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*Ever heard of Parrot Marketing? This month, instead of debunking one myth, we announce a booklet **debunking many myths ... all at once!***

*'[Pretty Polly, Sweet Sue and the White Knight](#)' takes a whimsical look at the Parrot Marketing lying behind the myths we've been exposing in recent issues of this newsletter, and then responds by identifying the weaknesses of the Standard Unmodified Ethernet (aka SUE) approach. Finally, over the horizon gallops the White Knight to tell us about the overwhelming advantages of PROFINET. This booklet is a 'must read' if you're interested in Industrial Ethernet.*

See [previous issues](#) for more 'debunks'.



**ADDITIONAL PROFIttech CLASS:** To meet the growing demand for qualified network engineers using PROFINET, the PTO and the PROFi Interface Center have announced an additional PROFINET Certified Network Engineering Class (PROFIttech) class for this year. The PROFIttech class is scheduled to begin on November 27 at 1:00pm. It lasts five day and delivers comprehensive training on the installation, operation and maintenance of PROFINET products and networks. During the training, students have a rack of multi-vendor PROFINET equipment at their disposal and the class provides a mix of theory and hands-on problem-solving. More details [here](#).

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**REGISTER FOR YOUR FREE TRAINING CLASS:** Want to know more about PROFIBUS? Want to know more about PROFINET? Want to know why you should use a fieldbus of any kind? A recent ARC Advisory Group survey revealed that one of the major factors inhibiting adoption of a fieldbus was "lack of knowledge." Remedy that by attending one of the free classes offered by PTO and the PROFi Interface Center. There are still a few of each class type remaining. There are no sales pitches but you can visit with the exhibiting vendors during breaks, lunch, and after the class at the hosted bar. If you register early you'll be eligible for an onsite raffle for a \$25 gift card. We hope to see you at one of the remaining classes in Calgary, Los Angeles, Denver or Seattle. For a summary of 2006 training opportunities, visit our [North American events page](#). For up-to-the-minute reports on classes as they happen, visit the [PROFiblog](#). We anticipate that 2007 will bring even more opportunities to attend a class. Watch [www.us.profibus.com](http://www.us.profibus.com) for news.

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**PROFINET DEVELOPER WORKSHOP:** A well-attended workshop at Chicago O'Hare (right next to the new Rosemont Expo Center) on the day after the [IES](#) saw over 20 prospective developers listen to a variety of PTO presenters on the technical merits of PROFINET and how it can be implemented in products. ARC Advisory's Harry Forbes introduced the topic of Industrial Ethernet. Carl Henning (right) led the event and later [blogged](#): *"Our first PROFINET Developer Workshop is now history. We had seven tool providers show device manufacturers how easy it is to add PROFINET to their products. It was amazing to see the range of choices available – from customized services to drop-in products. The seven tool providers: Hilscher North America, Inc. HMS Industrial Networks, Inc. Real Time Automation Siemens Energy & Automation Softing North America Grid Connect, Inc. Woodhead Industries."* He added that the success of the PROFINET Developer Workshop is a sure sign of the increasing market penetration of PROFINET in North America.




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**IN THE PROFIBLOG:** The PTO's Carl Henning, who spends much of his time traveling with the PROFINET Road shows, continues to write [his daily blog](#). Many good topics are covered, including the recent ISA Expo, the IES and of course his various PROFINET training classes and workshops. Carl always has a pithy comment to make and he's well worth reading. At the recent ISA Expo he noted (about one of the speakers): *"One good point about Industrial Ethernet he made is one we all too often ignore: multiple different applications can run over Industrial Ethernet at the same time. Yes, you can run PROFINET and email and web browsers etc. all at the same time on Ethernet. In fact, you can run Modbus/TCP, Ethernet/IP, and PROFINET at the same time."* So much for the differences ... and so much for competitors who Parrot that PROFINET isn't standard Ethernet. Pretty Polly!

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**[YOUR AD  
HERE](#)**

**PICCs AND PITLs MEET IN SWITZERLAND:** The PIC in Johnson City is just one part of a global set of PI Competence Centers (PICCs) and PI Test Labs (PITLs) supporting the international network of PROFIBUS and PROFINET communities. PICCs and PITLs from Switzerland, China, Czech Republic, France, Germany, Ireland, Italy, Japan, the Netherlands, Poland, South Africa, US, and United Kingdom met recently (above) at Winterthur, Switzerland where Quality Assurance was an important topic: quality of services agreements guarantee that a PICC has the know-how and equipment to provide competent advice and services, and that qualified training courses are offered. Strict regulations for the PITLs form the basis of PI's device certification system and ensure that the certification tests fulfill the same standards worldwide. Many people believe that the close collaboration of PI's global network (that is the Regional Associations, Competence Centers, Test Labs, and of course over 1,400 member companies worldwide) is the real differentiator for our technology.

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**PIC CHANGES NAME AS PROFINET RAMPS UP:** Here in North America our PICC recently changed its name to the 'PROFI Interface Center' (PIC) to more accurately portray current activities, which include both PROFIBUS and PROFINET technologies. The PIC is still quite active with PROFIBUS support but PROFINET-centered activities have increased rapidly. Increased support for PROFINET IO developers can now be provided. Also available from the PIC is a PROFINET IO Development Kit for PROFINET IO devices using standard Ethernet ASICs. As well as helping PTO, the PIC undertakes its own activities, The majority of time is spent on promotional work, mostly focused training events for Automation, Process, Installers and Certified Network Engineers for PROFIBUS and PROFINET. There are also Customer In-House PROFIBUS and PROFINET Events. PROFINET IO Developers Classes and In-House Industrial Ethernet Classes are on the increase. PROFIsafe Developers Classes and PROFIsafe Seminars are popular. On-Site Installation and Troubleshooting Visits are also handled. A total of 68 events took place in the last year, which 1641 people attended. The PIC also develops its own tools, for example [PROFINETCommander](#). The PIC team consists of Ron Mitchell, Mike Hales, Karsten Schneider, Hunter Harrington, and John Swindall. "It's been a very busy year and we anticipate an equally busy next year," says Ron. "If you have any PROFIBUS or PROFINET questions, need to schedule customized training or simply would like installation advice, please e-mail us at [profibus@sea.siemens.com](mailto:profibus@sea.siemens.com)".

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**MORE COMPETENCE CENTER NEWS:** In **ITALY**, INN.TEC Srl., the Italian PROFIBUS and PROFINET Competence Center, will begin offering the globally-recognized 'Certified PROFIBUS Engineer' training course in collaboration with PROCENTEC Netherlands. INN.TEC. Srl. is located at the University of Brescia, Department of Electronic for Automation. Inn. Tec. +39 030 3384030 or [www.inntec.it](http://www.inntec.it) or [info@inntec.it](mailto:info@inntec.it) In **GERMANY**, the PHOENIX PROFINET Competence Center offers telephone consultations, on-site servicing and training courses are taking place, the training course topics being PROFINET basics in theory and practice. An extra feature is the PROFINET starter kit for each participant. Phoenix Contact: +49 5235 3-19954 [dvogel@phoenixcontact.com](mailto:dvogel@phoenixcontact.com) [www.automation.phoenixcontact.com](http://www.automation.phoenixcontact.com).

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### ETHERNET SYMPOSIUM BRINGS MANY IE SOLUTIONS TOGETHER:

The Third International Ethernet Symposium took place in downtown Chicago in October. As well as keynote and introductory speeches on various aspects of the technology, delegates listened to presentations from all major Industrial Ethernet players. A panel session on Day 1 enabled key questions to be put to each solution representative by ARC Advisory's Dave Humphrey and shed light on many aspects of Industrial Ethernet. Break-out sessions on Day 2 allowed case studies to be presented in two streams. PI Chairman Edgar

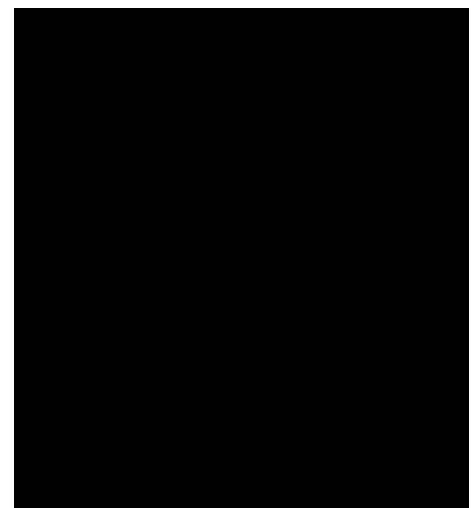


Kuester (above left) discussed PROFIBUS and PROFINET Standards and explained how PROFINET fits into the process industries in particular. Organized by Siemens, the event is a valuable addition to the annual automation calendar and we understand that it will travel to Asia next year. For much, much more comment go to [Automation World](#) or [ARCWEB](#) or of course [the PTO Blog!](#)

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## TECHNOLOGY UPDATE

**CERTIFICATION - WHAT IT MEANS:** Many people wonder how the PI community guarantees interoperability and quality. Well, it's all down to certification, which PI members take very seriously indeed! PROFINET and PROFIBUS devices of different types and manufacturers perform different tasks in the automation process. In order to do this correctly they must exchange information over the bus as specified in the corresponding standards. Basis for the certification is the framework for testing and certification of PROFIBUS / PROFINET products and the test specifications as well as the relevant standards. The documents can be found here at '[Downloads](#)'. Thus, users have the assurance of error-free functionality during the interoperation of devices from different manufacturers. Similarly, certification ensures standard compliant behavior within a PROFIBUS or PROFINET network, as defined by IEC 61158. Both PROFIBUS and PROFINET devices are checked in a certification test, which is performed by experts in special PI Test Labs (PITLs). Only certified devices guarantee worldwide conformity in an automation facility with products from different manufacturers. For PROFIBUS devices, certification is strongly recommended by PI and demanded by many end-users. For PROFINET products, certification is mandatory.



- **THE PROCESS OF CERTIFICATION:** The certification process (see graphic) is designed to ensure reliable, interoperable and safe operation for users and is similar for PROFIBUS and PROFINET devices. Details on the PROFIBUS certification can be found [here](#). The device manufacturer first contacts a PI Test Lab (PITL) for a certification test. The defined test cases are practically oriented and reflect the industrial requirements. Therefore, only those test cases are checked which might arise daily in a real installation. The certification test is structured as follows: Test of the hardware automated state machine test; simulation of diagnostics and alarms; interoperability test; inspection of the GSD file. Once a device has passed all tests, the manufacturer can request certification from PI.
- **SUPPORT, TOOLS AND USEFUL LINKS**
  - > [PITLs for PROFINET](#)
  - > [PITLs for PROFIBUS](#)
  - > PI has accredited a global network of PI Competence Centers, where engineering support like product development, trouble shooting or similar is offered, seminars and training courses are held, and experts answer technical questions.
  - > [PICCs for PROFINET and PROFIBUS](#)
  - > Helpful software and free tools like an XML Viewer, Ethereal (Wireshark), a test tool for PROFINET CBA, a Component Editor, a GSD-Editor, an I&M Functions Demo tool, etc. can be found on PI's website [here](#).
- **WHERE TO FIND CERTIFIED PRODUCTS**
  - > Certified products are listed in PI's online product guide at <http://www.profibus.com/meta/productguide/>

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**QUESTIONS ANSWERED:** There's a lively free Forum at <http://forum.profibus.com> where questions about PROFINET and PROFIBUS will be answered by experts. Recent topics included:

- Q: Can you summarize the differences between Industrial Ethernet and PROFINET?
  - PROFINET is based on Industrial Ethernet. Only in those parts where Industrial Ethernet is not able to provide satisfactory results was it necessary to extend standards to meet the requirements of end users (e.g. for real time behavior). PROFINET is standardized under IEC61158. With PROFINET, it is extremely easy to match an application to an automation task: PROFINET IO is optimized for fast data exchange with decentralized peripherals; PROFINET CBA (Component Based Automation) shows its strength when an automation plant is seen as just a collection of functions, enabling modules of functionality (i.e. components) to be easily and quickly connected together; components can also be re-used as often as needed, cutting engineering time dramatically.
- Q: Software implementation of PROFIBUS DP. Possible?
  - As PROFIBUS is standardized in IEC61158 it is no problem to implement PROFIBUS DP in software running at up to 1.5Mbs. Using higher transmission rates you will run into problems. But, because of the low costs of existing PROFIBUS ASICs it is much more time-saving to use an available ASIC. In combination with an existing software interface PROFIBUS is from the user's viewpoint just a dual-ported memory where the user can read and write the required data.
- Q: Is PA Profile V3.0 GSD a specific GSD File, or is it built into the manufacturer's GSD?
  - A PA Profile 3.0 GSD is a basic GSD for all devices which are possible to run in a profile mode. There are different profiles available like Temperature, Level or Flow. These GSD-Files are specified in the 'PROFIBUS Profile for Process Control Devices, Version 3.0'. You can find the profile GSD-Files on the PI Website [here](#).

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## IN BRIEF

**AROUND THE WORLD: CHINA:** On Sept. 4, 2006, CPO (Chinese PROFIBUS User Organization) held a successful press conference in Beijing on technology updates for PROFIBUS & PROFINET, as part of PI's Road Show in Asia. More than 60 media and journalists attended, including 3 major national TV stations! If you're interested in the Automation Standards used in China, the system of initials used are explained in [this recent Blog](#). While Ethernet/IP (and ControlNet, too) are in the beginning stages of adoption in China, both PROFIBUS and PROFINET are already Chinese National standards. **JAPAN** The Japanese PROFIBUS Organization (JPO) organized a press conference in Tokyo on Sept 7th at which Mr. Küster of PI explained how PROFINET will cover process applications in the future. One major topic was the announcement that three major Japanese companies have expressed their support for PROFIBUS and PROFINET as JPO members. These are Toshiba, Hitachi High-Tech Trading and Fuji Electric Systems. Toshiba explained that PROFIBUS fits its targets because it covers both factory and process automation. Hitachi explained the expected benefits of using PROFIBUS and PROFINET in its system while Fuji Electric reported on its marketing of PROFIBUS during the past 2 years and promised future support for PROFINET in its systems. **SOUTH AFRICA** The PROFIBUS User Group of SA (PUGSA) recently held a technology update on wireless communications in Johannesburg. Engineers and Technicians from around the country attended, completely filling the main auditorium. **UK** A call for papers has been issued for the Third International PROFIBUS Conference, which will be held at Coombe Abbey on June 26/27 2007. 'How to' papers are sought, for PROFIBUS and PROFINET. Contact: [uk@profibus.com](mailto:uk@profibus.com) **NETHERLANDS** In June over one hundred guests from the process industry converged on the Carlton Oasis hotel in Spijkenisse to enjoy a breakfast courtesy of PROFIBUS Netherlands, PI and eleven associated companies. One speaker was Dr. Hasso Drahten, general manager of NAMUR, a major international organization for process industry users has made a number of recommendations relating to fieldbuses. Lifecycle Costs were another key topic. The breakfast ended with a lively discussion! Guests used red and green cards to respond to controversial statements such as 'Important investments are frustrated by managers with a bean counter mentality'.

**GERMANY:** SPS/IPC/DRIVES will feature the very latest of PROFIBUS and PROFINET at what is fast becoming one of the best events in the worldwide automation calendar. Interbus and PNO will be exhibiting side by side once again with a joint booth and hospitality suite. One of the highlights will be a huge PROFINET presentation. [More here](#).

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## NEW PRODUCTS

**ControlLogix SCANNER INCLUDES DTM:** Woodhead Industries has announced a new PROFIBUS scanner for ControlLogix and Honeywell PlantScape controllers. The new version includes a CommDTM interface enabling the Scanner to configure and diagnose DTM field devices using FDT tools such as PACTware or FieldCare. This gives access to slaves simultaneously and provides a full scan list function, a set slave address function and access to the Scanner through the Allen-Bradley Remote Link Library. The tool is able to use the RLL feature for remote monitoring and downloading of changes to the PROFIBUS configuration through the RSLinx via Ethernet. The new release supports DP-V1 and all baud rates, enhancing the Scanner's use in PROFIBUS PA networks too. [More here](#).



**GATEWAY MANAGER:** Ascon's DeltaDue series control modules with DX DIN rail mount Gateway Manager provides a complete 'blind' system with configuration and parameter backup and a PROFIBUS gateway. The module can store a backup copy of all connected DeltaDue configurations and operator parameters. All DeltaDue modules feature "hot swap" capability and true single loop integrity. Thus, when a replacement DeltaDue module is inserted in the system, the DX module can instantly download all configuration and operator parameters to the new module without operator or engineer intervention. Also, the DX module provides a Fieldbus output of high speed PROFIBUS communication protocol. Additionally, the DX module allows for the connection of multiple Master devices to the system. Ascon has some new Process/Temperature Controllers with PROFIBUS DP Slave connectivity and Ascon's gammadue Series X5 and Q5 Process Controllers now include PROFIBUS DP Slave protocol. More from 630-482-2950 or [info@asconcorp.com](mailto:info@asconcorp.com) or [www.asconcorp.com](http://www.asconcorp.com).

**DP SLAVE FOR ControlLogix:** ProSoft Technology's PROFIBUS DPV0 Slave Module seamlessly integrates PROFIBUS DP Master devices with ControlLogix networks directly over the backplane. The MVI56-PDPS module possesses auto baud detection at all valid PROFIBUS DPV0 rates, user-configurable data mapping capabilities and DP port operation for optimal power and ease of use. This single-slot module supports extended diagnostic data (DP-V0); up to 244 bytes of I/O data, with 400 byte maximum; Freeze/Sync capabilities; 0 - 125 node addresses and multiple modules in a single rack. [More here](#).

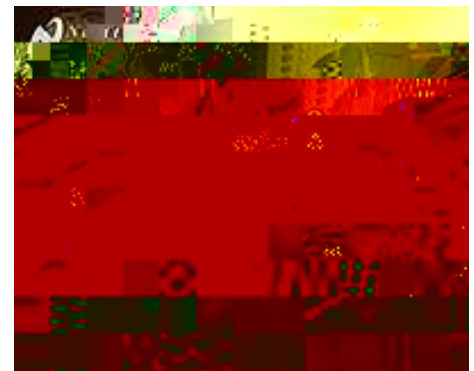
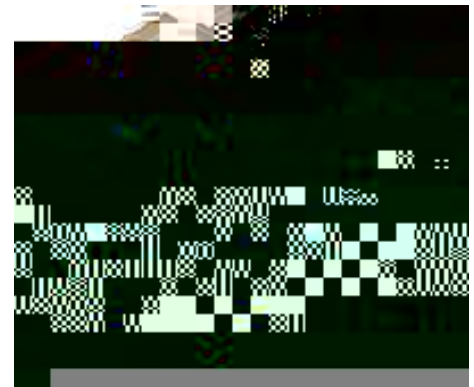
**PROFIBUS TESTER:** Softing's latest PROFIBUS Tester - PB-T3 - is a powerful, yet easy-to-use tool used to determine the signal quality to each connected PROFIBUS device. Potential faults in PROFIBUS networks such as device failures, communication errors, or even plant shutdowns, are frequently linked to poor signal quality and poor cabling. PB-T3 automatically analyzes the physical layer of PROFIBUS networks and visually displays the signal quality for each connected PROFIBUS device separately, thus helping users to quickly locate and correct errors. Automatic baud rate detection and the discovery of duplicate address assignments also contribute to the ease-of-use aspect of this innovative product. An included PROFIBUS master simulator enables the PB-T3 to verify the integrity of PROFIBUS networks during commissioning without having the actual controller (e.g. a PLC) on-line. In addition, PB-T3 provides the exact location of the problem by measuring the distance from PB-T3 to the device in question. Softing also has a new S7/S5 OPC Server and NETLink-PRO, offering robust high-speed connections to the S7 PLC-family and to compatible products from other manufacturers. More from Softing North America at 978-499-9650 or [Ken.Hoover@softing.com](mailto:Ken.Hoover@softing.com) or [www.softing.com](http://www.softing.com).

**FIBEROPTIC PROFINET IO:** IM 151-3 PN FO with integrated POF interfaces uses SC RJ cabling and makes it possible to interface the SIMATIC ET 200S product family to a fiber-optic PROFINET network. This, in turn, makes it possible to operate standard modules and, for the first time, fail-safe PROFIsafe modules on the ET 200 with a direct FO connection. Existing modules can still be used, protecting user investments. An integrated 2-port switch enables line topologies. More from [klaudia.trkaj@siemens.com](mailto:klaudia.trkaj@siemens.com) or [www.siemens.com/PROFINET](http://www.siemens.com/PROFINET).

**LINUX PROFINET IO:** LINUX PROFINET IO Two Linux adaptations for PROFINET IO are available from InES (Institute of Embedded Systems), based on the Siemens PROFINET IO Stack V2.1. The first is designed for powerful platforms and the second can be ported to low-cost platforms. PROFINET Isochronous Real Time is supported. Both utilize the most recent Linux Kernel (Gentoo). InES: +41 52 267 75 09 or [mth@zhwin.ch](mailto:mth@zhwin.ch). Separately, a board-level product called SINUS has been developed based on the Linux platforms for implementing device applications in a short time frame. More from: BIC Siemens: +41 585 583 123 or [patrick.vonlanthen@siemens.com](mailto:patrick.vonlanthen@siemens.com) or [www.siemens.ch](http://www.siemens.ch).

**PROFIHUB B5:** Procentec has announced a B5 version of its popular PROFiHub tool for PROFIBUS DP. B5 is a 5 channel spur/stub repeater suitable for IP20 environments and with a DIN rail mounting. This makes it quick and simple to build reliable star- or tree-structured networks. B5 has short circuit protection and can be used as a barrier for noisy-EMC environments and MCCs. [More here](#) or visit [GridConnect](http://GridConnect).

**DUAL PORT PHYSICAL LAYER TRANSCEIVER:** National Semiconductor's DUAL port 10/100Mb/s High Speed Industrial connectivity devices features Electrostatic Discharge (ESD) protection and offers guaranteed IEEE 802.3u compliance. Additionally, it has Flex-Port switching, which allows the two ports to be internally connected to provide fully integrated range extension, media conversion (100Base-Fx Fiber), hardware based failover and port monitoring. Enhanced System Diagnostics use a TDR scheme for detecting faults and cable diagnostics provide for real time monitoring of link quality to enable fault prediction. More information at [www.ethernet.national.com](http://www.ethernet.national.com).



**PRESSURE AND TEMPERATURE:** The Sitrans P DSIII digital pressure transmitter is the first PROFIBUS PA device designed for SIL2 safety shutdown in accordance with IEC 61508/IEC 61511-1. A PROFIsafe driver has been added to the standard pressure transmitter enabling the fail-safe transfer of the measured values via PROFIBUS. The measure values include pressure, absolute pressure, differential pressure, flow and level. Through PROFIBUS PA, the Sitrans P DSIII is connected with a Simatic S7400 controller that triggers a safe shutdown. In the case of 'redundant/diverse' design, measuring circuits up to safety level SIL3 can be established. With the Simatic PDM configuration tool, Sitrans P DSIII is started up as a regular PROFIBUS-PA device and then the PROFIsafe safety functions are activated. The files required for this are at: [www.siemens.com/sitransp](http://www.siemens.com/sitransp). Also new are Sitrans TH head mounted temperature transmitters which communicate via Hart or PROFIBUS PA, or stand-alone.

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