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Foundation Briefs

2010 General Assembly spotlights FOUNDATION Fieldbus successes

Strong evidence that FOUNDATION fieldbus is advancing as the automation architecture of choice in the process industries—even in today’s tough economy—marked the Fieldbus Foundation’s 2010 General Assembly, held in Houston, Texas, March 24-25. A large crowd from around the world attended in the event, which featured presentations by leading experts in fieldbus technology.

Houston was the site of choice for the event because the U.S. Gulf Coast region is among



the most developed markets for FOUNDATION fieldbus and is regarded by many as the central hub of the process automation industry in North America.

Based on the theme "*FOUNDATION Fieldbus—Asset Management Made Easy*," the 2010 General Assembly included a comprehensive, end-user-oriented agenda of fieldbus project case studies and tabletop exhibits. Technical sessions highlighted the advantages of FOUNDATION fieldbus as a solution for improving plant asset management, reliability, and economic performance.

The latest FOUNDATION technology developments, including FOUNDATION for Safety Instrumented Functions (FF-SIF), control in the field, field diagnostics, and wireless are designed to meet the business needs of process industry plants coping with a lingering recession and weak product demand.

Wednesday's program included updates on Fieldbus Foundation activities around the world. In addition, a diverse group of fieldbus end users described successful experiences with FOUNDATION technology in process automation applications. A welcoming reception for all attendees concluded the day. On Thursday, the Fieldbus Foundation conducted its annual business meeting for members only.



B.R. Mehta, senior vice president, Reliance Industries Ltd., delivered the General Assembly's keynote address, discussing the installation of FOUNDATION fieldbus at the new Jamnagar Refinery & Petrochemicals complex in Jamnagar, Western India. Mehta serves as chairman of the Fieldbus Foundation's End User Council—India and is a member of its End User Advisory Council (EUAC) worldwide. In addition, he is chairman of the Instrumentation Experts Club in Mumbai, India, and sits on the Board of Governors for Automation 2010—India's largest industrial automation exhibition and conference planned for September 21-24 in Mumbai.

Mehta's presentation described Reliance Industries efforts to deploy a world-class control system using the latest technology to achieve operational excellence at the Jamnagar refinery complex. The facility, recognized as the largest FOUNDATION technology refinery installation to date, is India's largest private sector enterprise. With a production capacity of 580,000 barrels-per-day (bpd), the operation, together with Reliance's neighboring 660,000-bpd refinery, forms the world's largest refining complex with a capacity totaling 1.24 million bpd.

"As part of the Jamnagar Export Refinery Project (JERP), our goal was to create next-generation control systems utilizing the rich intellectual property of our refining process, coupled with the latest automation technology, in order to achieve operational excellence unparalleled in the world," said Mehta. "In particular, the mission of process automation was to provide operational excellence in monitoring, controlling, and managing the process and the business; and to achieve an optimal level of integration between process control, operation support, and business support systems."



A company team of experts from operations, maintenance, and projects visited all major DCS vendor technology laboratories, as well as various end-user sites in China, seeking the optimal plant control solution, said Mehta. "We also considered references from other major petroleum industry companies in terms of technology advancement," he continued. "In the end, we concluded that FOUNDATION fieldbus is a well-proven automation platform, which is non-proprietary, open, and interoperable, and involves continuous supplier innovation. The FOUNDATION infrastructure is vendor-neutral and standards-based, and provides end-users with a common framework to implement and manage the most advanced control strategies."

Reliance specifications are now based on FOUNDATION fieldbus, and, "so far, our experience in handling this technology has been very good," added Mehta. "Based on feedback received from other plants worldwide, we believe the major benefit of the FOUNDATION solution is in asset management. Our next goal will be to get maximum benefit out of our fieldbus

installation and take full advantage of our control system capabilities."

For information about other upcoming Fieldbus FOUNDATION events, visit the Fieldbus Foundation [Website](#).

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University of Miskolc one step closer to becoming certified fieldbus training center



University of Miskolc, Hungary, has reached a significant milestone in its move to become an accredited training site offering fieldbus training courses certified under the FOUNDATION Certified Training Program (FCTP). The Fieldbus Foundation announced it has signed a license agreement with the school, recognizing University of Miskolc as a certified training center undergoing the rigorous process of auditing its educational curriculum and instructors to achieve full-certified training center status.

Once it has completed the accreditation process, University of Miskolc will become the preferred site for Fieldbus Foundation training for the Central & Eastern Europe region. Dr. Károly Jónap, department head, University of Miskolc, said, "I'm pleased that my team is one step nearer to offering certified FOUNDATION training to end users in Hungary and the neighboring area. We are looking forward to successfully completing our audit in the next few weeks and to a mutually beneficial partnership with the Fieldbus Foundation."

The certified training program establishes uniform standards for fieldbus educational curricula around the globe, and defines acceptable levels of learning for students of the technology. It is intended to raise the visibility and prestige of institutions offering certified FOUNDATION fieldbus training to a new and exclusive level. Educational facilities that successfully complete a multi-stage certification process can issue certificates stating the Fieldbus Foundation accredits their courses. They also will be recognized by the foundation on the Fieldbus Foundation Website.

Educational institutions must follow rigorous procedures to earn certified training site status for course instructors and curricula. Certified training centers are required to maintain multiple hosts and devices onsite to demonstrate competence with fieldbus technology. They must also satisfactorily show auditors that their course material adheres to predetermined instructional standards covering fieldbus segment limits; device replacements; commands, icons, menus, and screen designs of different software packages; and communication, scheduling, and function block assignments enabling configuration.

Certified instructors also are audited to ensure they have achieved specified Fieldbus Foundation training goals. Instructors must demonstrate expertise in such areas as human-machine interface (HMI) tools, fieldbus troubleshooting, simple device configuration, and device deployment and functionality across a fieldbus network.

Jürgen George, chairman of the Fieldbus Foundation Central & Eastern Europe Marketing Committee (FFCEEMC), is looking forward to the prospect of a fully certified training center in the CEE region. "One of the key objectives of the FFCEEMC is to provide technical training, support, and information about FOUNDATION technology and its applications to users and potential users throughout the CEE region at a local venue and, where possible, in a local language," said George. "To have a registered training center in Hungary that can support the region's technical training needs will be a great achievement for all those involved."

Several training centers around the world are participating in the FOUNDATION Certified Training Program. They include EMEA-based STC Brielle, The Netherlands and BIS Prozesstechnik GmbH, Germany, in addition to the University of Miskolc in Hungary.

More information about certified training and fieldbus training sites is available on the Fieldbus Foundation [Website](#).

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[Global News & Events](#)

EMEA Executive Advisory Council elects officers



Hartmut Wallraf, technology advisor—Invensys Operations Management and chairman—FDT Group, has been elected chairman of the Fieldbus Foundation's Europe, Middle East & Africa (EMEA) Executive Advisory Council (EAC) for the next annual term of office. Jean-Marie Alliet, EMEA technology consulting director and country business leader—Belgium, Honeywell Process Solutions, was elected vice chairman for the same term. Wallraf takes over the chair from Dr. Raimund Sommer of Endress+Hauser, and Alliet replaces colleague Richard Willems, formerly of Honeywell.

EMEA EAC members include: Gregor Kilian, ABB; Bob Sharp, Emerson Process Management; Dr. Raimund Sommer, Endress+Hauser; Dr. Peter Pockrandt, Hirschmann; Jean-Marie Alliet, Honeywell (vice chairman); Hartmut Wallraf, Invensys (chairman); Helmut Dunker, Krohne; Rob Stockham, Moore Industries; Peter Maxwell, MTL-Cooper Crouse Hinds; Dr. Gunther Kegel, Pepperl+Fuchs; M. Baret, Rockwell Automation; Dr. Peter Völker, R. Stahl; Dr. Wolfgang Trier, Softing (treasurer); and Henk van der Bent, Yokogawa.

Hartmut Wallraf

Marc Van Pelt, vice president, Fieldbus Foundation EMEA

Operations, welcomed Wallraf and Alliet to their new roles. "Firstly, I would like to thank Dr. Raimund Sommer for his dedication to the role of chairman over the last year and I'm looking forward to working closely with Hartmut and Jean-Marie over the forthcoming year as we progress further with several FOUNDATION technology and marketing initiatives throughout the EMEA region. The committee will have to work hard in today's challenging business environment," he continued, "but will have an exciting time in terms of the many technological advancements of FOUNDATION technology for automation infrastructures."



Jean-Marie Alliet

The Fieldbus Foundation EMEA EAC, a committee of senior executives from EMEA's leading control and instrumentation companies, was established in February 2005 in response to growing demand for FOUNDATION fieldbus in the EMEA industrial market. The advisory council is dedicated to promoting the adoption of FOUNDATION technology by automation equipment suppliers and end users. It ensures the funding and availability of human resources to support local fieldbus marketing activities across the EMEA region. The Fieldbus Foundation EMEA Steering Committee, together with local marketing groups, undertakes implementation of EAC's directives, as well as development of regional marketing initiatives.

Wallraf began his career studying electrical engineering at university. He joined Bayer, the German chemical company, and served as engineer and project manager for chemical plant engineering for five years. He then moved to Invensys Foxboro, where he has been for the last 30 years. He has held positions as project manager; service and engineering manager; sales and marketing manager; managing director of various Invensys businesses in Germany and Europe; senior vice president of RD&E for system products in Foxboro, Massachusetts; and CTO for the business group. He is currently a member of the senior management team at Invensys Operations Management as technology advisor and is the FDT Group's chairman of the board.

Alliet studied for a degree in electronics and measurement and control. Upon joining Honeywell Process Systems (HPS) in Belgium in 1985, he held several positions in sales support, system engineering, application engineering, project management, and account management. With Honeywell's EMEA organization since 1995, he has been leading the field marketing team and the EMEA sales support team, which is responsible for rolling out HPS' system platforms. Currently based in Honeywell's EMEA headquarters in Brussels, Alliet holds the position of HPS' EMEA technology consulting director, and represents EMEA interests in the global team that drives HPS' technology investments. He is also HPS' country business Leader—Belgium.

For more information about EMEA activities, visit the Fieldbus Foundation [Website](#).

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Vancouver seminar shows value of Fieldbus technology instruction

By Ian Verhappen (reprinted from ControlGlobal.com)

I had the opportunity to attend the Fieldbus Foundation Seminar in Vancouver recently, and



was not only pleasantly surprised by the turnout—some folks drove up from Seattle—but, more importantly, by the fact that several EPC companies were represented. This was the second of the 2010 North America seminar series.

Most of the industrial communications foundations (Profibus, FDT, etc.) have similar programs, so be sure to keep your eyes and ears open for the opportunity to partake of this free training when it comes to your neighborhood, because you can be sure that it eventually will. Most of these events also distribute professional development hour (PDH) certificates as well.

Despite being active in this technology for over a decade, I have found every time you attend an event like this, you are always sure to learn something, and it was a good opportunity to reinforce some of those little things you tend to forget over time. This year, the seminar agenda presents a short lecture on each stage of a typical installation, followed by a "live" demonstration of the discussion actually being put into practice. Topics covered include planning, design, installation/maintenance/troubleshooting, commissioning and configuration, maintenance and troubleshooting, and actual case studies to emphasize what is possible once all the pieces are working.

Of course, attending events like this also has the intangible benefit of letting you actually meet the people that are either experiencing the same pains as you with their first fieldbus project or those who have a closet full of T-shirts from having been there already. If you want to learn more about a fieldbus technology being considered for your project, seminars like this are a good way to get started.

For additional information about North America events, visit the [Fieldbus Foundation Website](#).



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German FOUNDATION fieldbus forum draws strong turnout



More than 100 participants took part in the fifth German FOUNDATION Fieldbus Conference, organized by the Fieldbus Foundation German Marketing Committee. Established FOUNDATION fieldbus end users shared their experiences at the event, which was held at the Industriepark Höchst, Frankfurt am Main, Germany, on Thursday, January 28, 2010.

Dr. Niels Kiupel, Evonik Industries AG, explained why fieldbus has become the optimum form of communication across the plant. Herr Klaus Fahrner and Michael Rauscher of Nurinova/Celanese AG reviewed their six-year experience with FOUNDATION fieldbus and concluded that in the future all new control and automation applications will implement the technology.

In addition to the end-user program, Tim-Peter Henrichs, a member of the German marketing committee, updated delegates on the economic benefits of Control in the Field (CIF) with FOUNDATION fieldbus. The ARC Advisory Group recently published a whitepaper titled "The Business Value Proposition of Control in the Field," following a quantitative study and evaluation. The event was sponsored by Burkert, Emerson Process Management, Endress+Hauser, Honeywell, Invensys, Leoni, MTL Instruments, Pepperl+Fuchs, Phoenix Contact, R. Stahl, Samson, Softing, and Yokogawa.

All sponsoring companies had tabletop exhibits throughout the conference, with representatives available to discuss products and applications during break times. Thomas Kasten, a member of the EMEA Steering Committee, gave an overview of the key products and services offered by the exhibiting sponsors, which helped to initiate informative discussions and exchanges between end users and suppliers.

Attendees also had the opportunity to participate in a choice of two out of three parallel discussion groups on the subject areas of tendering and planning; operation, maintenance, and diagnostics; and control in the field and fieldbus for safety instrumented functions. The roundtable discussions were moderated by industry experts Dr. Volker Oestreich, chief

editor of Drives and Motion; Wolfgang Siess, editor of Messtec and Automation; and Armin Scheuermann, chief editor of Chemie Technik.

In addition to the full conference program, delegates were offered the opportunity to attend a basic FOUNDATION fieldbus training course the previous day at the purpose-built fieldbus laboratory at the BIS Prozesstechnik centre of excellence. The training course included technical presentations enhanced by practical demonstrations that used a test host system and multiple field devices. Topics covered included a general overview of fieldbus technology and its key features/benefits; architecture and functionality of FOUNDATION technology; and comparisons with conventional technologies.



For information about future German marketing committee activities, visit the Fieldbus Foundation [Website](#).

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India Marketing Committee and ISA Chennai chapter host end-user event



The Fieldbus Foundation India Marketing Committee (FFIMC), the Fieldbus Foundation India End User Council, and the ISA—Chennai Chapter hosted a one-day FOUNDATION fieldbus end-user conference and meeting at the IIT Convention Centre, Adayar, Chennai, on February 6, 2010. Instrumentation professionals, engineers, engineering consultants, EPCs, and members of the ISA based in and around Southern India were able to share their knowledge and application experiences, and had the opportunity to gain practical insights from a live Honeywell demonstration system.

Ranganath Muthu opened the conference and welcomed the delegates. This was followed by Thampy Mathew (Chairman-FFIMC), who gave an overview of the FFIMC, and Vijay Araghavan, who outlined the organization and activities of ISA Southern India.

Guest of honor Prof. P.A. Janakiramen of IIT Madras gave an introduction to FOUNDATION fieldbus in his opening address. The program continued with presentations by end users and consultants that outlined the speakers' own experiences of implementing FOUNDATION fieldbus in their plants. Also, members of the FFIMC gave technical presentations about various aspects of FOUNDATION technology, including physical layer components and cables, system information, and asset management.

Delegates enjoyed several opportunities for discussions with fieldbus experts from several Fieldbus Foundation member companies at the tabletop displays. The day concluded with a practical, hands-on session using a live FOUNDATION fieldbus system from Honeywell.

For information about future India Marketing Committee and End User Council activities, visit the Fieldbus Foundation [Website](#).

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'Tea & Technology' highlights Process Automation 2010 in Hannover, Germany



The Fieldbus FOUNDATION is exhibiting at this year's Process Automation 2010 exhibition and conference at the Hannover Messe, Germany, which took place April 19-23, 2010.

Following its popular theme of "Tea and Technology," the Fieldbus Foundation again occupied stand B09, a prime 250-sq-m corner stand in Hall 7, which is dedicated to process automation technologies. Visitors to the stand were invited to sample a choice of 30 specialty teas during their discussions with Fieldbus Foundation staff and representatives from the participating member companies.

Coordinated by the Fieldbus Foundation German Marketing Committee, the stand layout featured purpose-built kiosks demonstrating FOUNDATION technology solutions and applications through the static and operational displays of registered devices, host systems, tools, and services available from at least 14 of the world's leading automation equipment suppliers. In addition, information was available about the latest technological developments from the Fieldbus Foundation, including the economic benefits of Control in the Field and FOUNDATION for Safety Instrumented Functions (FF-SIF).

Participating members at Process Automation 2010 included Bürkert, CodeWrights, Emerson Process Management, Endress+Hauser, Fieldbus International, Heinrichs Messtechnik, Leoni Kerpen, M&M Software, Pepperl+Fuchs, Phoenix Contact, R. Stahl, Siemens, Softing, and Yokogawa.

For more information about the Fieldbus FOUNDATION German Marketing Committee and its activities, visit the Fieldbus Foundation [Website](#) or send an [email](#) to the Committee.

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Southern Africa Marketing Committee to participate in upcoming roadshows

The Fieldbus FOUNDATION Southern Africa Marketing Committee (FFSAMC) has announced plans to participate in a series of CONTROL Roadshows during 2010 at the following South Africa locations:

- July 22: Secunda
- August 26: Port Elizabeth
- September 16: Rustenburg
- October 21: Vaal

For more information about these and future South Africa events, visit the Fieldbus Foundation [Website](#).



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Fieldbus Foundation offers educational events worldwide

The Fieldbus FOUNDATION is developing informational and educational events to be held around the world in 2010. Make plans now to

attend an event in your area.

LOCATION	DATE	EVENT and CONTACT INFORMATION
EVENTS IN NORTH AMERICA		
New Orleans, LA, USA	Oct. 19, 2010	FOUNDATION Fieldbus End User Seminar More information to come
Beaumont, TX, USA	Oct. 21, 2010	FOUNDATION Fieldbus End User Seminar More information to come
EVENTS IN EMEA (EUROPE, MIDDLE-EAST, AFRICA)		
Secunda, South Africa	July 22, 2010	Control Roadshow Click here for more information
Port Elizabeth, South Africa	Aug. 26, 2010	Control Roadshow Click here for more information
Rustenburg, South Africa	Sept. 16, 2010	Control Roadshow Click here for more information
Rome, Italy	Sept. 2010 (TBD)	TECNIP-FOUNDATION Fieldbus End User Seminar Click here to email for more information
Milan, Italy	Sept. 2010 (TBD)	ENEL-FOUNDATION Fieldbus End User Seminar Click here to email for more information
Istanbul, Turkey	Sept. 2010 (TBD)	FOUNDATION Fieldbus Roadshow Click here to email for more information
Istanbul, Turkey	Sept 29, 2010	FFCEEMC Meeting Click here to email for more information
East England	Oct 2010 (TBD)	FOUNDATION Fieldbus End User Seminar Click here to email for more information
Twickenham, England	Oct 2010 (TBD)	FOUNDATION Fieldbus End User Seminar Click here to email for more information
Vaal, South Africa	Oct. 21, 2010	Control Roadshow Click here for more information

Miskolc-Lillafured, Hungary	Oct. 25-27, 2010	DCS 16 Conference Click here for more information
Plock, Poland	Oct. 2010 (TBD)	FOUNDATION Fieldbus Roadshow More information to come
Brno, Czech Republic	Nov. 2010 (TBD)	FOUNDATION Fieldbus Roadshow More information to come
Jubail, Saudi Arabia	Dec. 5, 2010	FOUNDATION Fieldbus End User Seminar/Roadshow More information to come
Yanbu, Saudi Arabia	Dec. 6, 2010	FOUNDATION Fieldbus End User Seminar/Roadshow More information to come
Kuwait City, Kuwait	Dec. 8, 2010	FOUNDATION Fieldbus End User Seminar/Roadshow More information to come
Ruwais, United Arab Emirates	Dec.9, 2010	FOUNDATION Fieldbus End User Seminar/Roadshow More information to come
Gdansk, Poland	Jan. 2011 (TBD)	FOUNDATION Fieldbus Roadshow More information to come
Leverkusen, Germany	Jan. 2011 (TBD)	FOUNDATION Fieldbus End User Seminar More information to come
Linz, Austria	Oct. 4-6, 2011	FOUNDATION Fieldbus Presentation, SMART Automation Exhibition More information to come
EVENTS IN ASIA/PACIFIC		
Xiamen, China	July 15, 2010	FOUNDATION Fieldbus End User Seminar More information to come
Nanjing, China	Nov. 11, 2010	FOUNDATION Fieldbus End User Seminar More information to come
Thailand	To be determined	FOUNDATION Fieldbus End User Seminar More information to come

Malaysia	To be determined	FOUNDATION Fieldbus End User Seminar More information to come
Jakarta, Indonesia	To be determined	FOUNDATION Fieldbus End User Seminar More information to come
The Philippines	To be determined	FOUNDATION Fieldbus End User Seminar More information to come
Osaka, Japan	To be determined	FOUNDATION Fieldbus End User Seminar More information to come
Korea	To be determined	FOUNDATION Fieldbus End User Seminar More information to come
EVENTS IN INDIA		
Mumbai, India	Sept. 21-24, 2010	Automation 2010 More information to come

For more information, visit the Fieldbus Foundation [Website](#).

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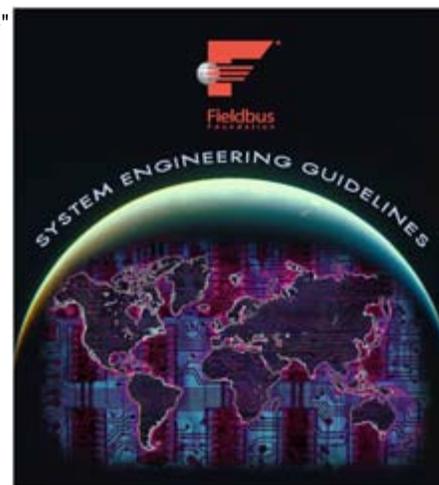
Technology News

Updated FOUNDATION Fieldbus 'System Engineering Guideline' now available

An update of the Fieldbus Foundation's "FOUNDATION Fieldbus System Engineering Guideline" (AG-181) revision 3.1, is now available. The new document provides comprehensive information on how FOUNDATION fieldbus-based control systems are specified, installed, configured, and commissioned.

The guide is divided into 10 sections, each addressing a key aspect of Fieldbus project implementation. They include:

- Introduction and scope, references and definitions
- Project requirements
- Host system requirements
- Software configuration guidelines
- Field device requirements
- Segment component requirements
- Fieldbus network/segment design guidelines



- Site installation guidelines
- Acceptance test requirements
- Documentation requirements

Appendix topics include:

- Host interoperability support test
- Cable characteristics
- Shielding methods
- Risk management
- Fieldbus segment testing documentation
- Segment and loop drawings
- Maintenance
- Acceptance test procedures

To obtain a copy of "FOUNDATION Fieldbus System Engineering Guideline (AG-181) revision 3.1," call (512-794-8890, Ext. 21) or [email](#) the Fieldbus Foundation.

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Products & Solutions

ABB event urges end users to 'harness the power of integration'



Do you know about FOUNDATION fieldbus High Speed Ethernet (HSE) and the advantages of a FOUNDATION automation architecture built around Linking Devices? Do you have questions about Electronic Device Description Language (EDDL) benefits and how to use one of the first registered host systems with that functionality? These were just some of the subjects covered in more than 100 workshops presented at ABB's Automation & Power World, May 18-20, 2010, in Houston, TX.

The Fieldbus and Wireless Technology track provided a solid overview of the information needed to optimize application of fieldbus technology. Included in the track was the workshop FOUNDATION Fieldbus: Beyond the industry standard, presented by Fieldbus Foundation marketing manager Bill Tatum. Professionals working with FOUNDATION technology or budgeting for fieldbus-related projects—including system engineers, plant operators, system integrators, and plant managers—benefitted from attending this workshop.

The Automation & Power World event also featured approximately 90,000 sq. ft. of exhibit space showing Integrated Power and Process products and services from ABB. Highlights included the Unified Fieldbus Infrastructure, where FOUNDATION fieldbus is a key component in the creation of the highly integrated environment that optimizes the plant process and the electrical systems that are critical to overall business success and profitability.

For more information, or to register to attend the event, visit the [ABB Website](#).

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Microcyber Fieldbus OEM solutions simplify device development

Fieldbus OEM solutions from Microcyber help automation equipment suppliers develop FOUNDATION fieldbus devices. Offerings include a newly designed FOUNDATION fieldbus H1 communication board that can be tailored to specific requirements. The board quickly allows a traditional instrument to be upgraded to FOUNDATION technology, and includes a communications stack, function blocks,



communication circuit, and interface circuit.

In addition, Microcyber provides technical support for FOUNDATION fieldbus registration testing, and for integration testing with all kinds of distributed control systems (DCSs). FOUNDATION fieldbus Interoperability Test Kit (ITK) pre-testing services are also available.

For more information, visit the Microcyber [Website](#) to download Fieldbus development case studies and datasheets.

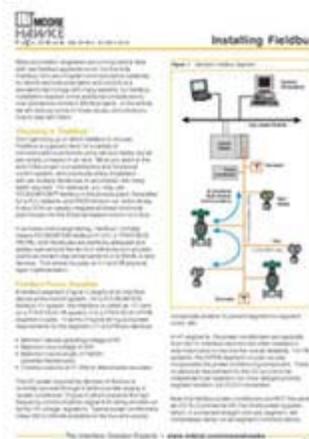
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Moore Industries, MooreHawke offer Fieldbus whitepapers, more

An extensive selection of fieldbus and instrumentation whitepapers and articles by Moore Industries and its fieldbus division MooreHawke are now available on the company Website.

Among the dozens of resources and papers online are:

- **Installing Fieldbus in Real Life Applications.** For the first time, automation engineers are coming face-to-face with real fieldbus applications. Although Fieldbus is a wonderful technology with many benefits, its installation requires considerations over and above typical 4-20 mA projects.
- **Intrinsically-Safe Fieldbus for Hydrocarbon Processing Plants.** For about 30 years, the oil and gas industry has considered it a given that intrinsic safety (IS) is the natural technique for explosion-proof protection of electronic instruments. Now Fieldbus users want complex processing and digital communications to and from many devices in intrinsically safe applications. The key is delivering enough power to a large number of field devices.
- **Implementing FOUNDATION Fieldbus Networks in Hazardous Areas.** Many engineers today find themselves questioning which bus technology to implement in their facilities. And if that decision isn't difficult enough, the subject is complicated by having to implement your chosen bus in a hazardous area.



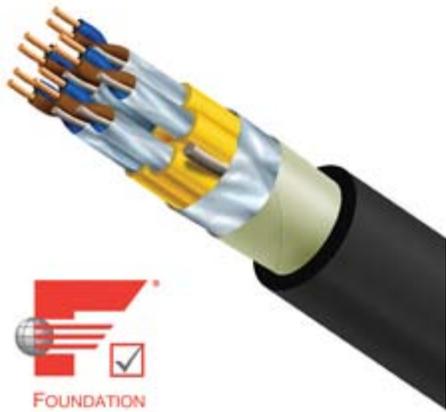
For more information and a complete listing of articles and whitepapers, visit the Moore Industries/MooreHawke [Website](#).

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Northwire fieldbus cables speed marshaling cabinet wiring

DataCell FOUNDATION fieldbus M-EZ (Marshal-EZ) cables from Northwire offer up to 24 individually foil-shielded pairs with an extruded binder over each pair—all within a single cable. Performance-guaranteed and custom-configured to specific requirements, the cables can be installed quickly and simply into marshaling cabinets without shrink tubing.

The FF-844 registered cables are ITC/PLTC-rated for exposed-run applications. Easy to strip and install, the cables offer superior ground system integrity and eliminate the potential for cross continuity between shields. Because they have passed crush and impact tests for metal-clad cable, they eliminate the need for conduit. Product line includes arctic-rated and marine-shipboard-listed versions suitable for -60° C. CSA, ABCD armored cables are also



offered.

Options include single- or multi-paired bus cables; individually or overall foil-shielded pairs with drain; overall tinned copper braid for low-frequency noise immunity; 16 AWG for longer runs, and 18 AWG in single-shielded, twisted-pair spur or multi-pair cables; and several jacket and inner-conductor colors with optional ground wire. Characteristic impedance Z_0 is $100\Omega \pm 10\Omega$ at 31.25 kHz. Other versions are available off-the-shelf in bulk quantities.

Northwire offers free design and prototyping services, no minimum length or quantity requirements, and fast delivery. Complimentary product samples are available.

For more information, visit the Northwire [Website](#).

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Pepperl+Fuchs tool validates fieldbus segments quickly

Pepperl+Fuchs has introduced Segment Checker version 1.20, a unique and easy-to-use tool for validating the design of FOUNDATION fieldbus and Profibus PA segments, even in hazardous areas. Users simply drag and drop components into the project window, and edit the attributes to build a fieldbus segment. New to version 1.20 are the latest FieldConnex fieldbus products and enhanced calculations for field barriers used in the High Power Trunk method. Segment Checker 1.20 also allows users to export a project in a graphic format for use in different media.

Segment Checker lets users intuitively check operational parameters to validate fieldbus segment architecture; display, archive, and print an entire design; and import field devices from a library or create new devices using the "device editor" feature. Clicking on a device

gives direct access to up-to-date technical and product information on the Pepperl+Fuchs Website. Cables can be tagged and attributes defined by the user. Spur cable length can also be set to a defined number, eliminating repetitive editing in larger projects.

For more information, visit the Pepperl+Fuchs [Website](#).

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Pepperl+Fuchs diagnostic module easy to configure, simple to operate

The new HD2-DM-A.RO Stationary Diagnostic Module with Relay Output from Pepperl+Fuchs is easy to configure and simple to operate. The cost-effective physical layer monitoring and diagnostic solution enables users to monitor continuously the jitter, noise, and signal level of up to four FOUNDATION fieldbus or Profibus PA segments with a single module.

"When it comes to continuous online monitoring of fieldbus segments and the PowerHub, there isn't a simpler or more cost-effective solution than the HD2 diagnostic module with



relay output," says Brian Traczyk, product manager, Pepperl+Fuchs. "The user simply sets the signal, noise, and jitter warning levels via easily accessible DIP-switches, with no software required. After the DIP-switches are set, the user just plugs the module into the motherboard to initiate physical layer monitoring. Any warnings will cause a summary alarm via voltage-free contact at the fault output on the motherboard."

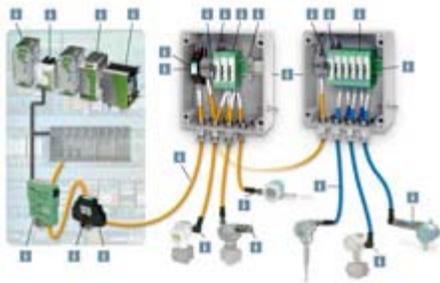
Only a small amount of engineering is needed to put physical layer monitoring into practice. The HD2-DM-A.RO quickly and easily snaps into the diagnostic module slot on any PowerHub motherboard, and puts no additional loading on the bus. A single relay contact input to the control system provides annunciation for the whole Power Hub.

The HD2-DM-A.RO is Zone 2/Div 2 mountable, and provides protection in accordance with IEC 60529, shock resistance in accordance with EN 60068-2-27, and vibration resistance in accordance with EN 60068-2-6. The module is ideal for entry-level users who need to monitor the fieldbus physical layer continuously.

For more information, visit the Pepperl+Fuchs [Website](#).

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New Phoenix Contact selector tool demos products for fieldbus applications



Modular fieldbus components from Phoenix Contact save critical installation and maintenance time. Learn more about them from the company's new "Solutions Selector" for FOUNDATION fieldbus applications, which demonstrates the wide range of fieldbus products the company offers—from the host to the instrument, from bulk power and cordsets to surge protection and terminals.

"Info" icons help the user navigate quickly and easily through the diagram. Mouse over the icon to obtain a brief description of the product category; click on the icon for detailed information from Phoenix Contact's online catalog, which offers a full complement of articles in each category, not just those shown in the diagram. The site also includes links to activities in your country or region.

To learn more about the "Solutions Selector," or to try it out the tool, visit the Phoenix Contact [Website](#). Additional information is also available by calling the company at 1-800-322-3225.

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Module-based architecture from Phoenix Contact eases system expansion

Phoenix Contact's module-based architecture saves space and reduces installation time. This breakthrough technology makes it easy to expand a system as, and when, you need to. Never over-engineer your system again.

The system provides benefits across the functional disciplines involved in project planning and execution, such as design and engineering, installation, operation, and maintenance.

Features and benefits include:



- Easy expansion for spare capacity: buy only what you need, and use what you buy;
- Selectable current limit: limited overhead for short circuits;
- Flexibility: Different spur counts per segment and a mix of approval types;
- Channel-to-channel isolation: contain noise and offsets, ease shielding;
- Small module size and front cable entry: limited size and weight of the field enclosure;
- Selectable shielding: easily meet any shield ground topology;
- Hot-swappable: live maintenance without process interruption; and
- Single-loop integrity: safeguard your process.

For more information, call the company at 1-800-322-3225 or visit the Phoenix Contact [Website](#).

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Rockwell Automation's 'Day in the Life' demo now available online

Rockwell Automation's popular "Day in the Life" demo is now available online. The multimedia disc features PlantPAX case histories, Flash primers, product literature, and commentary from Rockwell Automation experts.

PlantPAX
Process Automation System

Visitors to the Rockwell Automation Website can see detailed demonstrations of the PlantPAX Process Automation System for applications ranging from burner management to recipe control. All attributes of the PlantPAX system are covered, including:

- System core and utilities
- Process information
- Batch and sequential control
- Asset management and field device Integration
- Critical safety control
- Advanced process control

The PlantPAX asset management demonstration features FactoryTalk AssetCentre process device configuration, which uses FDT technology to standardize the communication interface between field devices and systems.

View the PlantPAX demonstration on the Rockwell Automation [Website](#).

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Softing USB interface allows portable access to H1 Fieldbus networks

Softing's high-performance, economical USB interface device for FOUNDATION fieldbus H1 networks (FFusb) provides easy access to H1 field devices over the USB interface of a desktop or notebook computer. A user can participate on the fieldbus network as a "link master" or a "visitor."

Traditionally, the configuration and parameterization of field devices is performed by a central control system. The approach is progressively complemented with current and



new computer technology. For example, today's inherently portable notebook devices allow device parameterization and immediate diagnostics to be performed directly in the field, significantly reducing the time needed to commission and troubleshoot a network.

At the same time, the conventional PC Card solution for notebooks has been replaced with flexible USB interface technology to combine fast data-throughput with a straightforward data exchange mechanism. Softing's FFusb, based on this progressive technology, can be used to monitor, configure, and parameterize H1 field devices.

Softing also offers a high-performance FOUNDATION fieldbus communications DTM (FF commDTM) that supports all standard FDT container applications such as fdtCONTAINER, FieldCare, PACTware, and other FDT frame applications.

For more information, visit the Softing [Website](#).

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Softing fieldbus kits shorten development cycles for FOUNDATION H1 devices



Fieldbus Kit (FBK), an industry-hardened, economical off-the-shelf communication board from Softing, allows the rapid development of FOUNDATION fieldbus H1 and Profibus PA field devices for intrinsically safe (IS) and non-intrinsically safe environments. Today, a large number of well-known manufacturers of process automation equipment are relying on the kit to install thousands of devices in the field.

FBK offers an excellent way to enhance any field device with Fieldbus Foundation technology. The fully pre-certified communications board entirely encapsulates FOUNDATION fieldbus. Existing field devices are easy to retrofit with the on-board HART and serial Modbus/RTU interface.

Combined with the fully documented interface, FBK ensures:

- Short development cycle: time-to-market can be as fast as 3 months;
- Minimal development risks: the pre-certified communication board hardware is ready-to-use; and
- Low development costs: no additional costs for fieldbus physical-layer testing are incurred.

FBK is qualified for ATEX-EEEx II 2G (1) GD EEEx IIC T4. The Softing FOUNDATION fieldbus development team is available on request to customize the device for specific needs.

More information is available on the Softing [Website](#).

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Yokogawa plant asset management system adds new features



Plant Resource Manager (PRM) R3.05, an online and centralized automation asset management system, is now available from Yokogawa Electric Corp., a world leader in process control and instrumentation technology. This powerful solution incorporates a number of new features, including:

1. **Support for new platforms.** In addition to Microsoft Windows XP, Vista, and Server 2003, PRM R3.05 now supports Windows 2008 and SQL 2008 Server as new operation platforms.
2. **Maintenance marks.** The system enables users to put maintenance marks electronically on individual field devices so that the maintenance team can share the same information online. When unified with the Centum integrated production control system, field device status and maintenance information can be shared among operators in the control room and maintenance personnel in the field. The PRM solution helps prevent unexpected incidents and failures in plant operation, and expands data collection capabilities to improve maintenance strategies.
3. **Support for multiple communication protocols.** PRM R3.05 supports Profibus DP and ISA100.11a wireless devices, along with instruments using the FOUNDATION fieldbus and HART communication protocols. The system is able to set or change parameters and monitor device status using device DTM, comm DTM, and gateway DTM for a wider variety of field devices.

More information is available on the Yokogawa [Website](#).

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