Field Communication Insider

Field Communication Insider is an e-newsletter featuring the latest news and developments in the application of HART, FOUNDATION Fieldbus and FDI technology around the world. To ensure that you continue to receive Field Communication Insider, please add pstudebaker@putman.net to your address book and subscribe here.

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NEWS

FOUNDATION Usability Initiative Shows Progress
Several important milestones reached in simplifying the implementation and operation of FOUNDATION Fieldbus-based digital controls systems in the process industries. Read more.

Successful Events Demonstrate Digital Innovation in Asia-Pacific Region
FOUNDATION Fieldbus, HART, HART-IP, WirelessHART and FDI seminars held in October and November revealed strong interest in digital transformation throughout the global industrial sector. Read more.

FieldComm Group to Participate in ARC Industry Forum in Orlando
Themed around "Realizing the Digital Enterprise," this year’s forum will include workshops, keynotes, presentations, and panel discussions that will delve into a number of key topics of interest to the automation industry. Read more.

Latest Registered FOUNDATION Fieldbus and HART Products
The number of FOUNDATION Fieldbus and HART products registered by the FieldComm Group continues to grow. Read more.
First Ever Officially Registered HART Host System

Wally Pratt, director of HART technology, FieldComm Group, termed the inaugural HART DD host registration 'a major milestone' in the continued progress of HART technology. [Read more.](#)

**FOUNDATION Fieldbus Contributes to Record-breaking Power Plant Efficiency**

EDF, a major French energy supplier, in cooperation with General Electric Power Generation, has generated more than 605MW for the world’s most efficient combined-cycle power plant in Bouchain, France. [Read more.](#)

**NEW PRODUCTS**

New product news you might be interested in:

- [CodeWrights Offers Multi-tool for Field Device Troubleshooting and Commissioning](#)
- [Moore Industries HCS HART Concentrator System: HART-to-MODBUS RTU Converter](#)
- [Moore Industries Has SSX and SST Safety Isolators for Digital HART Signals](#)
- [Phoenix Contact Launches Videos Describing HART Technology](#)
- [Phoenix Contact Provides WirelessHART Gateway Firmware Update for HART IP and Expanded Modbus Functionality](#)
- [Softing Offers Fieldbus Configuration Tool for Linking Devices and Portable USB interfaces](#)
- [Softing Linking Device Moves Fieldbus Data to IIoT and Industry 4.0 Cloud Applications](#)

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**CALENDAR**

Upcoming Events

**North America**

ARC Industry Forum
Asia Pacific

End User Seminar

Kuala Lumpur, Malaysia
January 2017
» More Information

End User Seminar

Tokyo, Japan
March 2017
» More Information

Working Group Meeting

Hong Kong S.A.R., China
March 27-30, 2017
» More Information

FDI Plugfest

Hong Kong S.A.R., China
March 30-31, 2017
» More Information

End User Seminar

Jakarta, Indonesia
May 2017
» More Information
Efforts to simplify the implementation and operation of FOUNDATION Fieldbus-based digital controls systems in the process industries continue to show progress, with the FieldComm Group’s Working Group helping the technology reach several important milestones.

Initially launched in May 2013, the Fieldbus FOUNDATION (now FieldComm Group) Usability Initiative was intended to make the digital fieldbus automation experience easier than conventional analog control systems in every conceivable way, from device setup to device replacement and daily maintenance practices.

The goal was to listen to the industrial marketplace and provide a managed infrastructure for process automation that allows end users to focus on their processes and their plants, not the technology tying everything together behind the scenes.

**What is “usability?”**

In the technical world, usability problems require the engineer to take off his or her engineering hat and think more like a user. The term “usability” is sometimes reduced to "easy to use," but this over-simplifies the problem and provides little guidance. A more precise definition can be applied to understand user requirements, formulate usability goals, and decide on the best techniques for usability evaluations.

The international standard, ISO 9241-11, provides guidance on usability and defines it as:

“The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.”

**Usability is about:**

- Effectiveness – Can users complete tasks and achieve goals with the product (i.e., do what they want to do)?
- Efficiency – How much effort do users require doing this (often measured in time)?
- Satisfaction – What do users think about the products ease of use?
Usability is affected by:

- The users – Who is using the product (e.g., are they highly trained and experienced users, or novices)?
- Their goals – What are the users trying to do with the product (e.g., does it support what they want to do with it)?
- The usage situation – Where and how is the product being used?

When it comes to industrial control systems and instrumentation, usability is all about human Interaction. It addresses the user experience and making the user interface (UI) simple and intuitive.

For many automation stakeholders, the inherent change from analog to digital technology hasn’t been the problem; it’s that users don’t understand how to employ new digital networks. Some plant engineering departments maintain a “4-20 mA mindset” in their technology decisions and practices. Instrument technicians have been known to ask, “Why can’t a digital device simply have its wires landed, be calibrated, and then start working?” Indeed, the idea of a device “driver” to make a device talk to a host system was once foreign to plant workers.

Identifying the challenges

The FOUNDATION Fieldbus usability initiative was conceived as a way to make intelligent devices easier to deploy and operate than traditional 4-20 mA technology. It began with surveys of the global supplier and end users communities to determine their “pain points” in utilizing fieldbus, followed by the development of case studies to resolve their issues.

An important motivation for the usability initiative was opening the market to applications involving single-loop controllers, supervisory control and data acquisition (SCADA) systems, remote terminal units (RTUs) and other hosts requiring a simplified interface to FOUNDATION Fieldbus. Working groups sought a manageable integration approach enabling end users to get started with digital technology as an alternative to traditional I/O, then expand data utilization through asset management applications, and finally advance to even more beneficial functionality like control in the field. In this way, plants could take advantage of the core features of fieldbus without encountering unnecessary complexity or training requirements.

A particular area of concern for the usability initiative has been eliminating the need to employ Electronic Device Descriptions (EDDs) for basic process variable (PV) integration – a key consideration in a wide range of device
replacement scenarios. The goal is PV device interchangeability, whereby end users can swap out different vendors’ products with different feature sets and still get the PV value with no engineering effort.

In many cases, plants faced with replacing fieldbus instruments want to install the identical device type and software revision, as well as maintain existing PVs, diagnostics, etc., as part of a seamless, automated process.

An overall priority for working group members has been replicating familiar 4-20 mA work practices in fieldbus installations. Most industrial facilities have three distinct roles involved with control systems and device networks: Operations, Engineering and Field Technicians. System engineers are tasked with configuring the function blocks used by operators, while field technicians are responsible for device set-up. Unlike traditional analog environments, these roles can overlap with fieldbus. True “plug and play” performance means eliminating the need for Device Description (DD) downloads from the control system, especially when replacing field instruments during off-hours or on weekends. Personnel should be able to set a few key parameters (e.g., device tags) on the replacement fieldbus device, attach it to the network, locate it automatically, and receive the PV. This requires a distributed set of network configuration rules allowing system and device configurations to be pre-set without the need for a full system download.

**Undertaking the work**
The comprehensive, standards-based usability project had four main starting objectives for its development work: Backwards Compatibility, DD Templates, Automated Device Replacement, and Standard Connection Points.

**Backwards Compatibility** – This “future-proofing” technique allows users to feel confident that in a replacement scenario of a field instrument with a different revision level, they will be able to maintain a minimum level of functionality within the new device. While the user may not be able to take advantage of the latest feature enhancements of the new device, the backwards compatibility parameter will make it possible to operate the new instrument on the old device’s DD until the system can be updated with the latest DD file to take full advantage of the new instrument’s capabilities/enhancements. Backwards compatibility is an important part of developing full device replacement strategies in the future.

**DD Templates** – Further to the simplification of FOUNDATION Fieldbus, DD templates help users configure their devices to their specific application using a pre-defined set of values that come loaded in the device from the manufacturer. FOUNDATION fieldbus also allows for multiple templates to be supported in each device, thus giving the user additional flexibility to choose between varying templates. Each template in FOUNDATION fieldbus is identified by a label and can be filtered. Additionally, each template can contain local help information within the device.

The goal of DD templates is to give individual users a basic foundation upon which to build a specific device configuration. From there, the user can decide if it is necessary to make additional configuration changes or if the standard template achieves all that is required for the application.

**Automated Device Replacement** – Automation of device replacement allows the configuration in an existing field device to be restored in a newer version of that instrument without manual intervention. This “plug-and-play” solution ensures features are consistent between different generations of devices without reengineering the host configuration or changing any element of the H1 network other than the new instrument. This results in greater predictability in fieldbus implementation, while reducing integration risks.

**Standard Connection Points** – Standard connection points is the dream scenario for the “Saturday 3 a.m.” instrument failure that inevitably occurs during a blizzard. A user needs to quickly get the process back up and running with as little effort as possible. If he or she can at least get the primary value out of the instrument, then it’s possible to run the process until Monday morning when the engineering department shows up and can configure all the enhanced features like advanced diagnostics, control in the field, etc. Essentially, a user should be able to get the PV without a DD. By decoupling the PV from the DD, FOUNDATION fieldbus maintains all the benefits of advanced capabilities while gaining the simplicity of traditional 4-20 mA signals. In fact, FOUNDATION Fieldbus will be easier than 4-20 mA because devices will not need to be ranged or calibrated before the operator has meaningful data. It is the best of both technologies wrapped into a single architecture.
In 2014, the FOUNDATION Fieldbus specification was updated to include support for fieldbus device replacement and backwards compatibility, DD templates, field diagnostics and alarm/alert integration. The ability to utilize these enhanced features was included in Host Profile C, which required hosts to integrate field diagnostics into alarm management systems, rather than just provide access to the information in a device view. Application time support also became mandatory under Host Profile C. This feature requires a time stamp capability in the host system, which will start on an actual calendar date and time.

**Status of ongoing efforts**
FieldComm Group technical teams are currently validating new “fieldbus for I/O” specifications and working on device/system interface prototypes based on the usability initiatives. This will be followed by the release of Interoperability Test Kit (ITK) Version 7.0 incorporating developments such as standard connection points and other enhanced features.

FieldComm Group’s director-fieldbus products, Stephen Mitschke, stated, "The enhanced usability features in our technical specification will make it easier for both automation suppliers and end users to realize the full value of FOUNDATION technology. They are specifically aimed at simplifying fieldbus implementation, operation and maintenance."

According to Mitschke, progress in the area of usability will eliminate arguments for the continued use of 4-20 mA technology in most process plants. End users will come to realize that FOUNDATION Fieldbus delivers the information they are accustomed to – in the same familiar format – while providing the opportunity to put advanced digital functionality to work when the time is right.

“Specifications and test equipment for backwards compatibility and like-device replacement are available today. Other valuable features, including DD templates and PV interchangeability, will be completed in the near future,” Mitschke said. “These system-focused solutions will provide an excellent return on investment and help industrial organizations take advantage of the inherent robustness of FOUNDATION technology.”

In conjunction with the usability initiative, FieldComm Group now offers a choice of test tools to meet the needs of the automation developer community. These kits are available at different levels, depending upon the technology features that must to be supported. For example, the latest version of the H1 ITK includes enhancements that make it easier for end users to replace “Like for Like” devices. In other words, the procedure for replacing a device with a newer revision level of the same make and model of device is automated to allow the configuration in an existing field instrument to be restored in a newer version of that instrument without manual intervention.
Currently available test kits include:

- Host Test Kit 2.0.1 – Includes Profile C and FDI testing
- DD Services / FF DD-IDE – Includes maintenance updates

Planned 2017 releases include:

- Standard DD Library Updates – SCP and maintenance updates
- ITK 6.3.0 – Standard Connection Points (optional)
- Host Test Kit – Supporting Standard Connection Points
- H1 ITK 7.0.0 – Standard Connection Points (mandatory)

Long-term releases include:

- Host Test Kit – Update with common Field Device Integration (FDI) UI test cases
- Automated Physical Layer Testing

Looking to the future
FieldComm Group will continue this Usability Initiative to encompass all of its technologies to drive an innovation strategy enabling plant owners to focus more on what technology can do for them and their business, versus how they manage the technology itself.

Focusing on standards-based solutions will make it easier for automation suppliers to develop new fieldbus-based products and applications. In addition, FieldComm Group’s testing and registration process is designed to ensure registered FOUNDATION Fieldbus devices, systems and components all work together as they should.

In the future, FOUNDATION Fieldbus will be more effective, efficient and user-friendly than ever before!

For more information, please visit the FieldComm Group website.
Successful Events Demonstrate Digital Innovation in Asia-Pacific Region

By FieldComm Group
Jan 03, 2017

FieldComm Group representatives staged a series of successful events in the Asia-Pacific region during October and November 2016. Sponsored by the organization’s regional marketing groups, these activities demonstrated the strong interest in digital transformation throughout the global industrial sector.

FOUNDATION Fieldbus, HART, HART-IP, WirelessHART and FDI seminars were held in Pattaya, Thailand (Oct. 14); Osaka, Japan (Nov. 10); and Seoul, South Korea (Nov. 23). The technologies were also demonstrated at the 2016 JEMIMA M&C show in Osaka (Nov. 9-11).

FieldComm Group Director, Asia-Pacific, Hisashi Sasajima, praised the cooperation of the various marketing committees in arranging the event schedule. “The FieldComm Group has a unified marketing effort around the world, and this was evidenced by the work of our local groups in Asia-Pacific,” he said. “We are striving for greater integration and teamwork to better serve our respective markets.”

FieldComm Group Director, Marketing, Paul Sereiko was invited to tour the Asia-Pacific region and participate in the recent events. He believes there is a growing recognition of the value of digital innovation for process automation. “Industrial organizations in Japan, Korea, Singapore and other key locations are evolving to keep pace with the Industrial Internet and Industrie 4.0,” Sereiko said. “The explosion in data and new computing capabilities—along with advances in other areas such as human-machine interaction—are unleashing innovations that will change the nature of manufacturing itself.”
Sponsored by FieldComm Group Thailand Association (FCGTA), the Pattaya seminar had nearly 130 attendees representing diverse segments of Thailand's process industries. Presentation topics ranged from digital transformation with wireless and growth of the Industrial Internet of Things (IIoT), to valve diagnostics, fieldbus design and troubleshooting, simplified commissioning, and asset management for smart process devices. The seminar concluded with a speaker panel discussion.

FieldComm Group presented a joint technology exhibition in cooperation with the Japan Profibus Association at the JEMIMA M&C show. The theme of the exhibit was “Field Network Technology Supporting IIoT.” In addition to showcasing FOUNDATION Fieldbus, HART, HART-IP and WirelessHART solutions, booth displays explained how the FDI standard contributes to information integration through various communication technologies and introduces process automation to the IIoT era.

As part of the JEMIMA proceedings, FieldComm Group also presented a sponsored forum on digital transformation, conducted a technical seminar introducing FDI, held a Japan End User Council Meeting, and conducted a press conference for trade publication editors.

Sponsored by the FieldComm Group Korean Marketing Committee, the Seoul seminar attracted 200 attendees from a cross-section of Korean manufacturing. It featured two presentation tracks: FOUNDATION Fieldbus, and HART and WirelessHART. The presentations provided “hands-on” instruction and information specifically related to the individual technologies.

Following the Seoul seminar, Mr. Sasajima and Mr. Sereiko visited the Shell Prelude facility on Geoje Island, South Korea, where the Prelude floating liquefied natural gas (FLNG) hull and topsides are under construction at the Samsung Heavy Industries (SHI) shipyard. The FLNG facility is the largest of its kind in the world. It is expected to stay moored at the Prelude gas field for 25 years, and production is estimated at 3.6 mtpa of liquefied natural gas (LNG), 1.3 mtpa of condensate and 0.4 mtpa of liquefied petroleum gas (LPG) for export.
FieldComm Group will participate in ARC Advisory Group’s upcoming Industry Forum in Orlando, FL, Feb. 6-9, 2017. The event will bring together leading authorities on manufacturing, industrial automation, and associated disciplines.

Founded in 1986 and based in Dedham, MA, ARC Advisory Group is a leading technology research and advisory firm for industry. ARC provides in-depth coverage of both information technologies (IT) and operational technologies (OT) and related business trends.

This year’s forum theme is “Industry in Transition: Realizing the Digital Enterprise” and will include workshops, keynotes, presentations, and panel discussions will delve into a number of key topics of interest to the automation industry. These include:

- the role of the Industrial Internet of Things (IIoT) in the plants of the future
- open process automation initiatives
- industrial cyber security challenges
- approaches for reducing today’s rapidly escalating project costs
- using analytics to gain value from today’s proliferation of field and asset data
- communicating the importance of unified field device management

FieldComm Group President and CEO Ted Masters said, “Our organization looks forward to the opportunity to discuss how FOUNDATION Fieldbus, HART and FDI play an important role in digital transformation for IIoT and Industrie 4.0. These technologies have provided a connected framework using intelligent field devices to reduce waste, improve safety and increase operational efficiency for over 25 years.”
If you are planning to attend the event and would like to meet with FieldComm Group representatives, please contact marketing@fieldcommgroup.org.

For more information or to register for the event, please visit the Industry Forum Page on the ARC Advisory Group website.
Latest Registered FOUNDATION Fieldbus and HART Products

By FieldComm Group
Jan 03, 2017

The number of FOUNDATION Fieldbus and HART products registered by the FieldComm Group continues to grow. FieldComm Group is one of the only automation industry organizations with a registration program requiring mandatory testing of critical elements of its technologies. The effort encompasses host systems and field devices and physical layer components such as power supplies and device couplers from all segments of the automation market.

The table lists the most recently registered products by manufacturer, type, and model/host name.

<table>
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<tr>
<th>Protocol</th>
<th>Manufacturer</th>
<th>Type</th>
<th>Model / Device Name</th>
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<tr>
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<td>Zone 1 Isolated Block Couplers</td>
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<td>Pressure Transmitter</td>
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<td>HART</td>
<td>Shanghai Yinuo</td>
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<td>Mass flowmeter</td>
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**Updated Registered Devices**

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**Updated Electronic Device Description (EDD)**

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<tr>
<td>HART</td>
<td>Yokogawa Electric Corporation</td>
<td>Flow Meter</td>
<td>ROTAMASS TI</td>
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First Ever Officially Registered HART Host System

By FieldComm Group
Jan 03, 2017

In a significant development for HART technology, FieldComm Group has registered the first ever host system conforming to the HART Communication Protocol Specification. Honeywell's Field Device Manager (FDM) passed the comprehensive Device Description (DD) Host Test and Registration Procedure, which assures industrial automation devices and systems conform to the same standard, and operate within the same environment, without loss of functionality.

FieldComm Group is one of the only automation industry organizations with a registration program requiring mandatory testing of critical elements of its technology. This effort encompasses Field Device Integration (FDI), FOUNDATION Fieldbus, and HART host systems and field devices, as well as physical layer components such as power supplies, cables, and device couplers.

Wally Pratt, director of HART technology, FieldComm Group, termed the inaugural HART DD host registration “a major milestone” in the continued progress of HART technology. “Open interoperability continues to be a clear directive for the automation industry, and is always part of our practice,” Pratt said. “The availability of registration for hosts employing the HART Communication Protocol, and the facilities and resources to carry it out will support further growth of HART-based automation solutions. The registration program addresses host applications to provide consistent presentation of real-time, diagnostic, and asset management information as supported by all registered HART products.”

Pratt added, “Host registration is an important step forward in the growth of HART technology in the process industries. We expect registration of Honeywell’s FDM to be a driving force for other major automation suppliers to submit their host systems for testing and registration.”
Mike Cushing, product marketing manager, Honeywell Process Solutions, commented, “Honeywell is pleased to have successfully completed the industry's first HART host registration. Our company has a strong commitment to supporting FieldComm Group and promoting its technologies by demonstrating compliance to the latest HART specifications. Rigorous criteria for customer usability and interoperability had to be met as part of testing and registration. The big benefit is that end users can purchase any registered HART product from any vendor and know it will fully operate with the registered HART system, independent of its supplier.”

Honeywell’s FDM is a centralized asset management system for remote configuration and maintenance of smart field devices based on the HART, PROFIBUS and FOUNDATION Fieldbus protocols. It is designed to simplify maintenance tasks, save time, eliminate errors, and provide the flexibility and scalability to perform complete device configuration and management tasks through smart plant instrumentation.

Shell’s Scotford Upgrader, a prominent FDM user located near Fort Saskatchewan, Alberta, Canada, won the 2011 HART Plant of the Year award. Shell commissioned a 100,000-barrel per day (bpd) expansion to the facility, and a safe and successful start-up meant the Scotford instrumentation team had to work quickly and efficiently with a minimum of mistakes. The team found that HART technology provided a way to streamline testing and pre-configuration of devices so when they were installed, everything was ready to run for a smooth start-up. Having HART devices from 26 different vendors, they still did not have to do any special testing for interoperability. All of the HART devices were plug-and-play and connected properly to their FDM asset management system. They used the ability to open a virtual window and unlock all the power of HART Communication for any type of measurement device supplied by all of their suppliers.

The HART DD Host Test and Registration Procedure benefits both automation suppliers and end users by enabling a high level of consistency in a multi-vendor environment. It verifies that DD hosts registered with FieldComm Group meet the requirements outlined in its Device Description Language (DDL) specifications. DD-enabled host systems must support all the capabilities of all HART-enabled field devices. Registration of a DD host confirms that the product has been tested and validated against the current HART specifications.

To gain registration, automation suppliers must comply with standardized test cases for all DD hosts. The registration process advances robust interoperability and integration between different manufacturers’ hosts and devices. In addition, it provides an extra measure of confidence that hosts properly employ HART technology features and can function within an open control architecture. The host has been of particular concern in the past because it is the crucial element at the system level.

Under the HART registration process, hosts that successfully complete the test requirements are authorized to bear the official “HART Registered” mark. Hosts may include configuration tools, recording devices, alarm display panels, Human-Machines Interfaces (HMIs), or systems with a combination of functionality.

The HART DD Host Test and Registration Procedure was driven by end users to bring about consistent interoperability between hosts and devices regardless of the host supplier. The HART specifications include profiles for functionally between different hosts and the appropriate features that apply to each host profile.

To learn more about host registration, please visit the Product Testing & Registration Page on the FieldComm Group website.
When it comes to setting efficiency records in the power generation industry, leading utilities and their equipment partners turn to FOUNDATION Fieldbus. The technology enables advanced digital control capabilities and provides the robust data needed to optimize plant operations.

EDF, a major French energy supplier, in cooperation with General Electric (GE) Power Generation, recently made history for powering the world’s most efficient combined-cycle power plant in Bouchain, France. The facility began operation in June 2016 and has a generating capability of more than 605 MW. It generates enough power to supply more than 680,000 homes.

**Bouchain Plant**

Key to record efficiency at the Bouchain plant was GE’s 9HA gas turbine unit technology, developed and manufactured at the company's Belfort Gas Turbine Center of Excellence in France. The HA gas turbine delivers enhanced flexibility and is capable of reaching full power in less than 30 minutes. This allows fast response to grid demand fluctuations, as well as integrating renewables to meet industry guidelines for reducing greenhouse gas (GHG) emissions.
GE’s Digital Power Plant capabilities also played an important role in achieving peak performance at the Bouchain site. The plant’s digital control system uses real-time data to enable better outcomes with stable and efficient operations, while providing valuable predictive insights for higher reliability and optimization. The control system employs FOUNDATION Fieldbus sensors and valves, which comprise 65 percent of process instrumentation in the plant’s turbine and generator sections, and 95 percent of field devices in its combined cycle and balance-of-plant sections.

FOUNDATION Fieldbus-connected pressure, temperature, level, flow, and analytical instruments provide an enhanced picture of process parameters, and isolation and control valves utilizing the technology enable an assessment of plant readiness that is impossible to achieve with conventional instruments. These digital devices are seamlessly and securely connected to cloud-based analytic and monitoring services, bringing the Industrial Internet of Things (IIoT) to life.

**GE Power Plant**

The Bouchain plant utilized FOUNDATION Fieldbus to reduce costs through easier commissioning and configuration, and improve reliability for plant availability. Powerful diagnostics make it possible for operators to identify device faults long before the plant is affected. Furthermore, FOUNDATION Fieldbus supports advanced control and modeling, predictive analytics and proactive maintenance. Control room and field personnel have a better user experience due to enhanced alarms and effective device asset management. Fieldbus wiring and terminations also help reduce labor and construction costs.

By monitoring and analyzing data from sensor inputs across the plant, the FOUNDATION Fieldbus-based digital control system helps EDF make decisions about how to optimally run its power generation facility, achieving better performance, greater efficiency and improved reliability while lowering environmental impact.
Looking for an easy solution to configure HART devices in the lab and for quick diagnosis in the field?

Tired of visiting several websites to download several software products before being able to start?

With CodeWrights PACTware Bundle for HART, that’s over.

The all-new HART CommDTM (FDT2) can be used with almost every HART communication modem for connection to your HART devices. iDTM-FDI provides FDI support today. Simply add the FDI Device Package of your preferred HART device and start configuration and troubleshooting immediately.

Do you need an FDT Frame Application supporting the latest FDT2 standard? Use the latest PACTware, provided with the bundle.

Check out our HART multi-tool: The CodeWrights PACTware Bundle. It is free of charge* and the complete FDT solution package for device management.

- Free-of-charge* solution with full functional, interoperable CodeWrights products + PACTware
- FDT2, FDT1.2 support through PACTware
- FDI compatibility via iDTM-FDI the FDI adapter for PACTware and any FDT frame application
- HART connectivity through the, simply connect to all ‘ HART CommDTM (FDT2)

* Some features and license options may only be available at additional cost

For more information, please visit the CodeWrights website.
Moore Industries HCS HART Concentrator System: HART-to-MODBUS RTU Converter

By FieldComm Group
Jan 03, 2017

The HCS HART Concentrator System by Moore Industries converts a HART digital signal to a serial (RS-485 or RS-232) MODBUS RTU communication protocol. This allows HART transmitters and valves to interface directly with MODBUS-based monitoring and control systems.

When operating in point-to-point and digital multi-drop HART networks, the HCS acts as a HART master and monitors a single or multiple HART smart instruments. All process and diagnostic data carried on the HART data string is converted to MODBUS RTU.

In a digital multi-drop HART network, up to 16 HART instruments digitally communicate on the same wires. The HCS can be set to monitor any or all instruments and/or valves within the network. Only one MODBUS address, and one communication link (such as twisted wire pair), is needed to send the process and diagnostic data from up to 16 HART devices to a MODBUS host.

The HCS works with every HART-compatible device including smart multivariable mass flow, pressure, pH and temperature transmitters; coriolis, magnetic, ultrasonic and vortex flow meters; radar and hydrostatic level transmitters; and valve positioners and damper operators.

All HART process information, including primary, second, third and fourth process variables, are converted to MODBUS RTU and available to the MODBUS host system.

For more information, please visit the Moore Industries website.
Moore Industries Has SSX and SST Safety Isolators for Digital HART Signals

By FieldComm Group
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Moore Industries' SSX and SST Safety Isolators and Splitters provide reliable isolation and signal conversion for HART data in functionally safe process control settings. Part of Moore Industries' FS FUNCTIONAL SAFETY SERIES, the two-wire (loop powered) SSX and four-wire (line/mains powered) SST have been certified by exida for single use in Safety Instrumented Systems up to SIL 2. They were designed and built from the ground up to the strict IEC 61508:2010 standards for safety-related applications.

The SSX and SST protect safety systems by isolating an SIS from basic process control or monitoring systems so that disconnections or other failures don't impact the safety system. It also has 1500 Vrms of isolating capability to protect safety I/O cards and systems from surges, spikes and transients in the field. Standard 20 V/m RFI and EMI protection stops damages caused by radio frequencies and electromagnetic interference.

While most isolators "strip off" HART data, the SSX and SST pass along HART data to asset management systems, programming devices or host systems. In addition, the SSX stops ground loop noise and solves "bucking" power supply problems caused when two devices try to source power to the same loop.

For more information, please visit the Moore Industries website.
Phoenix Contact has launched two YouTube videos that explain the basics of HART technology and the benefits of using it in a growing digital environment. There are over 36 million HART instruments installed worldwide. Less than 10 percent of these devices are continually connected to HART-capable systems, so engineers are retrofitting their systems to access to the additional digital data that the HART interface provides. Phoenix Contact has developed both wired and wireless devices that make it easy to upgrade these existing systems, all while keeping existing wiring in place.

The videos can be found at the Phoenix Contact USA YouTube channel at https://youtu.be/JL9ev5yElK4 and https://youtu.be/82HcCQXF2xY.

For more information, please visit the Phoenix Contact website and enter #0636 in the search box.
Phoenix Contact Provides WirelessHART Gateway Firmware Update for HART IP and Expanded Modbus Functionality

By FieldComm Group
Jan 03, 2017

Phoenix Contact’s RAD-WHG/WLAN-XD, the world’s first rail-mount WirelessHART gateway, received a firmware update, version 6.1, which features expanded Modbus TCP functionality as well as HART IP support. The additional Modbus functionality makes it even easier for PLC programmers to incorporate key HART parameters into a Modbus controller.

Support for the HART IP protocol, the new standard for HART communication over Ethernet, offers an easy-to-use, widely available interface to provide standardized deployment and the ability to do intelligent HART device management using Ethernet. HART IP integrates into tools that most plant operators and maintenance personnel already use: HART Server, HART OPC Server, Simatic® PDM, and Honeywell® FDM.

The gateway features an integrated WLAN, which can serve as a backhaul connection or as a "maintenance port" for a mobile operator. All programming and diagnostics can be accessed via an embedded web server.

The RAD-WHG/WLAN-XD is rated for use in Class I, Division 2 and Zone 2 hazardous locations and operates in -40 to 70 degrees Celsius temperature extremes.

For more information, please visit the Phoenix Contact website.
Softing Offers Fieldbus Configuration Tool for Linking Devices and Portable USB interfaces

By FieldComm Group
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Softing's FOUNDATION Fieldbus configuration software is an intuitive, easy-to-use tool to configure communication links and function blocks for FOUNDATION Fieldbus networks. The software is designed to work with standard interface and gateway products that are based on Softing's FOUNDATION Fieldbus H1 Host stack.

Get direct access to FOUNDATION Fieldbus H1 segments and H1 devices by using the software in combination with Softing's portable USB interface (FFusb). One major benefit of Softing’s FFusb is that it can be configured to not interfere with the active process control system while connected to the network.

In combination with Softing’s Linking Device (FG-200) the software is used to integrate up to four FOUNDATION Fieldbus H1 links into control systems supporting Modbus (e.g., legacy Bailey DCS) or to implement and configure control-in-the-field applications. Moreover, the FG-200 provides high-performance access to process data while, at the same time, supports FOUNDATION Fieldbus-specific aspects like reduced cabling, central field device parameterization, comprehensive diagnostics, or intrinsically safe device segments.

For more information, please visit the Softing website.
Softing’s latest Linking Device (FG-200) presents a two-step solution to address the Namur requirement. In step one, an operator can map any field device parameter to OPC UA tags using the included FOUNDATION Fieldbus configuration software. For step two use softing’s dataFEED OPC Suite to import generated list of UPC UA tags and move the data from the edge to IIoT and Industry 4.0 cloud applications.

Plant operators can retrofit existing control networks with this solution because Softing’s Linking Device can be attached to a running FOUNDATION Fieldbus network without interfering with the operation of an existing third party controller.