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Official Newsletter of PROFIBUS International

www.profibus.com

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(For your convenience we have linked the above headlines to their respective pages. Just click the 'hot spot')

ISA HOUSTON PROVES POSITIVE SUCCESS FOR PTO



Visitor numbers were up at this year's ISA EXPO in the new Reliant Convention Centre in Houston, where PROFIBUS Trade Organization (PTO) and its members showed the flag for

PROFIBUS on a booth that was one of the largest at the show.

As well as new PROFIBUS devices, PROFInet

technology was being demonstrated by personnel from the PROFIBUS Interface Center, including Ron Mitchell whose new pocket book about PROFIBUS was launched at the show (available from the ISA: www.isa.org).



PROFIBUS FEATURES MULTIVENDOR DEMONSTRATIONS AT SPS/IPC/DRIVES NUREMBERG, NOVEMBER 25-27, HALL 6, BOOTH 256

PROFIdrive:

 The Multivendor PROFIdrive Demonstrator includes products from 10 companies. The demo shows how drives and controllers from different manufacturers work in a Motion Control application and how devices can be exchanged with no change to the control program. Devices and services from AMK, Beckhoff, Danfoss, Fraba, HMS, Lenze, Mesco, Siemens, Softing and Yaskawa are shown in the live demo.

PROFI safe:

 A large number of PROFIsafe products for any kind of application is today available from an increasing number of vendors. Safe communication between devices from different manufacturers is shown in a live multivendor-demo.

PTO's Mike Aldridge gave a paper on PROFIBUS from DP-V0 up to the present day. Other notable events included Mike Bryant's appearance on the Ethernet Forum panel run by Dick Caro.

This was entitled 'Fieldbus Wars: an Encore?' but, apart from Ethernet presentations given by major players, the session showed as much interest in open-ness influencers such as FDT and OPC.


The PTO booth attracted many visitors during the event and over 250 leads were generated.

NEW POCKET BOOK



Ron Mitchell's new 190 page reference book on PROFIBUS is published by the ISA (www.isa.org)

PROFI net:

 Meanwhile, PROFInet has been successfully installed in international applications. The PROFInet presentations on the PROFIBUS booth show you the latest status of developments, available products as well as applications. A particular aspect of the presentations is how the 3 performance levels of PROFInet communication (TCP/IP, SRT and IRT) meet the different requirements of automation tasks and how this is realized.

Visit the 'industrial communication forum'

in Hall 6, Booth 250 (next to the PROFIBUS booth)

Latest technologies will be presented by experts and we kindly invite you to visit this forum and to join our 'fieldbus-rally'.

» PI NEWS

PROFINET ROAD SHOW TO VISIT ITALY, AUSTRIA, UK, NETHERLANDS



Starting on October 2 in Milan, the 2003 Road Show goes to Vienna Oct 21, then to Manchester on November 12. Next stop is the Netherlands on December 9th. For more events, please see bottom of this page or browse www.profibus.com

WITH PROFIBUS DP INTO HAZARDOUS AREAS

PROFIBUS DP segments can now be simply switched together in the Ex area without analysis or additional certification of the segment by the end user. No system certification is required either! All connected devices in the Ex area only need to comply with the new PROFIBUS Guideline 2.262, which is available free to members from www.profibus.com. Non-members may order it from info@profibus.com (price Euro 150)

» MEMBER NEWS

UNDERSTANDING PROFIBUS

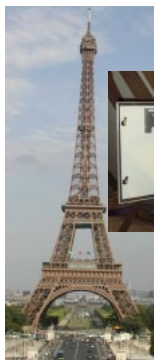


Softing has organized numerous PROFIBUS and PROFINET seminars and training sessions to help you understand the world's best fieldbus technology.

Courses are geared to both decision makers and end users. **Softing: +49 89 456 56 379 or www.softing.com or martin.mayr@softing.com**

» APPLICATIONS

FRANCE/ LIGHTING



Temporary lights on the Eiffel Tower celebrating the New year 2000 were dismantled in 2001 and totally rebuilt this year. The new lighting scheme started operations in June and will remain for 10 years. SDEL IMTEC installed a Centralized Technical Management System to manage in excess of 2500 I/O distributed across 5 S7 PLC's. One part is directly connected through a WAGO pre-cabling interface, and the other part connects via PROFIBUS to a further 10 WAGO remote I/O stations. WAGO remote I/O nodes are located

underground beneath the 4 pillars of the tower and also on each level of the tower. The WAGO I/O controls load/ load-shedding in the divisional cabinet and also monitors the temperatures of the various installations, the position of the elevators through analogue modules, and intrusion alarms of the technical blocks. **WAGO:**

www.wago.com

» PRODUCT GALLERY

POSTSCRIPT DRIVER

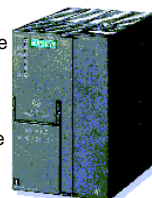
The first professional version of the Certification tool 'ProfiScript', for automatically testing PROFIBUS devices, has been launched. ProfiScript can test and verify the complete protocol functionality of DP, DP-V1 and PA devices. A FREE 30 day trial version is available.



PROFIBUS Center Netherlands: www.profibuscenter.nl/profiscrypt

PLUG AND PLAY IN HAZARDOUS AREAS

The new fieldbus isolating transformer (RS-485-IS) enables PROFIBUS DP to be taken into hazardous areas in accordance with Guideline 2.262. The coupler can be used as a barrier to allow up to 32 x 2.262-compliant devices to be connected without analysis or additional certification of the segment by the end user. PROFIBUS DP devices that are not 2.262 compliant can also be connected. As a repeater it can separate DP segments in the hazardous area when installation guideline limits are exceeded. It can also be used to expand existing DP segments whose devices do not comply with Guideline 2.262, with fieldbus devices that do comply, without circuit analysis or certification. **Siemens: simatic-dp@siemens.com**



DEVICE COUPLER FOR ERROR-FREE WIRING

TRUNKGUARD is a new device coupler to make PROFIBUS PA wiring simple and error-free. It's the first coupler to offer automatic segment termination. It requires no procurement effort and also allows longer or higher capacity segments to recover from field wiring damage. It's available for non-hazardous and non-incendive applications now, for explosion-proof and intrinsically-safe applications in Q1 2004. **Hawke International: +44 161 308 5818 or mike.oneill@ehawke.com**

PROFIsafe I/O

PROFIsafe modules can now be seamlessly added to any WAGO I/O SYSTEM 750 configuration. Modules measure 24mm wide and are distinguished by their yellow housing. Input modules are monitored for short circuits. Status, configuration and diagnostic data is provided. SYSTEM 750 will soon get two new co-processor units, enabling PROFIBUS networks to communicate with AS-interface and DALI. **WAGO: +44 178 856 8008 or uksales@wago.com**



TOUGH MINI-ENCODERS

New RBM Mini-Encoders are only 22 mm in diameter and IP 67 conformant. The sensor is an integrated ASIC Hall element, activated by an external magnet. The sensing system is encapsulated and wear-free. Resolution is up to 9 bits natural binary coded (up to 512 points per 360° revolution). Parallel or serial SSI is available. Working temperature range is -20° to +100° C and shock resistancy goes up to 200 g/11 ms. Application fields are textile machines, robots, handling systems and similar. **TWK: e-mail: info@twk.de or www.twk.de**



» EVENT DIARY

Even more at www.profibus.com

Oct. 09 – Belgium, Gent: PROFIBUS Belgium at M+R

Oct. 16-19 – China, Beijing: 2003 FA/PA

Oct. 21 – France, Paris: PROFIBUS at Automation Optimization Europe

Oct. 21 – Austria, Vienna: PROFInet Roadshow

Oct. 21-23 – USA, Houston: PROFIBUS at ISA Show

Nov. 04 – Netherlands, Waardenburg: Seminar: PROFIBUS in the factory automation

Nov. 06 – Italy, Rimini: PROFIBUS at Fieldbus & Networks

Nov. 11 – Italy, Milano: PROFIBUS at Fieldbus&Networks

Nov. 11-14 – Japan, Tokyo: PROFIBUS System Control Fair 2003

Nov.12 – Switzerland, Basel: Swiss PROFIBUS Day 2003

Nov. 12 – UK, Manchester: PROFInet Roadshow

Nov. 25-27 – Germany, Nuremberg: PROFIBUS at SPS/IPC/DRIVES

Nov. 26-27 – Netherlands, Den Bosch: PROFIBUS at MoCon

Dec. 3-5 – Japan, Chiba: PROFIBUS at SEMICON Japan2003

Dec. 09 – Netherlands, Amersfort: PROFInet Roadshow

» AROUND THE WORLD - THAILAND



The PROFIBUS Thai Association was officially launched in November 2001 at the Auditorium of the Thai German Institute (TGI) in Chonburi by the Steering committee consisting of SIEMENS, IMI, ABB, TGI and Samson. A Process model using PROFIBUS DP/PA was donated by Siemens, E&H, Samsung and TGI to the association with further free equipment supplied by other suppliers. The process model was put together by TGI



students and the software written by Siemens engineers. This model is now used for training and has been presented at numerous exhibitions and seminars since then.

In June 2002 former Chairman Mr. Alonggot introduced the Thai Association to a wider audience at the International PROFIBUS Users conference in Beijing. PROFIBUS Thai was officially accepted as a Regional PROFIBUS Association in October 2002.

In May 2003 TGI applied to become an international accredited PROFIBUS Competence Center. Following an expert inspection in July, TGI was certified as a PROFIBUS Competence Center (PCC) offering specialist knowledge in the application of PROFIBUS to Manufacturing and Process Automation and to Drives and Motion Control. TGI's training equipment includes a Universal Chemical Plant Bench Top Model for PCS7 and

PROFIBUS DP/PA flow, level and temperature control. All industrial components meet the German Industrial Standards (DIN).

The Institute now offers a syllabus of courses ranging from 'Introduction to Fieldbus Technology' (an awareness-raising seminar for decision makers, lecturers and engineers) to specialist engineering courses which cover PROFIBUS technology.

TGI's training has been used by a wide range of international and local companies, including Siemens and General Motors in Thailand. It has also been part of a Thai Government initiative under which more than 150 engineers have been trained in PROFIBUS Technology.

TGI has 5 PROFIBUS experts who are regularly contacted by companies which are experiencing system failures and breakdowns. They can make site



visits on request to give advice and support to maintenance staff.

Due to its large industrial base there are many users of PROFIBUS in Thailand in all sectors of industry, including food, textile, chemical and motor car manufacturing

The **Chairman** of the Regional PROFIBUS Association, Thailand, is Mr. Peter Franz Price of A&D Siemens Thailand. The two Vice Chairmen are Mr. Alonggot Jomhong of IMI Bangkok and Mr. Frieder Weiler, GTZ Expert at the Thai-German Institute.

» APPLICATIONS

FINLAND/ NUCLEAR POWER

Kriko Engineering (Merzhausen) has completely modernized the safety-critical reactor control rod automation systems in a nuclear power plant in Finland using PROFIBUS. Each of four subsystems consists of a S7-400 controller and an OP37 operator panel. These are connected to redundant Industrial Ethernet fiber-optic rings by means of OLMs and communicate via TCP/IP.

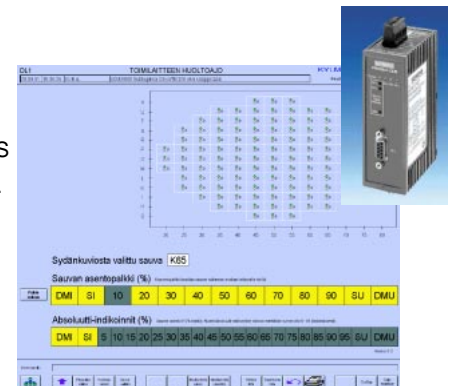
In nuclear power plants, a wide variety of different safety mechanisms interact. Among the most important are the reactor

control rods which regulate the flow of neutrons between the nuclear fuel elements. In normal operation, these are moved slowly between the fuel elements by an electric motor but, in emergencies, a 'scram' is initiated, when rods are immediately "dropped" into the reactor vessel. Each 'scram' must be documented in minute detail.

In automatic mode, move requests come from the Process Management System. In manual mode, local controllers control up to nine rods and visualize their position from values provided by the sensors connected to a

separate S7-300 counter controller via ET200M distributed I/O, two PROFIBUS OLMs and optical PROFIBUS.

The highest demand is signal acquisition during a scram, when the 3,650 mm long rods have to be dropped in fewer than three seconds. Because this is done hydraulically, 11 additional sensors (so-called 10% contacts) are distributed over the entire length of each rod in order to record and visualize the exact position of the rods. During a scram, the 10% contacts are available for only 20



ms, but must be reliably recorded with both edges and with time stamp. It requires not only a very fast PLC, but also time-optimized programming and short transmission paths.

Siemens: +49 911 895 4845 or guenter.m.baumann@siemens.com

» AROUND THE WORLD

UK



The UK PROFIBUS Group is holding its first ever International Conference in 2004 at the prestigious Ragley Hall venue - shown above. Featuring a comprehensive educational programme covering latest developments, this two-day Conference will be supported by an exhibition, interactive displays and technology demonstrations from the UK's PROFIBUS Competence Centre (PCC) and leading vendors, trainers, consultants and systems integrators. The Conference will also host PROFIBUS International's annual PCC meeting. Day Two will be largely given over to an open PCC session - the first time ever this has happened! Situated near the M42 in Shakespeare country, the event also offers opportunities to visit the region. Tours can be arranged. Further information from: uk@profibus.com, or check out www.profibus.co.uk/conference.htm or register online at www.kognosys.co.uk/catalog.htm Also in UK, the Manchester Metropolitan University's training courses continue to flourish. A Process module has been added to the Certified Engineer's course.

NETHERLANDS

PROFIBUS Center Netherlands is the next institute (after the USA, UK and Switzerland) to conduct Certified Engineer

training courses. Classes are organized in Dutch and English and are open to all countries. The first dates are planned at the end of 2003. **Contact:** dbooma@profibuscenter.nl or www.profibuscenter.nl

Because of fast growth, the Center moved to new premises in October. The brand new building houses training courses, workshops, seminars, product testing and R&D activities. The address is: **Turfschipper 41 2292 JC WATERINGEN The Netherlands**



JAPAN

The System Control Fair 2003, the biggest exhibition for Factory Automation in Japan, will take place from Nov. 11 to 14. There will be an active PROFIBUS demo and a PROFINet demo. 28 member companies will show their products and catalogs. Japanese PROFIBUS Organization (JPO) will also hold a workshop for PROFIBUS and PROFINet on Nov. 12. JPO will join SPS/IPC/DRIVES 2003 in Nuremberg and show its PROFINet marketing activities. Three members will provide PROFINet devices for the exhibition. Furthermore, JPO has translated the PROFIBUS System description into Japanese, and a pdf is available from the JPO web site at www.profibus.jp/tech/download.htm. Finally, the Industrial Automation division of SICE (The Society of Instrument and Control Engineers) will start a Working Group for FDT technologies. Mr. Motoyoshi, chairman of JPO, is assigned as a leader of the WG. With the cooperation of other members, JPO would like to introduce the new technology in Japan.

SWITZERLAND

PROFIBUS Switzerland will hold its annual Swiss PROFIBUS Day on November 12, in Basle. The event has become a popular meeting point for end users, integrators, vendors and, more recently, the academic community too. The topic this year is 'PROFIBUS Integration Technologies'. The event will also host the first worldwide Field Device Tool FDT seminar, together with DTM 'hands-on'. Other topics include PROFIsafe in process and manufacturing automation including the participation of safety authorities and experts. There will be a live demo of PROFIdrive in manufacturing application Class 4 and NAMUR PROFIBUS operating class AK1. PROFINet is also represented with a multivendor demo of Soft Realtime (SRT) and a presentation of the forthcoming Isochronous Realtime (IRT). Ample breaks provide opportunity for personal discussions and exchange of views. About 200 persons are expected. An exhibition of more than 20 vendors rounds up the event.

CHINA

The 7th International Exhibition of Modern Factory/Process Automation Technology & Equipment took place on 16-19 October in Beijing. The exhibition included fieldbus technology and there were 10 technology seminars. Chinese PROFIBUS Organization had a booth in each exhibition and members such as Siemens (China), Turck, Moeller, Festo, B+F and Weidmuller showed their products. It is believed that this exhibition will promote the development of industrial automation in China.



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