Field Communication Insider

Amanda, 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 control_enews@putman.net to your address book and subscribe here.

Logix 3800 from Flowserve

The Logix 3800 from Flowserve is the digital positioner choice for applications that require a balance between technological sophistication and long-lasting reliability in tough environments.

This high-precision positioner simplifies installation as well as offering greater robustness and consistency.

Compatible with linear and rotary valves and actuators, the Logix 3800, quick calibration and advanced diagnostic capabilities. Command and control can be done with 4-20 mA or with Fieldbus or HART.

Learn more.

FieldComm Group Holds 2018 General Assembly in Singapore

FieldComm Group 2018 General Assembly focused on the digital future of industrial automation and included the organization’s annual member meeting, several days of working group meetings, and an end user seminar. Read more.

Newest Member Company: Shenyang VibroTech Instruments, Inc.

A manufacturer of vibration instruments that monitor and protect rotating machinery, Shenyang VibroTech Instruments, Inc. is the newest member of FieldComm Group. Read more.
Updated ITK Version 6.3.1 Supports FOUNDATION Fieldbus Usability Initiative

FieldComm Group released version 6.3.1 of the H1 Interoperability Test Kit, further reinforcing support for Standardized Connection Points. Read more.

New Product Registry and Online Repository Launched

FieldComm Group launched a Product Registry and online Repository for those seeking information about HART and FOUNDATION Fieldbus registered products and development resources. Read more.

Unified EDDL Specifications Now Available

FieldComm Group and Profibus/Profinet International released the first Unified Electronic Device Description Language (EDDL) Technical Specifications. Read more.

Mining Operation Reduces Wiring and Maintenance Costs with WirelessHART

Second largest producer of natural sodium bicarbonate in North America estimates the use of WirelessHART technology has resulted in a total savings of $800,000. Read more.

New product news you might be interested in:

- ABB Electromagnetic Flowmeter Enables a More Measured World of Water
- Endress+Hauser Enhances Field Xpert SMT70’s Connectivity and Usability
- Moore Industries HES System Accelerates HART Data to the Speed of Ethernet

Yokogawa’s Field Proven Vortex Flowmeter “digitalYEWFLO”

Yokogawa has provided vortex flowmeters for over 40 years and has contributed to customers’ productivity improvement through high accuracy and long-term stability. Its reliability is proven by a large installation base and operational record. digitalYEWFLO continues to support steam, gas and liquid flow measurement with valuable information via HART and FOUNDATION Fieldbus communications. Learn more.

Upcoming Events
North America

FOUNDATION Fieldbus Developer Training
Austin, Texas, USA
December 4, 2018
» More Information

Europe, Middle East, Africa (EMEA)

HART Developer Training
Dusseldorf, Germany
December 10, 2018
» More Information

FDI Developer Training
Dusseldorf, Germany
December 12, 2018
» More Information

Asia Pacific

FieldComm Day
Singapore
December 7, 2018
» More Information

Field Communication Technology Seminar
Tokyo, Japan
December 17, 2018
» More Information

SPONSORS

[List of sponsors logos]

[Flowserve, ABB, Yokogawa, Endress+Hauser, Moore Industries, Azbil, Phoenix Contact, Emerson, FCI, Microcyber, Armstrong, Softing, ProComsol]
FieldComm Group held its 2018 General Assembly on December 3-7 in Singapore. The event focused on the digital future of industrial automation and included the organization’s annual member meeting, several days of working group meetings, and an end user seminar.

The General Assembly, an important gathering of automation industry professionals, was attended by both FieldComm Group members and non-members. The meeting was open to FOUNDATION Fieldbus, HART, WirelessHART and FDI suppliers, end-users and other participants from around the world.

The End User Seminar on Friday, Dec. 7, offered an overview of progress in digital transformation throughout the industrial automation marketplace. This included updates by leading experts on the latest technology advancements, as well as presentations by major end-users who have installed FOUNDATION fieldbus, HART and WirelessHART-based solutions in their plant operations. The end user seminar concluded with a panel discussion with the experts followed by a networking reception and product showcase.

Technical Working Group meetings provided an opportunity for marketing and technical professionals to collaborate and contribute to the strategic direction to FieldComm Group.

FieldComm Group President and CEO Ted Masters addressed the General Assembly and described his organization’s ongoing standards and technology development work. This includes release of the first Unified...
Electronic Device Description Language (EDDL) Technical Specifications; an updated H1 Interoperability Test Kit (ITK) to reinforce support for Standardized Connection Points (SCP); and a new Product Registry and online Repository merging the previous HART and FOUNDATION Fieldbus registries, and allowing users to find Electronic Device Description (EDD) and FDI Device Package files for all registered products.

Masters thanked industrial automation stakeholders for attending the General Assembly and learning about the emerging trends in digital transformation. “FieldComm Group technologies play an important role in the advancement of key initiatives such as the Industrial Internet of Things (IIoT) and Industry 4.0. By continuing to build on our protocols, bridging them to the IIoT and ensuring they conform to industry standards, we can seize upon today’s data revolution to achieve improved operations and enterprises,” Masters said. “Field devices are delivering data through robust protocols trusted by end-users to meet their performance, interoperability and security needs. In fact, it has become increasingly clear that the IIoT will require many protocols.

For more information, please visit the FieldComm Group website.
Newest Member Company: Shenyang VibroTech Instruments, Inc.
Company plans to add the HART Communication Protocol to vibration transmitters

By FieldComm Group
Nov 29, 2018

Shenyang VibroTech Instruments, Inc., a manufacturer of vibration instruments that monitor and protect rotating machinery, is the newest member of FieldComm Group. The company plans to add the HART Communication Protocol to their vibration transmitters, which are used in the petroleum, petrochemical, power and metallurgical industries.

Founded in 2010 as a Sino-American joint adventure enterprise, Shenyang VibroTech Instruments’ efforts are concentrated on R&D, production, and sales. The firm’s corporate office is located in Hunnan District, Shenyang, China, with another office in Tiexi District, Shenyang, China.

For more information, please visit the Shenyang VibroTech Instruments website.
Updated ITK Version 6.3.1 Supports FOUNDATION Fieldbus Usability Initiative
Tool allows automation suppliers to run a battery of tests against their field devices
By FieldComm Group
Nov 29, 2018

FieldComm Group has released version 6.3.1 of the H1 Interoperability Test Kit (ITK), which further reinforces support for Standardized Connection Points (SCP). This developer-oriented tool allows automation suppliers to run a battery of tests against their field devices to ensure robust and effective support for SCP.

SCP represents a major milestone within FieldComm Group’s FOUNDATION Fieldbus Usability Initiative, which has already delivered backwards compatibility enabling end users to replace an existing field device with a like device and have the new device seamlessly operate in the preexisting state. This capability has made device replacement scenarios simpler and faster.

A premier feature enhancement requested by the user community, SCP can be thought of as the familiar 4-20mA process for digital technology. When a field device and control system support SCP, the device can be installed on a FOUNDATION fieldbus segment and immediately begin publishing its process variable (PV) to the system – providing important information to operators so they can safely keep their plant running until full integration can occur. By separating the PV from full integration, end users can get their process back online quickly without the need for a Device Description (DD) or other engineering staff.

Accuracy of Free Space Radar White Paper
Receive the highest level of accuracy from your instrumentation.
Sponsored by Endress+Hauser
The impact of SCP can be explained in the following scenario: At 3 a.m. on Saturday, there is a skeleton crew running an otherwise familiar and uneventful process in the middle of a snowstorm. A critical device failure occurs and the control system is alarming. Operators must be able to get the system back to an operational state so they can run the plant in manual mode until the full staff returns on Monday morning. Prior to SCP, full DD integration would be required to bring the process back up, and that integration often requires multiple disciplines to be available. With SCP, field technicians can do basic device setup (e.g., add a device tag, units, etc.) and land wires, thus ensuring the plant is back online with the necessary information to run safely.

Field device suppliers can purchase or update their existing H1 ITK tools today and are encouraged to contact FieldComm Group with any questions. End users interested in SCP should speak to their suppliers about support within their product lines.

For more information, please visit the FieldComm Group website.
New Product Registry and Online Repository Launched

Registry and Repository provide a unified tool to obtain the latest device files and offers online access to APIs

By FieldComm Group

Nov 29, 2018

FieldComm Group has launched a new Product Registry and online Repository providing an enhanced user experience for those seeking information about HART and FOUNDATION Fieldbus registered products and development resources.

The new Product Registry and its online Repository are designed to bring the two prior standalone HART and FOUNDATION Fieldbus product registries into the 21st century by providing a unified tool to obtain the latest device files while also offering online access to APIs that host system manufacturers can tap into to enable built-in, real-time access to the latest versions of Electronic Device Descriptions (EDDs) and FDI Device Packages for field devices.

The release of these two systems is a major benefit to the industrial automation community, as FieldComm Group continues to simplify the experience users have with industrial standards and their integration across systems and enterprises. It also marks another milestone in the industry’s transition to the Industrial Internet of Things (IIoT) and Industry 4.0.

Temperature Calibration White Paper

How sensor technology makes calibration easier and less expensive.
Sponsored by Endress+Hauser

Located at www.fieldcommgroup.org/registered-products, the Product Registry includes:

- Modern look and functionality
• Text search capabilities
• Advanced filtering by application and FDI
• Mobile-friendly functionality
• Unified registry for FOUNDATION Fieldbus, HART and FDI
• Full device versioning support in EDD downloads (all registered versions provided in a single download)

The Repository provides:

• Cloud-based solution with REST APIs
• Single source for registered EDDs and FDI Device Packages irrespective of vendors and protocols
• Ability to update hosts and handhelds automatically or by manual trigger through the cloud
• Streamlined device revision management
• Push notifications for available updates

The new Product Registry offers increased search functionality that allows for various sorting and filtering capabilities to more efficiently and effectively find or research devices and systems. For example, automation tool suppliers can automatically query the online catalog and download key resources. Visitors can search and download EDDs and FDI Device Packages, as well as view information on registered devices and find additional details.

In the near term, host system suppliers will begin implementing the new capability in their product offerings to access the online Product Repository to provide instant access to Device Packages and EDDs on demand or on a scheduled interval.

For more information, please visit the FieldComm Group website.
Unified EDDL Specifications Now Available

FieldComm Group and Profibus/Profinet International have released the first Unified Electronic Device Description Language (EDDL) Technical Specifications.

By FieldComm Group

Nov 29, 2018

FieldComm Group and Profibus/Profinet International have released the first Unified Electronic Device Description Language (EDDL) Technical Specifications. The newly unified specifications consist of three separate documents combined into a single package that will be enhanced and improved collectively moving forward – making it simpler for automation developers and other stakeholders to source and adhere to the Electronic Device Description (EDD) standards.

FieldComm Group maintains a collaborative working relationship with other automation industry standard bodies, including ProfibusNutzerorganisation e.V. (PNO), OPC Foundation, ODVA, NAMUR and OPA Forum. The unified EDDL specifications are a result of this collaboration.

The new EDDL specifications consist of three parts:

FCG TS61804-3 specifies EDDL technology, which enables the integration of real product details using the tools of the engineering lifecycle. It specifies the semantic and lexical structure in a syntax-independent manner.

FCG TS61804-4 specifies EDD interpretation for EDD applications, and EDDs to support EDD interoperability. This document is intended to ensure that field device developers use the EDDL constructs consistently, and that EDD applications have the same interpretations of the EDD. It supplements the EDDL specification to promote EDDL application interoperability and improve EDD portability between EDDL applications.

Accuracy of Free Space Radar White Paper

Receive the highest level of accuracy from your instrumentation.

Sponsored by Endress+Hauser
FCG TS61804-5 specifies the EDDL built-in library and provides the profiles for various fieldbuses, including HART and FOUNDATION Fieldbus.

FieldComm Group Working Groups consisting of volunteers from member companies were responsible for the EDDL specification work.

To obtain the new release of the Unified EDDL Specifications, FieldComm Group members can visit https://fieldcommgroup.sharefile.com/home/shared/fo7252bc-1d66-461b-a5cd-e91b09de3f20 to download them free of charge.
Mining Operation Reduces Wiring and Maintenance Costs with WirelessHART

Natural Soda estimates the use of WirelessHART technology has resulted in a total savings of $800,000

By FieldComm group
Nov 29, 2018

Located in western Colorado, Natural Soda is the second largest producer of natural sodium bicarbonate in North America. The company’s product is used domestically and worldwide in the food and baking, personal care and pharmaceutical, animal nutrition and agriculture, pool and water treatment, and industrial markets.

An entrant for FieldComm Group’s 2018 Plant of the Year Award, Natural Soda produces sodium bicarbonate from its extensive nahcolite leases, which cover more than 9,400 acres at our processing facility located in the Piceance Creek Basin in Colorado. The Piceance Creek Basin contains North America’s only known significant deposit of nahcolite and Natural Soda is currently the only company taking advantage of this world-class resource.

Natural Soda mines nahcolite using solution mining, a technique that drills pairs of wells into the mineral-bearing layer 1,900 feet below ground. Steam is injected via one well, and saturated nahcolite solution is pumped out of the other for further processing.

The original Natural Soda facility was built in 1990 with the capacity to produce 60,000 tons per annum (tpa) of feed-grade product to be sold domestically. Expansion in 1996 increased capacity to 125,000 tpa. In March 2013, Natural
Soda completed construction of an additional production train, increasing annual production from 125,000 tpa to 250,000 tpa. The production site has grown in multiple ways: increasing production has meant adding new well pairs and the requirements for the amount of data collected has also increased. This has meant more instrumentation at each well.

Given the high cost of wiring for the additional instruments and reaching new injection wells progressively farther from the central facility, Natural Soda adopted *WirelessHART* for all of its wellheads. With the most recent expansions, the company has now deployed 60 wireless instruments across 10 wellheads.

The bulk of the instrumentation within the central processing facility at the production site continues to operate using its existing wired networks, but *WirelessHART* level instruments have been added in some tank monitoring applications.

Wireless transmitters make it possible to monitor remote injection wells to protect the environment, increase efficiency, and improve productivity. Natural Soda’s operating permits with the U.S. Bureau of Land Management (BLM) requires continuous monitoring and recording of fluid temperature, pressure, and flow rate in both the recovery and injection wells. Operators must also keep these parameters within specified ranges as detailed in a BLM-approved mine plan.

To help handle the distance on some legs in its *WirelessHART* network, which can be as long as one mile, Natural Soda added eight Rosemount 702 transmitters as repeaters. Instructions from the Emerson DeltaV process automation system to control valves at the wellheads are sent as serial data via a 900 MHz point-to-point licensed system. This radio system runs in parallel with the *WirelessHART* network as it brings data in from the field instruments. Until recently, the Emerson 1420 *WirelessHART* gateway and the 900 MHz radio both connected to the DeltaV system through a two-port RS232 serial I/O card.

As Natural Soda engineers were planning the most recent site expansion, they realized the capacity of their I/O card was already at maximum, which left them trying to figure out how to add more control valves. The solution proved easier than expected. The original *WirelessHART* gateway was replaced with a Wireless I/O Card (WIOC). The WIOC was installed in one of the site’s Distributed Control System (DCS) racks. It receives *WirelessHART* data and
transfers it to the DCS. Functioning as both a gateway and I/O node for up to 100 wireless devices, the WIOC was employed at a fraction of the cost of hard wiring, and was easily installed within the required timeline. This simple change provided additional capacity to support future expansions.

Natural Soda estimates the use of WirelessHART technology has saved more than $80,000 in wiring costs for each of 10 well pads, for a total savings of $800,000. The costs of maintaining wired infrastructure in northwestern Colorado are also significant given the elevation, elements, rugged terrain and damage caused by local wildlife. WirelessHART status and diagnostic information indicates if any transmitter has a problem, and the system alerts operators accordingly. If a problem does occur with any transmitter, technicians can go right to the device and troubleshoot with a HART communicator. A laptop is not required in the field for maintenance.

Performance of the WirelessHART network has been flawless, and over five years, Natural Soda has only had to replace the power module on three wireless devices, even when running with 4- to 8-second update rates. In addition to performing required control and monitoring at a much lower cost, Natural Soda is able to provide reports to the BLM and show it is working within the required parameters.

Some of Natural Soda’s future plans call for installation of asset management software to enhance troubleshooting, including pump and motor health management.

For more information about the Plant of the Year award, please visit the FieldComm Group website.
ABB Electromagnetic Flowmeter Enables a More Measured World of Water

Product features are targeted to the industry’s specific requirements

By FieldComm Group

Nov 29, 2018

ABB’s AquaMaster electromagnetic flowmeter has been designed to improve the management of potable water distribution networks. Its features are targeted to the industry’s specific requirements, ranging from a total water management solution for revenue (billing) applications, district metering and water distribution to leakage management and irrigation.

With the AquaMaster solution, flowrate information can be sent via GSM/SMS or GPRS/WITS enabling operators to pinpoint difficult, small, slow leaks, virtually as they happen and providing the opportunity to rectify them quickly.

For more information, please visit the ABB website.

Temperature Calibration White Paper

How sensor technology makes calibration easier and less expensive.

Sponsored by Endress+Hauser
Endress+Hauser Enhances Field Xpert SMT70’s Connectivity and Usability

SMT70 now offers HART over PROFINET access in systems using the Siemens ET200SP
By FieldComm Group
Nov 29, 2018

Endress+Hauser’s Field Xpert SMT70 industrial tablet already ensures that device configuration and associated tasks are performed with the minimum of effort. A new software release providing more connectivity, easier handling and additional applications now makes it even more attractive to the maintenance technician.

In addition to mobile access to HART, PROFIBUS, FOUNDATION Fieldbus and Modbus devices via WiFi, point-to-bus or point-to-point connections, the SMT70 now offers HART over PROFINET access in systems using the Siemens ET200SP. One-click automatic connectivity has been enhanced with the provision of favorites for frequently visited devices. The envelope curve app for ultrasonic and radar devices is already on board, and device commissioning and Heartbeat verification reports are available at the touch of a button.

The newest feature, “Automatic DTM Update,” keeps the Field Xpert SMT70 up to date. Only an Endress+Hauser IIoT account is necessary. When the B&R DTM is installed, it can be used to configure devices in the SOP300 Overfill Prevention and SPV350 Profile Vision solution packages.
The new release can be downloaded free-of-charge for all tablets purchased within the last year, and for users with a software update contract.

For more information, please visit the Endress+Hauser website.
Moore Industries HES System Accelerates HART Data to the Speed of Ethernet

HES connects with as many as 64 smart HART devices to collect Dynamic and Device Variables, along with diagnostic bits and bytes

By FieldComm Group

Nov 29, 2018

Timely knowledge about your process enables better decisions and faster preventive action. Now you can get the process detail that you need from your HART 5, 6 and 7 field devices to MODBUS/TCP- and HART-IP-based monitoring and control systems at the speed of Ethernet with the Moore Industries HES HART-to-Ethernet Gateway System.

Connect up to 64 smart HART devices to the HES and collect the Dynamic Variables and the Device Variables, along with diagnostic bits and bytes, from each device that help deliver critical information needed to help you address process and device problems before they turn into unplanned downtime.

The HES is simple to configure over Ethernet using PACTware or other FDT-compliant host with supplied HES DTM. Its support of open industrial protocols enables you to take advantage of any Industrial Internet of Things (IIoT) initiatives that deliver your process data to your higher-level systems. Plus, you can view all of the HART data from connected field devices in read-only mode with any web browser via the HES’ built-in web server or a MODBUS/TCP-compliant host.

Accuracy of Free Space Radar Radar White Paper
Receive the highest level of accuracy from your instrumentation.
Sponsored by Endress+Hauser
The new HES continues the Moore Industries reputation for rugged and reliable products that are designed and built to perform dependably year after year.

For more information, please visit the Moore Industries website.