

Read-out



read-out.net

Ireland's journal of instrumentation, control, and automation

Industrial cyber security in the spotlight

Foretaste of major event in Cork

It was a coincidence when we recently attended the Emerson Exchange User Conference in Stuttgart one presentation was "Implementing a Control System Security Program Using a Familiar Plant Model!" The speaker, **Bob Huba**, is in fact one of those who will address next months ISA international conference in Cork. **Jim Cahill**, Emerson's intrepid blogger, wrote a report which gives a flavour of this, to many of us, relatively new, technology. Bob's focus was to look at security

from a human centred design approach. Standard IT security is not appropriate for control systems. An example is patch update that is automated that loads the patches and reboots when completed. This can't be done without a plan in place to handle the loss of an operator station during the reboot process. He noted that the biggest fear is the loss of view that makes an operator shutdown the process. A big part of the security problem is people doing insecure things. Examples include



Emerson's Bob Huba

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ISA Ireland Conference on Cyber Security in Control & Automation Systems
8th April 2014
Cork



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NEXT ISSUE



DOES YOUR COMPANY SERVE IRISH INDUSTRY? TELL OUR READERS HOW DEADLINE

20TH JUNE 2014

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New Website



Eurolec Instrumentation has recently updated its website to facilitate customers to order and purchase on-line. The new website also includes a wide range of temperature instruments manufactured & distributed from Dundalk within an ISO 9001:2008 quality system. As the *Ono Sokki* distributor for both Britain & Ireland, the new website features a selection of instrumentation from Ono Sokki including the latest introductions, the NEW CT6520 universal engine tachometer and the NEW LV-1800 laser doppler vibrometer.

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Managing Steam!

Modern production environments require the maintenance team to be experts in a vast range of fields and while many areas may be adequately covered, steam equipment can sometimes be overlooked. This can lead to costly breakdowns or repairs which could have been avoided if some basic principles were better understood.

1. Velocity – Steam should be dry, and only minimal water content should be the target, but it is often present as entrained water and condensate. These phenomena can be damaging and wearing to the steam system – particularly at high velocities. As a general rule of thumb, pipe sizes are typically calculated using 25m/sec as the reference speed. This forms a crucial part of the design, to reduce the impact of water hammer, pitting and wear.

2. Water Hammer – Poor condensate management can lead to water hammer; a condition that should never be tolerated. As the steam travels over condensate in a steam line, it drags a 'slug' of condensate along with it. Due to the mass and velocity of the 'slug' it can contain large amounts of kinetic energy, which is dissipated when it hits an obstacle such as a valve or pipe elbow. The results can be mechanically destructive to plant and extremely dangerous to personnel, so every effort should be made to design and maintain an excellent condensate management regime and eliminate water hammer.

3. Installation of Strainers – Y-type strainers are needed to protect expensive and process-essential equipment from damage and faults due to debris in the steam. However, installed incorrectly they are a potential source of condensate pooling and water hammer. When installed in the steam line, y-type strainers should be installed NOT in the 'belly-down' position, but with the "belly" of the strainer in the horizontal plane – an issue Bürkert has seen on several occasions while fault finding on systems it has been called in to assess.

4. Pipe reducers – It may be necessary to reduce the pipe diameter as part of the steam system design. On steam systems, it is essential that eccentric reducers are used, rather than concentric parts, with the flat side at the bottom. Concentric reducers have a funnel-like profile and are

The Top 10 things you need to know about steam and how to manage it safely & efficiently!



Steam is used in a wide range of industries for a variety of processes, from a basic small heating circuit to large scale hygienic steam production. Greg Sutcliffe, Global Segment Manager at Bürkert looks at some of the basic principles that should be understood by maintenance engineers and facilities managers in order to achieve a safe and efficient process.

sometimes installed by less informed Engineers or when costs are being cut; however this will lead to pooling of condensate and can be a prime source of water hammer.

5. Equal T's – As a general rule, when installing a drain pocket, it should be of the same pipe diameter as the steam main – forming "equal T's", up to a size of DN100. If a smaller bore drain pipe is fitted then the velocity of the condensate will allow it to skip over the drain pipe connection. In addition, the reduced volume of the drain pipe may cause it to overflow, thereby becoming another source of water hammer.

6. Steam system materials – Particularly in legacy installations, cast iron (gg25) pipework and equipment was used as the standard material, which has been shown to offer certain weaknesses to impact (including water hammer) when compared to other affordable materials; – which could result in catastrophic failure. We recommend as a best practice, to use spherical graphite iron (SG Iron) or stainless steel (eg 316L), that can be up to

20-25 times more resistant to impact than standard cast iron.

7. Isolation valves – A crucial part of the safety of the steam installation is the isolation valve, which should be installed both sides of steam trap sets to allow maintenance to be carried out safely. More recently, industry has migrated to the use of double isolation valves either side of the various pieces of equipment to account for possible leakage past one of the valves and to ensure the absolute safety of maintenance engineers.

8. Pressure gauges – These are crucial for providing information required to understand the conditions inside the steam system and they should be installed before and after a control valve to ensure that the valve is performing as required. In addition, fitting them periodically throughout the steam system will give early indications of process change. This is crucial as variations in pressure, and hence temperature, can lead to reduced plant productivity and product quality.

9. Energy efficiency – Producing steam requires large amounts of energy so reducing losses wherever possible helps to improve the overall efficiency and reduce the operating costs of the system. In poor examples up to 40 percent of the energy used to produce the steam is lost, with failed steam traps accounting for 18 percent of these losses. Regular testing and maintenance is crucial to ensure that the steam traps function correctly. Further losses can come from the pipework itself and this should be lagged properly, including pipe flanges and all unused pipe-sections need to be isolated and lagged or better still removed.

10. Above all else – RESPECT steam. As an odourless, invisible, high temperature gas, steam can be extremely dangerous and as such should be treated with great respect.

As part of its product offering, Bürkert has developed a range of process control valves which can be equipped with the ELEMENT control head as part of an intelligent, decentralised control system. In addition, the experts at Bürkert can offer specific advice on selecting the correct components for most steam process designs.

www.petrochem.ie



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Cyber security from page 1

plugging in unfamiliar USB sticks and following insecure URL links.

As IT installs more and more complex security solutions, these can cause outages when applied to control systems, where denial of service is dangerous. Security has both technical and people issues to resolve. Like safety programs, security requires people, processes, and technology. Make HSE (health, safety & environment) become HSSE—health, safety, security & environment.

For a security program, train the people who are interfacing with the technology, from operations to maintenance, to project and process engineers. Following the safety program model makes a security program more easy to understand and be embraced by the people who interact with the control and instrumentation.

Also like a safety program, a security program should be localised to the plant. It must make sense to everyone involved and not be pushed down from above. Key to implementation is that there is ownership by the people involved in interacting with the systems. IT should be informed and provide auditing to make sure what is identified in the program is being done. It's a collaborative effort.

The security program begins with a security champion who leads, trains the personnel, liaises with IT organisation, and is the person responsible that the program sustains over time.

Bob suggested that the utilities area is a good spot to begin since it impacts the entire production operation. It's where the key elements of the program can be worked about and successes built as it is expanded plant wide.

See more on the Emerson Exchange in Stuttgart on page 10 and on our website!

ISA Cyber Security Conference, Cork on 8th May
www.isa.ie

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THE CONTROL CENTRE

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Foundation and HART



The *Fieldbus Foundation*, conducting a press briefing at the 2014 Hannover Messe, has announced significant progress in its discussions with the *HART Comm Foundation* on the potential for merging the two organisations into a single industry foundation dedicated to the needs of intelligent device communications in the world of process automation.

Following the signing of a memorandum of understanding last September, study teams representing both organisations have been investigating the implications of a merger in terms of: the potential benefits to both end users and suppliers, the organisations themselves, and extensive and often common membership; the possible structures that a combined organisation could take and how it would be integrated; and the exploratory work with regard to due diligence in the financial and legal aspects.

Preliminary evaluations support the coming together of the two organisations and confirm that many synergies already exist. The *Fieldbus Foundation* and *HART* have worked extensively together in the past and have a long history of cooperation. For example, the two organisations worked together on the development of common international standards such as Electronic Device Description Language (EDDL) and, most recently, the development of the Field Device Integration (FDI) specification. The merger offers significant potential to

harmonise many aspects of the two protocols, making it easier for end users and suppliers to implement the technology and obtain the full benefits of each technology in plant operations and maintenance.

In particular, the harmonisation of the test and registration processes and procedures and the simplified and single access to a shared IP portfolio, would streamline product development, increase efficiencies, and reduce the suppliers' cost to market.

wp.me/plcGFV-AD

Partnership in USA

CompuCal Calibration Solutions, the calibration management specialists have announced a new partnership in the United States. As CompuCal's North American partner Evolution Distributors will help to accelerate CompuCal's ambitious growth targets. They will distribute the CompuCal Calibration Management software to North American markets as well as implement the software into the quality system of their sister company Evolution Scientific. This expansion will see CompuCal expanding its technical team over the next two years to support this growing market.

Since the early 1990s CompuCal has provided world class calibration solutions to its multinational regulated customers in the pharma, medical device & oil & gas sectors. By implementing innovative technological solutions CompuCal delivers savings in operational expenditure leading to improved quality & compliance for its customers. **Jackie Dornan**,



CompuCal's Matthew Dornan with Joseph Morwald of Evolution Distributors at Interphex in New York

Managing Director at CompuCal said: "In a deal worth more than \$350,000 over the next three years this partnership will secure new life science customers for CompuCal's calibration management software and ensure success in the US market."

We are embarking on an exciting new journey with Evolution Distributors which will strengthen our position in the US market. CompuCal is proof that Irish companies continue to expand, create new job opportunities in Cork and bring

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positive news to the global stage.”

Evolution Distributors is an ISO 9001:2008 comprehensive technical service provider to the pharmaceutical, biotech, medical device, and other regulated industries. “As a partner in CompuCal Calibration Solutions, we see great market potential in CompuCal’s ability to manage multiple sites in multiple locations and the ability to provide the client’s management team with real-time information on the performance of all assets in all locations. At Evolution Scientific we are always looking for ways to improve; through the use of CompuCal’s KPI system, we look forward to having the capability to measure improvements with real-time metrics,” said **Joseph Morwald**, CEO, Evolution Distributors, LLC.

Signing the partnership deal at Interphex, New York, CompuCal’s Technical Director, **Matthew Dornan**, said “Our main area of expertise is in the provision of Calibration Management Software, configured to integrate into other systems and thereby offering a complete solution for our clients. CompuCal is a web based application which allows us to supply solutions that can be provided as a local server solution (intranet) or as a hosted solution (internet), this partnership with Evolution Scientific offers significant opportunity for growth in the North American market.”

www.compuicalsolutions.com

Accreditation

LotusWorks with operations throughout the country, are proud to announce that they have recently added Pipette and Balance calibration to their existing ISO 17025: 2005 scope of accreditation. They were awarded the extension to their accreditation by the Irish National Accreditation Board



From left: Tom McGuinn Calibrations Supervisor LotusWorks, Tom Cafferkey Director LotusWorks, James Stapleton Accreditation Officer INAB, Noel Molloy Calibrations Manager LotusWorks and Nicola Kennedy Quality Manager LotusWorks.

(INAB) in February 2014. ISO 17025:2005 is the international standard that formally recognises the demonstration of the technical competence of laboratories to carry out calibrations. LotusWorks, previously Lotus Technical Services, first achieved ISO 17025: 2005 accreditation in 2010 for Electrical and Temperature calibration. The company’s full scope of accreditation can be found on the INAB website under registration number 277C. The addition to the existing scope for Pipette calibration covers 1ul to 10,000ul and for Balance calibration ranges from 1mg to 20,000g. LotusWorks can perform the full scope of accreditation in their laboratory in Sligo or onsite at their customer’s facility. ISO 17025: 2005 accreditation is recognised as the industry’s top standard, and it assures the quality of their laboratory calibration services, processes, technicians, and data accuracy. The company’s calibration capability extends from onsite calibration, to a mobile

calibration service and laboratory calibrations performed at the company’s calibration laboratory at their headquarters in Sligo. Speaking about the accreditation extension, Calibrations Manager of LotusWorks **Noel Molloy** commented “We are delighted to add Pipette and Balance to our existing Temperature and Electrical offering, accreditation to this standard is a formal recognition that our laboratory is competent to carry out calibrations detailed in the ISO 17025 scope. This extension to our accreditation demonstrates our continued commitment to improving our service delivery.” www.lotusts.com

Automation resource

The International Society of Automation (ISA) has just launched its brand-new website, a state-of-the-art, customer- and member-centric portal that delivers a more personalised and satisfying experience in showcasing the organisation’s products, services, resources and technical information. Reflecting valuable input from

ISA customers, members and partners and involving months of detailed planning and software development, the new site is all-new from the ground up, outfitted with the most advanced technologies, tools, features and capabilities.



Behind the new website is a new best-in-class association management system—similar in purpose to a for-profit company’s customer relationship management system—and a new learning management system that enables ISA’s training and certification customers to easily register for, participate in, and track progress of their professional development activities. Improving ease of use are enhanced search and filtering capabilities site wide, a new design with mega-menus that allow users to browse three

Mirror hygrometer



Since its launch in 2012, the S8000 RS from Michell Instruments, marketed here by **Instrument Technology**, has proved to be a popular reference instrument with smaller calibration laboratories enabling them to generate extra revenue by extending their service to humidity calibration. The reason? It is the smallest and lightest hygrometer in its class, which enables small calibration laboratories to extend their ranges – but without also needing to extend their premises. The easy-to-use instrument also suits in-house reference labs at larger organisations. The S8000 measures dew points

down to -90°C (0.1ppmV) with an accuracy of $\pm 0.1^{\circ}\text{C}$. However, unlike many other hygrometers in this class, no additional external cooling equipment is needed to accurately reach these dry dew points. Even without all the extra cooling equipment, the S8000's nearest competitor in performance weighs 28 kg more. Designed to fit into a standard 17" rack, the S8000 is the most compact, convenient and – because it doesn't need extra equipment to work – the most cost effective hygrometer in its class.

This compact design was possible because of a sophisticated new optical system that detects very small changes in moisture condensed on the mirror surface. This guarantees high sensitivity and fast response when measuring low dew points.

With a high-contrast LCD touch screen, the S8000 RS is easy to operate and interrogate.

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ISA Website from page 6

levels of content deep in the site by hovering over navigation buttons, and an easy, intuitive and fast check-out process for e-commerce.

"At its essence, the new ISA website is all about providing a more valuable, satisfying experience for everyone who visits," said **Jennifer Infantino**, ISA's Manager of Marketing, Communications, and Corporate Partnerships. *"Our former website, while housing a tremendous amount of useful information, didn't make it easy for our customers and members to quickly find what they needed or do what they wanted to do."*

"We've designed the new isa.org so that—whether you are an ISA member, customer or partner, another automation industry professional, or a new visitor to the site—your individualised needs, preferences and expectations will be met... quickly and consistently."

www.isa.org

Automation on the iPad!

ISA has also launched *InTech Plus*, a new mobile app for the Apple iPad that enables automation professionals to rapidly access, scan and digest a diverse range of technical and educational content—and utilise valuable tools and calculators—through a highly interactive and inviting format. Download *InTech Plus* for free through the Apple App Store.

www.apple.com/itunes/

Catalogue

Rittal's new Catalogue 34 provides the essential product guide for industrial and IT solutions. Over 700 pages outline latest developments and acts as a comprehensive information resource about available product types, sizes, specifications, software and services, as well as a source of advice and support for customers

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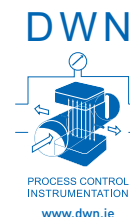
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Please see our website for more information:
www.krohne.com



Hygrometer from page 7

USB or Ethernet connections are supplied as standard to enable remote operation and data logging via a PC or network. As with all Michell chilled mirror hygrometers, the S8000 RS is available with a 5-point calibration, traceable to national standards, with UKAS accredited calibration available.

www.itl.ie

NEMA 4X Meters



Precision Digital, represented here by **PJ Boner & Co**, has announced the Vantageview Series of NEMA 4X Field-Mounted Meters. This Series offers the functionality and features of the company's ProtEX Series of Explosion-Proof Meters in an injection-molded plastic, NEMA 4X (IP65) enclosure. The meters are designed for use in demanding applications in wet or dirty environments that do not require agency approvals. They can be used for virtually any industrial process that involves level, flow, pressure, or temperature. Unique SafeTouch® through-window buttons allow operation without removing the cover. They are available in 4-20 mA loop-powered and pulse input models powered by the output loop, DC, or battery.

The instruments include large, dual-line displays for viewing critical process variables clearly at a distance, even in direct sunlight. Models are available for single process variables, rate and total, feet and inches displays for level applications, and a larger one-inch display for long-range visibility. Each meter features a sleek, modern, polycarbonate enclosure with built-in mounting flanges and a rear groove for sturdy wall or pipe mounting; the integrated tamper seal loop tab allows for an additional layer of security.

The meters also provide three 3/4 inch NPT threaded conduit holes for easy wiring in any direction and include two plastic conduit plugs. Operating and storage temperatures range from -40 to 75 degrees Celsius. Programming and operation of the meters can be done without opening the housing, using the built-in SafeTouch® through-window buttons. Each meter is equipped with up to four sensors that operate as through-window buttons so the unit can be programmed and operated without removing the cover (and exposing the electronics) in harsh environments. These buttons can be disabled for security with a switch located inside the enclosure. When the cover is removed, the mechanical buttons located on the faceplate are used for programming. The clear, impact-resistant polycarbonate window makes these meters ideal for applications where restrictions on glass exist, such as food production.

www.pjboner.com/

Metering Pump



The CHEM-PRO M™ series metering pump has the features and attributes industry pros have wanted, but couldn't find in Diaphragm Metering Pumps currently on the market. These features include: NSF 61 listing – a must in municipal water systems; 200:1 turndown; a large, easy to read LCD screen that displays the pumps' output rate; a 4-20mA output is standard on all models; a robust #316 Stainless Steel pump head cover for added strength; and a comprehensive 3 year warranty. The CHEM-PRO M also features Blue-White's exclusive

DiaFlex™ Diaphragm. The single piece DiaFlex is manufactured 100% in house of molded Kynar. There is zero delamination or breakdown with DiaFlex.

Optional advanced communications include: Industrial Ethernet, Modbus TCP, ProfiNet, Modbus, & Profibus.

www.blue-white.com

Safe Temp Transmitters



Constant measuring accuracy over a long period of time is crucial when it comes to monitoring process temperatures. The Krohne OPTITEMP TT 51, available from **DWN Instruments**, features a newly developed electronic system that boasts a long-term measuring error of ± 0.1 °C (for Pt 100) or ± 0.05 % of span. Over a period of five years, the long-term error is just a quarter of the drift of comparable temperature transmitters. By using the Sensor Matching feature, the total sensor-transmitter accuracy can be further increased.

The superior reliability of a measuring station equipped with this temperature transmitter can be attributed to more than one principle as the transmitter has double inputs for Pt 100 or Thermocouple sensors. The transmitter features SmartSense insulation monitoring to detect moisture in the measuring insert. If the measuring insert (and the sensor element) absorbs moisture, the electrical isolation resistance immediately decreases, resulting in a measurement error.

A second, redundant sensor can

be connected to the Optitemp TT 51 transmitter by way of a dual input. The Sensor Backup function will reduce the risk of losing important measurements by automatically switching over to the back-up sensor in the unlikely event that the primary sensor fails.

For use in safety-related applications, the OPTITEMP TT 51 features SIL2 approval as per IEC 61508. The error monitoring and information meet the NAMUR NE 43, NE 89 and NE 107 recommendations. The transmitters are available with Ex-approvals according to ATEX. The EMC immunity meets Criteria A performance, based on EN 61326-1 and NAMUR NE 21. The transmitter is programmable either directly from a PC via a USB interface or by means of any HART communication tool available on the market. It is either mounted directly inside a standard DIN B sensor head (head-mounted transmitter) or it is installed separately in a control cabinet as a space-efficient DIN-rail-mounted transmitter with a width of only 17,5 mm.

www.dwn.ie/

Software Defined Availability Platform

Industrial IT solutions provider, **SolutionsPT**, in conjunction with partner *Stratus Technologies*, has announced the launch of everRun® Enterprise, a next-generation software solution which represents a break-through in virtualisation technology.

This omprehensive solution, which represents the latest addition to the Stratus portfolio, combines the best of Stratus' high-availability software solutions with enhanced features such as disaster recovery and application monitoring to ensure business continuity.

Robert Dinsmore, High Availability Product Manager at SolutionsPT, said: "The new

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release combines Marathon's EverRun and Stratus's own Avance technology – meaning you get 99.999% availability from a software platform that can be used with commodity x86 servers. This brings true fault tolerance to a much greater user base since it allows businesses to stay in line with their current IT hardware policy, whilst delivering a higher level of availability than most cluster based alternatives. It does all of this in a simplified package that does not require additional shared storage.”

“This launch signals a change in strategy for Stratus,” said Nigel Dessau, Chief Marketing Officer at Stratus Technologies. “We are broadening our focus on fault tolerance – which ensures the highest levels of availability – beyond hard-ware, to virtual workloads on commodity servers. In effect, we are bringing mainframe-like levels of availability to Intel-based servers.”

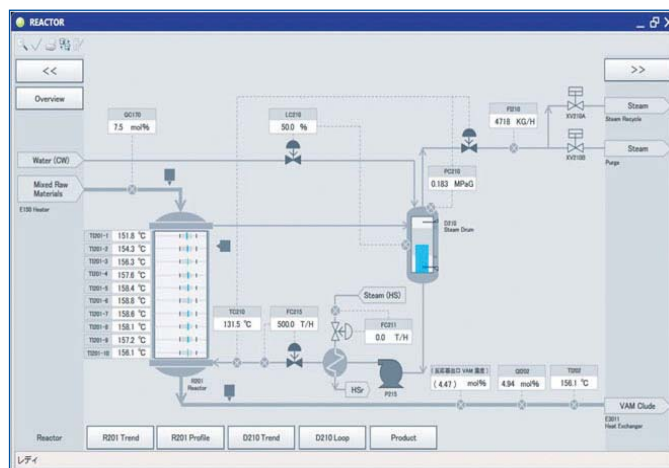
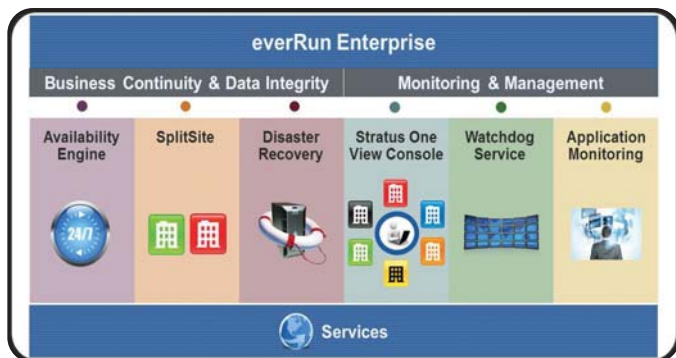
This solution unifies the ease of use, monitoring, management and service capabilities of the Avance® high-availability software with the fault-tolerant engine of previous generations of everRun. Additionally, the entire solution now leverages the open source Kernel Virtual Machine (KVM) hypervisor. The result of this architecture is a higher performance software

platform that supports a wider range of operating system guest workloads.

“This is significant since some customers have resisted migrating business-critical applications to virtualised architectures due to a lack of reliable, enterprise-grade availability in today's hypervisors,” said Jason Andersen, Senior Director of Product Management at Stratus Technologies. “We also see a very similar requirement in private clouds. This technology will be the basis of our cloud strategy as well.”

everRun Enterprise is designed to keep Windows® and Linux™ applications up and running continuously without changes to applications or in-flight data loss. It is compatible with a wide range of platforms, is easy to implement and includes centralised management tools for an all-encompassing view of the entire stack – from bare metal to the applications. The software runs on industry-standard Intel-based x86 servers without the need for specialised IT skills. Unlike other availability solutions, everRun Enterprise prevents downtime from occurring rather than merely recovering from it – a difference that can have a significant impact on revenues, costs and customer satisfaction.

www.solutionspt.com/



First online simulator

Yokogawa is beginning to offer new solutions for optimising plant operations in the oil & gas, petrochemical, and other industries. These solutions will be provided as part of Yokogawa's VigilantPlant Services® suite to support safe, stable, and highly efficient plant operations. The technology underlying these solutions is Yokogawa's newly developed MIRROR PLANT online simulator.

This simulator can visualise the internal state of a plant process and make near-term predictions on plant behaviour. An industry first, this simulator operates in synchronisation with the plant control system and features the good performance required in commercial plants.

Development background

In recent years, there has been increasing focus on improving plant safety and strengthening competitiveness by making plants more efficient. For example, in the chemical industry, plant operators need, in real time, to manage or adjust the state of catalysts and the composition of the reagents and product materials in a chemical reactor, to optimise both plant productivity and product quality.

However, many of the process variables are difficult to measure or cannot be measured directly. Based on actual process information such as flow rate, temperature, and pressure, simulation technology can make predictions on items that cannot be measured in real time: for example, the amount of each component in a product, and thus simulate the state of a plant. By means of high-speed calculations, the simulator can make near-term predictions on the state of a plant. Operators can then anticipate events and take action earlier to ensure safe operation.

Yokogawa and its subsidiary, Omega Simulation, jointly developed the this online plant simulator. It operates in synchronisation with the plant control system and constantly updates a process model. Based on this simulator, Yokogawa will offer support solutions that help its customers optimise their plant operations.

The simulator operates in synchronisation with the plant control system. Based on real-time manufacturing process information and using a proprietary function for adjusting model parameters, It precisely simulates the state of a

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plant. By using plant models, MIRROR PLANT visualises the current state of the plant, the state of the plant up to several hours in the future, and the state at plant locations where it is not possible to measure temperature or pressure. It then displays these results on screen at a CENTUM VP integrated production control system operator terminal or at a standard PC. It also has an alarm function that can alert operators to potential problems. As such, the MIRROR PLANT solution can help their customers operate their plants safely and efficiently while maintaining product quality. Yokogawa offers consulting and engineering services for building the simulation models that are key to MIRROR PLANT's effectiveness. The simulation models used are based not on statistical data from plant operations, but on physical laws. Thus, processes can be theoretically verified, and the simulator can be used for a broad range of applications such as identifying problems in a process. The optimum operating conditions can then be identified before making changes to items such as the production volume or the feed material composition. A field test of MIRROR PLANT was conducted from 2011 to 2013 at a plant of Mitsui Chemicals, Inc., and the results showed that it efficiently stabilised and optimised the operation of a distillation tower. As a result, MIRROR PLANT won the Technology Award from the Society of Instrument

and Control Engineers (SICE), which commended this innovative technology for boosting plant productivity and safety.

www.yokogawa.com/eu

SEMI F47 Compliant

The UltiMod and Xgen families of power supplies, from **Excelsys Technologies**, are now compliant to SEMI F47, an essential standard requirement for Semiconductor Processing Voltage Sag Immunity. Factory automation equipment requires very high levels of power quality due to the sensitivity of the fabrication equipment and process controls. *"Semiconductor processing equipment, in particular, can be vulnerable to voltage sags on the input line"* says **Dermot Flynn**, Director of Sales for Excelsys, *"The UltiMod and Xgen families compliance to SEMI F47, ensures that our customers equipment, and their customers semiconductor production, are unaffected by voltage dips or sags"*.

A voltage sag (or dip) is defined as a decrease in rms voltage or current below 90% of nominal for durations of half an AC cycle to one minute, but not a complete interruption. Voltage sags can have many causes such as severe weather conditions, utility equipment operations or failures as well as adjacent customers power demands. Many of us will have seen the effects of voltage sag (such as momentary dimming of incandescent lights), but in a production environment input voltage sag can cause a production shutdown, leading

to significant revenue losses. The SEMI F47-0706 standard defines minimum voltage sag immunity requirements for equipment to be used in the semiconductor industry. These immunity requirements state that the equipment must operate without interruption during voltage sags that are specified by sag depth (in percent of nominal voltage remaining during the sag) and voltage sag duration (in cycles or seconds). The UltiMod and Xgen families meet the required Voltage Sag Immunity of 200ms at 50% Voltage Sag as well as meeting 20ms hold up for a complete loss of input line voltage. Boasting the highest reliability, Excelsys power supplies come with the Industry leading 5 year warranty coupled with the leading efficiency specification of up to 92%. UltiMod and Xgen can be populated with up to 6 off the shelf powerMod output modules which have power ratings of 72W to 288W and can supply any combination of voltages from 1.5V to 58V. All outputs are fully isolated and may be connected in series or parallel for maximum flexibility and all are individually adjustable over a wide range. All possible output configurations carry full safety agency approvals, UL60950, EN60950 and are CE marked. All models have a permanently on 5VDC bias/standby voltage, power good LED indicators and individual output module control signals.

www.excelsys.com

Measuring everywhere!

The Emerson Global Users Exchange was a three-day event for existing and potential users of Emerson Process Management products and services. The event was held in Stuttgart (D) in April.

Emerson's Chief Strategic Officer, **Peter Zornio**, can always be relied upon to give an interesting presentation and this year proved no different. He spoke about the expansion of the Emerson offering from being merely process control towards an all-embracing monitoring of the entire operation, whether in the process area or in the peripheral areas within and outside the premises.



iOps Centre (above) & Demo at conference!



He introduced us to the iOps concept - Integrated Operations. As technology has developed so has it been possible to see what is happening in all areas of the plant - in real time. It calls for a clear, up-to-date view of what's happening in all aspects of an operation. This assists in more efficiency, increased staff effectiveness and therefore more productivity. By using what they have named Pervasive Sensing they have adopted a policy based on the axiom *"You can't improve what you don't know!"* With this philosophy it is possible to prevent problems rather than react to them.

Our report and links to more detailed information: wp.me/pt7Kv-22C

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EMERSON
Process Management

Automation people



Atlas Copco Compressors has announced the appointment of **Sean Fairest** as Country Manager for Compressor Technique in Ireland. In this new role, he will spearhead a strategy to strengthen the position of Atlas Copco as a market leader in Ireland by helping his team of almost 30 staff engage more closely with customers.



Peggie W. Koon, Ph.D., is the 2014 President of the International Society of Instrumentation. In this position, Dr. Koon will work with Society leaders and staff to increase awareness of the value and relevance of the ISA brand and build on ISA's proven range of capabilities and resources for automation professionals, which includes standards development, education, training, certification, publications, and technical symposia and conferences.



Francis Griffiths is the Senior Vice President of Regional Sales and Marketing to continue to drive global sales alignment and growth for National Instruments.

News daily on the
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Rochestown Park Hotel, Cork, Ireland.

Thursday 8th May 2014

"While no one can prevent industrial cyber attacks from occurring, you can significantly reduce your risk by understanding your vulnerabilities and minimizing the consequences"

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