PROFINEWS

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PROFIBUS PROCESS FIELD BUS

in this issue

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CONTENTS

Click any item to jump to the relevant page

THE GLOBAL INFLUENCE OF PROFIBUS AND PROFINET

PROFIBUS International activities around the world continue to emphasize the global importance of PROFIBUS and PROFINET.

Large-scale road shows in South East Asia and China have underscored the dynamics of those markets area: venues included Singapore, Kuala Lumpur, Jakarta, Manila and Bangkok, plus industrial centers in China. Feedback was excellent: visitors demonstrated extensive expert knowledge and said they will increasingly use PROFIBUS and PROFINET.

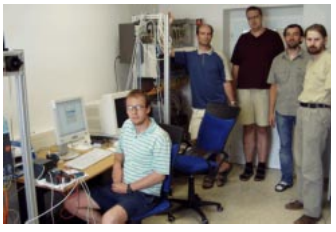
PROFIBUS has recently received additional support in the form of white papers from the ARC Advisory Group, in which the advantages of PROFIBUS are clearly identified. That study is now available in the Chinese language too. In parallel, a Chinese edition of 'PROFINEWS' (right) has been introduced helping ensure that up-to-date information is available to Chinese vendors and users.

In North America, the recent annual General Assembly attracted more than 60 delegates, (see Page 5). Also in North American, a new email edition of 'PROFINEWS' (below) is covering regional information as well as general PI news. Activities in North America include 23 workshops and seminars which are expected to draw more than 3,000 visitors in 2005. More venues are being added to meet demand. Important target groups are the chemicals industry and the automakers.

NEW COMPETENCE CENTERS

Just in time for the PI and PICC (Competence Center) meeting in June (see Page 2), two new PICCs were accredited: Phoenix Contact in Germany and ANF Data in the Czech Republic. Participation in the Competence Center Meeting was the ideal opportunity for the new PICC delegates to make contact with other PICCs to explain their own activities and plans.

Czech Republic



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PI has a worldwide network of 30 PICCs which offer technical support for PROFIBUS and/or PROFINET, working closely with the Regional PROFIBUS Associations (RPAs). Browse www.PROFIBUS.com > SUPPORT for a list of PICCs.

PI NEWS

PROFIBUS INTERNATIONAL DELEGATES MEET IN FRANKFURT

More than 50 delegates from Regional PROFIBUS Associations (RPAs), PI Competence Centers (PICCs), and Test Labs from 18 countries attended the 17th PROFIBUS International Meeting and the parallel 8th Competence Center Meeting and TC1 Meeting in Flörsheim, near Frankfurt, Germany, in June.

Belgium, China, Czech Republic, France, Germany, Ireland, Italy, Japan, Korea, the Netherlands, Norway, Poland, Sweden, Switzerland, Singapore, South Africa, UK and USA were represented. The goal was to exchange information and to agree international PROFIBUS and PROFINET activities.

Chairmen of the Marketing Working Groups (WGs) for PROFIBUS PA, PROFINET and PROFIsafe reported on their activities. The Roadshows in South-East Asia and China are an example of the WGs' activities, which are always carried out in close co-operation with the relevant RPA. During a press conference in the evening held on board a riverboat, German editors heard about these international activities and latest technical topics, and had the opportunity for personal contact with RPA representatives.

PROFINET and PROFIBUS PA 'in real life' were experienced during visits to the PROFINET Competence Center at Hilscher in Hattersheim, and the PROFIBUS PA Competence Center at Infraserv Höchst in Frankfurt. Demo-systems were shown and the organisation and work of the two PICCs were explained.

Detailed reports from the PI Support Center (PI-SC) on technical and marketing activities met with great interest. Regular exchange of information guarantees that all RPAs have the same level of information, and the considerable information exchange enables international activities to be better coordinated worldwide.

USER GROUPS DEVELOP EDDL

PROFIBUS International (PI), along with Fieldbus Foundation (FF), Hart Communication Foundation (HCF) and OPC Foundation (OPC) have agreed to jointly develop EDDL (Electronic Device Description Language).

EDDL, internationally standardized in IEC 61804-2, is the most common integration method to implement field devices into automation systems. 1,000 field device types from more than 100 manufacturers are described by EDDL. More than 15 million field devices based on EDDL have been installed worldwide.

At Hanover Fair 2005 a team was founded to further develop the technology, by creating a test specification and test procedures for compliance testing, and implementing the extensions into the IEC standards.

A steering committee consisting of delegates from the four user organizations will determine future strategy.

Electronic Device Descriptions (EDDs) support the management of intelligent field devices for parameterization and diagnostics, aiding planning, engineering, set-up, maintenance and decommissioning.

NEW FDT SPECIFICATION

PROFIBUS International (PI) has transferred the further development of FDT technology to the FDT Joint Interest Group (FDT JIG), which has published a revised specification (1.2.1) in cooperation with PI. Essential user requirements have been integrated, many concerning interoperability and version management based on the NE 105 recommendations from NAMUR.

One of the most important – a style guide for the uniform operation of device classes – will be available by the end of August 2005. PI is involved in all reviews of the FDT specification as a cooperation partner.

In addition to supporting PROFIBUS and HART, enhancements for other fieldbuses are being incorporated. All test and certification procedures for DTMs (Device Type Managers) have been defined, and a certification office has been operating since April. The submission of the FDT specification for international standardization at the IEC was also agreed in April.

FDT unifies the communication interface between field devices and systems. It works independently of the communication protocol and the operating environment. FDT can therefore enhance EDDL.

NEW GUIDE IS PLANT RESISTANT!

This new installation guide is a 'must have' for all PROFIBUS engineers. It's made of water and oil resistant paper for plant wide use and is available in German and English. Get it from the PROFIBUS International, price Euro18 to members and Euro36 to non-members. It's also available FREE as a pdf for PI members. Click here for more information.

AIDA AD IN USA

To highlight the standardization on PROFINET by the **A**utomation **I**nitiative of German **D**omestic **A**utomobile manufacturers (AIDA), the PROFIBUS Trade Organization is running an ad in 'Control Engineering'. It will appear throughout the year to encourage other automakers to join the PROFINET community.
Read more here; download the ad.

APPLICATIONS

AUSTRALIA/ BREWING

David Medlyn and Dr Tim Cooper

Coopers Brewery – Australia's third largest brewer and largest family owned brewery – was founded by Thomas Cooper in South Australia in 1862. When the company relocated to Regency Park in 2001, it took the opportunity to expand production by commissioning a new brewhouse. Briggs of Burton proposed that automation control and measurement be linked with a PROFIBUS communications system.

Coopers thus installed Australia's first PROFIBUS PA-networked brewhouse. Three years later it remains Australia's most modern. PROFIBUS DP (linking the PLCs, SCADA and drives) and PROFIBUS PA (for measurement and control of level, temperature, flow, pressure and positioning valves) and AS-Interface (for digital I/O such as valves and level switches) are used extensively.

A wide range of pressure and temperature transmitters, level measurement devices, and electromagnetic and Coriolis flow meters are connected to the brewhouse's PROFIBUS PA network to facilitate accurate, real-time monitoring and management of complex sets of interdependent parameters. The efficiency of the new, high-volume mash filter, which was delivered to the new brewhouse from Belgium with legacy 4-20 mA instrumentation, has been significantly enhanced by the addition of PROFIBUS-enabled mass flow meters. "Because of the PROFIBUS PA technology, we now get volumetric flow, mass and density to show us how effectively the filter is running – and Plato and temperature measurements are on the cards," says David Medlyn, Senior Process Control Engineer.

Coopers is continuing to introduce PROFIBUS PA. Over 70 devices are already installed in the brewhouse, and in the grain/malt/wheat silos the company plans an additional 11 level devices with Dustex approval. In the near future the lager cellar will also be upgraded to PROFIBUS PA. A Coriolis flow meter has been added to the yeast seeding plant, to fine-tune the quantity of yeast added for the secondary, in-package fermentation process.

"PROFIBUS PA has several major advantages for us," explains Medlyn. "Firstly, the flexibility of being able to connect straight on to the network at any position in the plant. Secondly, it's a big advantage to be able to cut down on cabling. Thirdly, the PROFIBUS-linked instruments give us a much higher degree of accuracy and control."

By radically reducing the amount of cabling needed and enabling process instruments to be added quickly and easily into the network, PROFIBUS has also radically reduced the potential for cable damage and the time, costs and dangers associated with maintenance. Less cabling is required when extra measuring points are installed, providing exceptional flexibility. Furthermore, PROFIBUS enables 'plug and play' commissioning.

Medlyn is particularly impressed by the robust performance of PROFIBUS PA, and the simplicity and convenience of its troubleshooting capabilities. When an instrument is damaged, the PROFIBUS network does not fail and the source of the problem is instantly identifiable remotely. Process managers can also proactively prevent instrument failure by remotely detecting incipient problems. This reduces down time, batch wastage and maintenance.

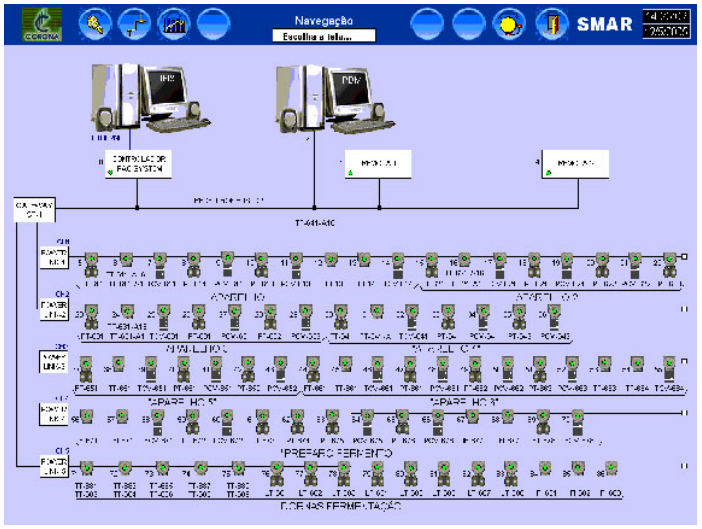
The company has seen improvements in product quality and consistency as well as time and cost efficiencies. "Our quality control is much tighter and sales of pale ale have increased by at least 15% for each year since the move – at a time when beer sales have been very flat," comments Medlyn. "We're expanding at a huge rate. We started with eight fermenters, and only three years later we have 14. We're adding to the brewhouse and upgrading it all the time, and will be investing at least $7 million in capital in 2004/2005." **Endress+Hauser Australia: info@au.endress.com or www.endress.com.au**

BRAZIL/ PAINT

BASF-Glassurit has recently completed an extension to its factory for pigments and painting products located in Sao Paulo. This plant now has the largest chemical PROFIBUS PA installation in Brazil. More than 150 PROFIBUS devices were deployed, including pressure (LD303) and temperature Transmitters (TT303), positioners (FY303) and current to PROFIBUS PA converter(IF303) from Smar. Twenty eight radar level and mass flow devices from Conaut/Krohne and 21 PROFIBUS DP/PA couplers from P&F are also installed. In addition, there are two DCS Advant Controllers from ABB, two PLCs as PROFIBUS DP Masters and the PDM as a configuration tool. The BASF team, Smar and Krohne performed configuration and commissioning. The project was completed in 2000 and engineer Fernando Anguita Jr. believes that over 10% of the total project cost was eliminated by using PROFIBUS PA, and by the extraordinarily smooth startup which took approximately 2 weeks. According to Claudio Antonio Oliveira Correira, Maintenance Engineer of BASF, Smar was chosen because "it has expertise in fieldbus and since the beginning has been our partner, providing support during project, commissioning, startup and operation phases. With the benefits we see today, we are sure that PROFIBUS was the right choice. **Smar: torres@smar.com.br or juliosouza@smar.com.br**

APPLICATIONS

BRAZIL/ SUGAR & ALCOHOL

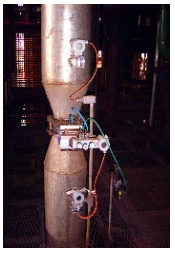


Açucareira Corona S/A has updated its Bonfim plant using a PROFIBUS-based system incorporating nearly one hundred PROFIBUS PA field devices.

The main factors influencing the choice of PROFIBUS were market acceptance, reliability, installation facilities, simplicity of configuration and easy maintenance. The architecture and project design were done by a team consisting of Corona's Eng. José Ernesto Braz, Smar's Eng. Julio Cesar de Souza and Eng. Marcio Barrico, with Eng. Leandro Torres' support. System integration was done by the Smar National Application Engineering Group.

Startup success was guaranteed by a well-prepared Technical Support team led by Eduardo Galeano, an engineer having wide experience of fieldbuses.

Pressure, level and flow transmitters, temperature transmitter, converters and control valve positioners were supplied by Smar. Simatic PDM software from Siemens was installed in the Maintenance Station. The PROFIBUS DP network has a bus length of 50m while the PROFIBUS PA networks are, on average, 200m. Five PROFIBUS PA channels are distributed among six distillation columns, plus ferment preparation and fermentation vats. The Pepperl-Fuchs SK2 set is supported by one gateway and 5 Power Link couplers. The control structure was built on the GE platform through PACSystems RX3i PLC.



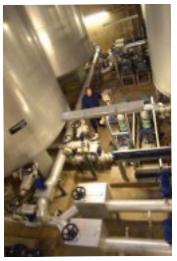
According to Corona, major economies were made in commissioning, training and startup times. Other benefits include outstanding supervisory actualization speed, configuration and instrument integration facilities, easy data acquisition and network expansion, and the agility with which problems can be resolved due to diagnostics.

"PROFIBUS technology allied to the Smar partnership were fundamental to application success," said José Ernesto Braz, Electrical and Instrumentation Supervisor. "In 13 days it was possible to put the plant into operation without problems. Network stability and actualization are fantastic!" **Smar: torres@smar.com.br or juliosouza@smar.com.br**

UK/ WATER TREATMENT

Rotork IQ intelligent valves are installed in the new Sewage Treatment Works at Reading in a project that has been described as one of Thames Water's flagship projects. Some of the most innovative technology has been used at the site, which is built on former waste disposal land.

The plant serves a population approaching 300,000, as well as a local brewery. Approximately 150 actuators control the movement of flows through the site. The control system utilizes 23 PROFIBUS segments for the instrumentation, actuators and package plant, which are linked to several PLCs. The site is the first Thames Water site to make extensive use of PROFIBUS, which was selected as the fieldbus that is most widely available from equipment suppliers.



Designed and built by the Target Alliance, a team formed by Thames Water, Taylor Woodrow and Black & Veatch, the plant was officially opened in January 2005. **Rotork: mail@rotork.co.uk or www.rotork.com or +44 (0)1225 733200**

PRODUCT NEWS

IRT SWITCH

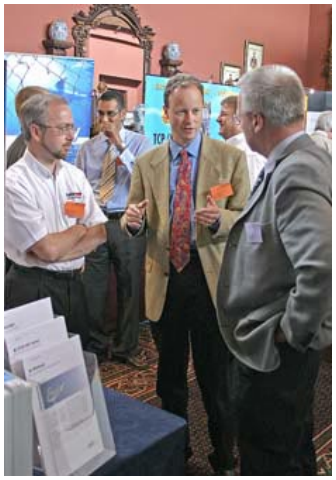
The first products for PROFINET IRT containing the new ERTEC 400 ASIC have been announced. SCALANCE X 200 IRT switches are suitable for configuring Ethernet networks in line, star and ring topologies at 10/100mb/s.

The switches are equipped with electrical and optical user and network interfaces. They can be installed in a control cabinet, on a standard mounting rail or on a wall. IE FC R45J Plug-compliant connectors provide relief against strain and bending. Redundant ring topologies increase network availability. LEDs on the device, an integrated Web server and signalling contact provide high-speed diagnostics. The switches are integrated in existing network structures using SNMP. **Siemens: simatic.net.info@siemens.com**

ERTEC DEVELOPMENT KIT

Also available is the ERTEC 400 Development Kit, which makes it easy for manufacturers of automation components to develop PROFINET IRT products and applications. The Development Kit comprises an evaluation board with ERTEC 400 ASIC as test environment, and ten ASIC samples. **Siemens: simatic.net.info@siemens.com**

AROUND THE WORLD



UK

Following the undoubted success of the 2004 and 2005 Conferences (see photographs above) PROFIBUS UK is delighted to announce that it will be presenting another Conference in 2006! Based on the feedback received, a 'better than ever' event will take place at Coombe Abbey next year, featuring a comprehensive multi-stream educational programme. Primers and Master Classes will be presented and there will again be an exhibition of products and services from member companies.

ITALY

PROFIBUS Network Italia organized a PROFIBUS day in June in Brescia, on the occasion of the 10th year of its existence. The event focussed on updating PROFIBUS and PROFINET technology, and on different end user applications in white goods, process automation and including hazardous area operations and Power Generation. The University of Brescia made a presentation about their degree thesis on PROFIBUS/PROFINET. Over 60 participants attended. The slide sets are available from **pni@profibus.com**

USA

The PROFIBUS Trade Organization held its annual General Assembly meeting in Scottsdale, AZ, in August 2005. Attended by more than 60 delegates from vendor companies, users, distributors, integrators and the PROFIBUS Interface Center (PIC) in Johnson City the meeting was hailed as a great success. The PROFIBUS Trade Organization is shortly to be renamed 'PTO' to reflect its increasing emphasis on PROFINET as well as PROFIBUS.

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The meeting included a keynote address on Day 1 from Todd Lucey of Endress + Hauser (1). Day 2 opened with an appraisal of Industrial Ethernet markets by ARC's Harry Forbes (2).

Also included were technology and marketing updates, and PI Chairman Edgar Küster explained more about global activities, particularly in the Far East. A new North American web site for USA, Canada and Mexico was demonstrated.

End user presentations were given by Scott Haulsee of the Tennessee Valley Authority (3) and Dave Diebert of Air Products. Josef Braun, who leaves the PIC soon to return to Germany, was presented with a special award (4) by PTO Executive Director Mike Bryant. On the two days prior to the GA, PROFINET IO Classes were held by the PIC for device integrators.

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