chips making the integration of PROFINET easy. Companies such as Renesas, Texas Instruments, Hilscher and Innovasic all had a big presence,

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with new chips and collaborations being announced that vastly increase the choice for PROFINET device makers. Hilscher announced next-generation versions of its netX family, supporting PROFINET V2.3 additions such as Dynamic Frame Packing, and a collaboration with Renesas on a next generation high end chip family. Separately, Renesas announced they will distribute the TPS-1 PROFINET IO single chip solution and starter kit based on a global licensing agreement with KW-Software. There's a comprehensive round-up of PROFIBUS and PROFINET items at the Fair that caught the eye of Carl Henning, in his [PROFiblog](#).

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TECHNOLOGY TIPS



FIND FAULTS FAST!: Typically, during commissioning, PROFIBUS addresses are not assigned in the numerical order according to their position in the network. PROFIBUS Tester 4 allows you to determine the physical location of each node, the cable length and the actual distance between nodes. After a successful topology scan, the PROFIBUS Tester 4 will display the signal quality graphs in the correct order. Here you can see

a significant drop between node 11 and node 12 due to high transient resistance (e.g. caused by corrosion in the PROFIBUS cable or connector). This feature allows you to rapidly localize problems in your network. [SOFTING](#).

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WORLD NEWS



INDIA: PROFIBUS/PROFINET Road Shows were conducted by the Indian PROFIBUS PROFINET Association (IPA) at Baroda and Pune in September 2011 and IPA participated in Automation 2011 at Mumbai in September. The event was inaugurated by Dr. Peter Wenzel, Executive Director of PI. IPA won the 'Best Stall Award' in the Special Category.

JAPAN: The Japanese PROFIBUS Organization (JPO) has translated the new version of the PROFINET System Description into Japanese. It's available from the JPO web page. JPO held PROFINET Open Seminars in October in Aichi and Tokyo and attended the System Control Fair 2011 (SCF) in Tokyo in November.

KOREA: The KPA Booth at 'KORMARINE 2011' during October included a multi-vendor PROFIBUS/PROFINET demo and individual company displays. The booth targeted the southern major industrial area comprising shipbuilding, marine,



steel, automobile and chemicals industries.

SOUTH EAST ASIA: The PROFIBUS Association Southeast Asia was invited to give a speech on Market Trends and new technologies at the Regional Industry Networking Conference held at the Singapore Polytechnic University.

GERMANY: Two 'Meet the Experts' events were held in December, covering the latest trends of PROFIBUS in Process Automation.



CHINA: The China PROFIBUS and PROFINET Association organized a series of road shows in Beijing, Shanghai and Shenzhen in August and September, attracting an average of 130 attendees. The Chinese PROFIsafe System Description and PROFIBUS and PROFINET Proceedings were launched.

FRANCE: France PROFIBUS-PROFINET delivered three technology sessions to an eclectic mix of industry representatives in Rennes, Paris and Mulhouse.

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APPLICATIONS

HIGH VOLTAGE TEST LAB USES PROFINET: The Arnheim-based Dutch company KEMA is a specialist for the functional and safety testing of high voltage electro-technical devices. They recently opened a new test lab using a system designed by Alewijnse Industrie. Previously, installing and disassembling individual measuring stations was a time-consuming chore.



The new solution had to add a high degree of flexibility so Alewijnse developed a modular system supporting 16 different testing stations each controlled by its own PLC. PROFINET is used for centralized control and data storage, while enabling decentralized execution of tests at the individual measuring stations and ensuring overall system safety. Protective cages including doors and door switches are integrated into the

safety network and connected to the PROFINET Remote I/O stations from Phoenix Contact using plug connectors which allow the entire measuring station to communicate with the SCADA system and the central controller.



One advantage of PROFINET is that the PROFINET controller immediately recognizes any component that is connected. Each component is assigned a unique ID to ensure that only the part of the testing program relevant for that device is executed. This allows KEMA to flexibly deploy the testing devices at different measuring stations in a fraction of the time.

Also, the controller only needs to be programmed a single time since the program can be copied to the 15 other PLCs. Another benefit is ease of cabling: KEMA operates a star-shaped fiber network for electromagnetic screening reasons. The individual stations

are numbered using standard techniques such as IP address assignment. [PHOENIX CONTACT](#).

(Top image: Central operating station with test configuration; bottom image: The flexible PROFINET infrastructure is highly advantageous since the testing configurations change on a regular basis.)

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NEW PRODUCTS



MONITOR ENHANCED BY GRAPHICAL TOPOLOGY

DISPLAY : TH SCOPE is now able to cover more than 80 percent of the Industrial Ethernet market, including PROFINET. Ethernet devices such as printers and cameras can also be monitored. TH SCOPE now displays graphical topologies too. [TREBING+HIMSTEDT](#).

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FIBER OPTICS CLIMB HIGHER : The PSI-MOS product family from Phoenix Contact is now qualified to be operated at a height up to 5000 meters above mean sea level. [PHOENIX CONTACT](#).

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MULTI-CHANNEL PROFIBUS PA BARRIERS: The new MBD40 is a 4- and 8-channel solution for the connection of intrinsically safe electric circuits to PROFIBUS PA networks. They offer protection up to category IP20. [TURCK](#).

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CHIP UPDATES: Hilscher has announced a new generation of netX single chip solutions for Industrial Ethernet. The netX 51, 52 devices support latest PROFINET specifications, including IRT and Dynamic Frame Packaging. [HILSCHER](#).

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REMOTE I/O IS SMALLER/FASTER: The SIMATIC ET 200SP is a scalable and highly flexible distributed I/O system for connecting process signals to a central controller via PROFINET. Its compact design saves valuable real estate. Up to 64 I/O modules can be plugged into passive base units in any combination. [SIEMENS](#).

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MOTOR PROTECTION USING IO-Link: Siemens Industry



Automation Division has equipped its range of monitoring relays with IO-Link. The relays protect motors and plant components by monitoring temperature, speed, network quality, current and voltage. IO-Link transfers measured values and messages to the control system. [SIEMENS](#).

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WIRELESS BRIDGE FOR ETHERNET: The Anybus Wireless Bridge makes life easier for system integrators and network designers needing to create connections through hazardous areas, hard-to-reach locations, or moving installations. The Wireless Bridge is compatible with all popular industrial Ethernets including PROFINET. [HMS INDUSTRIAL NETWORKS](#).

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UNIVERSAL MOTOR CONTROLLER: The UMC100-FBP from ABB offers comprehensive electronic motor protection, efficient motor control, quick fault detection and diagnostics as well as easy integration into control systems. It has a PROFIBUS interface and can measure active and apparent power, voltage, energy and power factor. [ABB](#).

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COMPACT RJ45 PCB JACKS: HARTING has new RJ45 PCB jacks with integrated transformers. Compact dimensions enable convenient and simple integration into established IP 65/67 interface types and the realization of very flat assemblies. [HARTING](#).

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PROFIpeople - the 'who's who' of PROFIBUS and PROFINET



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