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The official email newsletter of the PTO in North America

Issue 32, May 2010

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IN THIS ISSUE

[POLLY IS AWAKE!](#)

[PROFINET AND PROFIBUS SHOW 10% GROWTH](#)

[GENERAL ASSEMBLY MEETING TAKES SHAPE](#)

[TRAINING CLASSES RISE IN POPULARITY](#)

[WEBINARS ON SAFETY, ETHERNET BASICS ... AND MORE](#)

[A TIGER TO HELP PROFINET](#)

[FIRST PROFInergy PRODUCTS](#)

[IO-LINK OPENS UP MEMBERSHIP](#)

[BLOGGING AND TWEETING WITH PTO](#)

[WORLD NEWS: INDIA; UK; IRELAND; KOREA](#)

[APPLICATIONS: NORTH AMERICA / FLEXIBLE MANUFACTURING using IO-Link!](#)

[PROFIpeople: bringing you the 'who's who' of PROFIBUS and PROFINET](#)

NEW PRODUCTS:

- [PROFInergy ETHERNET SWITCH](#)
- [PROFIBUS IO BLOCKS](#)
- [IO-Link EXTENDS PROFIBUS AND PROFINET](#)
- [PROFINET STARTER KIT](#)
- [COMMANDER UPDATE](#)
- [Windows7 DRIVERS FOR PROFIBUS](#)
- [ProfiTrace WITH OPC SERVER](#)
- [PROFIBUS TO Modbus-TCP BRIDGE](#)
- [EASY PROFIBUS INSTALLATION](#)
- [TCP/IP TO PROFINET](#)
- [PROFIBUS MASTER FOR ControlLogix](#)

GENERAL NEWS

DEBUNKING THE MYTH

POLLY IS AWAKE! Polly, our myth-busting guard who stands ready to correct misinformation about PROFIBUS and PROFINET, nearly fell off her perch in April when she spotted a fresh outbreak of SUE. It happened during a webinar broadcast by a vendor who should know better and it so incensed Polly that she immediately flew off in search of SWEET SUE. Together they located their 'Pretty Polly, Sweet Sue and the White Knight' leaflets, and now they are ready to deliver copies to anyone who likes to enjoy a humorous take on the stupidity of claiming sole rights to 'Standard Unmodified Ethernet'. Polly says: "PROFINET is as standard an Ethernet as anyone's is (well there



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is one exception but we won't mention them here), and don't you believe anyone who claims otherwise." Polly's not wrong: check out [PROFIblog](#) for more details.

YOUR FREE DOWNLOAD: 'Pretty Polly, Sweet Sue and the White Knight' is [here](#).




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PROFINET AND PROFIBUS SHOW 10% GROWTH: PROFINET continued its progress during 2009 with 500,000 additional devices sold. The installed base has now reached 2.1 million*. Sales in the previous 12 months (2008) were 460,000, showing that the economic downturn did not have much adverse impact. PTO sees this as a great achievement. Executive Director Mike Bryant said: "In this difficult economic climate, to maintain 10% growth is a sign of the overwhelming acceptance of PROFINET. It offers significant added value and we continue to develop further benefits to make it even more attractive - for example our energy savings profile PROFenergy, which can deliver major cost savings for automation systems."




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In 2009, the number of PROFIBUS devices sold worldwide rose by 3.1 million, to a total of 31.4 million. Bryant said: "The installed base of PROFIBUS devices increased once again, this time by 11 %. Of those 31.4 million, 5.4 million are in process automation so it's clear that PROFIBUS has assumed the dominant fieldbus role." The latest PA Profile V3.02 is expected to accelerate this since it contains important asset management features specifically requested by end users.




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In the Functional Safety market, a further 220,000 PROFIsafe devices were purchased, equaling the number in the previous year. The installed base of PROFIsafe now exceeds 850,000 devices.


**NB: PROFINET market statistics are collected by an independent and fully neutral third party. Only end devices are included in the count; infrastructure devices are excluded.*



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GENERAL ASSEMBLY MEETING TAKES SHAPE: Set your calendars for the 16th annual meeting of PTO members. Unlike 2009, when the meeting took place online, this one's for real and PTO is expecting a great turn-out. There are two days of presentations, strategy sessions and Southwest hospitality, all designed to help members promote and sell PROFIBUS and PROFINET! But remember, it's for members only. The venue is the Marriot McDowell in Scottsdale, AZ as usual, and Lynne Froehlich is already taking confirmations of attendance. [Latest details are here](#) and there's a [tentative agenda here](#).

[Top](#)





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We really are...
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TRAINING CLASSES RISE IN POPULARITY: Attendance at our FREE one day training classes is on the increase! For the second time this year we've had to close registrations early. [Philly](#) was filled by mid-April, with 140 registrations. Our apologies if you could not get in. We do have a PROFIBUS class on June 3 in the [Hartford](#), CT area. Perhaps you can make the trip there? Check for another [class near you](#). And remember, please register early.



PROFIBUS classes now encompass both discrete *and* process automation, since PROFIBUS handles both types of application with a single protocol. The PROFIBUS class also has more PROFINET content this year. PROFINET classes are also focusing on *using* PROFINET, so when students leave they're ready for their first PROFINET project.

FREE One Day Training Classes		
DATE	PROFIBUS	PROFINET
May		Pittsburgh
June	Farmington	San Jose
July	Chicago	Kansas City
August	Tulsa	Cleveland
Sept	Baltimore	Denver
Oct	Omaha	Dallas
Nov		Detroit
Dec		

The list of one day training events is maintained [here](#), so monitor that to keep abreast of updates. The schedule, class contents and the amazing added-value content (including the PDH benefits) were blogged by [Carl Henning here](#).

For even greater in-depth knowledge of PROFIBUS and PROFINET you can do no better than our 4-day [Certified Network Engineer](#) classes. 11 are scheduled, including a new class for PROFIBUS PA!

PS: If you can't make it to a class, we've archived some webinars [on relevant topics here](#).

[Top](#)



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WEBINARS ON SAFETY, ETHERNET BASICS ... AND MORE: Although Ethernet is becoming more and more prevalent in industrial automation, it can be difficult for a control engineer to find an Ethernet introduction on his terms. PTO has produced a one hour introductory webinar entitled [A Short Introduction to Ethernet for Control Engineers](#) which is an excellent starting point. It's also the perfect introduction to our free PROFINET training classes (see above). [More information and a link to registration are here.](#) In April, our latest safety webinar explained how PROFIsafe meets the requirements for conducting safety functions over PROFIBUS and PROFINET. With 850,000 installed nodes, PROFIsafe is the world's leading networking solution for functional safety. [Link to the PROFIsafe webinar here.](#)

[Top](#)

A TIGER TO HELP PROFINET: As the Chinese "Year of the Tiger" was being celebrated in February, Phoenix Contact announced its new PROFINET chip - the TPS-1. Also known as 'TIGER' it is a highly integrated single-chip ASIC for easy implementation in low end compact devices and drives. The chip supports both PROFINET RT and IRT. Phoenix Contact said that with the TIGER chip, even small and simple field devices can be connected to PROFINET cost-effectively. Siemens collaborated with Phoenix Contact in the development of TIGER and confirmed its intention to use the TPS1 in devices such as compact IO devices.



[Top](#)

FIRST PROFIenergy PRODUCTS: PI's major new money-saving profile PROFIenergy - which manages power-hungry devices in a smart way over PROFINET - has hit the market! Phoenix Contact and Siemens both launched PROFIenergy-enabled products at the recent Hannover Fair in Germany. Phoenix Contact introduced a modular, PROFIenergy-enabled GB Ethernet Switch ([see product story here](#)). The goal, says Phoenix Contact, is to



make the entire PROFINET portfolio available in PROFIenergy-compliant versions as soon as feasible. Meanwhile, Siemens introduced the PROFIenergy-enabled ET200S (pictured). Siemens' strategy is to make downloadable PROFIenergy functions available for IO modules, for extremely simple upgrading of devices. Similar functions are already available for their PC-based solutions. PROFIenergy is an important part of PI's "green" portfolio, underpinning sustainable environmental protection and energy savings. There's a useful [White Paper here](#). See also [PROFIblog](#).

[Top](#)



IO-LINK OPENS UP MEMBERSHIP: There's never been a better time to get involved with IO-Link, the innovative connection solution for smart actuators and sensors that is supported by PI

because it partners well with PROFIBUS and PROFINET. The IO-Link consortium based in Germany has streamlined its infrastructure within PI. IO-Link is now part of Technical Committee (TC6) and is also represented on the Advisory Board. New Working Groups (WGs) for improved technical development procedures and more efficient dissemination of IO-Link information have been set up. A new Steering Committee (SC) has also been formed, but perhaps the biggest change is the elimination of the membership entrance fee. Membership in a Regional PI Association (such as PTO) and acknowledgement of the IO-Link System of Rules now provides full access to the specifications, participation in WGs, and use of the IO-Link logo. Visit [IO-Link](#) or [download this brochure](#) or contact [PTO](#).

STOP PRESS: A North American OEM is using IO-Link in its new flexible manufacturing system - [read about that here](#).

[Top](#)

BLOGGING AND TWEETING WITH PTO: Topics highlighted in PROFIBlog in recent weeks include an analysis of what actually constitutes a "node" in Industrial Ethernet markets. There's still some misunderstanding so PROFIBlog, in conjunction with Automation World and IMS Research, [has shed some light](#). A trip to Nashville also got Carl Henning's creative juices [working harder](#). Follow our Twitter feed [here](#). PROFIBlog is [here](#).

[Top](#)

WORLD NEWS

INDIA: UL Group organized three PROFIBUS training programs in Feb 2010, for paper and cement plant engineers. About 35

engineers attended (see right). **UK:** The annual PROFIBUS and PROFINET UK Conference, scheduled for 29-30 June 2010 at Stratford-on-Avon, will feature PROFInergy. Papers will discuss how PROFIBUS and PROFINET systems can be integrated into energy management programs, particularly in relation to energy



efficient drives. **IRELAND:** In what is hoped to be a biennial affair a PROFIBUS Ireland seminar was recently hosted by Automation Research Center (ARC). It was attended by over 55 participants. In the afternoon there was a tour of the Bulmers cider making facility in Clonmel, where PROFIBUS is extensively used. PICC Ireland and its Brazilian counterpart have put in place a student exchange program. Bluetooth on PROFINET is an early focus. **KOREA:** 8 members of PI supported the KPA booth at the Automation World 2010 fair.

[Top](#)

APPLICATIONS

NORTH AMERICA / FLEXIBLE MANUFACTURING: A Michigan-based OEM has developed a smart assembly machine in which "fixed and variable costs are reduced by 40%, floor space is reduced by 60%, and the number of automation components is reduced by 75%." It is one of the first deployments in USA of IO-Link, a smart connection technology used with PROFIBUS in this case to support an innovative auto tool changer. [Full story here.](#)



[Top](#)

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

MARSHA BRYANT: Marsha is the wife of Executive Director Mike Bryant and has worked in a support role at PTO for several years. Her official job title is "Executive Assistant" which, she says, covers almost "everything that no-one else wants to do!" Organizing materials for road shows, packing and shipping, helping with registrations at road shows, invoicing, and buying groceries are on her "typical day" list. Answering phones is another routine function. So, which part of the job does she like best? Talking with customers, members and users, she replies. So, if you want to make Marsha's day ...



[Top](#)

NEW PRODUCTS

PROFenergy ETHERNET SWITCH: The new GHS 12G/8 Gigabit Modular Switch from Phoenix Contact allows 12 Gigabit ports to be installed on a mounting rail. It is especially suitable as a powerful automation backbone and for connecting to higher-level IT networks. It supports standard IT protocols as well as PROFINET. It can be flexibly expanded to 28 ports. Twisted pair and fiber connections are available. The Switches support smart energy management strategies via PROFenergy. [PHOENIX CONTACT.](#)



[Top](#)

PROFIBUS IO BLOCKS: Balluff's latest PROFIBUS blocks come with a complement of innovative features that Balluff customers have been requesting. These include robust, all metal low profile housings that can survive rough treatment and still keep cables



protected, high density inputs enabling the use of splitters to double the input count, easily accessible set up switches to make addressing fast and simple, and large status LEDs. Both models provide a range of inputs that can be set for normally open and normally closed operation. Compatible PROFIBUS cables and connectors are also available. [BALLUFF](#).



[Top](#)

IO-Link EXTENDS PROFIBUS AND PROFINET: Balluff's new IO-Link system enables quick and easy expansion or simplification of PROFIBUS and PROFINET networks. A Balluff IO-Link expansion module attaches directly to PROFIBUS or PROFINET as a node. Then, using standard 3-conductor M12 cordsets, up to four intelligent IO-Link sensors can be attached from up to 20 meters away. IO-Link provides less expensive PROFIBUS/PROFINET connections, says Balluff. For example, one PROFIBUS IO-Link expander and 4 discrete sensor hubs can replace 5 discrete PROFIBUS modules, with 30-40% savings. Further, sensor hubs allow connection of 16 standard sensors to the network, giving a potential 76 sensors per PROFIBUS node. IO-Link supports conventional sensors too. [BALLUFF](#).



[Top](#)

PROFINET STARTER KIT: The PROFi Interface Center is now offering a new ERTEC200-based PNIO Starter Kit. The kit provides an easy way to add PROFINET to automation devices. It includes all the hardware, software and debugging tools needed to setup a PROFINET IO device prototype, including an Evaluation Board, ERTEC200 samples, the PNIO Stack and real time examples in source code. This is a "very attractive price point to start a risk-free development," says the PIC: Only after the development has been concluded successfully and the certification process passed is a product line license required. [PIC](#)



[Top](#)

COMMANDER UPDATE: The PROFi Interface Center has a new version 3.1 of ProfinetCommander, the PROFINET development and test tool. With ProfinetCommander, engineers, maintenance personnel, integrators and developers can test and build a PROFINET network and connect IO devices to it quickly without PLC programming skills. A Windows GUI allows the user to view configuration, I/O data, parameters, alarms, and diagnostic data. The output data to the IO devices can also be changed. New in version 3.1 is the option to display I/O data in hex, binary, or decimal, GSDML file parsing support for UNIX or Windows and added decoding of PROFINET port data change notification alarms. [PIC](#)

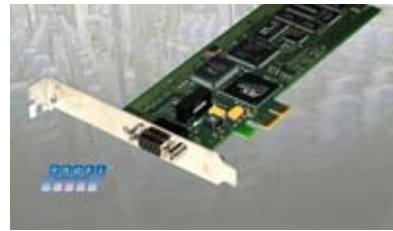
[Top](#)

Windows7 DRIVERS FOR PROFIBUS: Softing has a new set of free Windows7 drivers for its PROFIBUS PC interface boards,



including current PCI Express boards as well as the PCI, PC/104plus and USB Interfaces. These drivers are not only compatible with 32 bit operating systems, but also support the 64 bit versions of Windows7, Vista and XP. This allows 32 bit PROFIBUS applications to run on 32 bit and 64 bit operating systems.

Furthermore, native 64 bit programs can be built. Thanks to numerous samples it is easy to create new applications fast and efficiently. All boards are designed for harsh industrial usage and have passed comprehensive testing. [SOFTING](#)



[Top](#)

ProfiTrace WITH OPC SERVER: The latest version of Procentec's troubleshooting and maintenance tool ProfiTrace, contains an OPC server, offering a standardized interface to get ProfiTrace information into other applications. The opportunities are vast and, Procentec says, "we are just discovering what it can contribute to asset management processes." For example, ProfiTrace tags can be displayed in a SCADA/HMI package, or linked to an SMS/email client to send a message. Even reports could be generated in MS Word/Excel. [PROCENDEC](#)



[Top](#)

PROFIBUS TO Modbus-TCP BRIDGE: The Anybus X-gateway from HMS Industrial Networks enables system integrators to easily transfer I/O data between two different PLC systems and networks. The X-gateway is a configurable stand-alone module that allows plant-floor PROFIBUS devices to communicate with a Modbus-TCP network and vice versa. Typical applications are installations with mixed usage of Siemens and Schneider Electric, ABB or GE PLCs. The X-gateway is a compact device for standard DIN rail mounting and it functions as a server (slave) on the Modbus-TCP network and as a master on the PROFIBUS side. [HMS INDUSTRIAL NETWORKS](#)



[Top](#)

EASY PROFIBUS INSTALLATION: In addition to conventional screw connections, the new Subcon-Plus-Profibus/90° family of connectors also offers the option of insulation displacement technology. This allows PROFIBUS cables to be used with solid or flexible copper conductors and assembly times are significantly reduced as individual conductors do not have to be stripped. Clamping connectors manufactured out of a transparent plastic material ensure that the fieldbus cable is reliably connected and can be quickly checked for correct assembly. The high-grade shielded connector housing permits excellent interference immunity even at maximum transmission rates. [PHOENIX CONTACT](#)



[Top](#)

TCP/IP TO PROFINET: Control has added TCP/IP to PROFINET IO connectivity to the Devicemaster UP line of Industrial Ethernet gateways. The device provides connectivity to both serial and Ethernet TCP/IP raw/ASCII devices and provides detailed diagnostic capabilities. It configures in minutes, either directly from a PROFINET Controller or remotely via embedded web pages. Supported PLCs include Siemens ET-400, S7-400 and S7-300, the Omron CJ Series, and Bosch Rexroth IndraControl L10, L15, L45, L65. [CONTROL](#)



[Top](#)

PROFIBUS MASTER FOR ControlLogix: ProSoft Technology's PROFIBUS DPV1 Master Communication Module is a powerful communication interface for ControlLogix platforms. The module supports complete master specifications according to IEC 61158. Acyclic parameter data can be transferred with Class 1 or Class 2 DPV1 services, allowing processors to easily communicate with slave devices supporting PROFIBUS DPV0/V1 protocol. It is also CIPconnect-enabled. [PROSOFT TECHNOLOGY](#)



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