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SEE PROFIBUS, PROFINET AND PROFIsafe AT SPS/IPC/DRIVES

Nuremberg, Germany, Nov 25th - 27th, 2008 - Hall 6, Booth 210

This year's joint PI booth focuses on functional safety with PROFIsafe, which was launched exactly 10 years ago.

PROFIsafe introduced into automation a new era for safety technology. For the first time it was possible

to transmit safe data AND conventional data on the same cable. PROFIsafe is now the world-wide market leader due to its openness and huge installed base. (See box right).

Another highlight of the booth will be a forum entitled 'The Future

of Automation', which is being organized by PI together with the INTERBUS Club Germany. Expert speakers will present current

technology topics once every hour - see table.

The booth will also feature multi-vendor demos of products,

services and solutions. Various technology providers will also illustrate the 'value-added' they offer for the development of PROFINET products. Topics will range from advice, concepts and implementation to certification, support and service.

Time	Topic
10.00	PROFIBUS - Easy to Use
11.00	PROFINET & Integration
12.00	PROFINET & Performance
13.00	IO-Link - Transparency at the Field Level
14.00	PROFIBUS & Diagnostics
15.00	PROFINET & Safety
16.00	INTERBUS - The Next Generation

CONFERENCE TO MARK 20th ANNIVERSARY OF PROFIBUS

2009 is the 20th anniversary of PROFIBUS, and PI (PROFIBUS & PROFINET International), together with PNO (the German Regional PI Association) 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 one of the most important opportunities in 2009 for discussions about PROFIBUS and PROFINET technologies

and applications. It will answer questions about all aspects of automation by covering a wide range of industrial communication solutions, experiences and trends. It will focus on PROFIBUS, PROFINET and IO-Link as well as on solutions for Wireless, Safety, Security and device integration.

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. We will keep you informed!



TENTH ANNIVERSARY OF PROFIsafe HIGHLIGHTED AT FAIR

To mark the 10th anniversary of PROFIsafe, the PI booth



at SPS/IPC/Drives will feature a new live demo covering all stages of production - from upstream through mainstream to downstream.

PROFIsafe was the first successful implementation of functional safety on an open fieldbus network when launched in 1998. Today, there are more than 500,000 PROFIsafe nodes installed worldwide.

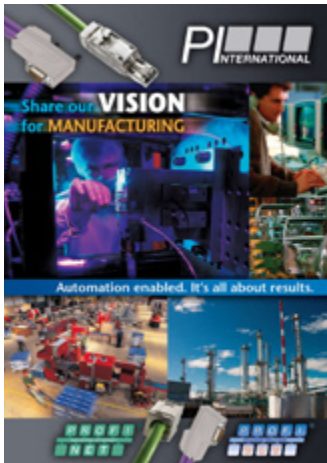
PROFIsafe works with both PROFIBUS and PROFINET networks in an almost identical way so implementing it in new installations is easy.

PA too! The booth demo will also show PROFIsafe in process automation, using PROFIsafe-enabled PROFIBUS PA devices and a failsafe controller.



PI News

SHARE OUR VISION!



Process and discrete manufacturing enterprises have to stay competitive in today's global marketplace. That means automating as many production processes as possible, and linking them effectively to management systems.

That way, timely and useful data reaches the right places fast, letting managers take the decisions that generate real automation 'results'.

Since 1989, PI has been supporting this vision with the best automation technology available. Our mission: to deliver maximum business advantage.

'Share our Vision for Manufacturing', a new brochure specially developed for management-level personnel, covers these key topics in more detail, explaining how PI can help achieve results and realize business goals easily.

The brochure includes application examples of benefits gained in industries such as automotive, infrastructure, chemicals, steel, food/beverage and oil/gas.

DOWNLOAD HERE.

PROFINET CONFORMANCE CLASS B CERTIFICATION AVAILABLE

Certification of PROFINET devices in accordance with Conformance Class B is now available, a further step forward for the PI quality system which guarantees interoperability in automation systems.

In order for PROFINET devices of all types and from various manufacturers to carry out their automation tasks properly, they have to exchange information over the network precisely and accurately. This requires implementation of the protocol in conformity with norms. Mandatory certification for PROFINET devices by accredited test laboratories guarantees that 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, during which many devices have passed the tests and been certified. Meantime, PROFINET test experts from Technical Committee 1 'Test and Certification' have continued their work and developed certification test specifications and test cases for devices in accordance with Conformance Class B.

PI has classified the scope of functions of PROFINET IO into conformance classes because not all of the functions are required for every automation system. 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.

This is an important step towards ensuring interoperability for all field devices involved in the communication process.

NEW EXECUTIVE DIRECTOR OF MARKETING

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. In his most recent position he acted as head of product development for flowmeter devices at ABB.

Erbe's first tasks at PI include



overseeing the development of a new website, the advancement of PI's corporate identity and further enhancement of the presentation of PROFIBUS and PROFINET at exhibitions, seminars and conferences.

In particular, he will be responsible for international business as well as press and PR. He will be active in all PNO Marketing working groups and the working groups of partners and, based on this, for PI marketing strategy.

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'MEET THE PA EXPERTS' AT ...

Leuna, Germany	September 09, 2008
Vung Tau, Vietnam (MORE)	October 2, 2008
Basel, Switzerland	October 28, 2008
Ludwigshafen, Germany	October 29, 2008
Gliwice, Poland	December 2, 2008

This autumn, PI is organizing a series of 'PROFIBUS – Meet the Experts' events aimed at staff in process automation industries responsible for automation, planning, start-up and operation of chemical, pharmaceutical and food plants. The events focus on technology presentations covering installation, safety, diagnostics and asset management as well as on the new PROFIBUS PA profile V3.02. End users will report on actual experiences with PROFIBUS PA and time is reserved for participants to exchange information with experts and other participants during open discussions and one-to-one conversations. All events are free of charge for participants. **MORE DETAILS HERE**



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



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 INC.**

FDT/DTM FOR COMPACTLOGIX

ProSoft Technology's 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. A 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 I/O control for slave parameterization, and acyclic DP-V1 messaging via explicit ladder logic message blocks, status data and alarms. For configuration, both modules use PROSOFT.fdt configuration software. Alternatively, the slave module can be configured via ladder logic. **PROSOFT TECHNOLOGY**



MORE PRODUCTS ON-LINE
Our **ON-LINE PRODUCT GUIDE** has over 2500 product entries. Search on keywords, text or profile.

ENCODER FOR PROFINET IO

TR Electronic's rotary encoder CEV65M and linear encoder LA66 are now available with PROFINET IO interfaces. The encoders are very reliable and stable and both have been certified by PI to support real-time Class I (RT) communications and real-time Class III (IRT) communications. The devices have two Fast Ethernet ports and an integrated real-time switch. The resolution and other parameters are programmed via the PROFINET Controller. **TR ELECTRONIC**



CONTROLLER CARD FOR PROFINET

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

Member News

ON SHOW

The 2008 Instrumentation Scotland & Offshore Systems Exhibition - which took place in September - featured companies who supply products and services specific to the offshore industry, plus processing, power generation, paper, distilling, water and waste, and marine engineering.

Bürkert Fluid Control System showed its Type 8650 AirLINE-EX valve system, which offers considerably reduced design, installation, validation and operating costs in ATEX applications. It integrates directly into the Siemens ET200iSP PROFIBUS DP-V1 distributed I/O system, combining digital pneumatic output modules with integrated electronic analogue and digital I/O. The resulting system uses a single fieldbus node, and is suitable for installation in Zone 1/21, with electronic I/O and actuation/air connection possibilities into Zone 0/20.



Other products on show included the Type 8643 I/O box that enables connection of digital control signals into a current automation system. It offers connections of up to 4 pilot valves and 8 NAMUR proximity switches. The I/O box communicates via PROFIBUS PA and is suitable for a range of applications in the oil, gas and chemical industries. **BÜRKERT FLUID CONTROL SYSTEMS**

PROFIBUS BOARDS

One of Softing's PROFIBUS boards was recently customized to fit into a subsea production component designed by Aker Solutions, Scotland, and has passed the stringent quality requirements mandated for use in subsea production systems. Softing's PROFIBUS board is integrated into an active electronic module that is part of a so called 'Christmas Tree', an assembly of valves, spools and fittings for an oil well. Aker Solutions rigorously

evaluated numerous vendors that offer PROFIBUS components and decided to partner with Softing because of the availability of a PROFIBUS board that satisfied the functional and quality requirements, and for Softing's ability to perform the required customization in an extremely short time frame. The new unit was subject to a rigorous qualification process with respect to mechanical shock, vibration, thermal shock, storage and operational temperatures. **SOFTING**

NEW GERMAN OFFICE

PROCENTEC has established a new office in Germany. PROCENTEC GmbH, a member of PNO, is based in Karlsruhe and Mr. Tim Karnau (above) has been appointed General Manager. His task will be to provide German PROFIBUS and PROFINET end-users with the same products and services - plus the same enthusiasm - that PROCENTEC is now famous for!



Says PROCENTEC's MD Dennis van Booma: "As well as supporting our German customer base the new office will play an important role in the standardization of our ProfiTrace Analyzer, the globally-recognized PROFIBUS troubleshooting and commissioning tool." **PROCENTEC** or tkarnau@procentec.com

FOR SALE ... SIM1 ASICs

PROCENTEC has a large quantity of SIM1 ASICs now available for sale. Device manufacturers that have based their design on this ASIC can contact PROCENTEC for enquiries. The later SIM1-2 replacement chip is also in-stock. The SIM1 ASIC is a Medium Attachment Unit (MAU) for PROFIBUS PA. It converts Manchester coding to MBP(-IS) signalling and supplies power for the electronics of the instrument. The device can also be used alongside a DPC31, SPC42 or other Manchester encoder/decoder. **PROCENTEC** or info@procentec.com





Applications

FRANCE / STEEL: “Nowadays, if you want to know what’s wrong with your car, the mechanic plugs it into a computer. That’s precisely what we want to do in the future.”

Alphonse Fabiani smiles about his comparison. But the electrical engineer sounds determined: he has arrived to digitalize the HF 1 blast furnace at Fos-sur-Mer in the south of France, a plant belonging to the largest steel producer in the world - ArcelorMittal.

The dimensions of the plant are gigantic. The colossus that produces pig iron is over 60 meters high, with 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 digitally 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.

In only 95 days - from August until December 2007 - one of the two blast furnaces on the site 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.

Renovating a blast furnace involves far more than simply running off red-hot pig iron



and slag before it cools, or dismantling huge constructions and building new ones at dizzying heights. For the company this was a project amounting to 150 million Euros. Time schedules were extremely tight. There was no room for trial runs; every idle day equated to one less day of production.



ArcelorMittal engineer Philippe Divol (center) and André Amar from Endress+Hauser (right) agree on the next steps.

New technology pointed the way forward. However, the

new technology employed is scarcely visible. 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 Fabiani. “We have built for the next two decades –

and now we’re leaving future generations of steel smelters a technology that is trailblazing.”

Fabiani is already looking at the second blast furnace at Fos-sur-Mer, which is scheduled to be renovated in 2009.

Preparations have already begun!

ENDRESS+HAUSER

USA / MACHINE BUILDING: 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, so costs are cut drastically. **SIEMENS**



PI World

AUSTRALIA & NZ

Encouraged by the success of an initial series of Certified Training Seminars in 2007, the PROFIBUS Association of Australia New Zealand (PAANZ) recently launched another extensive Australia-wide program of training Seminars, focusing on regions which are not only experiencing the highest growth of PROFIBUS technology, but also the greatest shortage of skilled technicians.

The Certified PROFIBUS 'Installer' and 'Engineering' courses - developed in conjunction with Andy Verwer from the Manchester Metropolitan University in UK - were held this year in Perth on the west coast of Australia, followed by Brisbane on the east coast (3,600 km and over 4.5 flying hours away!), and Sydney (1.5 flying hours south).

Perth and Brisbane are considered Australia's fastest growing demographic and economic growth centers. They are pivotal locations within Australia's booming resources sector, which is fuelled by China's and India's insatiable appetite for iron-ore produced in Western Australia's Pilbarra and Kimberley regions, and coal from central Queensland's Bowen Basin.

These two regions have experienced tremendous industrial growth over the past five years. However, companies are struggling to source qualified professionals, tradespeople, engineers and instrument technicians to meet the demand. As a consequence, most new projects are adapting new technologies like PROFIBUS to improve future



efficiency and reduce manpower.

PAANZ is playing a key role in alleviating the shortage of Certified PROFIBUS Engineers and has trained over 100 people this year. "These PROFIBUS training courses will go a long way towards addressing the PROFIBUS skills shortage and also open up new career paths for people seeking to move into the next-generation process instrumentation," says John Immelman, PAANZ President.

PAANZ's successful introduction of PROFIBUS training courses can be attributed to a successful Australia-wide marketing campaign, good timing and a quality educational product, created and presented by Andy Verwer, who is Principal Lecturer at Manchester Metropolitan University's (MMU) Department of Engineering & Technology in UK. Verwer is also responsible for the PROFIBUS Competence Center at MMU. "Although PROFIBUS is well established and easy to handle, training is essential when you are involved in advanced

automation technology," says Verwer. "It is also important for plant managers to gain an understanding of PROFIBUS to enable them to improve communications with contractors and gain a better insight into projects."

Graduates of Verwer's certified training programs attribute their understanding and enjoyment of the courses to his balanced curriculums. Verwer has successfully blended theory with practical industry examples and supplemented that with practical exercises within a 'class buddy' system, enabling a supportive, hands-on learning experience in the classroom.

The general sentiment of the attendees is best summed up by Vladimir Vukovic, Senior Engineer with Black & Veatch Australia: "I have attended many training courses in my professional career; however this is the one that I enjoyed the most."

PROFIBUS is now a US\$50 billion global market that dominates all sectors of automation. It has more devices in the field than all rival fieldbus systems combined. PROFIBUS is expected to exceed 30 million nodes in 2009 making it an attractive career option with tremendous opportunity.

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. The conference program will contain a mixture of presentations, demonstrations and hands-on practical sessions that are suitable for a wide variety of experience; from first-time users to those with extensive experience with working systems.

The event will be supported by an exhibition of the latest products and technology demonstrations from the UK PROFIBUS Competence Center. Separately, the success of the first **CERTIFIED PROFINET ENGINEER COURSE**, run by the PROFIBUS Group in conjunction with the PI Competence Center at Manchester Metropolitan University (MMU) and PROCENTEC of the Netherlands has led to the organization of a second Certified PROFINET Engineer Course, to be held in Manchester on 11th to 13th November.

DENMARK

PROFIBUS Denmark took part in the recent 'Automation 2008' Fair in Copenhagen. Seven members - SICK A/S, Siemens A/S, Endress+Hauser A/S, HH-Automation A/S, Max Fodgaard A/S, Phoenix Contact A/S and TEC (Technical Education Copenhagen) - participated with an exhibition unit manned by their own people.



It's the third time this exhibition has been held, and its progress confirms that the concept is a good one. With 147 exhibitors (it was totally sold out) and 3,381 well-qualified visitors the Fair has stabilized itself at a good level.

Arranged in parallel was a conference which was also very successful. PROFIBUS Denmark participated in the Conference with the headline: "PROFINET now, and in the future". The speakers were Kim Meyer-Jacobsen from Siemens A/S and Sten Birch Moeller from Phoenix Contact A/S. This part of the conference was widely recognized as one of the best parts of the fair. Overall, it was a very positive experience for PROFIBUS and our member companies, said Meyer-Jacobsen.



NEW PICC FOR AUSTRALIA

In a major boost for PROFIBUS in Australia, Tyco Flow Control Pacific has been accredited by PI as the first PROFIBUS International Competence Centre (PICC) in Australia. The Tyco Competence Center will support companies in new product



The Tyco PROFIBUS Competence Centre team, (from left) Saiyaz Hasim (Automation Engineer), Grant Weyman (Technical Services Manager - Controls), (far right) Nick Smith (Controls Manager) with Andy Verwer (Manchester Metropolitan University).

development, provide technical support for PROFIBUS manufacturers and users, allow demonstrations of interoperability of products and provide a comprehensive range of certified training programs. Tyco commence their training program on November 13, 2008 with an internationally accredited, certified one-day PROFIBUS Installer course in Sydney. A 3.5 day certified PROFIBUS Engineers course covering network design, commissioning and live fault finding is being scheduled for early 2009.



PI World

SOUTH AFRICA

The Southern Africa Regional PROFIBUS Association (SARPA) recently held a conference focused on asset management and diagnostics in the fieldbus arena, with specific emphasis on PROFIBUS in process applications.



The conference was preceded by a breakfast at which the keynote speaker was Dr. Jochen Mueller from PROFIBUS

International in Germany; he is also head of the marketing team for PROFIBUS PA. Mueller commented particularly on the astronomical rate at which PROFIBUS continues to grow and also the announcement of Profile 3.02 for PROFIBUS PA, which further improves integration of devices, up/download times and backwards compatibility.

PROFIBUS PA V3.02 will help users fully realize the benefits of smart instruments and total asset management as an efficient way of managing the life cycle of plants.

The day was rounded off with presentations from ABB and the PROFIBUS Competence Center of South Africa. Both echoed the theme that better maintenance, failure prediction and greatly reduced documentation are key benefits of improved asset management. It was also noted that most of the problems with bus systems can be avoided with good engineering, proper diagnostic tools and better training.

In his closing words, the chairman of SARPA, Mr. Edwin Bauer, noted that: "with this caliber of delegates in attendance it is clear that automated solutions, especially those that can



realize true value and savings, are here to stay. Proudly, PROFIBUS is at the forefront of fieldbus technology."

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.

The RPA Brazil Latin America 'Seminary Case' attracted professionals and representatives from sugar and ethanol plants across Brazil and other Latin American countries.



According to Cesar Cassiolato of Smar (see speaking above) who is President of the Association, the aim was "to bring information about PROFIBUS to users in this key industrial segment using real applications examples."



Among the case studies presented was one by the Corporate Coordinator of Automation from Santelisa Vale Group, Felipe Luiz Calori Coelho, (pictured above), who explained the PROFIBUS architecture adopted by his organization. He said that the reasons for using PROFIBUS include its advanced diagnostics, the remote configuration potential, and easy integration of devices and suppliers in an open and interoperable environment.

Coelho highlighted the ease of operation by which the COI (Center of Integrated Operations) integrates plant information in a redundant database, increasing reliability and availability. Accurate diagnostics without operator intervention was another highlight

The use of PROFIBUS in Brazil is increasing day-by-day in areas such as process control for chemical,

petrochemical, brewing, mining, food, pulp and paper, oil & gas, water treatment, sugar and ethanol and others industries. Seminars, workshops and training have been provided by the Association since 2000. More than 3600 professionals have participated and more than 21,100 people have received the Brazilian PROFIBUS Technical Description (**DOWNLOAD HERE**).

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. About 20



delegates from various companies attended. Mr. Roland Rudolph from Siemens introduced the basics of PROFINET IO and then demonstrated how to develop products, configure systems and troubleshoot with the DK-ERTEC Development Kit. Delegates asked many questions, which the lecturer answered clearly.

NORTH AMERICA

Long the heartland of major competition for PROFIBUS and PROFINET, North America seems to be changing its outlook. Membership of PTO is now at 142, the highest it's been for many years. Another indicator is the success of the educational program that PTO undertakes continent-wide. A recent one-day PROFINET training class in Kentucky attracted 75 delegates from end user, vendor and integrator communities. Said Carl Henning, responsible for PROFINET training: "We had 79 pre-registrations for Kentucky, so I was expecting about 60 'shows'. Frankly, I was amazed at the response. And almost everyone was genuinely interested in PROFINET products." Carl also reports that he and PTO colleagues are now travelling roughly 280,000 miles around North America each year, delivering PROFIBUS and PROFINET seminars, workshops and training classes.

PI Network

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- Published by: **PNO**
Haid-und-Neu-Str. 7
76131 Karlsruhe, Germany