

PROFINETS

North American Edition

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Issue 37, March 2011

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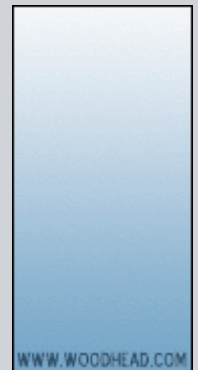
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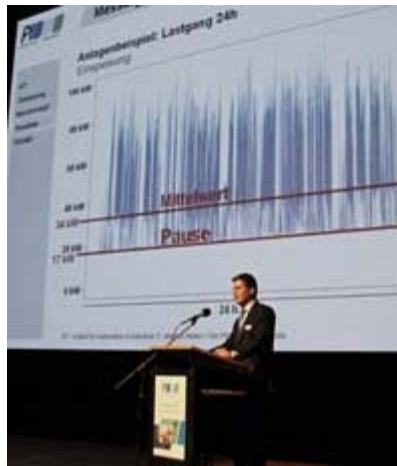


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GENERAL NEWS

PROFenergy ENTERS PILOT PHASE: A highly successful international conference held in February at PI's headquarters in Karlsruhe, Germany, focused on Energy Efficiency in Automation. Over 250 people attended to hear a variety of presentations about all aspects of PROFINET and PROFIBUS.

Savings could be 30% according to audit: The potential for huge energy savings resulting from the use of the new PROFenergy profile for PROFINET was revealed during the Conference. Markus Müller (right) of AIT (the Institute for Automation & Industrial IT) at FH Cologne presented the results of an energy audit undertaken at automotive manufacturing sites. The audit consisted of long term monitoring of real energy consumptions across a range of automation devices, following which a detailed analysis of the measurements was carried out. This showed that high amounts of energy are used during a variety of non-planned production pauses, many as short as a few seconds. AIT then showed how energy savings of up to 30% could be made available with PROFenergy. However, said Mueller, best results require careful planning, preferably early in the design of a plant.



Automotive majors pilot PROFenergy: The importance of good planning was underlined by a second speaker who pointed out that PROFenergy was an 'enabler' which, by itself "cannot save a single kilowatt!" It is the responsibility of OEMs, vendors and end users to ensure that PROFenergy is



used effectively, he said. Separately, representatives of the automotive manufacturers spoke warmly of PROFenergy. "It is the right way forward and now we need devices where PROFenergy is implemented," said Jürgen Kübler of Daimler AG (left). It was clear from this and other discussions that first applications with PROFenergy are already being piloted in automotive plants. It was also clear that the automotive makers are beginning to see better energy efficiency as a route to competitive advantage. [Read the full conference report here.](#)

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TRAINING CLASS SCHEDULES UPDATED: Our first PROFINET training class in February, held in Houston (right), was a corker! It attracted 103 students and 13 exhibitors. We added PROFINET in Process Automation this year and we showed how PROFINET can provide the ideal backbone architecture for automation projects that incorporate PROFIBUS,

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Foundation Fieldbus, DeviceNet, and others, as well as providing direct connectivity for PROFINET-enabled non-hazardous area process devices.

Seventeen more FREE training class opportunities are scheduled for 2011, as shown below. You should [monitor this page](#) to stay abreast of updates, as some dates are still to be confirmed. Click each city link to access class details and a link to registration. Attendees of these events each receive a certificate for 5.5 Professional Development Hours (PDH).

Schedule	PROFIBUS	PROFINET
March	Huntsville Mar 30	Greenville, SC Mar 23
April		Philadelphia Apr 12
May	Indianapolis May 18	Richmond May 10
June		Cincinnati
July	Pittsburgh Jul 7	Spokane July 19
August	Denver	Boston
September	Minneapolis Sep 29	Rochester Sep 14
October	Raleigh	Chicago
November	Houston	Milwaukee
December	San Diego	

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CERTIFIED NETWORK TRAINING CLASSES: Achieving Certified Network Engineer status can be a major career enhancer as well as the assurance that your customers get the highest possible quality of workmanship. Certified names also go onto our web-based Certified Engineer list for all to see.

Certification Classes in 2011 have been scheduled as follows. (Please monitor [this page](#) for any changes.)

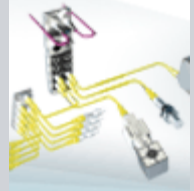
PROFIBUS DP	PROFIBUS PA	PROFINET
March 7		March 28
May 16	May 23	June 13
September 12	September 19	September 19
November 7		December 5

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TWO WEBINARS ANNOUNCED: Webinars are an easy way to learn from the comfort of your own office. PI North America has therefore scheduled two more live events covering the latest developments in PROFINET technology.

- PROFInergy: PROFInergy provides a unique method for reducing energy consumption

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during production pauses and the tools to shave peak power demand. Scheduled for April 20 at 2:00pm Eastern Time, this webinar will conclude with a live Q&A session.

- PROFINET in Process Automation: Just as PROFIBUS expanded from discrete to process automation years ago, PROFINET is now in a similar position. This webinar is scheduled for May 18 at 2:00pm Eastern and will also feature a live Q&A session. Join us to see how PROFINET forms the backbone for process automation, discrete automation and motion control.

Experts from PI North America and the PROFI Interface Center from Johnson City will be presenting and answering your questions. [Visit this page](#) for more information and to register.


There's a list of past webinars [archived here](#).

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TWO NEW PUBLICATIONS: Targeted at device manufacturers, our newest white paper comes from PI North America member and PROFINET Competence Center HMS Industrial Networks, who explains "Why It's Time to Move to PROFINET". [Find the pdf here](#). The second publication is the PROFINET Design Guideline which serves as a helpful guide for the step-by-step design of a plant and is presented in a brief and easy to understand way. A basic knowledge of PROFINET technology, electrical engineering and network technology is required. (This guideline does not cover the installation and commissioning; please refer to the PROFINET Installation Guideline and the PROFINET Commissioning Guideline for those aspects.) All these documents plus a network load calculation tool are available [online here](#).

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SOCIAL NETWORKING

LinkedIn  **ARE YOU LINKED IN TO PROFINET?** The new LinkedIn group for PROFINET has started to move. The group is moderated jointly by Dolf van Eendenberg in the Netherlands and Carl Henning in North America and registration is free. It's an ideal forum to ask questions and listen to tips and advice about PROFINET. [Visit the PROFINET LinkedIn Group](#).

PROFIblog: If it doesn't sound too perverse, Carl Henning's been really active on Twitter recently with links to stories, articles and movies about automation in general and PROFINET in particular. [The latest blog](#) lists all that action and more, including new products from North American manufacturers plus trivia such as when the first digital photograph was taken.

PROFINET MOVIE: We've mentioned [this one](#) before but it really deserves another push as it's such a great production. Everything you need to know about what PROFINET can do for you is covered in just a few minutes watching, including key topics such as motion control, functional safety, energy management and the integration of existing fieldbuses. Why not send the link to your colleagues and invite them to take a look?



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TECHNICAL MARKETING VACANCY: PI North America is looking for someone to work from the Scottsdale, AZ office as part of its Technical Marketing team. Someone with an engineering background and substantial industrial automation experience would make an ideal candidate. Some existing knowledge of PROFINET and PROFIBUS would be beneficial too. Good communication skills are required, especially in the sphere of public speaking, as regular technical presentations to audiences ranging from end user management and engineering staff through to OEMs and professional bodies is a key part of the job. A willingness to travel (about ten three-day trips per year) is also a requirement. If you fit the bill - or know someone who might - the person to contact is michael.bryant@profibus.com.

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'ALL THINGS PROFINET' GROWS: Latest additions to the PI North America web site 'All Things PROFINET' include fresh application stories about PROFINET and PROFIBUS. The Product Showcase has recently been opened up to all global members of PI, so this resource in particular is becoming more and more valuable by the day. As a 'first-stop' for finding suppliers of PROFINET products it will be one of the best in the world. [ALL THINGS PROFINET](#)



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APPLICATIONS

PROFINET IS THE TOPS: Liseberg in Gothenburg, Sweden has the biggest amusement park in the Nordic Countries. One attraction is the Lisebergstower, which is 116 meters tall. This has a glass-sided elevator cabin in which up to 80 persons can travel to near the top where it rotates about its own axis so that they can see Gothenberg below. An old relay-based control system needed to be replaced and for safe and effective control a major challenge was to organize communications with the elevator cabin. The solution was to use wireless PROFINET. One wireless access point (WAP) is placed in the elevator cage, around which a 'leaking antenna' cable is located. Another 'leaking antenna' is placed vertically on the outside of the tower so there is always a data connection with the elevator cabin. The antenna cables each have one client connected - one 90 meters up in the machine-room, the other in the cabin. From the top client a fiber optic cable runs down to the control system located underneath the tower. From there it goes to the main Liseberg network. Most of the drives are connected via PROFIBUS and PROFINET in nine cabinet locations. Failsafe signals are transferred via PROFINET too. Since all drives and HMI devices are integrated in the same system all nodes in the system can be accessed from any location. The control system knows the exact target position of the elevator and also the velocities to run. The PLC calculates the deceleration ramps while fixed sensors check the elevator's position. The monitor system is double redundant: one system controls



the positions and one watches the position monitoring system. Faster operating speeds and softer decelerations are now possible. Using wireless PROFINET solves all problems at once, say staff at Liseberg. Further, the level of safety they now have with PROFIBUS and PROFINET is far superior to that of previous systems.

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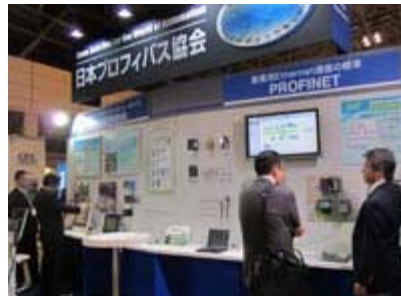
MEMBER NEWS

SCOPE WINS AWARD: TH SCOPE from Trebing + Himstedt was voted by visitors to the SPS/IPC/DRIVES fair in Germany as the runner-up in the Automation Awards 2010. TH SCOPE comprises diagnostics software for the unified monitoring of PROFIBUS, PROFINET and Industrial Ethernet networks and it allows several separate diagnostic tools to be replaced by this one, easy-to-use solution. [TREBING + HIMSTEDT](#).

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WORLD NEWS

BRAZIL: The Brazil Regional PI Association attended the Feicana 2011 Fair, which is targeted at the sugar and alcohol market. Presentations on PROFIBUS were given. A new edition of the Brazilian PROFINEWS has been published. **CHINA:** during a period of just 10 years, five PROFIBUS and PROFINET technical specifications have been transformed into Chinese Voluntary National Standards (GB/T) or Chinese National Standardization Guiding Technical Documents (GB/Z). Standardization activities in China play an increasingly important role in helping promote PROFIBUS & PROFINET technologies. **UK:** PROFIBUS UK has announced a new series of Free Seminars for 2011. Seven are planned, the first takes in Manchester on May 12th. **JAPAN:** The Japanese PROFIBUS Organization (JPO) attended the SEMICON Japan Fair in December. SEMICON is the semiconductor industry exhibition and it attracted about 66,000 visitors. JPO presented a demonstration comprising 35 PROFIBUS and PROFINET devices.



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NEW PRODUCTS

ETHERNET EVALUATION KIT: Softing's new industrial Ethernet evaluation kit is an ideal starting point for any device vendor. The kit is based on the Altera Cyclone III FPGA and provides numerous peripheral interfaces that enable a device vendor to investigate different integration options simultaneously. It supports PROFINET and is accompanied by example programs, detailed documentation, PLC test programs, and a complete development tool-chain to allow any design engineer to immediately start with the evaluation process. Softing says the kit can be used to verify the



implementation of the protocol functionality and to evaluate different approaches to stack integration.

[SOFTING](#) .

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PLUG-IN PROXY FOR PROFIBUS: Hilscher has released the netLINK Proxy, a PROFINET-certified product for integrating any PROFIBUS-DP Slave device into a PROFINET network. Plugging the proxy directly into a PROFIBUS-DP 9-pin connector turns it into a PROFINET IO-Device and maps the process data from the slave to a PROFINET Controller. The proxy can be configured directly through its Ethernet port or through the network in just a few minutes. The GSDML-file is generated automatically, making integration easy. Power is drawn from the PROFIBUS DP slave. [HILSCHER](#).



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PROFIBUS DP CONNECTORS: These new PROFIBUS DP connectors have a D-Sub and M12 interface with 35°, 90° or 180° cable outlets. All versions support data rates of up to 12 Mbit/s and feature compact die-cast zinc housings with test socket and active terminating resistor. They also boast quick-connection technology that needs no tools. The 9-pole D-Sub interfaces of the male and female connectors can connect high-level control systems, decentralized I/O stations, programming units or diagnostic devices. The B-coded M12 interfaces serve as a PROFIBUS input or output and signals can be daisy-chained via the output. [BELDEN](#).



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CUBE67 NOW HAS PROFINET: Cube67+ modules are now available with PROFINET connectivity. Up to two x 32 modules can be connected to just one bus node. Installations can cover long distances since cable lengths of up to two x 30 meters can be implemented. Cube67 modules can be installed at any position along the cable and the energy supply can be daisy-chained at the bus node. Integrated electronics check the outgoing system for short-circuits and overloads. If an M12 connector is under excessive load an early warning is given; if a limit is exceeded the line is switched off. Diagnostic messages are then sent to the control device. [MURRELEKTRONIC](#).



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IO-LINK ANALOG PLUGS: Balluff's new line of IO-Link Analog Plugs provides a means to easily integrate analog I/O. By placing a Plug between the standard analog field device and the Balluff IO-Link Master/Proxy, the plug converts the analog signal to a 14 bit resolution IO-Link signal, thus eliminating the need for

stand-alone modules. Further cost savings can be had by reducing the length of shielded cable. Input and output versions are available in 4-20 mA and 0-10 volts. Balluff now offers a full IO-Link I/O solution for gathering discrete and analog I/O on industrial networks. [BALLUFF](#).



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HAND HELD TESTER FOR IO-Link: This hand-held IO-Link EMC Tester tests both IO-Link Masters and Devices. It counts erroneous and missing telegrams. Different IO-Link output stages may be plugged in dependent on whether a Device or a Master is being tested. Various diagnostic messages such as operating state, error counters and baud rates are shown via LED and LCD displays. The unit can be battery operated or powered from an external 24V source. [MESCO](#)




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