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The official email newsletter of the PTO in North America

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GENERAL NEWS

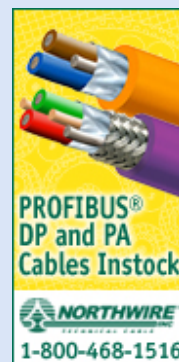
4 WAYS TO LEARN ABOUT PROFIBUS AND PROFINET:

1. [Become a Certified Network Engineer](#): PROFItch classes - which award the title Certified Network Engineer to attendees who successfully complete written and practical tests at the end of the five day course - are held regularly in Johnson City, TN. The 2009 schedule is:

	PROFIBUS	PROFINET
June	<a href="#">15-19</a>	
September	<a href="#">21-25</a>	<a href="#">14-18</a>
October	<a href="#">19-23</a>	
November	<a href="#">16-20</a>	<a href="#">9-13</a>

For more detail, download the PROFItch brochure [here](#). Now is the perfect time to train for the upturn but please register early.

2. [Attend FREE One-day Training Classes](#): PROFIBUS and PROFINET - including special Process Automation events - are covered comprehensively in our ongoing series of free training days. Classes include the latest technical advancements so here's your chance to stay at the forefront of networking technology at no cost. Our program for the rest of 2009 is:





**Enables  
Connects  
Protects**



Schedule	PROFIBUS	Process	PROFINET
May	<a href="#">Salt Lake City</a>	<a href="#">Newark</a>	<a href="#">Jacksonville</a>
June	<a href="#">Grand Rapids</a>		<a href="#">Vancouver</a>
July	<a href="#">Davenport</a>		<a href="#">Boston</a>
August	<a href="#">Portland, OR</a>		<a href="#">Milwaukee</a>
September			<a href="#">Cincinnati &amp; Toronto</a>
October	<a href="#">St Louis</a>		<a href="#">Minneapolis</a>
November	<a href="#">Milpitas</a>	<a href="#">Houston</a>	<a href="#">Seattle</a>
December			

Note: Attendees receive a certificate for 5.5 Professional Development Hours (PDH). And as a special bonus, PTO raffles a week-long PROFINET Certified Network Engineer Class (see above - a \$2695 value) at each PROFINET event.

3. **Connect via the Internet:** Our webinar schedule for 2009 is under construction. We anticipate webinars on PROFIBUS Basics, PROFIsafe, and more. Process webinars for PROFIBUS PA are [archived online here](#).

4. **Try our Web-based Training:** You will find PROFIBUS Web-based Training [here](#).



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**HANNOVER FAIR: MUTED ... OR NOT?:** Depending on who you spoke to, Hannover Fair in April seemed muted, hardly surprising considering the economic turndown. However, organizers reported slightly higher attendance than 2008, which might be explained by the fact that the Fair covers all industrial areas in 20+ huge halls and we heard that the energy sections were quite full while the automation halls not so. PTO's Carl Henning attended and delivered five PROFIBlogs from the PROFIBUS and PROFINET perspective, with pictures and video. Here's a quick overview - click the link to read each report in full:



**PI and Penguins:** The downsized PI booth included displays of PROFIsafe, PROFIBUS PA, IO-Link, PROFIdrive, the new PROFInergy profile, and the PROFINET wall. The PI staff and the attending RPA chairmen had dinner together on Tuesday evening where the 20th anniversary of PI was celebrated. [Read Carl's Blog here](#).

**Wireless, Process and Safety:** Wireless for process automation is already well along in cooperation with the HART Communication Foundation and Fieldbus Foundation. Now a Working Group for wireless in factory automation has made progress using IEEE802.15.1 and IO-Link for field device connection. PROFIBUS PA Profile 3.02 was being demonstrated and the PROFIsafe wall (right) gets longer with every fair. Five suppliers are developing safety controllers, with Phoenix Contact




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showing theirs. Siemens introduced a *PC-based safety controller*. [Read Carl's Blog here](#) and [here](#).

**Products, Ports, and Poppis** : A Phoenix Contact PROFIBUS Proxy with built-in 4-port switch was on the booth. Siemens introduced its new PLC, the S7-1200 with PROFINET connectivity. HMS showed an OPC server for their Anybus gateway - it comes free with the gateway. Finally there is a successor book to the 'Rapid Way to PROFINET' by Manfred Popp. It's called 'Industrial Communication with PROFINET'.. [Read Carl's Blog here](#).

**Development Tools**: Molex updated on their development kits including stacks for controllers and devices. KW-Software are working on a chip-based solution for PROFINET. Their literature calls it 'TPS-1' and the aim is to make it 'half the price of other solutions'. There are many other tool choices when it comes to adding PROFINET to devices. [Read Carl's Blog here](#).

NB: If you want to receive PROFIBlog regularly, you can get the RSS feed at any of the above links.



**PROFINET SYSTEM DESCRIPTION**: A new version of the PROFINET System Description has been published. It has 52 pages and covers all technical aspects of PROFINET. If you need a better understanding of PROFINET and already have a basic grasp of Ethernet then this document will go a long way towards explaining its full capabilities and provide a good introduction to what PROFINET can do for you. The new Description can be downloaded free of charge [here](#).



(If you're not one for the technical stuff but are interested in the benefits, then perhaps the White Paper below is more relevant?).



**WHITE PAPER: PROFINET IN CONTEXT**: This new White Paper does what it says on the front page - it contains an easy-to-digest overview of the all-encompassing Ethernet solution for automation. The Paper discusses the latest market statistics before moving on to describe recent successful applications. A list of the unique reasons why PROFINET is successful is also provided. This Paper is a 'must' for anyone interested in Industrial Ethernet. [Download it here](#).



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**PROFINET INSTALLATION GUIDELINE IS FIELD-FRIENDLY:** PI has published an installation guideline for PROFINET, designed to withstand the rigors of the field! Since experience shows that 80% of system failures can be traced back to bad installation this new guideline can help increase the quality of an network. Clear instructions are rendered as drawings showing only the elements necessary for understanding. Contact the PTO office for purchasing information. There's also a [free download here](#).

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**WIRELESS FOR SENSORS AND ACTUATORS IN FACTORY AUTOMATION:** PI has begun defining a standard way for using wireless for connecting to sensors and actuators in factory automation. PI has already specified connectivity to WirelessHART for process automation applications. Factory automation requires higher throughputs and faster response times. IEEE 802.15.1 will be used as the base technology (it's the transmission standard for Bluetooth). Elements of the WISA solution from ABB will be incorporated and field connections will be enabled via IO-LINK. Coexistence with WirelessHART, and WLAN - the standards for wireless transmission in PROFINET systems - will be ensured. The target for completion of documentation is end 2009.

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**PI CONFERENCE REPORT:** The 2-day international PI Conference in March to celebrate the 20th anniversary of PROFIBUS was attended by 150 delegates from around the world. Parallel sessions delivered updates and opinion about all aspects of PROFIBUS and PROFINET. There was a press conference at which key topics such as market statistics and the new PROFenergy profile for reducing power consumption in high energy



applications was announced. These were highlighted in [our previous issue](#). A full conference report including pictures of the press conference supported by major German automotive manufacturers [can be found here](#).

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#### TECH UPDATE: IMPLEMENTING FAST START UP

Fast Start Up (FSU) was specified for PROFINET IO to make it possible for an IO Device on the network to go instantly into a 'power on' state following cyclic data exchange with an IO controller. The basic rule defines that the time between the 'power on' and receipt of the first cyclic input data should not exceed 500 ms. This is a high priority in robot lines featuring Automated Tool Change because it can cut production cycles significantly. Find a more detailed appraisal of Fast Start Up in our Tech Update [here](#).

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#### TWO NEW BOOKS

1. A 'successor' book to the popular 'Rapid Way to PROFINET' by Manfred Popp has been published. It is called 'Industrial Communication with PROFINET' and it goes beyond the bits and bytes to provide a good introduction to PROFINET. The target group consists primarily of manufacturers of field devices, but also plant engineers and commissioning staff who want to use this book as a comprehensive introduction to the topic. The content concentrates only on essential information. In most cases, a close reading will suffice to obtain the required knowledge about PROFINET. Definitely recommended.

2. Siemens Milltronics has published 'Catching the Process Fieldbus'. Mainly aimed at process automation debutees it's written by James Powell (right) and Henry Vandelinde.



James said: "My intent was not to write the definitive handbook on PROFIBUS. I wanted to show that when industrial communications is understood and installed with forethought and care, network operation can be both beneficial and painless." The book speaks mainly to the beginner, says James, and "makes extensive use of my real-world experience". Ron Mitchell, formerly of the PIC and author of 'PROFIBUS - a pocket guide', recommends it as a: "Very good book! I particularly like your examples from site visits." [Order here \(look for the banner\)](#)

PS: James has a nice video about the Total Cost of Ownership for PROFIBUS on [YouTube](#).

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## WORLD NEWS

**BRAZIL:** During February, Andy Verwer from Manchester Metropolitan University in UK accredited the first PI Competency Center (PICC) in Brazil at the FIPAI-University of Sao Paulo-USP in Sao Carlos City. The PICC is also undergoing accreditation as a PI Training Center (PITC) ready to deliver Certified PROFIBUS Installer and Engineer training. **UK:** The PROFIBUS Group has organized a third Certified PROFINET Engineer Course and will be holding its annual Conference in June. **ITALY:** a new Board has been elected. Mr. Antonio Augelli (Industrial Communication Manager at Siemens) takes over the position of President from Mr. Maurizio Ghizzoni, who spent 14 years in the role.

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**REMOTE CONFERENCE AND EXPO:** The eighth annual conference and expo for engineers and managers of remote sites will be held October 29-30, 2009 in San Antonio, TX. Industry experts will speak on SCADA, remote networking technology, security (cyber and physical), control, automation, onsite and back-up power, M2M, emerging wireless technology, telemetry and condition monitoring. Attendees will receive certificates of attendance and can earn education credits. [More here](#).

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## NEW PRODUCTS

**DEVELOPER PACKAGE:** The right advice, right from the start is available now via the PROFI Interface Center (PIC) in Johnson City! Are you planning to connect your field devices and systems to PROFIBUS or PROFINET? If so, benefit from the great value of the PIC's week long [PROFItech Certified Network Engineer classes](#), held at regular intervals through the year. For every purchase of a Siemens PROFIBUS or PROFINET [Development Kit](#) you will receive a coupon worth \$1,000 off on any PROFItch classes conducted by the PIC. [PIC](#)



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**OPC SERVER:** HMS Industrial Networks has extended the functionality of the Anybus X-gateway family with an OPC Server. The new feature connects PC based OPC-Client applications through 19 Industrial Ethernet networks and the X-gateway to all major fieldbus networks. It comes with the X-gateway at no extra cost. Typical applications include OPC-based SCADA systems with remote visualization and control. [HMS](#)

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**4 PORT IRT SWITCH:** Scalance XF204IRT is an optimal managed switch for PROFINET IRT applications. It combines a flat housing (ET 200S design) and four downward-sloping RJ45 jacks for easy installation with high performance isochronous real time performance. So, even in cramped control cabinets, PROFINET IRT segments (line, star and redundant ring structures) can be established. Even standby connections to other network segments are possible. The RJ45 jacks are optimized for FastConnect RJ45 plugs. [SIEMENS](#).



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**REPEATER:** PROCENTEC's new compact PROFIBUS repeater is identical to ProfiHub. It can be cascaded without limit and is equipped with the latest isolated RS 485 interface. Data are constantly monitored for glitches, which are digitally filtered out. Every channel has on-board switchable termination and can drive 31 devices. A DB9 connector is provided for ProfiTrace or other maintenance/engineering tools. [PROCENTEC](#).



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**UNIVERSAL GATEWAY:** netTAP 100, based on Hilscher's netX chip, is a gateway module for linking any major fieldbus with real time Industrial Ethernets such as PROFINET and serial protocols. It can be configured as a master or a slave. The configuration software for the master is an FDT/DTM tool. A USB port is used for configuration and diagnostics. Development tools are available that allow third parties to develop custom protocol gateways utilizing any stacks and gateway applications. [HILSCHER](#).



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**MASTER FOR CONTROLLogix:** This PROFIBUS Master for the ControlLogix chassis (MVI56-PDPMV1) is the first module to be enabled with CIPconnect, a feature that allows a PC to connect to the MVI56-PDPMV1 module over Ethernet via the 1756-ENBT EtherNet/IP module. This allows the user to configure the PROFIBUS master and network, upload, download files, and view network and module diagnostics from a PC using the ProSoft Configuration Builder. RSLinx is not required and the user only requires one IP address and slot number. PROFIBUS comDTM (PSW-cDTM-PDPM) support is included to allow FDT or Asset Management software connectivity.

[PROSOFT TECHNOLOGY.](#)



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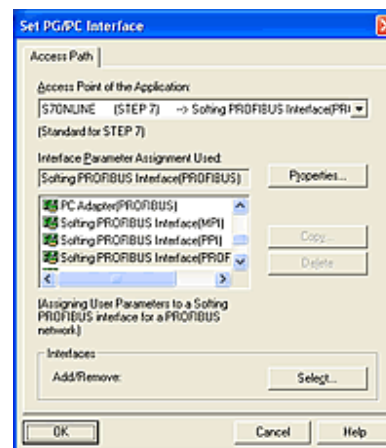
**MODBUS TCP/IP TO PROFIBUS:** ProSoft Technology's Modbus TCP/IP to PROFIBUS DP Slave Gateway (5205-MNET-PDPS) is the ideal solution for applications requiring Modbus TCP/IP to integrate PROFIBUS DP slave devices. The PROFIBUS DP slave interface enables hosts supporting the PROFIBUS DP protocol to exchange data with Modbus TCP/IP compatible devices.

The Modbus TCP/IP driver supports both Client and Server connections. [PROSOFT TECHNOLOGY.](#)



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**STEP7 AND PDM DRIVERS:** Softing has released a fully featured STEP7 and PDM driver that provides connection to the full range of [Softing's PROFIBUS \(master\) interface boards](#) and [PROFIBUS gateways](#). The driver can be downloaded [here](#) (select "Driver for STEP7 and PDM" under "Download form"). The new driver seamlessly integrates Softing PROFIBUS boards with Siemens' programming software. After installing the driver, simply open the Simatic "Set PG/PC Interface" applet and select Softing as the PG/PC adapter. The user has the choice between MPI/PPI or PROFIBUS as the preferred access path. [SOFTING.](#)



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