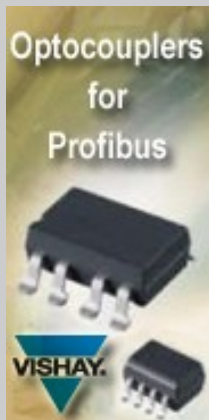




The official email newsletter of the PTO in North America

Issue 8 May 2006

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DEBUNKING THE MYTHS

Held over to the next issue - we've found a corker that deserves more attention!

[Debunk previous myths here](#)

Do you have a tasty PROFIBUS/PROFINET myth that you think we should debunk? We'll name and shame! Email suggestions to [Feedback](#)

[ONE DAY TRAINING CLASSES IN FULL SWING:](#) Ten classes down, lots to go.

Events have concluded in Austin, Cincinnati, Detroit, Houston, Montreal, Philadelphia, San Juan, Toronto, Tampa, and Indianapolis. With registrations averaging over 80 per city, a lot of people are learning about why to use a fieldbus, what fieldbuses are available, and of course a little depth of knowledge on PROFIBUS and PROFINET. You can join this number by [choosing a city here](#) and registering online for these free classes. There are 14 more classes currently on the schedule, including the recently-added New Jersey 'PROFIBUS in the Process Industries' one-day training event scheduled for June 27th. We



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wireless?

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anticipate adding more cities and events as the demand warrants so [watch the website for news](#). An ARC Advisory Group survey revealed that a major impediment to implementing a fieldbus was lack of knowledge of the possibilities. So join us to discover the benefits of using a fieldbus! Economic benefits are one, but there are many more. The classes are free, but we do ask you to register so we have an accurate count for the free lunch. To encourage early registration, **we've started an 'early bird' incentive. Register at least 8 days before the event and be eligible for our \$25 gift card raffle.** [Visit this page](#) for the latest class additions and for links to registration. [Even more here](#).

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CERTIFICATION CLASSES: The first PROFINET Certified Network Engineering Class (May 15-19) is filled, so we've added another class in July (24-28). For information on the July class [go here](#). Or [register here](#). PROFIBUS Certified Network Engineering Classes continue to fill up, so register early to ensure you get a seat on the dates you want. The new PROFIBUS Installer's Class is also popular. Participants in this one-day class receive hands-on training on PROFIBUS DP networks and learn how to avoid common networking problems. You will find additional detail about all the classes in the last issue of [PROFINews North American Edition](#). You can always find the [latest list of certified training classes here](#) Or call 480-483-2456.



Optocouplers for Profibus



VISHAY

Belden CDT

Click here for a cable sample of 3079A



PROFINET IO DEVELOPER CLASSES: Attention device manufacturers! We continue to offer the PROFINET IO Developer Classes at no charge (a limited time offer). This two-day class is your 'kick start' to adding PROFINET to your devices. The next class begins June 6 and there are still a few seats available. [Details here](#)

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USB Tools



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IRT TECHNOLOGY RECOGNIZED BY CONTROL ENGINEERING:

Control Engineering hosted an award ceremony at the National Manufacturing Week venue in suburban Chicago in March. PROFINET IRT technology received an award in the 'networks and communications' category. Michael Bryant, Executive Director of PTO, accepted the award from *Control Engineering* publisher Michelle Palmer (pictured). Mark T. Hoske, Editor in Chief of *Control Engineering* hosted the award ceremony and cited the benefits of IRT in his recognition of the technology. The ERTEC chip that supports IRT was also recognized by the award.

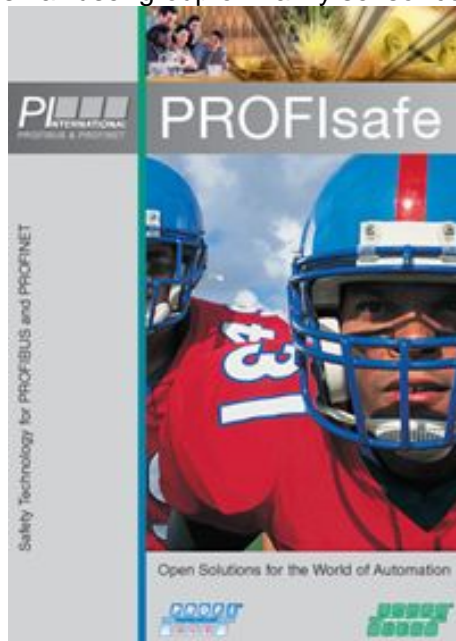


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HANNOVER FAIR NEWS: At the largest industrial trade fair in Europe, if not the world, PI presented PROFIBUS and PROFINET developments and products on the largest booth they've ever employed. News from PI included the TCI (Tool Calling Interface) specification now being available for review, and a brand new PROFIBUS/PROFINET Profile for pumps.



Motion Control with PROFINET proliferated and a new PROFIsafe overview brochure was released. The new PROFIsafe brochure features an American football scene on the cover (see below). There was also a new sensor technology to think about. Called IO-Link, it's administered by PI on behalf of the small user group of mainly sensor companies driving it. IO-Link is a fieldbus-



independent sensor/actuator communication system. PI is providing the organizational infrastructure but IO-Link is not a fieldbus. In fact, it's not a bus at all, merely an interface specification with point-to-point connection to the field up to 20m maximum. However, it can work with any fieldbus, with Interbus and PROFIBUS mapping already specified. IO-Link looks at first blush like it's competitive with AS-interface, a true bus system. So, when would you use IO-Link instead of AS-i? The answer depends on the application, more particularly on the type of sensors used, because modern sensors have much more functionality than traditional types - for example configuration, parameterization and diagnostic data have to be communicated. IO-Link only needs a cheap

microcontroller in the sensor, so there's ample opportunity to be clever, for example by building in extra processing capability such as spurious signal cancellation. Can't AS-i do this? Well, the new Version 3 can handle some aspects but there's a speed trade-off. The real distinction lies in whether you

want to use a bus system or conventional point-to-point - in other words it's the plant culture that's the key. Interestingly, ifm effector were showing an interface for running IO-Link clusters under AS-i, proving that it can be complementary too! Six manufacturers demonstrated prototypes - including the SICK interface pictured here with its PROFIBUS connection - and several more announced that devices are in the works. Expect the first by September.



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WEB UPDATES:



INTRODUCING PROFIBLOG! The PTO's Carl Henning is now on-line with one of the first PROFIBUS and PROFINET blogs! [Read the blog here](#). This web log has up-to-the-minute reports from our various events and trade shows, with some opinion and insight. What's a web log, you ask? Check the Wikipedia entry for [blog](#). PROFiblog focuses

on items of interest to North American fieldbus users (and users who should be using a fieldbus!), with special emphasis on PROFIBUS and PROFINET of course. Add your own comments to start a dialogue! You will find references to other blogs in the industrial automation space there, too. Don't forget to pick up the RSS feed to ensure you never miss any of Carl's *bons mots*.

- **SAFETY WHITE PAPER:** ARC has just released a nice [White Paper](#) about PROFIsafe, the profile for networked functional safety that can be used with PROFIBUS and PROFINET. The paper focuses on the benefits of PROFIsafe, something that is often overshadowed by the sheen of the technology. It says that safety has evolved from being a cost burden and 'necessary evil' to a strategy for improving productivity and reducing downtime. Two-bus architectures are now a thing of the past, it adds, thanks to PROFIsafe's support for both PI protocols, and it recommends end users find out how a single-bus strategy can cut costs and lower TCO. To component suppliers and OEMs it says, "assess the business opportunities. Listen to your customers and you will hear the truth!"
- **MORE RESOURCES AT [US.PROFIBUS.COM](#):** The new incarnation of [us.profibus.com](#) continues to set records for visits. And we've recently added even more helpful resources. Click the new [Resources](#) menu item for a good overview of all the resources available to you online. This 'guided tour' to the website also refers you to other sites' information. The new white paper page provides access to in-depth information about PROFIBUS and PROFINET, including the basics of why use a fieldbus in the first place. Need documentation on CD? You can buy a CD in the [Resources](#) section too. You can also buy the popular books 'The New Rapid Way to PROFIBUS DP' by Manfred Popp and/or 'The Rapid Way

to PROFINET' by Manfred Popp and Karl Weber. Of course, you get both the CD and the book of your choice at no charge when you join the PTO.

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2005 FIGURES CONFIRM PROFIBUS AS THE WORLD'S MOST POPULAR FIELDBUS:

2005 was the most successful year to date for PROFIBUS International (PI) and its member companies. The number of PROFIBUS nodes sold rose by nearly 25% compared to the previous year, as approximately 2.8 million PROFIBUS devices were added to the worldwide user base. The total number of PROFIBUS devices now installed has grown to 15.4 million. PI remains on target for increasing this to 20 million by the end of 2007. The total today exceeds all other fieldbus solutions by a large margin. PROFIBUS is particularly strong in process automation. In 2005, 130,000 new PROFIBUS PA devices were installed, an increase of 30% compared to 2004. By year end, approximately 530,000 devices were being used in mainstream process and process-oriented systems. The broader picture in process markets- including PROFIBUS DP - is even stronger. A total of about 2.8 million PROFIBUS devices are used in process plants because of the excellent integration between PROFIBUS DP - the fieldbus protocol optimized for discrete manufacturing - and PROFIBUS PA, which is an IEC 61158-2 solution designed for mainstream processes. PROFIBUS is the only fieldbus to support both types of application on a single protocol. And, since most process plants incorporate discrete manufacturing functions upstream and downstream of the main process, PROFIBUS is the most cost-effective option available. PROFIBUS continues to strengthen its position in all segments of the market, and in all regions of the world. North American and Far Eastern markets were especially dynamic. PI recently certified the first PROFIBUS PA instrument developed solely in China. Others are expected shortly.

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WASTEWATER PLANT USES PROFIBUS AND PROFINET: The town of Rainsville, Alabama, wanted to raise the capacity of its sewage treatment plant by 30%, and improve peak handling after heavy rain. Existing PROFIBUS drives at the 4 acre site suggested using similar technology for the upgrade, while Industrial Ethernet was favored for site-wide communications over a redundant 1800 metre fiber ring. PROFIBUS and PROFINET was chosen by integrator Hi-Tech Systems, with Component-Based Automation (CBA) being employed to make engineering and configuration simple. The site includes several Motion Control Centers for the various pumping and filtering functions. This 'modularity' allows functions to be represented as 'components' of the overall system and

CBA enables the communications relationships between them to be configured using simple drag and drop techniques. In this way data communications need not be separately programmed, speeding engineering and making the plant much more flexible. PROFINET IO remote IO modules are used, along with standard PROFIBUS remote IO functionality. The project succeeded in doubling the performance of the plant and will enable extensions to be deployed easily by adding PLC components. [Hi-Tech Systems](#) or marty@hi-techsystemsinc.com or 706 278 1311

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ARE YOU ATTENDING THE PTO GENERAL ASSEMBLY MEETING IN AUGUST?:

The dates for the PTO General Assembly Meeting have been set as August 2 and 3 in Scottsdale. We'll actually kick off at noon on Monday July 31 with a one-day class 'PROFIsafe for Developers', followed at noon Tuesday by a half-day introduction to safety concepts and PROFIsafe. The 'welcome' reception is set

for Tuesday evening. We'll get down to business Wednesday morning. Wednesday evening we'll be headed to Jillian's again (by popular demand). This is your chance to network in an informal setting while beating your colleagues at pool or bowling! Seriously, if you missed this last year, ask someone who was there – it was a great time. Back to business Thursday morning.

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CALLING ALL END USERS! Do you have an interesting application involving PROFIBUS and/or PROFINET? If so, would you be willing to present it at our next General Assembly meeting in August? Membership is not required but you'll have free access to the entire two day event and its social activities, plus you'll have the chance to network with some of the best fieldbus engineers in North America. If you'd like to give it a try (and we understand that engineers are not professional speakers) contact [Carl Henning](#) and suggest a theme.

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NEW PRODUCTS

CONSULTANCY, TROUBLESHOOTING AND CERTIFICATION OF PROFIBUS NETWORKS:

The professionals at PROCENTEC have years of experience with PROFIBUS installations. Certification of new and existing networks ensures quality, and decreases the need for expensive troubleshooting when PROFIBUS goes down. PROCENTEC is an accredited PROFIBUS Competence Center and has certified many networks. What is certification? During network certification, qualified staff audit the network with the help of the [ProfiTrace network analyzer](#) and [HandyScope](#) to see all anomalies and errors on the bus. These are then quickly solved. Also, the auditors inspect the network topology and search for engineering or installation errors. Many installers or engineers do not take PROFIBUS installation rules into account, one of the most common sources for errors on a PROFIBUS network. After certification, the auditors write a detailed certification report on the audited network. The proven concept of certification has improved the stability of many installations worldwide. [More here](#)



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5 CHANNEL SPUR LINE REPEATER FOR DP:

ProfiHub A5 is an advanced, flexible and robust network component for PROFIBUS DP installations, which makes it possible to implement long multi-device spur lines and backbone structures with star/tree segments. It has the functionality of 5 galvanically-isolated transparent repeaters. This allows network structures with extended spur lines that individually can handle a maximum of 31 devices and a length equal to the main bus. The spur lines have short circuit protection and the maximum baudrate is 12 Mbit/s. It can also be used as a barrier for noisy EMC-environments and motor control centers (drawers). [More information here](#) or 630 245-1445 or [email](#)



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SERVICE CENTERS NOW CERTIFIED FOR NEXT-GENERATION REPAIR AND SUPPORT:

MTS Systems Corp. Sensors Division now offers factory-certified repair service and support for its next-generation G-Series and R-Series product lines at:

- Hydraulic & Motor Control - Orchard Park, New York
- MCS Servo Inc. - Montreal, Quebec, Canada
- Paw-Taw-John Services, Inc. - Rathdrum, Idaho
- PQ Systems Ltd. - Burnaby, British Columbia Canada.

These experienced Temposonics® repair centers are also authorized, full-service, MTS Sensors distributors for the Temposonics product line, specializing in fluid power and controls, and offering comprehensive applications, field

support, and products. "Combined with MTS' factory 24-hour field service, applications engineering and repair services - including 48 hour turnaround on most repairs - MTS customers can expect the best product support and service in the industry," said David Edeal, Temposonics Marketing Manager. "Our products operate in some pretty nasty environments and some out-of-the-way places. These facilities, representing a combined 100-plus years of Temposonics service and support, supply the critical extension of our factory-direct support. Customers can expect world-class capabilities." [MTS Systems Corp](#) or 919 677-0100 or info@mtssensors.com

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CONNECTING RFID DEVICES TO PROFINET: Siemens Automation and Drives (A&D) has developed two new communication modules for connecting RFID read/write devices to PROFINET. With the Simatic RF180C module, the read/write devices are connected direct to PROFINET, and with the Simatic RF170C, the connection is established via the Simatic ET 200pro distributed I/O device. The primary application areas are in mechanical equipment manufacture, conveyor technology, assembly lines in the automobile and supplier industries, and in small assembly lines. The read/write devices of all RFID systems can be operated on the new communication modules, and the high degree of protection IP67 enables installation outside the control cabinet, direct in the field. Integrated connections guarantee fast startup. Full software compatibility enables simple migration from PROFIBUS to PROFINET. [More information](#)

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INDUSTRIAL TO SERIAL CONFIGURES IN MINUTES:

Control's DeviceMaster UP offers a industrial Ethernet to serial solution that configures in minutes via the web, allowing you to support major industrial Ethernet PLC networks including PROFINET on a single platform. Whichever protocol you use, DeviceMaster provides an RS-232/422/485 software-selectable serial connection that

communicates with automation PLCs. Features include: Connect, communicate and control up to four serial devices such as bar code scanners, scales and printers; Micro form factor and -37° to 74°C Industrial Temperature Range; Variable power input eliminating need for power converters. The unit offer reliable and fast connectivity from an industry leader with 25 years experience and includes PortVision® enterprise monitoring and management software that automatically monitors devices on the network and enables user to view status, update firmware and resolve issues remotely. The adaptability of flash-in configuration enables users to upgrade plant floor visibility on a global scale faster and more economically than ever before. The DeviceMaster UP also provides unprecedented power to leverage legacy devices and boost ROI. It's the pain-free Industrial Ethernet solution, says its makers! [More information here](#) or contact [sales](#). Free evaluation units available.



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PROFIBUS DP HIGH SPEED WIRELESS

GATEWAYS: Connect PROFIBUS field devices 'over-the-air' and up to 20 miles away, using new ProLinX Wireless Gateways. Progressive technology provides unprecedented flexibility, allowing heterogeneous networks to share process and status data. Using the ProSoft Wireless Protocol (PWP), data is transferred securely and efficiently between different industrial networks and protocols in a high-performance way. ProLinX Wireless applications are used for cable replacement (for cost reduction) and wireless extension of slave networks; communication between multiple and separate networks, connection of multiple wireless remote device networks to any central system including SCADA and connection to multiple PROFIBUS DP wireless remote device networks. [More here](#) .



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