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Welcome to the July 2005 issue of *ICEnews*, the Instrumentation, and Control Engineering news source. A formatted version of this newsletter can be found at <http://www.iceweb.com.au/icenews/icenews07-2005.pdf>. ICEnews is a bimonthly compendium of useful information though we apologise for not releasing an issue in May.

We want to make this newsletter a source of information that YOU can use in YOUR job, while also keeping you informed on what is happening in our industry both directly and indirectly. If you have something, you would like to contribute, please send it to the editor at Ian Verhappen (<mailto:ian.verhappen@iceweb.com.au>) or Jim Russell (<mailto:jimrussell@iceweb.com.au>). We welcome your Press Releases, information, AND any technical articles you may have that could be appropriate for this newsletter or our web site <http://www.ICEweb.com.au>.

ICEweb's primary purpose is to disseminate information about Instrumentation, Control Engineering to you the practitioners and developers of these arts. ICEnews is another mechanism to get this information out to you.

The authors encourage you to support our newsletter sponsors and also appreciate if you tell those companies to which you reply based on this newsletter that the inquiry is based on an article in ICEnews. Thank you.

As an ICEnews member you are on our mailing list so that we can keep you up-to-date technical information.

At ICEweb/ICEnews we take Spam very seriously and aim to make any information that we send out useful and informative.

Whilst we encourage you to remain on the mailing list to benefit from this important information, we would like to provide you with the option of removing yourself from our mailing list.

If you no longer wish to receive information from ICEnews, please reply to this email with "unsubscribe" in the subject line or contact <mailto:ian.verhappen@iceweb.com.au> and just put "unsubscribe" in the subject line.

If you select either of these options we will remove you from the list. If you wish to continue to receive the information you do not need to take any action.

The newsletter materials are 'subdivided' into various topics as follows though not all categories may be present in every issue:

**ICEart** — Technical articles related to instrumentation and control.

**ICEbus** — Information on any of the 26 different bus systems in use in the area of instrumentation and control. The authors however have a definite bias towards Foundation Fieldbus.

**ICEfolks** — News about promotions and changes people in the Instrumentation Control Engineering world.

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**ICEletters** — electronic newsletters of potential interest to our readers.

**ICEmerge** — Mergers and acquisitions in the Instrumentation Control Engineering community

**ICEnet** — Internet related topics and sites that may be of interest to our readers. In addition to ICEWEB that is.

**ICEnew** — Great new technical links posted on <http://www.iceweb.com.au/new.htm>

**ICESponsor** — Newsletter sponsor recognition. Normally at the beginning and end of the newsletter. These people have kindly contributed to the creation and sharing of this information by offsetting the costs associated with its production and distribution.

**ICETIME** — Seminars, Tradeshows, Conferences and Events of interest to our readership. (Despite the fact that I am a Canadian, this will not include a listing of ALL the ice hockey games I know of or participate in.)

**ICEtools** — Software and offers that will help with engineering design.

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### **ICEart**

Honeywell (NYSE:HON) has announced it has signed an agreement to standardize its automation project engineering on SmartPlant® Instrumentation, an instrumentation engineering solution powered by INtools®, from Intergraph Process, Power & Marine. Honeywell and Intergraph intend this agreement to be the next step in an on-going collaboration to integrate SmartPlant Enterprise with Honeywell's latest process automation technology, Experion(tm) Process Knowledge System (PKS).

Honeywell has earned SIL 3 certification for its Safety Manager platform.

York University professor Dr. Brendan Quine has created a mini-spectrometer capable of detecting greenhouse gases from space to a resolution of 1 km<sup>2</sup>. The device costs approximately \$10 000, weighs 150 grams and is only 50 mm by 80 mm in dimension.

Yokogawa Electric Corporation has reorganized to form Yokogawa Electric International Pte Ltd. in Singapore to serve as the headquarters for the Industrial Automation business in all regions of the world other than Japan, China, South Korean and Taiwan.

FINEDEWT is the new micro chilled mirror hygrometer from Yamatake Corporation with the targeted applications being fuel cells and measurements in the upper atmosphere.

KROHNE has released a new clamp on sonar flowmeter, the OPTIPHASE suitable for measurement of multiphase flows or liquids with high solids and gas contents. Maximum velocity is 10 m/s for pipe diameters between DN 50 (2") and DN 1500 (60").

The NeSSI (New Sample System Initiative) network has moved to a new site that includes discussion forums and a wide range of other information sharing mechanisms for those interested in modular analyser sample systems. Registration on the site at <http://www.cpac.washington.edu/NeSSI/NeSSI.htm> will allow you access to all this information and presentations.

Spitzer and Boyes have released another volume in their "Consumer Guide Series." The latest addition to the family is on Non-Contact Level gauges.

Jonas Berge's book on OPC and Automation software has now been released and can be ordered from <http://www.isa.org/autosoftware>

Rotork has released the SI range of Skilmatic electric modulating actuators for failsafe and emergency shut down valves that incorporate the Rotork IQ communications and diagnostics package.

As part of its rebranding activities, ISA the Instrumentation Systems and Automation Society has adopted a new positioning statement **ISA...Setting the Standard for Automation**<sup>TM</sup> to better reflect its global

nature and broad cross-section of industries in which its members are employed. ISA recently formed of a new standards development committee on human-machine interface, or HMI. The committee is seeking input and participation as it formulates a scope and plan of action. In keeping with its long history of developing integral standards, ISA established ISA-SP101 based on input from users across industry that HMI guidelines and standards and is soliciting participation from representatives from all sectors of the industry. Please contact <mailto:lferson@isa.org> if you are interested in participating in this effort.

MicroStrain has announced the new Inertia-Link™ wireless inertial sensor suite that includes three orthogonal rate gyroscopes, three orthogonal accelerometers, microprocessor, data logger, and RF transceiver. It supports a variety of communications options, including: wireless IEEE802.15.4, USB, RS-232/485, and CAN bus. The product will enable machines and robots to possess the ability to sense their own angular position, and to estimate their transient linear displacements. These new sensors can be used to stabilize cameras, antennas, and other sensitive equipment on moving platforms. Potential consumer product applications include yaw and roll control for cars, trucks, and SUV's.

Since its introduction in January 2004, ABB has sold Industrial<sup>IT</sup> System 800xA to more than 1,000 customers in a wide variety of process industries all over the globe including a recent order with PEMEX Gas y Petroquímica Básica to provide integrated control and safety for its Pajaritos Marine Terminal in Coatzacoalcos, Mexico

### ICEbus

TTA-Group (Time Triggered Architecture) has formed a working group to define a certifiable reference architecture for a complete steer-by-wire application, without mechanical back-up for both on-road and off-road use.

The CANopen association is making available a significant number of their specifications from the download portion of their web site at <http://www.can-cia.org/downloads/ciaspecifications>.

Yokogawa Electric Corporation has joined the FDT Joint Interest group (JIG). Yokogawa instruments have also been integrated into Honeywell's PKS Advantage Program.

The FDT-JIG and ODVA have agreed upon a common understanding of joint activities to incorporate FDT technologies into software tools built on the Common Industrial Protocol (CIP) to support configuration of devices using EtherNet/IP, DeviceNet, and ControlNet.

ARC recently completed and released two reports on digital networking. The first report at <http://www.arcweb.com/res/Ethernet> is on the use of Industrial Ethernet while the second is on fieldbus.

TÜV has certified INTERBUS Safety for use in applications up to SIL 3 as defined by IEC 61508.

Another new fieldbus has been approved by the IEC. Yokogawa's Vnet/IP has been accepted as a Publicly Available Specification (PAS) by the IEC as standard IEC/PAS 62405.

The HART Communications Foundation has started an initiative to support wireless communications.

Free web based training on PROFIBUS International technology is available on their web site at <http://www.profibus.com/wbt/index2.htm> in both English and German.

The SERCOS Working Group have founded a new C2C (Controller-to-Controller Synchronization and Communication) working group to specify a profile for distributed control functions in modular machines and systems, providing for controller-to-controller synchronization between distributed motion controls via the SERCOS interface. The organisation has also released its first SERCOS III controllers. SERCOS III has been defined such that any standard IP telegram (e.g., TCP/IP) can be transmitted in a non-real time slot, in parallel to the real time processing. A SERCOS III control system is able to exchange these telegrams with super-ordinate devices in the network. Thus, SERCOS III combines the established SERCOS real time mechanisms and standardized parameter set with universal communications based on Industrial Ethernet.

The new CAN in Automation, CANopen Product Guide 2005 can be downloaded as a free-of-charge mirrored CD-ROM on the Internet at <http://www.can-cia.org/products/pg2005/> or you can request your personal copie(s) of the CD-ROM from <mailto:headquarters@can-cia.org>. New CANopen profiles for laboratory equipment, heating/cooling/air-conditioning, and construction machinery are also being developed by three new Special Interest Groups (SIGs).

If you would like to learn more about all the Function Blocks used in Foundation Fieldbus, download the following manual from the Smar web site at <https://www.smar.com/products/dfi302.asp>. Registration is required but beyond that the information is free.

### ICEed

Lee College have recently released a new Fieldbus training course "*Course 102 Fieldbus for Sales Professionals*" to help this group of people understand the technology so it can be explained to their customers. A full listing of course at Lee College can be found at <http://www.knowthebus.org>.

SAIT will be offering 3 different Fieldbus courses at their facility in December. More details and registration information can be found at <http://www.sait.ca/fieldbus>.

The Foundation Fieldbus End User Council Australia Inc offers regular Foundation fieldbus courses see <http://www.fieldbus.org.au/training/EUCtrain.htm> for details.

Watch for news on other Fieldbus Training Center courses around the world in future issues of ICEnews.

Through collaboration between the ISA and Drexel University, ISA members can now further their education online without compromising quality for convenience. ISA members can earn an online Master's degree or Certificate through Drexel University in Information Science & Technology, Business, or Engineering and receive a 10-20% tuition discount off the regular Drexel rate. More information can be obtained at <http://www.drexel.com/isa>

### ICEfacts

"Make your own Holograms" kits are now available by purchasing a \$139 kit from Liti Holographics <http://www.litiholographics.com/> using Litholo film the first "Polaroid like" self-developing film uses a blue LED to light the room while the kit is being set up and then a diverging laser beam illuminates the film and object to create the hologram. Maybe not the most useful gadget ever, but it certainly has "geek appeal."

A European collaboration has found that by using a photonic crystal waveguide they are able to slow down light to observe pulse traveling at one-thousandth of the normal speed of light. Details on their work was published in Phys Rev. Lett 94 and summarized in the June issue of Laser Focus World. See <http://lfw.pennnet.com/>.

In the same issue of Laser Focus World another light phenomenon, this time the concentration of light via an optical nanofountain was able to concentrate light beyond the linear limit of about 45 000.

There is another acronym for ICE as described below.

Paramedics will turn to a victim's cell phone for clues to that person's identity. You can make their job \*much\* easier with a simple idea that they are trying to get everyone to adopt: ICE.

ICE stands for **In Case of Emergency**. If you add an entry in the contacts list in your cell phone under ICE, with the name and phone no. of the person that the emergency services should call on your behalf, you can save them a lot of time and have your loved ones contacted quickly. It only takes a few moments of your time to do.

Paramedics know what ICE means and they look for it immediately. ICE your cell phone.

For more than one contact name ICE1, ICE2, ICE3 etc.

**ICEletters**

Subscribe to this newsletter by registering your e-mail address at <http://www.ICEweb.com/au/icenews/register.htm> or sending a note with the subject 'subscribe ICEnews' to [jimrussell@iceweb.com.au](mailto:jimrussell@iceweb.com.au) or [ian.verhappen@iceweb.com.au](mailto:ian.verhappen@iceweb.com.au)

Intergraph Corporation now has an electronic newsletter to which you can subscribe at [www.intergraph.com/econnection](http://www.intergraph.com/econnection)

**ICEmerge**

Honeywell International Inc. is purchasing Swiss toxic and flammable gas detector manufacturer Zellweger Analytics.

The entire fieldbus product line of Hawke International has been acquired by Moore Industries Inc. of North Hills, California, USA.

MTL Instruments Group has acquired the GECMA group of companies for their hazardous area operator displays.

Thermo Electron has acquired Rupprecht and Patashnick Co. Inc (R&P) for their continuous particulate monitoring instrumentation. Thermo Electron has also purchased NITON LLC and their line of portable x-ray analyzers.

Dynisco LLC has purchased pressure transducer and transmitter supplier Viatran Corp from Invensys PLC.

Rexnord Corporation will be purchasing Falk Corporation from United Technologies Corporation.

Schneider Electric has completed its acquisitions of Canadian company Power Measurement, Inc. (PMI).

Racine Federated Inc. has acquired the vortex flow meter product line from J-Tec Associates Inc.

Cognex Corporation has acquired DVT Corporation to expand their line of vision sensors.

Lambda power supplies are no longer part of the Invensys family as they have been sold to TDK Corporation of Japan.

Emerson Process Management has acquired Tescom Corporation and their pressure regulators, valves and systems business. Emerson also recently announced that it has acquired Solartron Mobrey from the Roxboro Group PLC in the United Kingdom. Solartron Mobrey, whose measurement technologies include level, density, viscosity and flow computer products will be renamed Mobrey Measurement, and become part of Emerson Process Management

**ICEnet**

The OMAC MSMUG User Group now has an e-mail user group for which you can register at [http://groups.yahoo.com/group/MMUG\\_OPC](http://groups.yahoo.com/group/MMUG_OPC). This is effectively the OPC Foundation End User Council so if you wish to learn more about OPC and influence its direction this is the place.

The Chemical Industry Data Exchange CIDX <http://www.cidx.org> has published 2 sets of tools for Cybersecurity and Business Practices. The two tools are; "Guidance for Addressing Cybersecurity for Chemical Companies" for \$150 and "Business Process Guidelines."

The following web sites are from the "working the web" column in *Laser Focus World* as links to sites that help explain the science of "how stuff works." One obvious URL is [www.howstuffworks.com](http://www.howstuffworks.com). Don't let the name fool you [www.britneyspears.ac/lasers.htm](http://www.britneyspears.ac/lasers.htm) has good material on semiconductor lasers and light physics. From here scoot on over to [www.semiconductors.org](http://www.semiconductors.org) and [www.users.telnet.be/encyclopedia](http://www.users.telnet.be/encyclopedia). If you want some pictures of the REALLY small world try either of [www.molecularexpressions.com](http://www.molecularexpressions.com) or [www.olympusmicro.com](http://www.olympusmicro.com).

At the Gartner Application Integration and Web Services Summit in Los Angeles, fourteen organizations joined together for the first public demonstration of the interoperability of the WS-Security OASIS Standard by exchanging messages protected by WS-Security using the X.509 Token Profile. WS-Security, developed by the OASIS Web Services Security (WSS) TC, delivers a technical foundation for implementing security functions such as integrity and confidentiality in messages implementing higher-level Web services applications. WS-Security allows a wide range of key security methods such as authentication and access control to be reliably, readily associated with SOAP messages. OASIS has stayed busy as they have also approved the Open Document Format for Office Applications (OpenDocument) v1.0 as an OASIS Standard, a status that signifies the highest level of ratification. OpenDocument provides a royalty-free, XML-based file format that covers features required by text, spreadsheets, charts, and graphical documents.

cfiXML is a consortium working on developing XML based schema to transfer data across and between applications for the life cycle of a facility. Check out their work at <http://www.cfixml.org/>

Can't decide if you prefer Yahoo or Google? Try <http://www.yagoohoogle.com> as it combines both search engines in one URL.

International standards consortium, OASIS, announced the formation of a new committee to develop a core reference model that will guide and foster the creation of specific, service-oriented architectures (SOA). The SOA reference model will offer an understanding of the core elements within a service oriented environment and the associations and relationships among those elements. The reference model itself will not be directly tied to any standards, technologies or other concrete implementation details. Rather, it will be an abstract, designed to be used as a tool by software and enterprise architects developing specific SOAs.

IAONA ([www.iaona.org](http://www.iaona.org)) have released an updated version of the "Industrial Ethernet Handbook." This updated manual presents in a plain manner the basics of Industrial Ethernet and also the different protocols of the partner organizations. The handbook starts with a short overview over Ethernet TCP/IP is given, and then the differences between Industrial Ethernet and standard Ethernet are explained. This followed by sections on wiring and cabling, communication structures, security, wireless and safety. Each of the five partner organizations presents its protocol in a single, short and comprehensive chapter and the book concludes with a short vendors guide. The IAONA Handbook Industrial Ethernet can be obtained for free from IAONA by emailing [handbook@iaona.org](mailto:handbook@iaona.org)

The following article provides a summary of a number of fieldbus protocols and a prediction on their role in future automation activities <http://www.sensorsmag.com/articles/0104/34/>.

## ICEnew

This is a section that highlights those useful technical links that are new to ICEweb.

- Exd Immersion heaters - **From our valued sponsor Grimwood Heating Pty Ltd** (<http://www.grimwoodheating.com.au/flangeheaters.php>)  
Over the years it has been difficult to source Exd Certified immersion heaters and often this has led to a certification nightmare for those engineers responsible for the associated equipment packages. These IEC certified heaters may provide the solution. See [http://www.iceweb.com.au/Ex-web/ExdImmersion/exd\\_flanged\\_immersion\\_heaters\\_wi.htm](http://www.iceweb.com.au/Ex-web/ExdImmersion/exd_flanged_immersion_heaters_wi.htm)
- Lots of new information on Oil Mist detectors can be found on our fire detection page. [http://www.iceweb.com.au/Fire\\_Detection/fire\\_detection.htm](http://www.iceweb.com.au/Fire_Detection/fire_detection.htm)
- Why should you Choose Intrinsic Safety rather than Flameproof for Fieldbus Applications? <http://www.iceweb.com.au/Instrument/Fieldbus/FieldbusIS.htm>
- The ICEweb fieldbus page has been updated. <http://www.iceweb.com.au/Instrument/fieldbus.htm>

- Thanks to our sponsor CCI Sultzer Valves <http://www.ccivalve.com> a large number of papers on Severe Service Control Valves have been posted. [http://www.iceweb.com.au/Valve/severe\\_service\\_valves.htm](http://www.iceweb.com.au/Valve/severe_service_valves.htm)
- Have you heard of the IECEX scheme? The IECEX Scheme provides the means for manufacturers of Ex equipment to obtain certificates of conformity that will be accepted at national level in all participating countries. See ICEweb's Electrical Equipment in Hazardous Areas page. <http://www.iceweb.com.au/Ex-web/HA%20Tech.htm>
- Electrical Motor Control and Soft Starters- Excellent information from Fairford Electronics, see ICEweb's TechWeb pages. <http://www.iceweb.com.au/Technical/Technical.htm>
- Information on innovative wireless applications, thanks to Microstrain. [http://www.iceweb.com.au/Newtech/wireless\\_technologies.htm](http://www.iceweb.com.au/Newtech/wireless_technologies.htm)
- Safety information -Energy Safety in Western Australia publishes a range of informational brochures related to safe use of electricity and gas in and around the home as well as in the workplace. [http://www.energysafety.wa.gov.au/energysafety/resources/publications/pages/Safety\\_information.html](http://www.energysafety.wa.gov.au/energysafety/resources/publications/pages/Safety_information.html)
- Basics and Fundamentals related to Process Automation and Control  
Process Instrumentation - Control Systems - Fieldbus - Advanced Control - and more topics-Thanks to PAControl.com  
<http://www.pacontrol.com/index.html>

## ICEtools

Another segment design tool this issue, from Emerson Process Management this time. Go to <http://www.emersonprocess.com/systems/support/segment/>. On the right hand side, you will notice a Download button and once installed you will have to register the software as well to be able to store and print your results.

The Manufacturing Enterprise Solutions Association (MESA) <http://www.mesa.org> provides information to those involved in the manufacturing production system realm. Membership ranges from US \$20 for students, US\$ 85 for a single employee up to \$5500 for a business entity.

The Government of Canada has developed a program called CanMOST – the Canadian Motor Selection Tool that is available on the government of Canada Natural Resources web site <http://oe.nrcan.gc.ca/egi/english/software/intro.cfm> and requires you to create a user profile. The software includes a database of 43 000 motors and can be used to determine the economic reason to use one type of motor versus another.

If you would like to receive a neat heat dissipation from enclosure monograph, send an e-mail to Philip Corso ([cepsicon@aol.com](mailto:cepsicon@aol.com)) and he can reply with the Adobe file.

Trade journal “Automation World” have compiled a number of their past articles into a series of Special Reports that can be downloaded from <http://www.automationworld.com/get/reports>

“The Complete Guide to Chain” website at <http://chain-guide.com> has the complete contents of the originally Japanese book with the same name and has a comprehensive reference on power transmission and conveying chains.

Upon completion of an on-line survey, Advantech (<http://www.advantech.com>) are offering customers a copy of “The PC Handbook” seventh edition.

Phoenix Contact (<http://www.phoenixcon.com>) have developed a new manual “Explosion Protection Theory and Practice” that includes basics and how to information on equipment selection for hazardous locations.

Not to be outdone, competitor Pepperl+Fuchs have a 210 page Blue Book available in English and Spanish that can be downloaded at <http://www.am.pepperl-fuchs.com/literature/litform.asp> that explains Intrinsic Safety.

Fairford have launched a comprehensive new on-line resource library for softstarters, providing information on everything from basic application advice to detailed data on energy saving performance. Available on-line at <http://www.fairford.co.uk>, the site aims to provide everything an electrical engineer needs to know about Soft Starters, quickly, at the click of a button. Simple navigation and a broad range of downloadable data ensure that the site is easy to use and above all useful.

If you would like to learn more about Bode Plots for Process Control, you may be interested in the tutorials that can be accessed on-line at <http://www.cse.ucsc.edu/classes/cmpe293/Spring04/> particularly sessions fifteen and sixteen.

### ICETIME

If you would like to have your event listed in ICETIME, please send a note or press release to the editor at <mailto:ian.verhappen@iceweb.com.au>

### 2005

#### August

28 – 31 Honeywell Users Group Australia, Queensland, Australia

#### September

**5 – 6 Foundation Fieldbus End User Council Meeting, Xian, China**

6 – 8 IEC 61850 Seminar/Workshop, Toronto Ontario <http://www.nettedautomation.com/seminars/uca>

**8 – 9 Foundation Fieldbus End User Council Meeting, Kurashiki Japan**

**14 – 16 Jump Aboard 2005. Information at <http://www.fieldbus.org.au/JA05info/JA5-rego.pdf>**

12 – 15 ASIS Security Show, Orlando, Florida

15 – 16 14<sup>th</sup> Sampling, On-Site Analysis, Sample Preparation Conference and Courses, Pittsburgh, PA  
Information at <http://pacslabs.com>

21 – 23 Honeywell Users Group China

25 – 29 18<sup>th</sup> World Petroleum Congress, Johannesburg, South Africa. Sandton Convention Centre. More information at <http://195.166.37.12/ite-group/og/18wpc/>

26 – 28 PACKEXPO International, Las Vegas Nevada

28 – 30 SAFECOMP 2005, 24<sup>th</sup> International Conference on Compute Safety, Reliability and Security, Fredrikstad, Norway <http://www.hrp.no/safecomp2005>

#### October

3 – 7 Emerson Exchange, Orlando World Center, Orlando Florida

16 – 19 Canadian Chemical Engineering Conference, Toronto, Ontario

17 – 18 38th annual Congress of the Brazilian Pulp and Paper Technical Association Sao Paulo, Brazil  
[http://www.abtcp.org.br/m3.asp?cod\\_pagina=1822](http://www.abtcp.org.br/m3.asp?cod_pagina=1822)

**18 Foundation Fieldbus End User Council Meeting, Top Hotel Praha Blažimská 1781/4, 149 00 Prag 4 – Chodov, Czech Republic**

24 – 27 Honeywell Users Group Europe, Prague

25 – 27 ISA Expo 2005, Chicago, Illinois <http://www.isa.org>

26 – 27 2005 Huntsville Simulation Conference, Huntsville Marriott Hotel Huntsville, Alabama  
<http://www.scs.org/hsc>

29 – November 2 Telvent UGC 2005 <http://www.telventcanada.com>

30 – November 1<sup>st</sup> AIChE Annual Meeting, Cincinnati, Ohio

31 – November 3 IEEE Sensors 2005, Irvine California. Advance program at  
[http://www.epapers.org/sensors2005/ESR/session\\_sched.php](http://www.epapers.org/sensors2005/ESR/session_sched.php) additional information at  
<http://etp.ieee.org/tc/sensors/sensors2005/index.html>

#### November

1 – 3 CHEM SHOW, New York City, New York

**3 - 4 Fieldbus Foundation End User Council Meeting, Cambridge, Massachusetts**

9-11 Measurement & Control Show 2005 TOKYO, Tokyo Big Sight

13 – 16 Multiphase Pumping & Technologies 2005, The Diplomat Radisson SAS Hotel, Manama, Bahrain  
<http://www.multiphasepumping.com>

16 – 17 Allen-Bradley's Automation Fair

22 – 24 ISA Show South America 2005, White Pavilion of Expo Center Norte (São Paulo - SP – Brazil,  
<http://www.isadistrito4.org.br>

23 – 24 Process Automation, Instrumentation and Electronics Expo, Eden Park, Auckland

28 – December 1 Interkama Asia, Shanghai New International Expo Centre.  
<http://www.interkama-asia.com>

29 – December 2 ChemAsia 2005, Singapore

#### December

6 – 7 **Multaqa – 2005**, Foundation Fieldbus Middle East End User Council meeting, Gulf Hotel, Bahrain  
<http://ffeucme.org>

12 – 14 Kuwait First International Petrochemicals Conference <http://www.kuwaitpetrochem.com>

#### 2006

##### February

20 – 23 IFPAC 2006 Arlington, Virginia. <http://www.ifpac2006.org> to learn more.

27 – March 3 Measurement Science Conference, Anaheim, California [www.msc-conf.com](http://www.msc-conf.com)

##### March

6 – 8 Kuwait 2nd International Oil and Gas conference and Exhibition <http://www.kuwaitoilexpo.com>

12 – 17 PITTCON, 2006 Pittsburgh Conference, Orlando, Florida [www.pittcon.org](http://www.pittcon.org)

##### April

3 – 6 SAE World Congress, Cobo Center, Detroit, USA

##### May

22 – 24 Air Pollution 2006, The New Forest, UK  
<http://www.wessex.ac.uk/conferences/2006/air2006/cfp.html>

June

21 – 23 Waste Management 2006, Malta <http://www.wessex.ac.uk/conferences/2006/waste2006/cfp.html>

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Relcom Inc, CIRCOR International Inc, Zellweger and Grimwood Heating sponsor this issue of ICEnews, which is a joint publication of ICEweb and ICE-Pros, Inc.

Well recognized by such brand names as Circle Seal Controls, Hoke/Gyrolok fittings, and Go Regulators, CIRCOR International Inc. is a leading supplier of valves and related products and services to a wide range of users who require precise, efficient, and safe fluid-control systems. For over 125 years they have been providing a complete array of fluid-control products and technologies to a highly fragmented industry.



For more information go to <http://www.circle-seal.com>

Relcom Inc. specializes in the design and manufacture of wiring components and test equipment for the physical layer of Foundation Fieldbus and Carrier-band industrial local area networks (LAN). From our headquarters near Portland, Oregon, USA, we have provided taps, repeaters, network monitors, and test equipment to demanding users and leading control system manufacturers since 1985.



For more information go to <http://www.relcominc.com>

The **Zellweger Analytics group** of companies provides gas detection solutions in industries where potentially hazardous chemicals and gases exist. A full range of fixed gas, portable gas and flame detection equipment is available for the measurement of flammable gases, toxic gases and oxygen concentrations. The company provides design, development and manufacture of electrochemical, catalytic and infrared sensors, along with Chemcassette technology, placing the company at the forefront of innovation. The company offers solutions to increasingly difficult gas detection and monitoring applications.



They also offer project management for specialized fire and gas systems, a global network of service centers and 24-hour on-line technical support.

For more information go to [http://www.iceweb.com.au/Suppliers/zellweger\\_analytics.html](http://www.iceweb.com.au/Suppliers/zellweger_analytics.html)

The **Grimwood** range of flanged immersion heaters can now be manufactured to provide hazardous area protection for users in the Asia Pacific region. Depending on the location and operating environment, units can be made in either carbon steel or stainless steel. The benefits of using locally designed and manufactured product fully complying with hazardous area requirements are shorter supply chains and lead times and quicker, clearer communication.



<http://www.grimwoodheating.com.au/flangeheaters.php>

ICE-Pros, Inc. is a global independent Instrumentation & Control Engineering consultancy specializing in the areas of Fieldbus technology and process analyzer systems. More complete information can be found on their web site at <http://www.ice-pros.com>

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