INDUSTRIAL DATA COMMS FORUM

INDUSTRIAL WIRELESS - INDUSTRIAL ETHERNET
- FIBRE OPTICS - SCADA - ROUTERS & SWITCHES
- MODBUS PROTOCOLS - TCP/IP - RADIO TELEMETRY
- DNP3 - REMOTE MONITORING

Featuring Keynote Speaker:

IAN VERHAPPEN
CANADA

Chair Canadian IEC TC65 Committee and Chair ISA 103 on FDT Committee

21st & 22nd March 2012

Mercure Hotel Brisbane, Australia

WHY ATTEND THIS FORUM:

- Network with experienced Data Comms experts and your peers
- Gain practical know-how and best practice in designing, installing, commissioning and troubleshooting industrial data communications systems
- Unashamedly non-commercial presentations – No sales pitches
- Learn about new approaches and technologies through practical case studies and critical discussion
- Find practical solutions to your Data Comms problems
- Discuss new technologies, applications of this technology and the most current developments in this critical subject
- Learn how to select the correct technology and standards for your plant/project

WHO SHOULD ATTEND:

- Instrumentation and Control System Engineers
- Process Control Designers and Systems Engineers
- Instrumentation Technologists and Engineers
- IT Managers working with Networks
- Electrical Engineers
- Project Engineers
- Design Engineers
- Electrical and Instrumentation Technicians
- Maintenance Engineers and Supervisors
- Systems Engineers

And all Engineering Professionals who have an interest in the installation, design and support of industrial communications systems

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INTRODUCTION TO INDUSTRIAL DATA COMMUNICATIONS

The objective of this forum is to outline the best practice in designing, installing, commissioning and troubleshooting industrial data communications systems. In any given plant, factory or installation there are a myriad of different industrial communications standards used and the key to successful implementation is the degree to which the entire system integrates and works together.

The main steps in using today's communications technologies involve selecting the correct technology and standards for your plant, based on your requirements. This includes the design of the overall system; installing the cabling; configuring and then commissioning the system.

The industrial data communications systems in your plant underpin your entire operation. It is critical that you apply best practice and have the skills to fix any problems that may occur. This forum's goal is to distil all the tips and tricks learnt with the benefit of many years of experience. The technical papers presented at this forum will showcase the best and most proven practices to follow.

FORUM DAY 1 - 21st March 2012

8.00am **Registration**

8.15am **Opening Address**

8.30am **WORKSHOP**

Includes: Morning Tea - 10.30am
Lunch - 12.30pm

A Practical Roadmap for Industrial Data Communications – What Really Works

Session 1 — KEY NOTE

Ian Verhappen
Director, Industrial Automation Networks – CANADA

This workshop will provide a comprehensive survey of the wide range of industrial protocols and standards from field protocols to Industrial Ethernet and Wireless to recent breaking developments. You will leave with a valuable toolbox of know-how on topics ranging from selection of the proper physical layer, what bus or protocol to use where and how to apply this information to your next project. You will access some startling conclusions (based on real research and the instructor's standards work) on what standards are actually being used and what really works.

Industrial communications today range from twisted pair fieldbus protocols, to their Ethernet equivalents, and now the increased awareness of wireless. Each of these types of communications is suited to particular niches and applications. What all protocols have in common is a physical layer on which the signal is transmitted so the presentation will give an overview of RS-485/RS-232 and USB, copper twisted pairs, Ethernet (copper and PoE versus fibre), and License Free wireless. Getting the physical layer infrastructure right is critical – so getting it right will determine the likelihood of success for the balance of your project.

Several key protocols with associated typical applications and interconnectivity issues will then be briefly discussed including: Profibus / Profinet, Foundation Fieldbus / HSE, DeviceNet / Ethernet/IP, DNP3 & IEC 61850, HART, as well as the competing industrial wireless protocols Wireless HART, ISA-100, WIA and Zigbee.

Because these are all now digital protocols extending the network to the sensor level part of good risk management practices will need to consider cyber security. We will highlight the commonalities and differences between the IT and control network mindset and requirements in keeping data flowing where it should, when it should.

The "final mile" and payoff for the investment in integrated digital communications is converting the resulting data into information to provide better operations decisions and increased profits. The workshop will conclude with a discussion of how to effectively manage your control system assets for maximum return.

KEY NOTE SPEAKER - Ian Verhappen

BSc, P. Eng, ISA Fellow, ISA Certified Automation Professional

Ian is chair of the Canadian IEC TC65 Committee and has been heavily involved in setting industrial data communications standards. Ian is also a chair of the ISA committee 103 on FDT and is the Managing Director for ISA -5 and ISA-20 having to do with system documentation. Ian is the author of the bestselling book on Foundation Fieldbus technology and has been providing specialist consultancy advice and training to clients throughout the world on taking advantage of the latest developments in industrial data communications.

Afternoon Tea - 3.00pm

3.30pm **Wireless LAN in Industrial Application – Planning, Installation and Commission**

Session 2 — CASE STUDY

Falk Hohmann
Manager PLC/Networks, Siemens - Industry Sector

This presentation will give an overview of an industrial WLAN installation which was completed in 2008 with the target to connect mobile ship unloaders with a corresponding PLC application. Due to several incorrect configurations the entire application was not satisfactory for the customer and the performance in general was not acceptable.

The presentation shows all the circumstances which where responsible for the poor performance and will show you how to fix and to plan a proper industrial WLAN system from beginning to end. Several theoretical and practical facts will be covered plus an overview of useful tools which can be used in order to plan, run and maintain a WLAN system within the industrial environment. This will include: WLAN Channel selection, WLAN signal strength, WLAN antenna positioning, WLAN antenna mounting, and WLAN site survey.

4.15pm **Industrial Ethernet with Video Streaming using a Ruggedised Industrial Strength IP CCTV Solution (including LIVE RESILIENCY TESTS)**

Session 3 — LIVE DEMO

Ian McKinnon
Technical Business Manager, Lan 1

This presentation provides a useful toolkit to consider when building an Industrial Ethernet solution with a particular focus on how to apply video streaming solutions. This will be contrasted with the commercial Ethernet solution. Components most commonly required in an industrial-grade Ethernet solution such as ruggedised IP CCTV cameras, outdoor network switches, wireless infrastructure will also be examined. Case studies from electrical substations, gas pipelines and pumping stations, oil refineries and storage facilities, water treatment stations and reservoirs, bridges and tunnels will be used to illustrate the principles discussed. A fully operational IP CCTV industrial Ethernet system will be demonstrated as a grand finale to explain the best practice design and installation principles discussed above. This live equipment demo will offer delegates a hands on opportunity to explore equipment used in the field.

Closing - 5.00pm

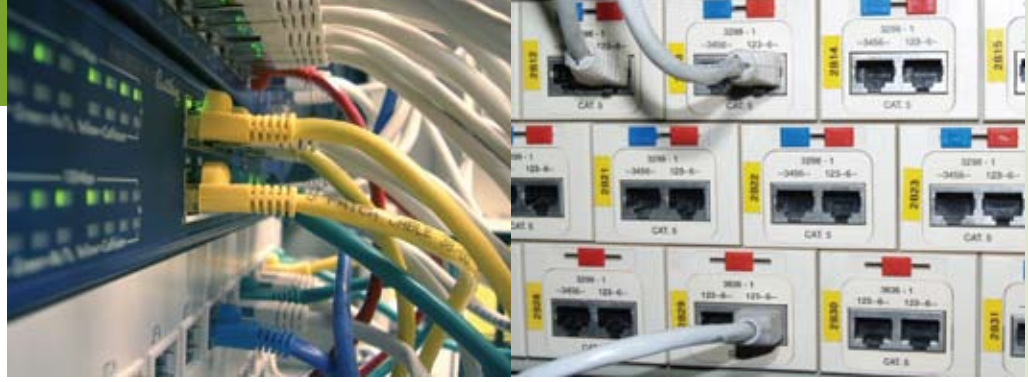
NETWORKING SESSION

Cocktail Hour - 5.00pm to 6.00pm

An hour dedicated for all attendees to meet and socialise with experts and industry peers at the Industrial Data Comms Forum Cocktail Hour.

Sponsorship Opportunities

Representing your business at the 2012 Industrial Data Comms Forum will provide you the opportunity to reach key decision makers from a multitude of industries. For more information on sponsorship and exhibition opportunities please contact Sarah Montgomery via email sarah.montgomery@idc-online.com



All forum papers are reviewed and selected for their high quality and technical value by our panel of specialists experienced in the theory and practice of data communications technology.

FORUM DAY 2 - 22nd March 2012

8.30am — Session 4 — KEY NOTE

Industrial Comms - It's Not Really about the Protocol

Ian Verhappen
Director, Industrial Automation Networks – CANADA

Despite the discussions and 'wars' between the various industrial communications factions, there are now 19 different fieldbus protocols and more than three different industrial wireless protocols either approved or in the process of being approved by the IEC. What this says is that the application and other 'non-technical' factors are more important than the protocol itself. Once you have the application and support questions identified, the selection of the right protocol becomes easy. We will examine a number of different protocols and then once we have identified the target capabilities for these protocols we will learn how to make an informed decision on which one(s) to use for your project. We will cover all the factors that need to be considered, not just the latest hype in the trade press.

9.30am — Session 5 — CASE STUDY

DNP3 Architecture – Water Industry Case Study

Lara Pournayeb
Product Manager – Micro Automation, NHP

DNP3 has emerged as a standard for distributed communication in the water and electricity industry, which has a need for time-stamping, security and an open protocol. Historically, this protocol has been available on RTUs (Remote Terminal Units) for some time, but is increasingly available in a wider range of hardware from many vendors. Surpassing MODBUS, an older, non-secure de-facto standard which uses polling methods, DNP3 allows time-stamping to be captured even when system communication fails. This becomes critical in correcting major faults. Another aspect of DNP3 is the enhancement for data and process security with encryption and authentication. This paper will focus on DNP3 architectures used to reliably and securely control remote infrastructure such as water pumps. Application examples will be drawn from actual installations.

Morning Tea - 10.15am

10.45am — Session 6 — CASE STUDY

Remote Monitoring of Origin Power Station SCADA System's and Associated Security Threats

Ravi Malik
Instrumentation and Controls Lead, Origin Energy

This presentation will discuss the remote operations and monitoring of Origin Power Station with a focus on managing security in line with growing demand for remote data access within the business. Also covered will be: exploring how Origin established remote operation for Uranquinty Power Station from a traders desk and what was learnt from this achievement, analysing the security measures that were considered and implemented to ensure security of the control system, stepping through security threats and outlining the benefits of a centralised remote operation of various power stations as business grew, reviewing the SCADA system to mitigate risks from increased cyber security threats.

11.30am — Session 7 — CASE STUDY

Mining Company Accelerates Data Access and Lowers Costs with OPC Hub and Spoke Solution

Richard Muniz
Asia Pacific OPC Manager, MatrikonOPC

When process engineers and others at Tiwest's mine in Cooljarloo, Australia, needed to examine historical data, they faced a long and labour-intensive process. Often, the engineers could not navigate the IT infrastructure well enough to access the data themselves, and their requests for assistance sometimes went unmet because the data could not be found. With a tight budget and a challenging remote environment where wireless bandwidth is limited and communications often drop due to lightning strikes – Tiwest used OPC technology to overcome these challenges and made the setup, use, and maintenance of its data a simple, everyday experience. Attend this presentation to learn how Tiwest did it.

Lunch - 12.15pm

1.15pm — Session 8 — CASE STUDY

Wireless Instrumentation Technology in Industry

Obaidullah A. Syed
Senior Instrument & Control Engineer, Saudi International Petrochemicals – Saudi Arabia

Although wireless technology is fairly common in commercial and residential arena, it is relatively new in industrial applications. There are many standards offering a wide variety of wireless instrumentation but the industry seems to be cautious in adopting this technology. So what exactly is wrong? This paper will shed some light on the above issue and give an overview of ISA100.11 and IEC 62591 (Wireless HART) standards. A case study along with the cost saving analysis will also be shared to indicate the implications and obstacles that Sipchem faced in initiating and executing its first Wireless project.

2.00pm — Session 9 — CASE STUDY

Strategies and Benefits of Implementing a Wireless Control Infrastructure for Productivity and OH&S Gains

Damon Ellender
Regional Business Development Manager, Cooper Bussman Wireless

This paper will provide an overview of drivers for implementation of a Wireless Control Infrastructure, and the key wireless technologies available currently in the marketplace. Additionally, it will describe the productivity and OH&S benefits delivered in a successfully implemented system, as well as, provide an outline of strategies and selection criteria for key areas of upstream and midstream operation. Finally, a case study of a successful implementation and their outcomes will be provided.

Afternoon Tea - 2.45pm

3.15pm — Session 10 — CASE STUDY

Integrating the Physical Layer of Complex Communications Systems for the Australia Pacific LNG Project (APLNG)

Alan Timmins
General Manager – Data & Communications, O'Donnell Griffin

A major challenge for resource and energy companies, who are investing billions of dollars in exploration projects, is ensuring their communications systems are seamlessly integrated for maximum productivity and security, and robust to withstand harsh environments. This case study will explore the APLNG's communications systems temporary works in Gladstone, QLD. The complex layers of communications discussed will include: mobile communications, access control systems, marine radio systems, CCTV, microwave communications and radio systems. The permanent communications works package includes the additional systems: Fibre Optic Intruder Detection System (FOIDS), local area networks, permanent telecommunications, VOIP, Public Address General Alarm (PAGA) and UPS systems. By utilising the latest technologies, this integrated communications system for APLNG will help create a new, long – term gas processing and export industry in Queensland.

4.00pm — Session 11

Discussion Panel

This session will provide delegates with the opportunity to ask our speakers questions and discuss data communications issues in their workplace, covering typical problems and possible solutions.

Closing - 4.45pm

REGISTRATION FORM: INDUSTRIAL DATA COMMUNICATIONS FORUM

Simply complete this registration form online or return by fax, email or mail.

CONTACT DETAILS

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ATTENDEE 3

MR/MS: _____ FIRST NAME: _____ SURNAME: _____

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EARLY BIRD OFFER: 20% off the forum fee for registrations received before 24th February 2012

3 FOR 2 OFFER: Register 3 people and only pay for two - Save $1645

REGISTRATION & DELEGATE DETAILS

PLEASE NOTE: Full payment is required prior to the commencement of the forum.

☐ **INDUSTRIAL DATA COMMUNICATIONS FORUM** - 21st & 22nd March 2012

☐ OPTION 1: **NO Early Bird Discount** - Book after 24th February **$1645** x _____ delegates = $ _____

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GENERAL INFORMATION

Confirmation Details

A confirmation & information email will be sent to all delegates approximately 10 days prior to the forum. Please ensure that you provide both your mailing address and email address on the booking form.

Cancellation Policy

Full reimbursement will be accepted if written notification of cancellation is received by IDC Technologies on or before 4th March 2012.

A fee of 20% will apply to any cancellations received between 5th March and 15th March 2012.

No cancellation requests can be accepted after 16th March 2012 however from this date substitute delegates are welcome.

Venue

Mercure Brisbane
85 – 87 North Quay
Brisbane, 4000 QLD, Australia
07 3237 2300

Accommodation

The conference venue has accommodation available. Contact directly on 07 3237 2300 to make a booking. Please quote block code #IDC200312 to receive a special room rate. For alternative accommodation, contact IDC on 1300 138 522.

Food and Beverages

All lunches, morning and afternoon refreshments are included.

Unable to Attend

If you are unable to attend the full forum program, contact us for details to attend individual sessions or to purchase the Forum Resource Kit.

Enquiries

1300 138 522

REGISTRATIONS

We encourage you to register early, as spaces are limited. Your payment must accompany the registration form in order for it to be processed and confirmed.

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