Leveraging The Latest Communication, Security, Integration And Control Best Practices For Pipelines & Midstream Facilities Which Streamline Access To Field Data

To Deliver Automation Strategies Which Improve Safety, Optimize Flow & Increase Revenue

Featuring 20+ Case Studies From Leading Pipeline & Midstream Facility Operators, Focusing On:

- **WIRELESS COMMUNICATIONS**: Benchmarking the reliability and cost of radio, cellular and satellite systems and failure procedures, including for remote locations, to minimize time spent on maintenance and manual collections

- **INSTRUMENTATION SELECTION**: Identifying the most appropriate SCADA and DCS systems, measurement devices, PLCs and RTUs for each application to minimize investment costs, programming time and improve reliability

- **SECURITY**: Utilizing encryption, firewalls and security procedures to protect critical infrastructure from the threat of hacking in the context of increasing remote access requests and wireless communications

- **CONTROL ROOM MANAGEMENT**: Hearing how midstream companies have eradicated nuisance alarms, optimized HMI and managed staff to reduce downtime

- **SAFETY**: Leveraging data from the field, leak detection software and automated control systems to improve the integrity of assets, perform shutdowns and reduce risks to health and the environment

- **SYSTEMS INTEGRATION**: Learning how the adoption of organizational changes, testing strategies and selection of appropriate devices can reduce commission time and the impact of integrating new devices on operations

May 27-28, 2015 | Houston | Texas

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www.midstream-automation-2015.com
THE FIRST MIDSTREAM-FOCUSED CONGRESS FOR UTILIZING FIELD DATA TO IMPROVE SAFETY, FLOW CONTROL AND REVENUE GENERATION

The automation of field data collection and control for pipelines and midstream facilities has enabled operators to significantly improve safety, reduce downtime, more precisely control flow and accurately allocate royalties – with millions of dollars in benefits. However, to further automate manual operations and exploit the full benefits of data, further technical challenges must be overcome, from security and integration to instrumentation selection and communications design.

The inaugural Midstream Automation, Instrumentation & Control Congress 2015 will deliver over 20 case studies, each tackling a critical challenge faced by midstream operators across the continent. From integrating new control systems and instrumentation with legacy devices and designing a robust communications infrastructure to implementing HMI and alarm management best practices, this is the first and only vendor-neutral forum to share real-life case studies from experienced midstream operators.

Thanks to the advice of dozens of midstream operator decision-makers, which helped to forge this meeting agenda, attendees can be confident that every minute will be spent focused on solutions that will leverage field data and automation best practices to measurably improve safety, reduce downtime, optimize flow and inevitably increase revenue.

VENUE INFORMATION:

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Four Riverway, Houston, Texas 77056, United States
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WHY IS THIS CONGRESS UNIQUE?

• Operator Led: Each discussion will be led by a neutral case study from an experienced midstream company, delivering real lessons that can be swiftly translated to your operations

• Midstream Dedicated: Best practices will be identified specifically for automation, SCADA and control professionals working in the midstream sector – no vague cross-industry presentations designed for large tradeshows

• Vendor-Neutral: Midstream companies are particularly excited about utilizing an open forum where operators can talk honestly and benchmark instrumentation from competing vendors

• Expert-Designed Program: Every agenda topic has been selected based on multiple requests by midstream industry leaders. This ensures every minute is spent addressing the very latest challenges faced by operators

• Focussed On The Value Of Data: Case studies will focus on the core challenge of rapidly and reliably communicating monitoring data from the field to measurement and control as quickly as possible to improve the accuracy of business decisions and optimize flow control

• Deliver A Measurable Return On Investment: Presentations will also unveil the business case for automation, comparing initial investment with the medium term operational savings to justify technology adoption back in the boardroom
LEVERAGING THE LATEST ADVANCES IN INSTRUMENTATION, WIRELESS COMMUNICATION & NETWORK SECURITY TO REDUCE THE TIME OF FIELD DATA COLLECTION & DEVELOP A RELIABLE & SECURE AUTOMATION NETWORK FOR PIPELINES & MIDSTREAM FACILITIES

Day 1
Wednesday May 27, 2015

8.50 Chair’s Opening Remarks

KEYNOTE: MIDSTREAM AUTOMATION & DATA STRATEGY
9.00 Utilizing The Internet Of Things (IoT) To Translate Accurate Field Data Into Improved Operational Efficiency And Provide More Profitable Business Information To Customers
• Identifying which field data is most impactful to producers and crude buyers to improve safety, security, efficiency, accuracy and transparency of business transactions
• Reviewing the functionality and processes of models to ensure data is acquired, analysed and shared securely and efficiently
• Assessing what software and methodologies are available today for accurately gathering real-time and historical process data into a single manageable system.
• Understanding how producers, logistics companies and buyers can leverage historical data to optimize long term processes improving operational productivity
Robert Throckmorton, Chief Information Officer, First River Energy

9.30 Question & Answer Sessions

WIRELESS COMMUNICATIONS
Benchmarking Devices, Standards And Failure Procedures To Design A Reliable Communications Network That Will Minimize Maintenance Requirements And Manual Collection

REMOTE LOCATION COMMUNICATIONS
9.40 Hearing How A Midstream Company Has Set Up Reliable Communications With Remote Locations To Reduce The Time Spent On Manual Collection
• Comparing the costs and reliability of radio and satellite specifically for remote locations to inform equipment selection
• Utilizing repeaters for moderns and radios to traverse mountains and other geographical hazards to reduce demand for expensive satellite communications
• Identifying the optimal frequency of communications for less critical flow locations to balance operational costs with data value
• Hearing methods to improve the reliability of equipment to reduce the time spent on maintaining equipment in hard to reach locations
Konstantin Khodosko, Telecommunication Systems Technologist, Inter Pipeline

10.10 Question & Answer Sessions
10.20 Morning Refreshments In The Exhibition Networking Area

COMMUNICATION STANDARDS
10.50 Reviewing The Cost And Commissioning Time Benefits With The Concerns Of Reliability, Power And Security To Determine The Appropriate Standards For Using Wireless Communications For Electronic Flow Measurement
• Understanding how the introduction of wireless communications can ease the installation and configuring of field devices and reduce the overall time and cost of commissioning a site
• Examining the implications of wireless communications on total installation costs and time to determine the complete business case for utilizing the technology for metering stations
• Reviewing the main concerns associated with wireless communications for custody EFM measurement including power, reliability, security and integration
Ted Glazerbrook, Regional Manager, Gas Measurement And Field SCADA, Enterprise Products

11.20 Question & Answer Sessions

COMMUNICATIONS FAILURE PROCEDURE
11.30 Designing A Robust Process For Installing And Switching To Backup Communication Systems To Avoid Interruptions To Monitoring And Control Operations For Critical Midstream Infrastructure
• Assessing whether the switch from primary to secondary communication system should be automated or performed by an operator to balance reliability with cost
• Reviewing the main causes of communication failure from topography to weather and wildlife
• Evaluating which communication methods are most suitable for secondary or backup systems to counter the vulnerabilities of the primary system
• Understanding which applications are communications-critical to require the costs of a backup system rather than waiting for a maintenance crew
Qing Tan, SCADA Application Team Lead, BP Pipelines

12.00 Question & Answer Sessions
12.10 Networking Lunch In The Exhibition Showcase Area

WIRELESS COMMUNICATIONS PANEL
1.10 Determining The Best-Fit Wireless Communication Options From Radio, Cellular And Satellite For Each Midstream Application To Provide A Constantly Robust Connection Between Field Devices And Control Rooms
• Benchmarking the ease of installation and integration of each device with existing systems to reduce commissioning time and programming requirements
• Examining the reliability and vulnerability to weather across radio, cellular and satellite dishes to select the most appropriate device for each geographic location
• Assessing the security vulnerabilities of each communications system and mitigation methods to reduce the threat of hacking
• Comparing the frequency and bandwidth of each option to ensure devices can communicate the required number of packets at a time for a given application
• Exploring innovative power solutions from solar and wind to thermoelectric generators to reduce the threat of a communications blackout
Major Simmons, Control Center Automation Engineer, Shell Pipeline

1.40 Question & Answer Sessions

CYBER SECURITY
Designing Communication Systems And Methods For Blocking Illegitimate Network Requests To Protect Data And Secure Control Systems In The Context Of Evolving Cyber Holes

1.50 Providing A Midstream Operator’s Guide To Protecting Communication Systems From Hackers While Accepting Legitimate Data Traffic To Ensure Security Does Not Affect Productivity
• Evaluating the rapidly evolving threats posed by hacking to midstream infrastructure to justify the business case for security investment
• Assessing the effectiveness of each mitigation method such as monitoring tools, firewalls and encryption to protect wireless communication systems
• Developing robust identification and verification methods to ensure legitimate data traffic is not blocked by over-sensitive security
• Learning how to avoid relying on security features which consume significant time to navigate such as multiple passwords to improve the productivity of staff
Daniel Crandall, Manager Of Cyber Security And Maintenance, Enterprise Products

2.20 Question & Answer Sessions
2.30 Afternoon Refreshments In The Exhibition Showcase Area

MITIGATING HACKING
4.10 Providing Insight Into How To Mitigate The Threat Hacking Poes To Automation Systems Through Applying Encryptions, Internal Access Restrictions & Communication Changes
• Developing a more robust understanding for the level of threat posed by hacking and interruption to the data stream to identify causes for concern
• Comparing the difficulty of hacking radio versus other communication methods such as cellular and wired connections to determine whether security should impact upon communication system design
• Evaluating techniques for increasing the difficulty of hacking such as encrypting, firewalls and isolating networks to mitigate threats
• Optimizing the level of access to the system granted to different staff and departments within the organisation to improve security without impacting functionality
Nary Subramanian, Associate Professor, University Of Texas

4.10 Question & Answer Sessions
4.20 Chair’s Closing Remarks

3.30 Question & Answer Sessions
3.40 Providing Insight Into How To Mitigate The Threat Hacking Poes To Automation Systems Through Applying Encryptions, Internal Access Restrictions & Communication Changes

Resolute Energy

“...“
CONTROL SYSTEM & SCADA SELECTION

9.00 Reviewing The Data Processing Functionality, Ease Of Integration And Costs Of Different SCADA And DCS Options To Aid In The Design Of Future Control Systems Across Pipelines And Plants

- Benchmarking the functionality, usability and costs of SCADA and DCS individually and as a combined solution to identify the required equipment for each application
- Comparing the costs and integration challenges of using bespoke systems versus off-the-shelf solutions
- Hearing the very latest polling engine capabilities to ensure systems can manage sufficiently large device counts across a network
- Evaluating the ability to manage both real-time and historical process data to ensure a single system can meet the requirements of all business applications
- Understanding the integration challenges associated with each system to ensure that a selected solution is compatible with legacy equipment

9.30 Question & Answer Sessions

MEASUREMENT DEVICE SELECTION

9.40 Explaining How Midstream Operators Are Improving The Reliability And Accuracy Of Measurement Devices For Both Gas And Liquids To Aid In The Selection Of Devices For Each Application

- Reviewing the ability of devices to measure gas and liquid flow, pressure, temperature and density to provide accurate data to meet the requirements of measurement and control departments
- Benchmarking the impact of weather and power consumption on device reliability to ensure equipment is suitable for field conditions
- Assessing the value of equipment such as chromatographs for sampling gas quality and identifying contaminants such as moisture, oxygen and carbon dioxide
- Assessing equipment such as level transmitters for measuring and communicating tank data to control and reduce the risk of overflow

Mark Vandiver, Manager Liquids Measurement, American Midstream Partners

10.10 Question & Answer Sessions

10.20 Morning Refreshments In The Exhibition Showcase Area

ALARM MANAGEMENT & HMI: PART 1

11.30 Comparing Strategies For Alarm Notifications And HMI Graphics Options To Ensure Control Room Operations Are Conducted Efficiently

- Benchmarking criteria for a notification reaching the control room to ensure operators are not receiving nuisance alarms
- Analyzing the control room procedure from receiving a notification to implementing a solution to ensure continuous ownership and rapid processing of each alarm
- Benchmarking color schemes used across control room screens to effectively prioritize alarms and aid in swift decision-making
- Hearing controller feedback on HMI software in the market to aid in the selection of future products

Clint Bridges, SCADA Analyst Alarm Management, DCP Midstream

12.00 Question & Answer Sessions

12.10 Networking Lunch In The Exhibition Showcase Area

ALARM MANAGEMENT & HMI: PART 2

1.10 Learning How To Prioritize Notifications And Ensure Each Alarm Has Accountability To Meet PHMSA Guidelines And Reduce Downtime

- Highlighting methods for setting optimal alarm limits to ensure only critical information on alarms reach the controller
- Comparing policies on alarm accountability to ensure control operations and maintenance in the field are put into action in the lowest possible time
- Analyzing methods for mitigating false alarming to ensure alarms are trusted and the time of controllers is prioritized effectively
- Determining the implications of regulatory standards such as those set by PHMSA on the alarm management strategies and frequency of alarms

Thomas Armitage, Transportation Services Project And Alarm Management Coordinator, Colonial Pipeline

1.40 Question & Answer Sessions

SYSTEMS INTEGRATION

Discovering How Staff Reorganization, Testing Procedures And Equipment Selection Can Ease The Integration Of New Equipment And Reduce Costly Disruption To Operations

INTEGRATION PART 1: SCHEDULING AND COMMISSIONING

1.50 Explaining How To Modify Construction, Testing And Integration Strategies To Reduce The Time To Commissioning Of A New Automation System And Minimize Interruptions To Operations

- Scrutinizing methods for performing integration of new hardware while online to eliminate the requirement of an operational shutdown
- Reviewing procedural changes for the checking of new installations such as merging verification teams with construction teams to reduce the time to commissioning
- Understanding how a phased approach of migration to new systems can reduce the total time of disruption to operations
- Hearing a success story on how efficient scheduling of staff and tasks can ensure construction and integration can meet commissioning deadlines

Chris Geer, REL Manager, SemGroup

2.20 Question & Answer Sessions

2.30 Afternoon Refreshments In The Exhibition Showcase Area

INTEGRATION PART 2: PROGRAMMING AND COMMUNICATIONS

3.00 Hearing A Case Study On How A Midstream Operator Minimized The Time Of Integrating New Hardware Onto An Ageing Network By Optimizing The Process Of Equipment Selection, Programming And Communications

- Reviewing the compatibility of modular and smart devices on the market with popular legacy systems to predict the difficulty of integration prior to purchase
- Assessing methods for reducing the programming and software integration requirements to reduce time to commissioning
- Examining innovative solutions for getting legacy systems and new devices to talk to each other using popular communication protocols
- Comparing the integration challenges of buying bespoke systems versus off-the-shelf DCS and SCADA packages

3.30 Question & Answer Sessions

LEVERAGING AUTOMATION TO IMPROVE SAFETY

Understanding How To Use The Very Latest Leak Detection Software, Control Systems And Process Data To Reduce Risks To Health And The Environment

SAFETY PANEL: LEVERAGING AUTOMATION & DATA

3.40 Utilizing Historical Process Data To Assess Risks To Health And The Environment, Meet Regulatory Requirements And Improve The Integrity Of Pipelines And Facilities

- Revealing the business case for improving safety based on the recorded improvements in health and environmental protection
- Benchmarking methods to ensure all required historical process data is collected and stored appropriately to meet regulatory and legal requirements
- Learning how to leverage automation to mitigate surges and unintended blockage of flow to improve the integrity of the pipeline
- Understanding how to analyze data to assess future risks and investigate what went wrong following an incident

Qing Tan, SCADA Application Team Lead, BP Pipelines

4.10 Question & Answer Sessions

4.20 Chair’s Closing Remarks

4.30 End Of Congress

“Great opportunity to hear both providers and user points of view on the need for and design of SCADA systems”

“BHP Billiton”

I was able to validate our production units automation approach through understanding what is being done by others”

“SUR Inc.”
The Midstream Automation, Instrumentation & Control Congress 2015 offers a unique platform for highly relevant solution providers to showcase their latest technology advances to an audience of decision makers looking to improve the reliability, accuracy and functionality of their automation systems.

WHY IS THIS CONGRESS A UNIQUE OPPORTUNITY?

DECISION MAKING AUDIENCE
Midstream attendees are primarily decision makers looking to learn from other operators. Every conversation is valuable and there is no searching through endless crowds in search of the next customer.

EXCLUSIVE NETWORKING OPPORTUNITIES
We work with dozens of operators across the US to identify the agenda topics and vendor categories they need to hear from. We allocate stalls and speaking time only when suppliers can offer solutions the audience is looking for, so you know your next customer is in the room.

SHARE YOUR SUCCESS
As an operator-led congress, speakers will be delivering unbiased reviews of equipment currently installed across their pipelines and facilities – good or bad. If the feedback is good, solution providers need to be in the room to capitalise upon the moment and make the next sell. If the feedback is poor, suppliers must be ready to update the audience on their latest work to improve the reliability of their devices and reassert confidence in their solutions.

If you have a successful case study to share with operators, get in touch to apply for information on speaking opportunities and stall allocations:

(1) 800 721 3915
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VISITOR PROFILE

Attendees By Job Title
- SCADA Coordinator / Manager - 25%
- Process Control Lead / Manager - 20%
- I&E / Field Technician - 15%
- Automation Manager - 10%
- Measurement Manager - 10%
- Alarm Management Lead - 5%
- Communications Technologists - 5%
- Security Manager / Technician - 5%
- Other - 5%

Attendees By Company Type
- Midstream Pipeline & Facility Operators - 75%
- Solution Providers - 20%
- Consultants & Other - 5%

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