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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')

ASIAN TEXTILE SUCCESS FOR PROFIBUS AUTOMATION TECHNOLOGY



In October, CITME 2002, the largest textile machinery exhibition in ASIA, took place in Beijing. More than 500 machine builders from China, Japan and Europe exhibit-

ed products in textile industries ranging across cotton processing, dyeing and chemical fiber processing. CTMC (China Textile Machinery (Group) Co., Ltd) decided to use PROFIBUS automation technology to link a group of demonstration systems incorporating about 20 different kinds of machine. Control equipment from companies including Siemens, Mitsubishi, Matsushita, Koyo, B&R, Lenze, Sanyo Denki were involved in the demo. All types of textile machines are available today with PROFIBUS interfaces, enabling a complete plant to be based on them. More - Page 3

FIRST PROFInet TEST LAB ESTABLISHED



PROFIBUS International has established the first test laboratory for PROFInet devices at ComDeC in Fürth.

After releasing the PROFInet runtime software and drawing up instructions, everything is ready for certifying the quality of PROFInet products. Ensuring high product quality is seen as

one of the decisive factors in guaranteeing PROFInet success and for this reason, PROFInet products must go through the certification process before being introduced to market.

This will give users the confidence to commit to using PROFInet as the best and the most reliable Ethernet-based communications technology for automation.

PTO BOOTH SUCCESS DEFIED VISITOR TRENDS



PROFIBUS Trade Organization (PTO) had a 1500 sq ft booth incorporating product displays from 30 companies, including masters from Foxboro, Siemens and Woodhead/SST. The booth included three live PROFInet presentations each day and a multi-vendor PROFIsafe display. The overall show attendance



was modest, but the PTO booth had good traffic and a constant high level of interest was experienced resulting in several hundred leads.

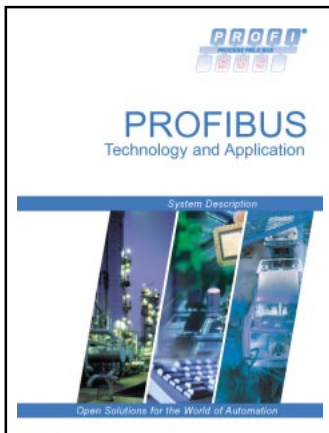
10TH ANNIVERSARY

PROFIBUS Switzerland is ten years old and now has more than 120 members! Read how they did it on Page 4.



» PI NEWS

PROFIBUS 'AUTOMATION TECHNOLOGY' REVIEWED



PROFIBUS International (PI) has published a system description document entitled 'PROFIBUS Technology and Application'.

PROFIBUS can now boast nearly fifteen-years of success in automation. During that time it has grown from a communications protocol to an extensive automation technology, utilized worldwide in all industries. The

new document provides a comprehensive overview in 12 chapters. Special focus is placed on general and application-specific profiles, including the PROFIsafe profile for safety-related applications. Profiles such as PROFIdrive, PA Devices, SEMI, Ident Systems, Remote I/O for PROFIBUS PA and others, highlight the exceptional application range of PROFIBUS.

There is also an overview of the certification process for PROFIBUS devices. The mandatory test procedures for all testing laboratories and equipment certification are described.

The publication can be downloaded in English, German and Swedish from www.profibus.com

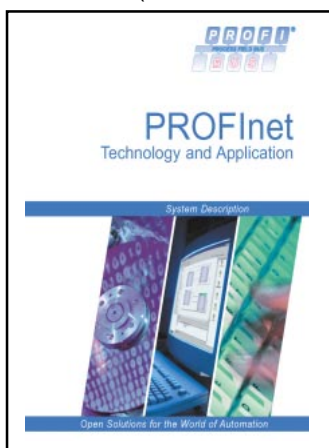


The PROFIBUS PA Roadshow "PROFIBUS Automation Technology - Solutions for Process Automation" visited Hanover, Cologne, Frankfurt and Salzburg from Nov. 4 to 11, 2002. PROFIBUS presented itself as a plantwide and uniform automation technology, which can be used in all applications - upstream, mainstream and downstream. Around 200 visitors listened to brand new presentations, which included many practical examples.

End-user reports from Wacker Chemie, Merck and Degussa confirmed the benefits. Speakers said that they would chose PROFIBUS again, especially because of less planning, less documentation, less space needed (due to reduced cabling), less effort, lower secondary costs, and easier operations. An important aspect is the large range of available devices. End-users confirm that PA devices are available for more than 95% of all instrumentation tasks.

PROFINET SYSTEM DESCRIBED

A new PROFINET system description, comparable to the PROFIBUS system description above, provides an overview of PROFINET technology. It is available for download from www.profibus.com now. In addition, a PROFINET Installation Guideline (order no. 2.252) is available for members



download on www.profibus.com. Non-members can purchase the document from PROFIBUS International.

www.profibus.com is a unique resource for all kinds of automation information. Visit often.

» GENERAL NEWS

HAZARDOUS INTERFACE WIN FOR HAWKE

Hawke Fieldbus was one of the few UK companies with a booth at ISA, Chicago, October. Here's Mike O'Neill with his 'Best in Show'

award from Chemical Engineering Progress, given for the



Route-Master interface unit which can connect PROFIBUS networks into hazardous areas. Route-Master offers many advantages in ex. areas. **Hawke: 0161 308 3611** or mike.oneill@ehawke.com

» APPLICATIONS

CHINA/ TEXTILE MACHINES

At the recent CITME Trade Fair in Beijing, CTMC (China Textile Machinery (Group) Co., Ltd) decided to use PROFIBUS to link all machines from members participating on the booth.

About 20 different kinds of machines were involved, with control and drive systems from Siemens, Mitsubishi, Matsushita, Koyo, B&R, Lenze, Sanyo Denki and Omron. They included: FK6 Draw Twister Machine from Jingwei Textile Machine Works, Blowing and carding machine from Qingdao Textile Machine Works, FK1520 spinning machine from Jingwei Textile Machine Works, Air Jet Loom from Jingwei Textile Machine Works, Bale Opener from Qingdao Textile Machine Works, Bale Opener from Zhenzhou Textile Machine Works, FA326 Drawframe from Shenyang Textile Machine Works, Fly frame from Jinwei Textile Machine Works, 1725 Rapier Loom from Jinwei Textile Machine Works, Two for one Twister from Yichang Textile Machine Works, and a Circular Knitting Frame from Yichang Textile Machine Works.

All the machines were centrally controlled via WinCC operator stations showing detailed machine and production data, and, using the WinCC web navigator function, visitors could surf the live exhibition machine via the Internet.

CTMC and its visitors showed great interest in this application demonstrator because, at the moment in the Chinese



cotton process factories, machines from different vendors with different control systems work independently, creating a big barrier to increased automation. By implementing PROFIBUS, production can be monitored centrally with machine status and maintenance information, etc., and this can be the basis for implementing MES systems. The first pilot project, in Jiangsu Province, is underway now, with around 50 different cotton processing machines and control systems from different vendors linked together by PROFIBUS. china@profibus.com or weiguang.chen@siemens.com



BRAZIL/ WATER TREATMENT

smar has provided instrumentation for a PROFIBUS PA process line in a new water treatment station in Brazil. During May, SANEPAR inaugurated the Iraí Water



Treatment Station, a new facility located in Curitiba city, which will provide 4000 l/s of treated water.

Flotation technology by dissolved air was implemented for water treatment. This is the inverse process to sedimentation, but with the same objective of separating flaking particles. Certain flakes sediment slowly and to improve the floatation process, micro air bubbles are added to increase the push force, facilitating ascension and removal.

The PROFIBUS system is installed in the raw water elevatory station, controlling five sets of submersible pump-motors, and also to control the flotation process and the treated water elevatory station where there are five sets of 800 HP pump-motors as well as three more sets of 350 HP pump-motors.



More than 200 PA devices are integrated with Siemens S7 PLCs. There are pH, Conductivity, Chlorine, Fluorine and Turbidity Analysers; Ultrasonic, Differential and Hydrostatic Level, Pressure and Temperature Transmitters from Endress+Hauser, and Flow Transmitters from Danfoss. A total of 54 PA Positioners from smar (FY303) are responsible for valve control. There are 186 Westlock valve actuators operating via AS-i networks (P+F) and Frequency Inverters from Ansaldo (PROFIBUS DP) and Danfoss (4-20mA). Also included are Simocode Soft Starters and 4-20mA Chlorine and Fluorine Analysers from Prominent.



Commissioning and startup was undertaken by Pedro Arnaldo Cizotto, Joao Vicente Michelotti and Yoshiaki Yamabe from Consorcio Queiroz Galvao Company, in partnership with the vendors. [Cesar Cassiolato - cesacass@smar.com.br](mailto:Cesar.Cassiolato@smar.com.br); [Fabricio Pascon - pascon.dnapi@smar.com.br](mailto:Fabricio.Pascon@smar.com.br)

► FOCUS ON ... REGIONAL PROFIBUS ASSOCIATIONS



Swiss PROFIBUS Day 2001 was highly successful. Inset, from the first member assembly steering board in 1992, are Mr Geisser, Prof. Bender as guest from Germany and Mr. Max Felser

Max Felser, Chairman of PROFIBUS Switzerland, writes: "Ten years ago, on the 15th of October 1992, the Regional PROFIBUS Association (RPA) in Switzerland was founded with 15 Members, as the first RPA outside Germany.



The 100th Member joins!

From the beginning it was clear that the organization should also include end-users, so PROFIBUS Switzerland created the membership category of 'informative member', which enables such members to receive PROFIBUS information, but a restricted range of other services.

"This was the first main source of membership growth. Good cooperation with manufacturing members allow a lot of Integrators to be included as well and this made it possible for

PROFIBUS Switzerland to be the 3rd RPA to pass the 100 members limit in January 2000. The next aim is to convert 'informative members' to full user-members, and to improve services for Institutes and Research Centres as members too.

"Information dissemination about PROFIBUS began with four seminars for about 50 sales personnel. They had to learn the basics of PROFIBUS first! A series of 10 Trend seminars followed, in different universities of applied science all over Switzerland, lasting about three years and reaching about 400 persons in total. Technical Training and support was provided by the PROFIBUS Competence Centre in Bern.

"One early objective of the organisation was a booth at key Swiss automation fairs and, since 1993, PROFIBUS



Booth at SAW2000

► PRODUCT GALLERY

TESTERS

The new version of the PROFIBUS Tester from itm (Institute of Information Technology in Mechanical Engineering/Technical University Munich) runs on a Softing PROFIBoard under WINDOWS 2000. It is designed for testing during development and in preparation for certification as it replicates the protocol conformance tests. Many new features are incorporated. The new version of the IT Monitor also runs under WINDOWS 2000. Both tools are ideal for troubleshooting networks. itm: +49 89 289 16 447 or roemer@itm.tum.de



PROFIBUS BOOK

This new book contains key information about PROFIBUS networking technology as well as the range of PROFIBUS products available from Phoenix Contact, including I/O modules, converters, optical link modules and gateways for AS-i. It includes applications examples and diagrams. Also included are the PLUGTRAB range of surge voltage protectors which, Phoenix says, are particularly useful in large PROFIBUS networks, and outdoors. **Phoenix Contact: +44 118 944 2844**



Switzerland has participated eight times at the INELTEC and SAW exhibitions.

"Last year, PROFIBUS Switzerland decided to set-up a new event: The 'SWISS PROFIBUS DAY'. This dedicated event offers members the same possibilities for promoting products as a common booth at a national fair, but with parallel session

presentations about new trends and user experiences in applications of PROFIBUS technology.



Trend seminar in Yverdon (held in French)

"The first SWISS PROFIBUS DAY was held on the 22nd November 2001 and was a great success, with more than 160 persons attending. So we are optimistic that the second 'SWISS PROFIBUS DAY' on the 27th of November 2002 will not be the last one! "

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» PRODUCT GALLERY

TEMPERATURE CONTROLLER

West Instrument's super compact MLC 9000 temperature controller is now available with PROFIBUS connectivity. It is a behind-the-panel multi-loop device containing up to 8 dedicated PID loops, available in single or 4-loop modules. It was designed to overcome the disadvantages of temperature control solutions provided within PLCs, but is also proving to be a better option than multiple panel-mounted discrete controllers, due to faster set up time and reduced wiring.



West Instruments: www.westinstruments.com or +44 (0) 1273 606271.

PLC SCANNERS ... AND XP DRIVERS

Woodhead PROFIBUS modules for Allen-Bradley ControlLogix or Honeywell PlantScape PLCs now support both PROFIBUS DP Master and Slave protocols, which can be communicated with separately or simultaneously. Existing users of the SST-PFB-CLX can upgrade by going to www.mySST.com/download. **Woodhead SST:** 519-725-5136 or sales@mySST.com or www.mySST.com



Meanwhile, Woodhead applicom has announced a driver for Windows XP using their PC interface cards, which are based on common PC bus formats. **Woodhead applicom:** +31 2 32 96 26 30 or marketing@applicom0int.com



ANALYTICAL INTERFACE

The JUMO dTRANS transmitter, a well-proven instrument for measuring pH, redox, conductivity and high-purity water, can also be used as a controller/indicator for acquiring various other measurement variables. In its current version it is available with an optional PROFIBUS DP interface. These instruments offer the further advantage of high-contrast LED displays for clear presentation of the measurements. The JUMO dTRANS series gives the user ample scope for managing his process with the utmost flexibility. **Juchheim:** +49 661 6003 612 or rolf.heinrich@jumo.net



CONTROLLER

Softing has introduced a LINUX-based programmable automation controller called 4C FieldController, which has two PROFIBUS channels for networking field devices, and Ethernet for communications with higher level networks or similar control devices elsewhere in the plant. 4C FieldController, which is part of the 4CONTROL range, can be the basis of powerful, distributed automation solutions plant-wide. **Softing:** +49 89 4 56 56 0 or www.softing.com



Clarification: In PROFINews 28 we did not make clear that the P+F RPI device includes a DTM which can be configured and parameterized by PACTware or another Engineering Tool equipped with an FDT interface. **Pepperl + Fuchs:** akern@de.pepperl-fuchs.com or +49 621 776 1388 or www.pepperl-fuchs.com

» GENERAL NEWS

VALIDATING PROFIBUS-BASED PRODUCTION PROCESSES

PROFIBUS has become one of the first fieldbus organizations to offer support to operators of systems and processes that are subject to Validation. A white paper with application reports is to be published shortly.

FDA 21 CFR Part 11 (CFR = Code of Federal Regulations) is a USA regulation for manufacturers of pharmaceuticals, cosmetics and food items. The FDA (Food & Drug Administration) monitors this regulation, which includes a description of the requirements for recording electronic data and electronic signatures in production facilities.

Using a validation process, vendors must show that they meet the requirements of FDA 21 CFR Part 11. If a company intends to market its products in the United States, it must meet the regulations.

Regulatory offices are constantly updating or supplementing their regulations, as a basis for good manufacturing practice. This includes GAMP (Good Automated Manufacturing Practice).

The document "Good Practices for Computerized Systems in Regulated Environments", published at the beginning of this year, describes, for example, how automation systems are im-

plemented and validated. For computer-based systems, the validation is intended to ensure that functionality, reliability, usability, efficiency, adaptability and assignability meet the specified requirements.

Since PROFIBUS is the accepted standard for industrial communications in process automation, PROFIBUS International will support the user with the best possible information about how PROFIBUS can be used for validation. PROFIBUS International is compiling guidelines that describe the validation-supporting functions of PROFIBUS with respect to GAMP or 21 CFR Part 11.

To accomplish this, PROFIBUS has standardized processes for creating these guidelines. This includes release procedures through experienced specialists, uniform change request procedures for all documents and traceable version planning.

For PROFIBUS, the technical foundations for the validation process (amongst others the transport of data) are established through data integrity and Data Link Layer services, as well as via regulations concerning the assignment of passwords in PROFIBUS profiles. In the last two years alone 10 PROFIBUS systems have been validated.

Contact pi@profibus.com for more information

Seminars, workshops, training, exhibitions and conferences ... and all other important dates and news from the world of automation are listed on the PROFIBUS website. Just visit 'News & Events' at www.profibus.com

» AROUND THE WORLD

News from the Regional PROFIBUS Associations. If you have a report please send it to the editor at the address given bottom right of this page.

CHINA

The Chinese Test laboratory in Beijing has been very active during past months as an accredited PROFIBUS test centre in Asian markets. First products have been tested and certified. Making PROFIBUS the first to become a Chinese branch-industry standard (JB T 10308.3-2001) was very important to opening up the 'route to market'. Manufacturers and end-users get full support from the Chinese PROFIBUS Organisation (CPO), the Chinese PROFIBUS Competence Center (CPCC) and the Chinese PROFIBUS Test Laboratory (CPTL). Documentation and information is available in Chinese, and various marketing efforts are underway. CPO says PROFIBUS has many advantages, including an extensive application base and excellent support from talented technical personnel.

USA

The PROFIBUS Trade Organization (PTO), in cooperation with the PROFIBUS Interface Center in Johnson City, is planning a series of ten, free, one day seminars in North America next year. The seminars will include topics such as Basics of PROFIBUS, Bus Physical Wiring, Physical Layer and System Troubleshooting, PROFIBUS PA, PROFIdrive and PROFINet. Representatives from ten sponsoring companies, including Invensys, Siemens, Endress + Hauser,

Beckhoff and Acromag, will show their PROFIBUS products. The seminars will be held once per month in different cities, starting February.

GERMANY

PROFIBUS and NAMUR are actively cooperating on general technical and economic issues in the area of process automation, particularly the further development of PROFIBUS profiles. Sharing data allows users' needs to be absorbed into profile definitions at an early stage. Current collaborations apply to: PA Devices, Alarm Handling & Time Stamp, PROFIdrive, Weighing and Metering and Remote I/O. Standard definitions have been agreed, to compile a glossary covering terms from communications and automation technology. A clearing house for multivendor systems, product testing and plant trials of programmable controllers are some of the issues under discussion.

UK

The PROFINet Road Show came to UK in November, to the TEAM event in Birmingham, where one whole day of



the 'Automation University' was devoted to PROFINet. More than 30 delegates pre-registered - which was a record - and 17 more turned up on the day, so the 'University' had a full complement of students. Manfred Popp from the new PROFI-

net Competence Center at Fürth, and Bernard Voss, a technical consultant specialising in PROFINet, were the chief presenters. Brian Holliday (pictured below left) from Siemens introduced the concepts. PROFIBUS UK is now planning its 2003 Show schedule - with visits to MTEC in March and Southern Manufacturing in February now fixed.

JAPAN

PROFINet seminars took place at Osaka November 15 and Tokyo November 19. Edgar Kuester, Chairman of PI, explained the background to PROFINet and committed to its



future expansion. A multi-vendor demonstrator showed prototype products in a simulated bottle filling application, using Digital, Fuji Electric, Yokogawa Electric, Siemens, Mitsubishi and OMRON automation devices. This demo impressed, particularly the ease with which data communications can be changed using the PROFINet engineering tool. Japanese PROFIBUS Organization (JPO) now plans to take the demo to end users. Because of higher than expected interest, JPO has decided to hold another seminar in Tokyo shortly. Thanks are due to Digital, Fuji Electric, Yokogawa Electric, Siemens K.K., PI, PNO and Siemens AG for supporting the events.

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