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INSIDER

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Emerson Global Users Exchange takes off in Germany, setting high standards, focusing on safety + wireless

Emerson brought their Global Users Exchange to Europe at the end of May: but this was not just a satellite show for those European, Middle Eastern and African cousins! This was a full transplant of the Emerson Global Users Exchange, as has previously been seen each year for the last 25 years in major cities across the USA.

Bob Sharp, business leader for Emerson Process Management in Europe, opened the three day event in the Hotel Maritim, near Dusseldorf airport, saying that the 1050 attendees from 46 countries at this first ever Exchange event outside the USA was a marvellous start, and he hoped it would be repeated annually, since the EMEA region currently contributes 30% of the Emerson Process Management total sales.

Sharp also pointed out that while the US event has had 25 years of history, and while the 2011 event had 3000 participants, with an average annual attendance growth rate of 14.4% it was only in 2003 when they too had passed the numbers attending for this first year in Europe. Obviously the total numbers had exceeded the original plans, with the press packs only suggesting a figure of "over 800 delegates", and attendance by Emerson staff being rationed. The breakdown of the numbers was not provided, but estimates were that 50% were from end-user companies.

Investment in customer support

Steve Sonnenberg, president of Emerson Process Management, congratulated the organizing board of the European Users Exchange for their hard work, and success, in creating the programme that includes 100 presentations, mainly (80% plus) from the end-user community, to

meet the conference objective of "Exchanging ideas. Creating solutions."

Within Emerson he outlined the dual priorities of investment and partnering to create the sort of ethical business deserving of the trust placed in it by their customers, the users of the Emerson products. To do this the company has become a listening organization, interviewing around 5000 customers to find out what improvements their experience suggests is needed. As a result, over 4000 staff were added in 2011, many in local support and service centres: not all the vacancies created have yet been filled, because of the difficulty of finding the right people.

The floods last year in Thailand had been a major lesson, badly affecting the Emerson pcb production capabilities, and as a consequence investments have been made to improve the robustness of the supply chain, using dual-redundant sources for critical items. Duncan Schleiss, vp business development, in his DeltaV Roadmap session later in the day, confirmed that their Thailand production facilities have been duplicated with another factory now established in Penang, Malaysia: with these facilities shipping at 150% of normal capacity, production should be out of backlog soon!

The concluding message from Sonnenberg to the assembled customers was to "Give Emerson your toughest challenges, make us a trusted advisor!" This is their current objective.

Solutions Exhibition

The inevitable product displays to encourage customer discussions were presented in what was presumably a ballroom, which gave an impressive scene,



Bob Sharp:
"EMEA represents 30%
of the Emerson business"

THEY SAID IT

"Make Emerson your trusted advisor"
Steve Sonnenberg,
President,
Emerson Process
Management
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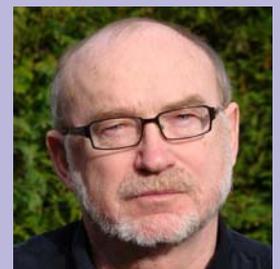
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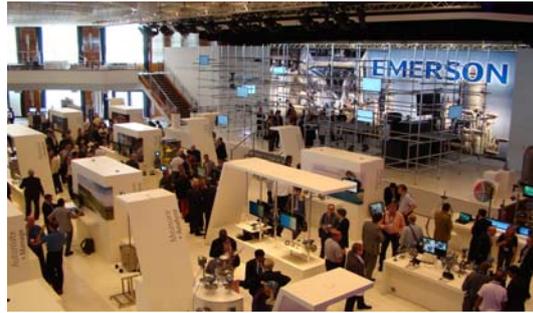


A separate news website and blog is published as
www.iainsider.com

Cryptzone, the European-based IT threat mitigation specialist, has published the results of a recent survey of 300 IT security professionals, which reveals that the boards of directors are most likely to ignore or flout security policies and procedures, with 42% cited as frequently ignoring them. Over half of all respondents were convinced that senior management believed that "the rules don't apply to them", although they have access to the most sensitive company information. The directors are easy people to identify and target! Another 20% of their respondents also suggested the IT team were just as bad! Cryptzone is a technology innovator of proactive controls to mitigate IT security risk.

One of the most popular customer presentations at the Emerson Exchange in Dusseldorf discussed cyber security, explaining how one process industry chemical manufacturer hired an "ethical" hacker to nose about inside the office domain of their WAN. This hacker easily gained access to many of their confidential programmes where for example access codes and passwords had been left unchanged from the ex-factory supplier codes, such as "0000" and "admin". Naturally this resulted in a corporate steering document to address this basic problem. There was some discussion about how an ethical hacker could be validated!

rivalling any major exhibition event. It also gave a spacious, comfortable and easy atmosphere for process discussions and explanations. Here one of the main



The Emerson User Exchange show floor

themes of the Emerson message came through, with some product displays extending high up on scaffolding, all equipped with wireless aerials - with a distinct absence of wiring and cable trays.

This 'benefits of wireless' message came through strongly in the user presentations as well as the Solutions Exhibition: the whole event confirmed the Emerson leadership in, and commitment to the area of wireless technology.

Pre-bundled solutions

The "Industry Applications" area of the exhibition featured several specific targets where Emerson products and ideas are said to be able to improve the performance of the customer's plant. Broadly described as "Pre-bundled solutions", these covered Distillation systems, Precise filling, Blending and logistics, Energy management (including Combustion control, Burner management, Fired heater control, Emissions monitoring) and Power Generation. Many of these themes were reinforced in the customer presentations given throughout the event.

Classically the industry partners who are complementary suppliers also invited (by Emerson) to exhibit at these events seem to be shunted into a cul-de-sac, and here these partner stands were positioned on the balcony, around the edge of the ballroom, looking down on the main event below. At least they each had a good write-up in the 60 page comprehensive conference guide!

Now Emerson reduces SIS project time + complexity

Inevitably, for a user-defined event, the official Emerson press conference did not entirely follow the main themes of the Emerson Exchange user presentations! The first press session was entitled "Conquering the Complexity of Safety", and featured three new "Smart" safety solutions, to assist in improving and simplifying safety systems. Peter Zornio, chief strategic officer, first introduced a new approach to simplifying and streamlining the system project engineering needed in a safety system, reducing the time to market for any new process plant investment.

Electronic marshalling for SIS

It was in 2004 that Emerson launched their DeltaV SIS, claimed as the first digital, fully integrated safety system. Then in 2009, the Emerson CHARMS electronic marshalling reduced the complexity of the standard DCS projects, with the first system installed in May 2010, but so significant a development that Zornio suggests 50% of their projects are now using CHARMS. Last Autumn Emerson launched intrinsically safe CHARMS modules, coloured blue rather than the original grey. The latest launch in Dusseldorf presents a further new design of CHARMS modules, coloured yellow, to be used to provide more efficient marshalling of the inputs and outputs from DeltaV SIS logic solvers in plant safety systems.

"This new DeltaV SIS architecture addresses the project challenges we hear about from customers," said Keith Bellville, Product Manager for the DeltaV SIS offering. "They wanted the best of both worlds - the DeltaV SIS characteristics of integrated but separate safety, compliance with IEC standards and field device diagnostics, but with the capabilities they saw in our CHARM technology for process control. The result is a more flexible, easier-to-install, higher capacity system. Furthermore, the overall footprint requirements for the solution are far less than other safety systems in the market."

The system can be implemented as a standalone SIS solution, natively integrated as part of a DeltaV installation, or connected to any DCS, via Modbus. This was a logical step in helping customers tackle the complexity of designing, implementing and operating safety systems. CHARM technology greatly reduces the number of steps needed to successfully design, install and operate these solutions.

The new CHARM Smart Logic Solver (CSLS) provides the same functionality as the existing SLS 1508 logic solver but extends the previous 16 I/O limit per logic solver to a capacity of 96 I/O CHARM units in the rack below each logic solver. All inputs are software-assignable to any of the 16 logic solvers on a Local Safety Network, dramatically increasing the flexibility of configuration and wiring possibilities. All logic on the network is still executed within 50 milliseconds.

While the initial release of the new DeltaV SIS system with CHARMS is announced now, it is not expected that full certification or production will be available for another 12 months. Then, further planned releases will address additional I/O types, including intrinsically safe CHARMS for the CSLS (No-one was commenting on what colour these modules would be!) Until these are available the hazardous area connection will be made through standard safety barriers.

Control element improvements

A further product improvement announced covered the extension of the capabilities of the Fisher digital valve controller DVC6000, originally introduced for safety systems in 2002: over 50,000 units have been supplied since then. Treve Tagg, manager for final control elements, ad-



*Peter Zornio:
"50% of current projects
are using CHARMS"*

vised that the final control valve still accounts for 50% of all safety system failures, and is a critical area where further diagnostic information is desired on site.

Using the interaction between a magnet in the valve spindle and a non-contact Hall effect sensor, the DVC6200, launched in 2009, has been well accepted, with over 80,000 units sold. This unit provides the desirable information about the actual movement of the valve stem, which is particularly useful during valve stroke test procedures, and this valve controller will shortly be available with SIS approval for use in safety systems. The information then available about the actual valve movement within partial stroke testing procedures will give added reliability to this area of safety system testing.

Rotating machinery protection

Similarly, Björn Salomon, general manager for machinery health monitoring, confirmed that 50% of all rotating machinery safety incidents occur during transient operations, such as start-up and shut-downs – which is only 10% of the total running time. A limited view of asset performance during these periods can lead to developing machinery faults being missed, so the CSI 6300 digital overspeed protection system for critical rotating machinery – such as turbines, compressors and pumps – is to be introduced, offering SIL2 rotational direction detection, and SIL3 overspeed protection. The CSI 6300 SIS, approved by TÜV, is the only overspeed protection system that complies with the latest version of safety standard DIN EN 61508:2010.

Wireless applications are steaming ahead

Since most of the Emerson Exchange delegates wanted to talk about experience with wireless systems on the plant, and many of the end-user presentations featured such applications, it was inevitable that Bob Karschnia, vp for wireless in Emerson, would provide a review of the progress of wireless for the press.

Emerson have announced the award of a \$23m contract by BP to supply integrated control and safety systems for two new bridge-linked platforms for the Clair Ridge project. Clair Ridge is located in the North Sea to the west of the UK's Shetland Islands. It is being developed by BP and its co-venturers ConocoPhillips, Chevron and Shell. In addition to providing automation technology, Emerson will serve as the project's main automation contractor (MAC) under its global agreement with BP. As MAC, Emerson will conduct front-end engineering and design for the integrated control and safety system, as well as other services that include automation engineering, installation, acceptance testing, commissioning, configuration, and start-up support. The integrated Emerson solution will use PlantWeb digital plant architecture, including the DeltaV digital automation system, DeltaV SIS process safety system, and AMS Suite predictive maintenance software. These digital automation technologies will support BP's Field of the Future programme for enhancing operating efficiency and oil recovery. Wellhead monitoring and control functions will take advantage of Emerson Smart Wireless technology, which helps reduce engineering and cabling costs as well as installed weight on the offshore platforms. A separate wireless plant network will support applications such as mobile workers and video streaming for flame detection.

McCrometer, part of Danaher, manufactures the “versatile” V-Cone flowmeter, “with its unique self-conditioning flow technology” – OK, if I were writing the PR it would probably have to get lyrical, to make it seem more than a DP measurement across a cone in an orifice. But these flowmeters were designed for rough water applications, then found good performance and a niche application in steam metering, and are also the mainstay of the downhole oil and gas mass flowmeters and shale gas metering systems, which must be another profitable niche. Now the latest info from McCrometer says the V-cone is also the lowest installed cost, reliable measurement solution chosen for yet another niche application – measurement of LNG (Liquefied Natural Gas). McCrometer say “The gas liquefaction process requires accurate flow measurement: several times during transportation, storage, regasification and in distribution through pipelines to the end users. With its self-conditioning, no-moving parts DP technology, McCrometer’s V-Cone Flow Meter is now installed in a wide variety of LNG applications all over the world. Hundreds of V-Cone Flow Meters have been installed to measure LNG as it flows into liquefaction trains and then from the trains into storage tanks and even in specialized cryogenic applications where flow was never before measured.” What happened to Gervase, and Spirax’s Gilflo?

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Karschnia advised that Emerson have around 8000 SmartWireless networks (Gateways) in operation in the market, at over 3000 locations, and have accumulated around 850m operating hours to date, from nearly 100,000 installed units: by the summer this will be 1 Billion hours.

“This is no longer a new technology, it is proven out in the field, with customers in all world areas in all kinds of different applications – in oil and gas, upstream and refining, chemical plants, power plants”. The most significant application areas were quoted to be solving problems or enhancing plant performance, listed as: optimization in oil and gas wells; health and safety; and in energy projects to make processes more efficient.

Latest wireless sensors available from Emerson include the CorrLog corrosion monitoring system, the Rosemount steam trap leak and temperature monitoring sensor, and the safety shower monitoring system, using the TopWorx switch discrete input transmitter.

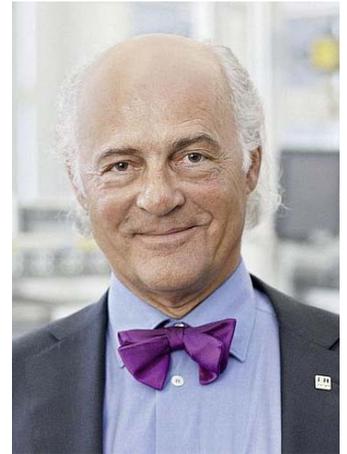
● Further reports from the Emerson Exchange customer presentations, including several presentations showing the use of wireless sensors where the customers themselves have put them into active control loops, will be reported in the next issue of the **INSIDER**.

Endress surprised at E+H 2011 sales results, up 16%

The Endress + Hauser annual media conference disclosed their financial results for 2011, which even ceo Klaus Endress said had surprised him, in view of the sovereign debt crisis and currency upheavals, on top of natural disasters in Asia: “But we nonetheless grew across most regions and industrial sectors”.

For 2011 net sales were up 16% at Euro1.5Bn (\$1.9Bn); profits increased 40% to Euro177m, and headcount increased 10% to 9414 employees. For the current year, further solid growth is expected, targeted at 11%, but figures to date are below budget, with China in particular below expectations.

Last year, for E+H, the Americas showed stronger dynamic growth than Asia, and sales in Europe grew with double digit figures. Political unrest in the Arab region and Northern Africa caused this area to fall behind expectations. The most significant business growth was in the oil and gas industry, where E+H is pleased to have established an Enterprise Framework Agreement with Shell.



*Klaus Endress:
Profits up 40% to record
level of Euro177m (\$225m)*

During 2011, one of the E+H strategic acquisitions was of Systemplan, based in Durmersheim, Germany, an engineering bureau which offers its consulting services to businesses in energy efficiency. This complements the E+H sensor and other activities in this important market area.

Capital spend in 2012 is budgeted to increase 64%, to Euro140m, including further investment in the USA, plus China and Brazil, where a new production facility will be built for flow, level and pressure measurement engineering.

Nevertheless, the family owned group still has considerable cash resources available, possibly for other investments.

Invensys report on 2011 - something for everyone!

The statements made in association with the full year results from the Invensys Group seem to offer something for everyone. The Group review started on a high note, recording the order intake (for the year to end March 2012) up 12% at GBP2.75Bn (\$4.34Bn), including “major awards for rail signalling contracts in both new and core markets in Invensys

Rail and good momentum across all lines of business in Invensys Operations Management”.

Sales revenue was GBP2.54Bn, up 2%, driven by large greenfield contracts in Invensys Operations Management and new market contracts at Invensys Rail, but offset by a sales slump of 13% (GBP75m) at Invensys Controls.

Operating profit was £209m (\$330m), down 20%, equivalent to a GBP53m fall, as a result of the GBP60m (\$95m) of additional contract costs announced in January 2012 (See the **INSIDER** report in February, pages 3-5).

After these highlights it was perhaps not surprising that both Wayne Edwards, group chief executive, and David Thomas, group cfo, both emphasized that “We are looking forward to a year of improving performances across our businesses!”

IOM and Rail shoulder the blame

The highlights were embellished with the following comments, in a review by Edmunds: “However, it is disappointing that our profitability was reduced by additional costs arising from our nuclear projects in China within Invensys Operations Management (IOM) and a handful of contracts within Invensys Rail. We have responded by strengthening our procedures and management teams in a number of areas.”

These profit reductions compared to last year were actually made up of declines of GBP27m at IOM, GBP12m at Rail, and GBP21m at Invensys Controls: and these figures are after the divisions had absorbed part of the GBP8m of costs that have been re-allocated or taken out of the central charges from the group. So it seems as though IOM and Rail are rather unfairly taking all the blame.

Mixed results with IOM Greenfield projects

The Group review commented on IOM: “Invensys Operations Management had another year of strong order intake (total GBP1266m, \$2Bn) across each line of business despite the absence of any new large greenfield project awards in the year. The underlying rate of order increase was 11% [excluding the China Nuclear con-

tracts] with orders in systems up 7%, software up a record 20% and equipment up 11%. Revenue growth (11% at GBP1272m, \$2Bn) was also strong mainly due to the ramp-up of activity on many of the recently won large greenfield projects.”

The greenfield projects then also featured in their future outlook: “Our systems business will benefit from its strong order book but growth in its operating margins will be moderated by the effects of the lower margin greenfield projects.”

Quizzed later over whether these “green fields” are attractive, Edmunds commented that these might number 30 contracts in all, taken at single digit margins, because it is difficult to make more than this on bought-in material: but he explained that at the back end of such projects, where extra software is added to enhance or optimize the processes, the margin is much better.

The view from IOM

Within the IOM review there are three business areas reported, and these have been re-named. Systems, previously called ‘control and safety’, represents 60% of revenues; Software, previously called ‘advanced applications’ is 18%, and Equipment (presumably sensors and transmitters) is 22%.

IOM say “Systems continued to grow based on services and upgrades of ageing assets in the developed world and good prospects for larger projects with some schemes, previously deferred, being re-activated. Software is seeing excellent recovery in areas such as optimization, Human Machine Interface (HMI) and Manufacturing Execution Systems (MES). The equipment business is still seeing good growth driven by continuing investment in the energy sector, particularly in upstream oil and gas in North America.” IOM also comment that “The rapidly developing economies of the Middle East, Asia and South America continue to expand greenfield capacity in the power, upstream and downstream oil and gas and petrochemical sectors to meet consumer and export demands”.

“During the year, we established a line of business structure within the division

Yokogawa advises that the orders to be placed with them from the Australian Ichthys LNG project, for control systems on the LNG plant, the Central Processing Facility and the FPSO vessel - following the Yokogawa FEED study - will be the largest order Yokogawa has ever received for a single project. The Ichthys gas field is in the Browse Basin approx 200km off the shore of Western Australia, and gas will be exported via an 889km subsea pipeline to the onshore processing facilities in Darwin. Yokogawa was selected as the Main Automation Contractor for this project in 2009.

One out of four of all the gas liquefaction plants around the world use Yokogawa control systems, and these systems are also used on 41 LNG receiving terminals and 47 LNG carriers.

Products to be supplied to Ichthys include Centum series integrated production control systems, safety instrumented systems for detecting abnormal conditions and safely initiating emergency shutdowns, Exaquantum plant information management systems, PRM integrated device management packages for monitoring and diagnosis of plant equipment, and OmegaLand operator training systems. Yokogawa will also handle the engineering, installation, and commissioning of these products and the training of operators.

Sudipta Bhattacharya has left Invensys, and accepted a position as ceo for Strategy and Transformation at the Adani Group, in India. The group, founded in 1988, is a GBP6Bn integrated energy, infrastructure and logistics company, which has seen exponential growth by providing goods and services to India's burgeoning middle class. In India the Government has struggled to keep pace with this rise in demand, and has opened up the energy and infrastructure markets to the private sector. Adani has taken up this opportunity and currently operates in mining, power, oil and gas, ports, shipping and rail services: the group expects to grow between 4 and 10 fold over the current decade. Could this be achieved in automation systems?

Recently Joe Hogan, ceo of ABB, commented "I worry about India. The country has enormous potential. But it suffers from a high trade deficit, strong inflation and has only a bit of room to manoeuvre on fiscal policy. I'm keen to see what happens there in the next 12 months. The country has gotten so important as an economic power."

Bhattacharya responded that the current slowdown to only a 6% growth rate has two reasons – the global crisis and historic Government policy. Because of the high internal demand from the growing young population and the huge need to invest in core infrastructure, this is just a blip in the economic cycle.

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(systems, software and equipment), each with its own leadership team responsible for strategy, commercial activities and operational delivery. In addition, we announced in November 2011 the formation of a separate global nuclear business unit to recognize the significance of the nuclear industry to this division; nuclear represented around 6% of the division's revenue in the year." Obviously Mike Caliel only rejoined IOM as ceo in the last quarter of the year, and has presumably been deeply involved in this business reorganization.

IOM base business

For the previous year, ie 2010-11, the Invensys Group results were reported in the *INSIDER* (June 2011, pages 1-3): these had enabled the then new chief executive, Wayne Edmunds, to say "IOM had a terribly successful year", and made the first group results he had to report look reasonable, despite the shortfalls in orders at Invensys Rail. Actually, as pointed out last November by Sudipta Bhattacharya, then the IOM ceo (*INSIDER* November 2011, pages 3-4), the IOM base business was seen as "surprisingly strong" even then.

The same comments can be made for the full year results for 2011-12, where if the nuclear order intake figures are excluded, the underlying rate of order increase for the business was 11%. Then after removing the GBP40m re-engineering costs at China Nuclear, the IOM operating profit would have risen 12% year on year, in line with sales, maintaining the 10.7% operating margin achieved in 2010-11 (still well below the Invensys Rail margin of 15%, however).

Comments on Invensys strategy

While Edmunds would not comment to media analysts about recent press speculation over a possible acquisition of Invensys by a competitor - GE, Emerson, Siemens and ABB were all quoted, with a suggested price of \$2.6Bn - or make comment about any recent internal review of the business by Invensys, his review did detail their latest business strategy.

This was based on a new analysis that Edmunds explained had given him a new insight into the foundation set of the Invensys Software and Equipment businesses, with high growth and in strong defensible niche positions globally, which are stable and predictable. The Software businesses average the low 20% region in terms of profitability, whereas the Equipment businesses return in the high teen percentages. In Wonderware Invensys have what is considered to be the most profitable industrial software business worldwide, with a return of around 30%, outclassing such very tough competitors as Aviva Solutions, AspenTech and OSIsoft. Edmunds was enthusiastic about their Equipment businesses, which were said to be near capacity and giving high returns, labelling them as the foundation of the business. It was this area that he therefore said would be the focus of their current M+A activity, using bolt-on acquisitions.



Wayne Edmunds: "New insight into Invensys business"

In answering a later question from an analyst about the recent acquisition of PHW and its Positive Train Control systems, based in the USA, Edmunds again said "I just happen to like the Equipment businesses quite a bit – you can get them at a reasonable price, they have great returns, they are low risk implementations, and they are stable..... You will be seeing more of the same."

We look forward to more of the same, for the IOM Equipment business.

So what are to be the big acquisitions for 2012?

Jim Pinto reckons automation acquisitions are brewing, because the majors are flush with cash. In his eNews at the end of May Pinto suggests that Honeywell Proc-

ess Solutions (HPS), Invensys and Rockwell are the targets in play, and the potential bidders are Siemens, ABB, Schneider Electric, GE and Emerson. Pinto is at least consistent, since he has held and expressed these views for some years, and maybe the difference that might trigger some action now, is the amount of cash currently available.

For a different view your Editor presents an opinion as follows:

Rockwell too strong

Pinto suggests that Rockwell are doing fairly well, but have nowhere to go, and are too big to be small, and too small to compete against Siemens and ABB. After recent good results they would be expensive, and would not be of interest or offer anything really new to Siemens, ABB or Schneider Electric, in my view. Indeed Joe Hogan of ABB confirmed their position in a recent interview with the Handelsblatt newspaper in Germany, saying "From time to time there are rumors that we want to buy Rockwell. I can say it's not true."

GE would probably not find the Rockwell customer profile of interest. The only real potential might be for Emerson to look at acquiring them to address the discrete automation market? But then Emerson have enough potential for development in-house, so Rockwell would probably be seen as a distraction.

Honeywell for oil and gas

Honeywell's HPS I see as a well performing solid, steady, primarily oil and gas automation system supplier - again an expensive acquisition, from the larger group. It would still make sense for GE to consider them (as they did, seriously, about 10 years ago) for the oil and gas focus, but have GE decided that they do too well out of the oil and gas hardware, to want the hassles from full automation systems? HPS are not likely to interest Emerson or ABB.

Siemens and Schneider are the ones left, and Pinto suggests that Siemens is currently seriously reviewing the possibility. It is likely Honeywell would consider selling HPS, at the right price.

Invensys on every shopping list?

The Invensys Group is half rail and half "Operations Management", plus a small, recently ignored and poorly performing further business. IOM has a large heritage in terms of the existing process industry user base that has already been used as a hunting ground by Emerson and maybe ABB: that user base might still be an asset to others of course.

Invensys is currently very low cost as an acquisition (market capitalization GBP1.7Bn), and comes with GBP40m of head office costs that could be eliminated immediately, but carries a small pensions problem (a lot smaller than Pinto suggests, while he mentions GBP1.7Bn, I believe it currently totals GBP426m). Invensys has enormous potential for blossoming, in both rail and IOM, for example in China: but then it always has had this potential, it just has not blossomed too well so far.

For Siemens the rail business is just as attractive as the IOM side, and Siemens is normally thought of as the first potential bidder. This was discussed in the March 2011 issue of the *INSIDER*, when Invensys was valued at GBP2.7Bn. ABB has probably sorted out their past DCS history with a multiplicity of different operating systems, so just might not see that as an obstacle - anyway InFusion is said to work with any host system: plus the Invensys price is probably right, which is a major factor at ABB.

GE would probably be attracted by the infrastructure potential in rail, and presumably GE Nuclear Plant Services is planning their future involvement with nuclear power plant construction, so there are interesting areas for GE within the Invensys package, before you add in IOM. Invensys would add interesting capabilities to Schneider Electric, to move them into a broader automation profile. So it's really Emerson who are probably the only people who will not be interested!

What is the Invensys plan?

It is interesting to ask what plan the Invensys Group management themselves might have for future ownership. As commented in the *INSIDER* in April 2011,

Honeywell has won a renewal of a multi-year contract with Linde AG to provide UniSim Design Suite simulation software. Linde uses UniSim Design for the process engineering of olefin, hydrogen and synthesis gas plants, for which it models the complete processes in a single simulation. It also uses the solution for R&D, plant safety design, and as a starting point for detailed engineering of complex equipment such as heat exchangers and distillation columns. More than 200 Linde engineers across the world use the software to determine the most economical and reliable plant design, and optimize plant performance. "UniSim Design helps us deliver projects faster and ensure we get the best solution for our customers," said Dr. Gabriele Engl, manager of information technologies for process design and control at Linde's Engineering Division. "We migrated because we wanted technology that could handle large complex models in a robust and efficient way, but also offered on-going support and flexibility to evolve as the demands on our designers changed. Over the last five years, Unisim Design has proved it can deliver." Honeywell has tailored the solution to the company's requirements using a joint development programme. It interfaces, for example, with Linde's in-house physical properties system and incorporates a number of the company's in-house unit operation models.

PI, Profibus and Profinet International, has a new Chairman. Michael Bryant, PI North American executive director and PI Deputy Chairman, introduced Karsten Schneider, the new Chairman, to the global community of 27 regional PI associations at a recent meeting in Dubai.



The former PI Chairman, Jörg Freitag, has accepted a new post at the Toronto-based company RuggedCom, which was recently acquired by Siemens, his employer, and this created the vacancy. Karsten Schneider is also a Siemens employee, where his rôles have included being head of development for MES components and then marketing manager for distributed peripherals: in April this year he was appointed director of fieldbus strategy for Siemens. Schneider also worked closely with Michael Bryant in North America from 2005-8, when Schneider was head of the PROFI-Interface Center, the North American PI Competence Center and Test Laboratory in Johnson City, Tennessee.

page 1, Sir Nigel Rudd, the Invensys chairman, is famed in UK boardroom circles as a corporate deal maker: maybe the previous ceo Ulf Henriksson even had to leave Invensys because he could not bring a good acquisition deal to the table.

The current ceo, Wayne Edmunds, was previously the chief financial officer, and to some his appointment by Sir Nigel was seen as a person chosen to tidy up the pension fund and put the group in shape to be sold. Sir Nigel originally built a small car dealership into the Williams industrial conglomerate before dismantling it to create fire safety companies Chubb and Kidde. He has chaired a string of Britain's most high profile companies, and oversaw the GBP12Bn sale of Alliance Boots, the drugs distributor and retailer, to private equity firm KKR. The deal still ranks as Europe's largest ever leveraged buy-out. He also sold glass-maker Pilkington.

Rudd, now 65, joined Invensys as Chairman in December 2008: in recent days has been pre-occupied with a possible new appointment as chairman of Prudential Assurance, but eventually he withdrew.

Other interest also from Asia

Associated with the London stock market and city there are many investment and private equity groups that might buy Invensys for the potential carve-up value when sold on as smaller specific business chunks. Plus what about an approach from an Indian or Chinese group? For example from the Adani Group, which just recruited Sudipta Bhattacharya? (Page 6)

To be honest, the current situation can probably continue for a year or more: the interesting bit only occurs when the first bid is announced, and the other bidders then have to make their move.

ABB launches CE approved K-Tek level products in UK

Last month the *INSIDER* reported on the wide range of ABB instrumentation installed on the CCS pilot plant at Imperial College, which had one slight hiccup in terms of the liquid level switches used in the reservoirs at the bottom of the columns

– these were from Vega.

Well, at the IWEX water industry exhibition in the UK last month ABB took delight in presenting three separate K-Tek level measurement systems, freshly released for sale in Europe, with full CE approval. ABB acquired K-Tek early in 2010 – the product range is well known and much respected in the USA and across the Middle East, particularly in the oil industry, but has never really had a presence in Europe before now.

Advanced laser products

Alan Hunt is the Product Manager for these K-Tek level instruments in the UK and Ireland, and he sees many opportunities for the products across several industries, including power, food and general storage silo measurement, as well as in the oil/gas and water industries. On show at the NEC were two advanced level measurement systems, one using laser ranging, and the second using guided wave radar (GWR) along a flexible cable dropped down into a tank or silo.

While the laser system on show was set up to measure the visitor's height, the pencil beam and targeting possible, measuring the distance to any surface - even when it is not flat or providing an apparent reflection - makes the system useful for problem applications in narrow wetwells, in large silos containing food, like potatoes, or even for gas holders. The laser system is also being used in more sophisticated scanning systems to monitor the contours of solids in a storage area, computing the total contents, despite the changing levels.

Tank monitoring

More conventional level systems from K-Tek also include a chamber or bridle to be fitted onto a tank containing process liquids: the float within the chamber contains a number of magnets, which are used to drive semaphore type flap indicators external to the process, but in a sealed, clean environment. In addition K-Tek have associated 10 Amp rated alarm switches, hermetically sealed, ATEX certified and CE approved that attach on the external chamber.

Then moving up in price again, a magnetostrictive transmitter can be positioned next to the chamber to measure the actual level of the liquid, if needed!

The rest of the range is coming to Europe soon, ie the CE approvals are nearing completion: these include ultrasonic level measurement systems and simple point level switches.

- Vega have introduced the VegaPuls WL61 radar based level measurement system, aimed at replacing poorly performing ultrasonic sensors in water industry applications, particularly for open channel flow measurement.

Which way forward in flow meters for the TASI Group?

The Flow Division of the US-based TASI Group is made up of five well established brand names – AW-Lake Company, KEM (Küppers Elektromechanik GmbH), Exact Dispensing Systems, Litre Meter Ltd, and Vögtlin Instruments AG.

The acquisition of Litre Meter was announced in November 2011: Charles Wemyss, ceo at Litre Meter, said: “By becoming a part of TASI Group, Litre Meter can now provide its customers with an enhanced range of flowmeter solutions including positive displacement, mass flow and Coriolis meters across an increased global range.”

Move into Coriolis meters

The Coriolis meters quoted are those manufactured by Tricor in the USA and Germany: Tricor is a brand within the AW-Lake Company that was introduced in June 2011. Their products were first offered by Litre Meter in August 2011.

Move to March 2012, and Litre Meter announced the appointment of Chris Ringer as applications engineer, responsible for strengthening the company's customer focus by providing sales support for Litre Meter and products for offshore, sub-sea and general applications manufactured by other TASI Group brands, including Tricor and KEM. Ringer gained extensive experience with Coriolis

meters at Krohne UK, where he was sales manager, and he has previously worked at Foxboro - as flow products manager - and Hartmann and Braun.

Global business development

In their latest move, in May, TASI and Litre Meter have further strengthened their senior management with the appointment of Paul de Waal as global business development director: this appears to be a group appointment, as the job responsibilities are quoted to be to “strengthen the [Litre Meter] focus on developing products and market strategy in the Americas, Asia and Europe for TASI Flow Group technology brands including AW-Lake, KEM and Tricor”.



Paul de Waal:
“Flowmeters are my passion”

Commenting on his new job, de Waal said: “I feel fortunate to be given the opportunity to join such an excellent and professional team. I look forward to working with them to focus on the expansion of the of the TASI flow group product line. Flowmeters are my passion. I find the combination of technologies and variables in physics, electronics, mechanics, processes and materials fascinating. I believe in focussing on core capabilities, correct application and making quality, innovative products. But in the end it is all about people.”

It is really interesting how the flow business produces this reaction in so many people: so what is the next move? Maybe there is a clue in de Waal's recent experience.

Experience in thermal mass

De Waal joins Litre Meter from Sierra Instruments in the Netherlands, where he was managing director. The press release says he has vast expertise in a range of flowmeter technologies, including thermal mass flow (which is the main technol-

Radar liquid level measurement systems from Vega are being used for monitoring the fill levels in the special stainless steel flasks used to contain and transport potentially hazardous nuclear waste from the decommissioning activities at the Dounreay nuclear research establishment in Northern Scotland. To protect the contents during transport, the flasks are filled with water in a robotically operated filling station, where complete filling is critical, but the process must avoid over-filling, since removal of any spillage requires a complex clean-up procedure. Because of the potential radiation level, no sensitive electronics can be positioned in line of sight above the flasks. The stainless steel VegaPuls waveguide and radar antenna is designed with a 90 degree bend, to allow the microwave generator and electronics to be positioned outside the container and protected from any direct radiation. Such bespoke waveguides have been built up to 8m long. The Vega pulsed radar with EchoFox signal processing allows the level measurement to be made accurately over a 180mm measurement range in the top of the flask. Nuclear testing has shown the radar to be suitable for SIL1 applications: a separate SIL2 high level alarm is also provided, using a VegaSwing tuning fork type liquid level switch.

Ametek Corp has acquired German motion control specialist, Dunkermotoren for around Euro250m: the company will join the Precision Motion Control division. Their products complement each other in several industries including factory automation and medical. Dunkermotoren is a competitive manufacturer of industrial small motors in Bonndorf, Germany plus Serbia and China, which will be beneficial to Ametek in building a stronger presence outside of the Americas. Dunkermotoren sales this year are expected to be Euro155m. IMS Research comments that these are two of the top 10 manufacturers of industrial fractional HP motors around the world. Last year, Dunkermotoren bought the UK-based Copley Motion Systems linear motor business. The Ametek move will threaten the dominance of the top two suppliers, Maxon and Faulhaber. "Multiple acquisitions by other leading motor manufacturers such as ABB, Regal Beloit and Nidec have really changed the competitive landscape for industrial fractional HP motor suppliers," said Bryan Turnbough, analyst with IMS Research. "Since the downturn, larger companies have been finding new areas of growth through acquisitions while smaller companies are struggling to keep up. This is changing the competitive dynamics of the industrial fractional HP motors market, which is growing 3% to 4% annually."

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ogy behind the Sierra flowmeters). De Waal commented "It was John Olin, the founder of Sierra Instruments, who asked me to set up Sierra Europe. Now, 22 years later, I am leaving a mature and successful Sierra division behind. I am very grateful to Sierra for all it has taught me but now I am ready for a new challenge."

Litre Meter ceo Charles Wemyss added: "I am delighted to welcome Paul to Litre Meter and to the TASI Group. As a Sierra distributor in the UK since 1993 I have known Paul for nearly 20 years. He brings with him valuable experience which will make him a great asset to our team in driving growth for Litre Meter and for TASI as a whole."

Within TASI, it is Vögtlin Instruments that manufacture thermal mass gas flowmeters: the Vögtlin company was acquired in September 2011.

Do MES vendors miss out from UK manufacturing?

Organized by *The Manufacturer* magazine, the "ERP Connect" symposium event was held in May at Ansty Hall in Coventry, UK. This very successful event formula alternates presentations of case studies, given by end users or independent suppliers, with 1:1 Q&A sessions and discussions between the delegates (ie the potential users) and the ERP vendors, who actually sponsor the event. The delegates effectively get to see all the ERP vendors in one room and also have the chance to network with other potential and existing ERP users. In reality, if you described this day as free concentrated consultancy, you would not be exaggerating, suggests our Northern correspondent. But more than that, the day left the impression that the presentations each had a familiar ring - as the claims were those that, in the main, would be made by MES vendors. So the next step is maybe to assemble the MES vendors and resellers for a similar event, once again organized by *The Manufacturer*, to open up this discussion format wider.

The case studies were varied and discussed the reality of ERP implementation, its business benefits, what was learned on



the way, and in one case how to pick up a failing implementation and turn it around. *The Manufacturer* had ensured that no actual vendor or reseller spoke, so the content was informative and as real world as it can get, mainly from end-users. The only downside was that the necessary parallel sessions meant that delegates could not attend all the presentations in the time available!

To attend the event required registration and a fee, which was reduced if the delegate agreed to participate in the 1:1 sessions (why would one not do so and therefore not obtain the full benefit). Speaking to a random sample of co-delegates it was clear that the event was of significant use and was an efficient way to sound the market and make early-day potential vendor selection. For the suppliers, these discussions with the delegates gave valuable information and business potential assessment for later follow-up.

Implications for MES vendors?

The fact that *The Manufacturer* (www.themanufacturer.com) could get the co-operation of many ERP vendors to attend under one roof and sponsor an event is praiseworthy, and perhaps shows a 'market-forces' approach by these vendors, each of whom had brought their inevitable pop-up exhibit displays to attract the eye. Could such an event be co-hosted by the MES community?

There is an assumption that the ERP business comes expensive (in millions) and ties up an organization's resource for over a year, therefore there is an associated market size and money to do such things, whereas this is not the case for MES. Well, not quite, as it was said that ERP today kicks in at circa GBP25K and tops out at GBP125K (whether this is full costing I do not know), and one presenter at a previous ERP Connect event talked about implementation in a few weeks rather than months (although he admit-



ted to an assertive approach!).

Given that an MES project can be the same kind of money, and take similar times and that many of the benefit claims overlap, one has to wonder if the MES players are busy fighting amongst themselves rather than joining together to produce more market focus on the undeniable and unique benefits of MES. It seems that the potential customers for MES are the same as those for ERP, and give the same beneficial results.

Real time information?

Admittedly no one spoke at the event about such things as OEE, Asset Management, Downtime and Historians; and 'real-time' was just not mentioned! In fact the assumption was that the data appeared from 'somewhere' and ERP made good use of it in delivering useful information. Whether the information was about what was 'supposed to have happened' or 'actually happened' was unclear, but possibly barcode readers and keyboard input were part of these schemes. This however was a personal and theoretical observation, as there was an overwhelming endorsement in terms of business benefit - regardless of any concerns about data accuracy, reliability or timeliness. Needless to say S95 was not mentioned (*this, it seems, is just NOT recognized in ERP-speak*).

The whole thing was about business benefit - the case for which was presented very convincingly by numerous end-users during the day. The confusion for your reporter was the repetition to a high degree of what one would hear at MES presentations by vendors (and no doubt their satisfied customers); although I may have been the only person at the event to make this observation. Possibly many MES disciples could and would take exception to what was being said, but that would be to argue with satisfied customers that were testifying to measured business benefits from ERP, such as inventory reduced by 50%, and the reality in one case that over

Euro100m of business had been previously managed on ad hoc spreadsheets.

Can the MES vendors co-operate?

It could be that there is an opportunity to develop an 'MES Connect' event proposal, to bring the functionality and benefits of MES to the attention of 'the right people' - people not currently seen by MES suppliers: and it does seem that these would in the main be the same sort of people that attend ERP Connect, which are presumably at the core of *The Manufacturer* magazine readership.

Can MES vendors come together in a group for the common good? Nothing is impossible, but without such a combined approach, MES vendors may find that they are nibbling at the edges rather than enjoying main-stream acceptance as 'being as useful as ERP', and UK manufacturers certainly seem to need and appreciate all the benefits of such systems, once shown what is available.

- Interested? E-mail the **INSIDER**.

Automation group ATG expands across the UK

Autotech Controls, based in the UK - a major supplier of automation and control solutions for production and logistics - has purchased two smaller suppliers with specialist expertise in the industry to form a GBP30m turnover group, to be called the Automated Technology Group. Andy Robinson, Managing Director of Autotech and ceo of the new group, commented: "This deal opens new markets for each of the three group companies, offering the potential for greater success through co-operation, to increase market share and secure economies of scale."

The other companies involved are Igranic Control Systems, a leading supplier of motor control centres and innovative high-voltage switchgear/distribution systems, (with a turnover of over GBP7m for clients like British Sugar, Hanson Cement, Scottish Power, Tata Steel and Thames Water); and PSJ Fabrications, a specialist in sheet metal fabrications val-

At the UK National Exhibition Centre in May, two separate exhibitions of interest to automation companies ran in the same week: these were Sustainability Live, mainly featuring IWEX, the International Water and Effluent Exhibition, and NEMEX, the National Energy Management Exhibition, plus another multi-show event which included MEDTEC, a medical technology show, and MTEC (Sensors, Measurement and Instrumentation).

Whilst MTEC was once a busy show, in recent years it has seemed to be in terminal decline. Last month the visitors hurrying past the remaining few MTEC stands to reach the MEDTEC event showed that MTEC had indeed died, and now even the official show website carries information only for the next MEDTEC event. You had to sympathize with the air flow measurement specialists Furness Controls, who had put up the only large custom stand in MTEC, and supplied four sales people, who then had no-one to talk to.

The IWEX show, on at the same time, had more visitors than MTEC - but as noted last year (*INSIDER* June 2011 page 5 - 8) the NEMEX Energy Management section of this event hall had more visitors. Positive thinking IWEX exhibitors commented "Much better than yesterday?" - on Day 2! The Sustainability Live website reported 7259 visitors in 2011 for the whole event, and only "large crowds" this year.

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ued at over GBP2m pa, supplied to demanding clients such as the USAF, the Ministry of Defence and the Science Museum.

Virtual factory simulation

A key area of growth for ATG will be virtual manufacturing services, whereby clients planning new or modified automated production systems can have their proposals comprehensively proven before the new systems are built and installed. Having invested over GBP1m in dedicated software, hardware and simulation expertise, ATG is the UK's leading supplier of virtual manufacturing services. "The ability to prove, say, a robotic work-cell before it is delivered to the factory floor of a leading car maker is absolutely invaluable," explained Andy Robinson, "because it reduces risk, improves production quality, eradicates costly design errors and accelerates time-to-market for new models. Using our experience in the automotive industry, we will be looking to apply our virtual manufacturing and simulation expertise across all of our client base."

ATG plan to expand and develop the established Autotech business, which designs, installs, maintains and upgrades control systems for companies in industries that include the automotive, logistics, airport (conveyors) and food & beverage sectors. The company works with blue-chip clients such as BAe Systems, Bentley, Cadbury (Kraft), Coca-Cola, Ford, Gate Gourmet, Jaguar-Land Rover and Procter & Gamble, providing local support and service for all their systems. Autotech is an approved system integrator for Group Schneider, Rockwell and Siemens, and provides European on-site support for many software systems and packages from international vendors.

AdProSys partners with InduSoft in UK and Ireland

Mike Bradshaw started AdProSys with a mission to make automation software simple and cost effective. After a career at Wonderware dealing with resellers and OEMs, he believes automation software should be affordable, easy to use and buy, and avoid complicated software licensing rules. To achieve this he has partnered with InduSoft and Software Toolbox, in the UK and Ireland. InduSoft Web Studio provides all the software building blocks to develop HMI, SCADA, or OEE solutions for production automation or energy management data via a web enabled interface.

Wallenius Water targets Legionella bacteria control

In January 2007 Alfa Laval launched the PureBallast water purification system for marine applications, a system to meet the legislative requirements of IMO, the International Maritime Organization, in order to protect against potential ecosystem disasters that can be caused by transporting organisms around the world in ballast water. The sterilizing technology behind the system had been developed over many years by Wallenius Water, in Sweden, and licensed to Alfa Laval for marine applications. The system is described in reports on www.iainsider.com dated 8 January 2007, and uses UV light on a titanium dioxide catalyst within the liquid, to create high activity hydroxyl radicals, a short-lived powerful oxidant that kills such organisms.

Last month Wallenius Water were back in London offering similar technology, but now applied to the elimination of bacteria such as Legionella in air conditioning, water cooling and recirculation systems, as used in cooling towers and boiler systems, with a new partner for the UK market, Guardian Water Treatment. Wallenius Water is partnering with such distributors worldwide who understand the complexities of water treatment in industrial applications, because while their purification system eliminates many of the dangerous chemicals previously used on site, any water treatment system needs the backing of expert on-site advice, to include pre-treatment and flow control.

Another application for Wallenius purification systems has been for bacterial control within the centralized metalworking fluid system in the machine workshop at SSAB, the Swedish steel producer. With the Wallenius system in operation on test for over a year, no extra biocides have been added, something that was previously very necessary. The SSAB goal had been to eliminate or drastically reduce the use of biocides in their metal working fluid, because this also has an impact on employee health. Checks on the fluid have shown that the active biocide level is now too low to be measurable, but the bacterial levels are still below the allowed upper limit levels. The SSAB workshop had suffered from bacteria-related issues for a number of years, but now the bacteria in the metal working fluid can be controlled without high biocide levels – even during the warm summer months.

● Expect the next **INSIDER** on 10 July