PROFINEWS

in this issue | **Official Newsletter of PROFIBUS International** | **www.profibus.com**

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

OPEN-NESS 1

COLLABORATIVE PROJECT TO DELIVER COMMON DEVICE LANGUAGE

TRUE FIELD 'OPENNESS' NOW WITHIN REACH

PROFIBUS International is putting its full weight behind a three-pronged initiative to standardize an Electronic Device Description Language (EDDL) for the common benefit of HART, FOUNDATION Fieldbus and PROFIBUS users.

An agreement, signed February by these three major fieldbus organizations, will see the completion of the EDD technology that has already been unified under the European NOAH project and adopted by CENELEC. It is available as an IEC Public Available Specification (PAS) and the version will now be 'rounded off' and submitted as a draft international standard to the IEC for vote.

"We sincerely believe this will lead to a full International Standard for EDDL," said Edgar Küster, Chairman of PROFIBUS International. "The target is to make it possible for users of all three fieldbus systems to configure field devices in the same way. Thus we will jointly deliver the greater cross-platform open-ness that end-users have long desired."

EDDL is a description language used for describing the parameters of field instruments. An EDD (Electronic Device Description) is provided with each instrument for interpretation either by device configuration software, or by a control system. EDD ensures that an instrument provides the right data for the system.
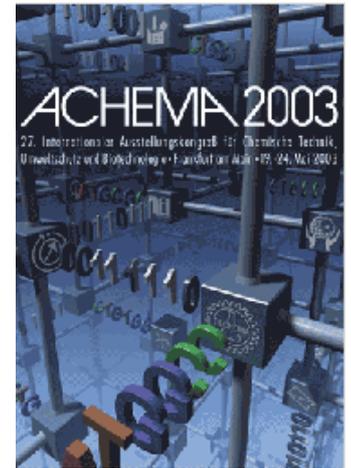
PROFIBUS IN PROCESS AT ACHEMA

The PROFIBUS Nutzerorganization will have a large booth at Europe's leading Trade Fair for the process industries, where the advantages and benefits of PROFIBUS in Process will be demonstrated. Don't miss the many new PROFIBUS products that will be shown.

May 19 - 24, Frankfurt
Hall: 10.2, Booth: F3-J6

OPEN-NESS 2

FDT TO ENCOMPASS MORE PROTOCOLS

PROFIBUS International has joined a group of well-known manufacturers to form the Field Device Tool Joint Interest Group (FDT JIG), to develop FDT solutions for other communication protocols. FDT, developed by PI and now owned by ZVEI, offers a universal approach to the engineering of process and production automation systems, regardless of platform or protocol. The FDT JIG will now reorganize with the objective of extending the reach of FDT and relevant test and certification, and then press ahead with joint marketing.

PI supports the work of the FDT JIG in spreading 'open' solutions. "We are confident that the work of FDT JIG will strengthen our engineering concept," explained Klaus-Peter Lindner, member of the PNO management board. "Leading companies have recognized that FDT fully meets the expectations of users and vendors. PI, as an initiator, is proud to have recognized this early."

▸ APPLICATIONS

CHINA/ CEMENT

The DianXi cement company, a subsidiary of the HongTa group, is the largest cement manufacturer in YunNan province. The plant has three production lines which have a daily cement production capacity of 1000 tons, or 9 million tons a year. Maximum production capacity is 11 million tons per year, which is the largest in the YunNan province. The company has adopted the latest technologies available for cement production and had the following goals for the automation of its kiln and cement grinder:

▸ Use latest control and communication technology

▸ Use standard Ethernet and TCP/IP

▸ Base the control strategy on a standard fieldbus.

▸ Integrate a variety of instrumentation from different vendors.

▸ Use both locally wired devices and remote I/O

▸ Use the Chinese language for operator & engineering software interfaces

ABB's Industrial[IT]system was selected, along with PROFIBUS for field communications. The automation system has 4 operator stations and one engineering station. The control network is based on Ethernet with TCP/IP protocol and the system uses OPC for data exchange between controllers, operator stations and other third party systems or applications. Redundant networking is supported.

There are six field Control[IT] AC800F Field Controllers; three are dedicated to the kiln process and three to the cement grinder process. Each controller is connected to three or four PROFIBUS segments, with three or four Master Cards (FI830). There are nine remote I/O S800 stations and in total there are 225 devices (64 on

PROFIBUS DP, 161 on PROFIBUS PA) distributed over nineteen PROFIBUS segments.

All instruments are integrated into Industrial[IT] under the Field[IT] suite, which makes available the wealth of data resident in the PROFIBUS devices.

Three MB204 Multibarriers are used. These are 4-fold fieldbus distributors for hazardous and non-hazardous

areas. In an Intrinsically Safe (IS) segment (hazardous Zone 1 area), it increases the number of devices per bus, offers flexibility and reduces cost of power supply and wiring by approximately 30%.

When connected to the low speed fieldbus segment, behind the segment coupler/link, the multibarrier ensures IS supply of up to 4 instruments. Since the barriers can be 'cascaded', up to 32 field instruments can be operated on a single segment coupler in the hazardous

area. The multibarrier does this without requiring a separate power supply.

The ABB Control[IT] AC800F controllers support PROFIBUS DP and DP-V1. This means that the engineering software can program field devices online. For this project, ABB utilized 161 PA devices, including ABB temperature transmitters, standard and differential pressure transmitters, VEGA radio level instru-

ments, and Siemens positioners. The various other field device vendors have adhered to the PROFIBUS standards for communication, which makes it possible to have a unified way of configuring as well as communicating with these devices. The engineering software provides a uniform approach to configuring devices online which improves efficiency and reduces cost.

DP-V1 standards have resolved the versatility problem of fieldbus equipment configuration. Because of the ABB engineering software's template technology, device configuration templates are readily available for different manufacturers' field devices based on the PROFIBUS PA standards. These templates can be used directly or downloaded from ABBs internet website.

The system is completely scalable, and if the customer wishes to expand the plant, more controllers or operator stations can be added, and engineering is done in the same efficient manner. The system software is available in Chinese version including engineering tools, operator interface, help function and all menus.

The DianXi cement plant has been in operation since September 2001. Commissioning took approx. one month. **ABB: Patrick-Peng.Cao@cn.abb.com or Arvind.Vasu@cn.abb.com**

▸ APPLICATIONS

USA/ CARTONS

John Young, Chief engineer from Roberts PolyPro, liked

what he saw at the PTO PROFIBUS seminar he attended at Control Corporation of America (CCA). He just needed an opportunity to use it on a real machine. After years of using another vendors PLC solution with proprietary networks, he liked the benefits of using an industry open network.

The ideal opportunity arose shortly afterwards, when Roberts PolyPro found themselves looking for a more efficient and up to date automation solution for a new high speed French fry scoop (carton) maker that would run at 1,800 ft/minute, or 260,000 scoops per hour. Previous designs had used one brand of PLC and another brand of drives, interfaced together by I/O. The HMI and PLC were connected together by the PLC

vendor's proprietary network and I/O.

After discussion with CCA he decided on a solution using a Siemens S7-300 PLC and MM440 AC Drives networked using PROFIBUS. A TP270 touchpanel was incorporated for process setup and visualization.

John says "By using standard motors and vector drives we had a lower cost, off the shelf solution, which gave significantly improved machine performance and maintenance. The PROFIBUS network also eliminated costly and troublesome wiring." Machine setup was significantly improved using recipe capabilities passed over PROFIBUS.

Larry Matson, Director of Engineering, says, "We had higher line speeds and were able to optimize machine efficiency by maintaining ratios between the drives through to full line speeds - and we attribute that to the high speed communications of PROFIBUS and the overall system architecture."

Results were so positive that Roberts PolyPro is looking at using PROFIBUS as a standard on upcoming machinery. **CCA: pgiler@cca-corp.com**
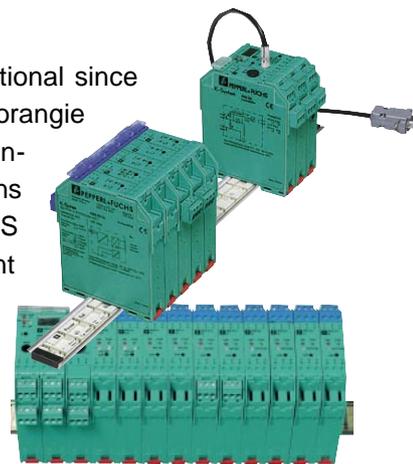
UK/ WHISKY

In April 2001, Glenmorangie plc, malt whisky distiller and producer, formed a joint venture with The Drambuie Liqueur Company Ltd. This partnership, **Glenaird Ltd**, handles Glenmorangie's and Drambuie's supply chain requirements in their entirety, from whisky sourcing to bottling, warehousing and logistics and is based at Glenmorangie's site at Broxburn in West Lothian.

Fieldbus technology was chosen for the Glenaird project, due to its flexibility, and also to reduce the installation cabling. A vast range of field instrumentation from various leading manufacturers are integrated with a Remote Process Interface (RPI) system via a SIEMENS S7 control system, and a SCADA In-Touch system is employed for the operator interface.

A combination of over 500 digital, analogue input/outputs are connected to the intrinsically safe side of the RPI modules and communication to the SIEMENS S7 master is established between the PROFIBUS DP gateways via 2-wire PROFIBUS cable, which dramatically reduces the safe-area cabling to the PLC.

The project has been operational since August 2001 and the Glenmorangie engineering team have confirmed that the cost reductions and simplicity of PROFIBUS were very evident. The plant has now changed from manual operation to a fully automated process – a step change which has very effectively improved production.

The use of PROFIBUS has helped with the project and will allow future expansion to take place with minimum effort. Pepperl+Fuchs have two certified PROFIBUS network engineers on-site. **Pepperl+Fuchs: sales@gb.pepperl-fuchs.com or www.pepperl-fuchs.com**

⯈ APPLICATIONS

UK/ METALS

Burkert Fluid Control Systems in conjunction with their partner distributor Fine Controls (UK) Ltd has supplied PROFIBUS and AS-interface valves for one of the largest PROFIBUS network systems in the UK – at Johnson Matthey precious metals refinery at Royston, Herts.

Johnson Matthey's Chemical Business Unit refines precious metals and produces fine chemical products for other Johnson Matthey divisions, for use in high-purity applications in the pharmaceutical, medical, electronics and other industries. A major expansion at the Royston site required significant additions to the automated control systems. The central control system located in the engineering office uses two Wonderware InTouch (SCADA) servers and one InSEQL (data logging) server to communicate with local Omron PLCs across the site over a number of PROFIBUS networks. An additional InTouch server and an InSEQL server are located in another building to give redundancy.

The Burkert valves are being used throughout the new control systems to supply feed liquors and reagents to many different processes. Many of the chemicals used are strong acids and alkalis so the use of plastic valves is common. The plant also uses many glass-lined steel reactors, which are heated and cooled at various stages of the process using Burkert PROFIBUS steam valves.

The proportional valves connected to the PROFIBUS PA network were supplied with software customised to Johnson Matthey's requirements. The on/off valves, which use the latest AS-i Version 2.1 technology, are connected to local AS-i networks and thence into PROFIBUS DP.

Johnson Matthey project engineer Paul Ashby says that Burkert equipment was the obvious choice for both projects. "These are new systems based on the very latest technology, so Burkert's technical support through Fine Controls and the product quality and reliability, proved invaluable," he says.

Components used on the project were PROFIBUS diaphragm and globe control valves and AS-i 2.1 globe, angle seat, polypropylene, stainless steel and lined diaphragm valves. **Bürkert Fluid Control Systems, 01453 733020 or www.burkert.co.uk or marketing.uk@burkert.com**

⯈ GENERAL NEWS

PRODUCT DEVELOPMENT

MESCO Engineering is offering 'more' for the future. The communications specialist in measurement and automatic control technology is enhancing its service offer for the implementation of PROFIBUS field devices. Besides hardware and software development, the new 'completely carefree package' for customers includes product stewardship with certification, CE (conformity assessment) marking, ex-license and manufacturing transition, including resources, tooling and parameterization software. The market launch of products, ready to go into production, is also supported through training of the Service and Sales teams. **Mesco: www.mesco.de or +49 76 21/8 90 31 0 or Steffi.Elschner@mesco.de**

ERRATUM

In our previous issue we told you about the Certified PROFIBUS Installers Course developed at Manchester Metropolitan University. Due to software irregularities we gave the wrong contact details. The correct ones are: **Kognosys: +44 1489 589574 or www.kognosys.co.uk/catalog.htm.**

MANUEL TECHNIQUE EN FRANÇAIS!

PROFIBUS International's system description 'PROFIBUS Technology and Application' is now available in French. It includes a comprehensive overview of PROFIBUS with special focus on general and specific application profiles. Also available in German, Swedish and English, it can be downloaded from **www.profibus.com**

UK EMAIL NEWSLETTER

PROFIBUS UK is launching an English-language email newsletter featuring forthcoming events, technology and product announcements, contract wins, case studies and new developments from the UK. It will be sent approximately 4 times a year to registered readers only. Readers interested in receiving this email newsletter can sign up to receive it by sending a blank email to:
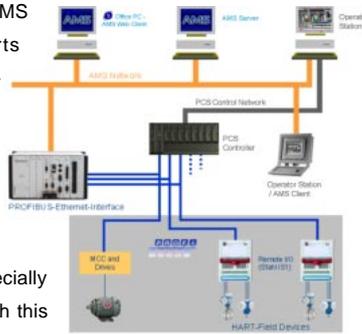
profibus.mailings@btopenworld.com

with the words SUBSCRIBE PROFIBUS in the subject line

▸ PRODUCT GALLERY

AMS REACHES OUT TO PROFIBUS-HART

With Release 6.2 the world leading AMS software platform now supports PROFIBUS/HART field devices, following a joint development by Emerson Process Management and Trebing & Himstedt. This allows AMS configuration of HART field devices over PROFIBUS and the entire PROFIBUS/HART device range, especially Remote I/O (RIO), is supported. With this development, Emerson underlines the openness of its AMS platform for all leading fieldbus systems. Trebing & Himstedt provides all hardware and software components. For larger installations, a Class 2 master Ethernet-PROFIBUS-Interface with up to 13 PROFIBUS strands is available to provide Ethernet-based connectivity. The new AMS functionality also provides the infrastructure to support modular software extensions to the standard Device Description - Snap On applications - to meet additional diagnostic or configuration requirements. The first PROFIBUS Snap-On is Trebing & Himstedt's PROFIBUS Scope software, with other slaves such as Motor Speed Controllers and Starters expected soon. In a pilot pharma installation, operation with Stahl I.S.1 RIO has been successfully demonstrated. The product will be shown live at ACHEMA. **Trebing + Himstedt: www.t-h.de or info@t-h.de.**

UNIVERSAL POSITIONER

The Foxboro Eckardt Universal Positioner SRD960 with PROFIBUS PA for explosion proof/ EEx d-applications is now also available with ATEX approval. The device consists of a full-text graphical LCD and external push buttons that allows a menu-driven easy operation and start-up in several menu languages. The diagnostic messages as well as values like valve position, digital setpoint or even the base current can be displayed on the LCD. **Foxboro Eckardt GmbH Tel: +49 211 5966 372 or www.foxboro-eckardt.com or karsten.fischer@invensys.com**

SIDE CONTROL POSITIONER

The Type 8635 PA side controller is suitable for use with linear or rotary actuators and is designed for two-wire operation over PROFIBUS PA. It is also ATEX certified for Zone 1 hazardous areas. Autotune software matches the position controller to the control valve. Configuration and operation is by touch pad and text display, or via engineering tools over PA. Alternatively, it can be configured via FDT (Field Device Tool). The positioner has been installed in one of the largest PROFIBUS networks in the UK (see Page 4). **Bürkert Fluid Control Systems, Contact: 01453 733020 or www.burkert.co.uk or marketing.uk@burkert.com**

INTELLIGENT ACTUATOR

FieldQ from Emerson Process Management's Valve Automation Division is an intelligent pneumatic actuator and controls package incorporating a pneumatic rack and pinion actuator and integrated, on/off control. FieldQ uses intelligent position tracking to provide contact-less position sensing and feedback. Smart function modules allow push button initialization and commissioning. Break time, travel time and cycle counter can be monitored over PROFIBUS. FieldQ is designed for in excess of a million cycles. **Emerson Process Management: +31 74 256 1047 or william.ekkel@emersonprocess.com or www.FieldQ.com**

SAFETY DATA MANAGER

Memo-Graph S meets the strict electronic recording regulations of 21 CFR Part 11 issued by the Food & Drug Administration (FDA). Its electronic signature and data security features help ensure that the process is properly recorded and that the measured values are tamper-proof. Up to 1 million measured values can be stored. The safety data manager accepts 'universal' inputs (mA, mV, V, TC, RTD) and also PROFIBUS DP signals. **Endress+Hauser. Contact www.us.endress.com or 888-ENDRESS.**

DRIVE SPEAKS ENGLISH

Sprint Electric's PLX range offers "the most powerful, flexible and easy to program digital DC drives on the market". 2 and 4 quadrant options are available in ratings up to 265 kW. The drives have an easy to use menu structure using English language parameter names and there is a 40 character backlit LCD display. An extensive range of application software is incorporated. PLX sets the standard for applications where "DC drives provide significant advantages over their more boisterous AC cousins", says the Company. **Sprint Electric: 01903 730000 or info@sprint-electric.com**

ETHERNET GATEWAY

Ethergate 692DP links PROFIBUS DP with the world of UDP/TCP Ethernet. Connection down to field level from the world of IT is made by Ethergate acting as a 12 Mbs PROFIBUS slave. However, Ethergate can also serve as a link between two PROFIBUS DP masters. Sample programs are available to allow teleservice and web server functionality for sending emails and html pages. **Kuhnke: +49 45 23 4 020 or www.kuhnke.com or sales@kuhnke.de**

USB INTERFACE

Pro USB turns desktop PCs and notebooks into PROFIBUS stations within seconds. The interface is bus-powered. Included are universal PROFIBUS drivers for Windows 9x, ME, NT 4.0, 2000 and XP and the interface supports Master functionality up to PROFIBUS DP-V1 (class 2). Pro USB can be integrated in user-specific applications easily. Moreover the user can easily incorporate automation solutions offered from ifak system for data logging and OPC integration. A device type manager (DTM) compliant with version 1.2 of the FDT specification is delivered optionally. **ifak: +49 3 91 54 45 63 60 or ahe@ifak-system.com**

EASY CONNECT

Lumberg has announced a modular connector concept called e2c, having IP67 ratings and potted for direct mounting on machinery. The backplane accommodates 4, 6 and 8 slots for various combinations of I/O, including modules for PROFIBUS DP in small I/O concentrations, a module for connection between a 12 Pole M23 connector and an 8 digital I/O module, and analog modules. Each channel can be individually configured to the application. **Lumberg: www.lumbergusa.com/profibus_trade_organization/Newsletter.htm or clong@lumbergusa.com**

AND, TO FINNISH ... ☺

Helkama Bica Oy is the first Finnish company to produce a PROFIBUS-compatible bus cable. Designed with shipboard installations in mind it has a multi-thread construction, which makes installation simpler and high vibration environments easy to withstand. It's also flame retardant and halogen-free. An industrial version is also available. **Helkama: www.helkamabica.fi or raimo.mustakangas@helkamabica.fi or dan.kurman@helkamabica.fi**

⏩ AROUND THE WORLD

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

UK

The UK PROFIBUS Group has organised more seminars in their "PROFIBUS Made Easy series", INCLUDING 'Implementation Made Easy' led by Manfred Popp, 'Safety Made Easy' and 'Process Applications Made Easy' hosted by Endress+Hauser. 'PROFIBUS + Ethernet Made Easy' will be hosted by Hirschmann. Dates can be found at www.profibus.com and events can be booked at uk@profibus.com or by phone/fax on +44 1489 589574.

JAPAN

Two engineers from the PROFIBUS Center Nederland are helping with a 3-day seminar on PROFIBUS Device Development, to be held in Tokyo on July 15 - 17. The seminars will include demonstrations and Japanese language explanations will be given. More from http://www.profibuscenter.nl/ppd or contact info@profibus.jp Or call Mr. S. Motoyoshi, PROFIBUS Japan on +81 3 3570 3034

NORWAY

PA2003 in Oslo was a great success for PROFIBUS i Norge. More than 10 member companies joined in a common booth measuring 64 sq metres, presenting the wide selection of products available for PROFIBUS. Dr. Wolfgang Stripf from Siemens and Mr. Joerg Knierriem from Hilscher helped introduce PROFIsafe (top right picture) and PROFInet to the audience. It showed that Norway still has lots of growth potential, as more than the expected ratio of visitors had little knowledge about fieldbuses in general. A multivendor student project called the 'Moving Tablet' (bottom left picture) appealed to the spectators' curiosity. An mpg film showing this tablet in action can be downloaded from www.profibus.com. PROFIBUS Norway is going 'on the road' in May (see advertisement below). If you want to take part, the deadline is May 20th.

SINGAPORE

PROFIBUS South East Asia tells us they are planning to take part in a major Singapore trade fair in December called CIA 2003. See advertisement above or please contact PROFIBUS South East Asia.

DENMARK

PROFIBUS Denmark and the DAU (Danish Automation Society) are jointly arranging a two day PROFIBUS conference on the 3rd and 4th of June 2003 at Grand Park in Korsoer. The program includes topics ranging from the basics right up to installation and diagnostics and end- user experiences and workshops will provide in-depth education on working with PROFIBUS. The Conference prices are DKr 5900 (approx. 738 Euros) for members and DKr 6900 (approx. 863 Euro) for non-members, the latter to also cover membership of both DAU and PROFIBUS Denmark until 31.12.2003. This price also includes all foods, drinks, hotel, social arrangements and conference material. Participants who sign up first will stay overnight at Grand Park. Contact www.dau.dk/content/aktivitet_dau_0005.asp or at www.profibus.dk