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The official email newsletter of the PTO in North America

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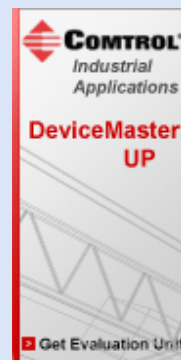
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**DEBUNKING THE MYTH:**

**Myth:** "CIP Safety stands alone as the world's only media-independent, truly open network protocol for functional safety" (from a recent mail shot issued by ODVA)

**Response:** Once again, the masters of spin try to put PTO down! Our PROFIsafe technology dates back 10 years, while theirs only [dates back three](#). Ours was **the** pioneer in the open networked functional safety market and today there are hundreds of thousands of working devices across the globe. PROFIsafe works with PROFIBUS **and** PROFINET - both open and widely supported technologies - **and** it pioneered the use of the 'black channel' concept that CIP Safety finally chose to adopt too. **Furthermore**, they only added wireless capability to the spec [just this year](#) by which time we already had hundreds of wireless safety installations.



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To be fair, they do stand alone in one thing - CIP Safety only works in discrete automation! In contrast, PROFIsafe spans the entire automation spectrum, from discrete through process to motion control. So, if you want to deploy networked functional safety in **any** part of your plant - wireless or cabled - there's only one open, media-independent, solution to consider ... PROFIsafe, on PROFIBUS or PROFINET. And with great global support from the PI network of Regional Associations (like PTO), Competence Centres and Test Labs, there's no easier way to learn about and deploy functional safety on your networks. [Find out more here.](#)



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**GENERAL NEWS**

**NORTH AMERICAN MEMBERSHIP BUILDS:** PTO now has 144 members, the highest number for many years. Said Executive Director Mike Bryant: "The number of companies interested in PROFIBUS and PROFINET seems to be entering a new phase. Whereas a few years ago PROFIBUS was not taken that seriously in North America, today we've raised our credibility to match or even exceed our main competitor. There's also massive interest from both vendor and end user communities in our Industrial Ethernet solution PROFINET and I am now confident that PROFINET will be as successful here as in Europe in coming years."



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**SEMINAR SEASON CONCLUDES SUCCESSFULLY:** North American one-day training classes for 2008 conclude this week with PROFIBUS in Indianapolis and PROFINET in Chicago. This year saw over 2,100 registrants from 900 companies in 24 separate classes in 23 cities (we came to Chicago twice). There were 6 PROFIBUS in the Process Industries classes; 8 PROFIBUS; and 10 PROFINET. If you missed us in 2008, watch the web site for the 2009 schedule. Or better yet, subscribe to the web site's news RSS feed to be alerted to all the PTO news. (You'll find more about using RSS in our [RSS primer](#) from issue 19.) If you can't wait until next year, view our [archived webinars](#) for coverage of Industrial Ethernet, PROFINET, wireless, and PROFIBUS in the Process Industries.



Words of praise from this year's attendees included:

- *Very good presentation and handout. Very informative to prospective user like us. We are looking at using PROFIBUS - very good technology, simple and effective.*
- *Thanks for the information. This has given me a good picture for a project I will be working on in a few months.*
- *I learned things even though I've been through this a number of times.*
- *I thought this free training was a good way for our company to learn about the technology and the vendors. Thank you.*

**Certified Network Engineer classes** conclude next week with a [PROFIBUS Certified Network Engineer class](#). It's a little late to make arrangements, but there are two seats left if you are interested. We've added over 100 Certified PROFIBUS and PROFINET Engineers this year in North America.



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Of course, these numbers for one-day training classes and Certified Network Engineer classes are just for North America. There are 24 organizations like PTO around the world and they each run classes in their local geographic areas.

If you are interested in attending one of PTO's educational events, then this [web site](#) will keep you up to date. Watch [here](#) for updates on the one day training classes and to be kept informed automatically of future events use this [RSS feed](#) to stay up to date.

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**10th ANNIVERSARY OF PROFIsafe:** Few people realize how mature and stable the PROFIBUS and PROFINET safety technology has become.

PROFIsafe, the only safety-over-a-bus technology that covers discrete, process AND motion control, is celebrating it's 10th anniversary at the forthcoming SPS/IPC/Drives fair in Nuremberg, Germany (Nov 24/27), where the PNO (that's our sister organization in Germany) will feature a new live safety demo on its booth covering all stages of the production process – from upstream through mainstream to downstream.



PROFIsafe was the first successful implementation of functional safety on an open fieldbus network when launched in 1998. It pioneered the 'black channel' concept and it is proven in both wired and wireless networks. Today, there are more than 500,000 PROFIsafe nodes installed worldwide. PROFIsafe works equally well with PROFIBUS and PROFINET, and in almost identical ways, so implementation is easy.

PROFIsafe is usually thought of as a factory automation solution, but it can play an important role in process automation too because - guess what? - PROFIsafe supports PROFIBUS PA for functional safety too. (Don't forget PROFIBUS PA inherently takes care of Intrinsic Safety issues because it already meets the IEC 61158-2 standard.) The booth at SPS/IPC/Drives will show PROFIsafe in a process automation demonstration, using PROFIsafe-enabled PROFIBUS PA devices and a failsafe controller.

SPS/IPC/Drives is the most important automation fair in Europe and it's still growing despite the 'incredible shrinking syndrome' being experienced by other trade fairs. Be there if you can - PNO has one of the largest booths and it's always packed with action, vendors, products, live demos and expert presentations.

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**20th ANNIVERSARY OF PROFIBUS:** 2009 is the 20th anniversary of PROFIBUS, and PI (PROFIBUS & PROFINET International) together with our sister organization PNO is organizing a special international conference called "Excellence in Automation" to mark the occasion. Taking place March 11-12, 2009 in Karlsruhe, Germany, the event is planned to be a showcase for PROFIBUS and PROFINET technologies and applications. Our vertical market solutions for Wireless, Safety, Security and device integration will also be featured strongly, together with IO-Link . Target groups for the conference include end users, developers, system integrators/OEMs and scientists. Both German and English languages will be used. Many more events will be organized worldwide to celebrate the 20th anniversary, including here in North America. This newsletter will keep you informed!



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**SHARE OUR VISION!** 'Share our Vision for Manufacturing' is a new brochure specially developed for management-level personnel, covering key topics such as how modern enterprises can realize business goals and deliver 'results' by automating with PROFIBUS and PROFINET. The brochure includes application examples of benefits gained in industries such as automotive, infrastructure, chemicals, steel, food/beverage and oil/gas. It's not a technical brochure so if you're thinking about improving your manufacturing technologies then you should read it. If you're not yet using automation, study the business benefits now. [Download it here.](#)

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**PROFINET CONFORMANCE CLASS B CERTIFICATION:** Certification of PROFINET devices in accordance with Conformance Class B is now available. In order for PROFINET devices from various manufacturers to carry out their automation tasks properly, they have to exchange information over the network precisely and accurately, which means rigid conformity regimes. The functions of PROFINET IO have been separated into conformance classes because not all of the functions are required for every automation system and this facilitates the use of PROFINET IO. Conformance classes also enable systems operators to select the field devices and bus components they require according to clearly defined features and services. Mandatory certification by accredited test laboratories guarantees interoperability and the use of standard test methods ensures that identical tests are carried out worldwide. Certification of PROFINET devices in accordance with Conformance Class A has been available for more than a year.

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**FOR MEMBERS ONLY:** PTO members already received some of the news in this issue of PROFINETS North American Edition in their monthly members-only newsletter. In addition, they learned of new documents that have been recently released, like "Test Specification for PROFINET IO-Devices" and "GSDML-Specification for PROFINET IO." They've been invited to participate in specific Working Groups and to comment on draft documents. Already a member but not receiving this important updaters? Find out how to get your subscription by [emailing Carl Henning](#) . Not a member? Maybe now is the time to join to gain these benefits and many more. You can apply [online here](#). PTO offers special low dues levels for users.

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**IN THE PROFIBLOG:** [Carl Henning's blog](#) continues to comment on all aspects of automation. He'll shortly be off to the SPS/IPC/Drives in Nuremberg so watch out for his blogs from the absolute frontier of automation during November.

**PROFIBUS AND PROFINET IN ACTION**

Two PROFINET case studies, including one in USA.



**MAKING STEEL:** PROFIBUS is being used in a major revamp of the HF 1 blast furnace at Fos-sur-Mer in the south of France, at a plant belonging to the largest steel producer in the world - ArcelorMittal. The dimensions of the furnace are gigantic - it's over 60 meters high and has a capacity of over 3,000 cubic meters. Temperatures inside the 11 meter diameter melting crucible reach 2,000 degrees Celsius. Anyone wanting to control this process is exposing engineering and measuring instruments to extremely harsh conditions. And they are expecting everything to function for a very long time: furnaces which produce the raw materials for steel have a service life of 15 to 20 years. The revamp of the furnace was accomplished in only 95 days - from August until December 2007. The furnace was run down until it had cooled, then completely renovated using PROFIBUS-based

instruments and finally run up again. Together with their partners, employees of ArcelorMittal Méditerranée invested two years in the preparation work alone. 600 companies were involved in the renovation – including a measuring instrument consortium led by Endress+Hauser, France. New technology pointed the way forward. For the conservative steel industry, which depends on reliability and is therefore cautious about innovation, this project represents a 'first'. Before being introduced on a large scale, the technology passed probationary tests in a small section of HF 1. "I didn't just want sensors - PROFIBUS technology was vital too," emphasizes the engineer in charge. "We have built for the next two decades – and now we're leaving future generations of steel smelters a technology that is trailblazing." Engineers are already looking at the second blast furnace at Fos-sur-Mer, which is scheduled to be renovated in 2009. [ENDRESS+HAUSER.](#)

**MACHINE BUILDING WITH PROFINET:** The US systems integrator CAMotion Inc., headquartered in Atlanta, Georgia, has realized a safety control network for large overhead crane robot systems based on a PROFINET network with wireless operations working in conjunction with standard and fail-safe communications. CAMotion wanted the new solution to be less expensive than traditional approaches, to be highly robust and reliable, and to minimize risk. The solution also had to be a 'safe investment', i.e. flexible enough to expand and adapt easily later. CAMotion decided to go with a combination of fail-safe Siemens controllers linked to safety components via PROFINET using PROFIsafe. The solution employed the SIMATIC CPU 315F-2 PN/DP with fail-safe IO on the plant floor, SIMATIC ET 200S with safety modules on the movable crane, SCALANCE W-788 Wireless communications based on LAN access points and SCALANCE X-208 industrial Ethernet switches. The solution has been a real 'milestone' for CAMotion since it is the first time safety and wireless have been married in one application. The contractor is also delighted that only one network is required for all tasks, cutting costs drastically. [SIEMENS.](#)



## WORLD NEWS

**GERMANY:** Volker Erbe has joined PNO / PI as the new Executive Director for Marketing at the PI Support Center in Karlsruhe. Erbe studied electrical engineering and has broad experience in automation technology. He is particularly familiar with PROFIBUS and PROFINET after working in sales and the engineering of DCS systems with special responsibility for fieldbus technology. He will be responsible for international business as well as press, PR and marketing strategy. **AUSTRALIA & NEW**



**ZEALAND:** The PROFIBUS Association of Australia New Zealand (PAANZ) has launched an Australia-wide program of training Seminars, focusing on regions such as Perth and Brisbane which are considered Australia's fastest growing demographic and economic growth centers. Companies are struggling to source qualified professionals, trades people, engineers and instrument technicians to meet the demand and new technologies like PROFIBUS can improve future efficiency and reduce manpower. PAANZ has trained over 100 certified engineers this year. Tyco Flow Control Pacific has been accredited by PI as the first PROFIBUS International Competence Center (PICC) in Australia. **UK:** There's still time for Papers to be submitted for the 2009 Conference, to be held at the Stratford Manor Hotel on June 16 and 17, 2009. **DENMARK:** PROFIBUS Denmark took part in the recent 'Automation 2008' Fair in Copenhagen. Arranged in parallel was a conference in which PROFIBUS Denmark participated. **SOUTH AFRICA:** The Southern Africa Regional PROFIBUS Association (SARPA) held a conference focused on asset management and diagnostics in the fieldbus arena, with specific emphasis on PROFIBUS in process applications. Profile 3.02 for PROFIBUS PA, which further improves integration of devices, up/download times and backwards compatibility, was one of the topics. **BRAZIL:** In September PROFIBUS case studies were presented at a special event promoted by the Brazil Latin America RPA (Regional PI Association) in parallel with the most important show for sugar and ethanol industries in the world - the FENASUCRO Fair. **CHINA:** In September, a one-day PROFINET Product Development Seminar was held jointly by CPO Technology Working Group (WG2) and Siemens Ltd., China in Beijing.

## NEW PRODUCTS

**HEAD TRANSMITTER:** Endress+Hauser has replaced the iTEMP® TMT184 head mounted temperature transmitter by the new iTEMP TMT84. The device includes extra functionality, including a second sensor input, a backup function and drift detection that provide maximum safety, availability and risk minimization. To make changing over from the earlier iTEMP® TMT184 as smooth as possible, iTEMP® TMT84 has a compatibility mode, which automatically recognizes the previous model's presence in the automation system, thereby assuring cyclic data exchange. No change is required to the automation system. **ENDRESS+HAUSER.**



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**PROFINET CONTROLLER:** This new PCI/PCI Express card provides high-speed deterministic communication between control / SCADA applications and IO devices using PROFINET. The card is packaged with a complete Windows software suite and the configuration console includes advanced features to quickly setup and define connected devices. A network detection mechanism is able to discover and build the network topology based on an integrated GSD device library. Acting as an IO Supervisor, the console allows each device to set the name and IP address for each IO device. OS driver kits are available free-of-charge for Linux, VxWorks, QNX and other platforms.



**MOLEX.**

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**MASTER/SLAVE FOR CONTROLLOGIX:** BradCommunications SST PLC communication module provides the interface required for a Rockwell Automation PLC controller to connect to PROFIBUS as a master or slave or emulate PROFIBUS DP I/O. New features include increased performance and quicker startups through elimination of ladder logic programming. The module also now supports Add-On Profiles for easy integration into the ControlLogix system using Rockwell Automation's RSLogix 5000 software, and Remote Link Library functionality which allows remote configuration and diagnostics using Rockwell Automation Integrated Architecture. Users benefit from faster configuration, better diagnostics and enhanced module data display. [MOLEX.](#)



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**MARQUEE:** The Uni Marquee is a marquee sign that communicates with any manufacturer's PLC via PROFIBUS to display alarms, machine performance or production data. Data can also be collected in real time through its built-in web server. The Marquee allows the user to configure and broadcast PLC data and message information without programming communication blocks within the ladder logic code of the PLC software. Setup is done with a web browser by entering the IP address of the sign and selection of the communication driver, which is then configured using Exor's Designer software. [EXOR.](#)

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**DIAGNOSTICS TOOLS UPDATE:** Softing has enhanced its PROFIBUS Protocol Analyzer to concurrently analyze PROFIBUS DP (RS485) and PROFIBUS PA (MBP) networks without need for additional hardware components. It can also display a manufacturer-specific diagnostic frame in clear text to enable swift identification of error conditions. Meanwhile, Softing's PROFIBUS Electrical Tester PB-T3 automatically analyzes communication problems based on electrical issues without need for an oscilloscope or expertise in electrical engineering. It's the only tool that is able to determine a PROFIBUS DP topology, says Softing, so it can line-up signal levels enabling trouble-spots to be pinpointed. It also displays the average signal level with minimum and maximum deviations. Many puzzling communication problems can be traced back to sporadic changes in the signal levels, claims Softing. [SOFTING.](#)



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**PROFIBUS FOR COMPACTLOGIX:** These new single-slot PROFIBUS DP V1 Master (PS69-DPM) and Slave (PS69-DPS) modules are backplane-compatible with the CompactLogix platform. The master module is extremely fast with 204 words of input and 240 words of output. Master DTM is included for FDT Asset Management, with support for FDT-compliant containers such as PACTware or FieldCare. The PS69-DPM Master module supports both I/O control and CIP messaging for slave parameterization, and acyclic DPV1 messaging via explicit ladder logic message blocks, status data and alarms. For configuration, both modules use PROSOFT.fdt Configuration Software, or the slave module can be configured via ladder logic. [PROSOFT.](#)



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