



# SMARTER

KEEPING YOU INFORMED OF DEVELOPMENTS IN THE ELECTRONICS INDUSTRY

FEBRUARY 2011

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## Welcome to our newsletter

Firstly, may I invite all members and friends in the industry to visit the SMART Group booth at Southern Electronics and Manufacturing to be held shortly, on 16th & 17th February, at the FIVE Venue in Farnborough. More details on page 2, both on the show and the varied free technical seminar programme. It's a unique opportunity to see many colleagues in industry as well as special show features including 'Emerging Technologies'. See you there!

I make no apologies for dedicating the rest of my piece in this Newsletter to a committee member who has, sadly, decided to resign from our Management & Technical Committees. Peter Swanson, Managing Director of Intertronics, has given unstinting time, effort and expertise to the Group. With his expanding business commitments Peter has decided the time has come to devote his full energies to his company.

I have long held Peter in high regard, his role as Chairman was outstanding and his contribution to the Group has always been positive and energetic. He will certainly be missed by the Management and Technical team at SMART. I would like to share with you some of Peter's resignation letter:



Bob Willis waves Peter Swanson farewell

"I have been a Director for 17 years, and was Chairman for four and half years. However, I feel it is the right time to make way for fresh talent, new ideas and invigorated energies. In the past 17 years, the world has changed, inevitably and wonderfully. My own business has found that, to continue our growth, we have had to change too. The printed

circuit assembly sector has become a smaller proportion of the high technology, high performance manufacturing market which we now address. Whilst we will remain members of the SMART Group, the value it presents to our company is diminished. In conjunction with this, the personal resource which I have available to devote to Committee duties has become limited. I am not prepared to do less than expected of a Committee member; not to hold up my end; not to do a great job.

"The past few years of economic uncertainty have presented new challenges to the SMART Group. In order to meet these and other, inescapable evolutions in the marketplace, I urge the committee to persist with the mantra of "delivering member benefits", and to keep re-evaluating both what these are and how this is being achieved. The future veracity and viability of SMART hinges on how well member benefits are defined, delivered and communicated."

"In my SMART Group career, if I reflect upon what-I-put-in versus what-I-got back, the balance is truly in my favour. It has been a huge learning experience, and not purely in matters technical or surface mount. The opportunity to work alongside a varied group of intelligent and widely experienced folks has been incredibly rewarding."

"Above all, I have had the privilege of making many friends through SMART. I deeply value the boundless camaraderie, loyalty and affection I have been shown down the years; these things, I know, will endure."

Peter, we wish you continuing success and hope to see you at some of our events in the future... On behalf of all your colleagues BEST WISHES to you and GOOD LUCK.

Mike Judd



**Southern**  
Electronics Exhibition

16-17th February 2011 FIVE, Farnborough

**Full Details  
on Page 2**



16-17th February 2011 **FIVE, Farnborough**

## Southern Electronics show reflects resurgence of UK manufacturing

**News that UK manufacturing is growing at a 16-year high is an indication of an industry hitting its stride once more. And nowhere is this renewed optimism more apparent than in the extraordinary demand for tickets and exhibition space for this year's Southern Electronics Show (FIVE, Farnborough, February 16th and 17th)**

With the number of exhibitors confirmed at the show exceeding 600 for the first time in its history, Southern Manufacturing & Electronics 2011 can justly claim to be the top annual electronics business event in the country. Exhibitors from all over the UK and continental Europe will be converging on Farnborough Airport on February 16th and 17th for what promises to be the busiest and most comprehensive show of industrial expertise ever staged by the organisers.

Show director, Phil Valentine, says, "The phrase 'Something for everyone' is rather overused these days, but it can certainly be applied with complete honesty to the Southern Manufacturing & Electronics Show, where virtually every aspect of electronics and manufacturing activity is represented in a single, purpose-built venue." Demand for exhibition space meant that the venue was all but sold-out by mid-September, prompting the addition of a further 750 m<sup>2</sup> of floor area. With stand sales continuing at a remarkable rate for the remainder of 2010, Valentine is in no doubt that 2011 will be the most successful show ever.

"UK manufacturing's great strength is its entrepreneurship," says Valentine. "Developing new ideas requires a broad outlook, and with its diverse mixture of exhibitors, Southern Electronics is the perfect place to find new answers to old problems."

Along with the thousands of manufacturing solutions on show, Southern Electronics also hosts an extremely popular free technical seminar programme addressing the needs of the electronics and engineering sectors. As the recovery gathers pace, it often takes just one good idea to accelerate a company from the slow lane to the fast lane. With its impressive roster of notable guest speakers drawn from a wide range of academic and business backgrounds, this year's seminar programmes abound with such good ideas. A complete listing of this year's programmes can be found at [www.industrysouth.co.uk](http://www.industrysouth.co.uk)

For 2011, there is also a special show feature on Emerging Technologies, highlighting areas where UK's undeniable expertise in the field of advanced semiconductors is leading the world in Marine, Medical, Computing, Communications and the Aerospace/Defence sectors. Many of these applications will be on display, and visitors to the area will be welcomed by RoboThespian - a UK-built humanoid robot presenter and highly appropriate host.

Entry to Southern Manufacturing & Electronics and its seminar programme is completely free to business visitors, and FIVE Farnborough offers plentiful free car parking and easy access by road or public transport. To register online for tickets simply visit [www.industrysouth.co.uk](http://www.industrysouth.co.uk) or call 01784 880 890. You can also keep track of all the latest announcements from the show by following the official blog at [www.blog.industrysouth.co.uk](http://www.blog.industrysouth.co.uk). It's even possible to start meeting exhibitors straight away through the show's official group page on the popular business networking site LinkedIn. Just search for Southern Manufacturing & Electronics in the groups tab.

### smart-e-link Job Vacancy Notice

SMART Group maintains a confidential member service by posting industry job vacancies to [smart-e-link](http://smart-e-link). All correspondence is directed to [info@smartgroup.org](mailto:info@smartgroup.org), where it will be treated with strict confidence. SMART

offices will pass correspondence and contact details to and from interested parties only with their express permission. SMART Group assumes no liability whatsoever with regard to this service. Our last posting was a Vacancy for a Sales Engineer – Solder Paste Stencils – South of England area. Use SMART Group to fill your vacancy.

## Upcoming Event

# uBGA PoP & Fine Pitch Printing Workshop

23<sup>rd</sup> March 2011 - Venue The Oxfordshire, Thame - Commencing 09.30

**Successful solder paste printing requires correct circuit design, suitable paste specification, correctly manufactured stencils along with a printing platform which can handle all the variables which can still exist in a factory environment.**

**Printing can be simple or complex when other process variables like the environment and the volume of products are considered, no clean solder paste can react differently to water soluble products.**

For further conference details:

[www.smartgroup.org/images/stories/ubgaprinting.pdf](http://www.smartgroup.org/images/stories/ubgaprinting.pdf)

To improve yield in any process engineers and managers also need to control all of the other factors that impact the assembly and soldering process. Everyone blames the printer but is that the real cause of defective products?

### Workshop includes:

- Stencil specification, manufacture and design
- PCB design and printed board requirements
- Printing process including open and sealed head systems
- Cleaning and inspection of metal stencils
- Solder paste print inspection
- Cleaning defective print deposit
- Printing defects and causes
- Question time - all your questions answered, email your printing photos for analysis on the day

### Who should attend?

If you are involved in SMT assembly as a Line Manager, Process Engineer or QA then this workshop will add real benefit to your objectives to improve end of line defect levels. It will allow you to take the steps required to put in place the correct inspection tools to analyse your process and inspection procedures to improve line yield.

**For more information contact: Tony Gordon [info@smartgroup.org](mailto:info@smartgroup.org)**

## SMART EU Project Websites

Keep up to date with the SMART Group activity in Europe, each project has its own dedicated web site for project information and results when they are available.

**TestPEP** - [www.testpep.eu/home](http://www.testpep.eu/home)

**uBGA** - [www.ubga.eu/](http://www.ubga.eu/)

**Ship Inspector** - [www.shipinspector.eu/](http://www.shipinspector.eu/)

**ChipCheck** - [www.chipcheck.eu/](http://www.chipcheck.eu/)

### SMART Group member wins iPad from uBGA project

The winner of the iPad was John Hegarty from Intel. (It arrived just in time for Christmas!). A detailed questionnaire was sent to companies in UK, Ireland, France, Portugal, Greece and Poland. All respondents were entered into a draw and KCC UK the project co-ordinator picked the name out of a hat. SMART Group member companies accounted for 70% of the respondents. The questionnaire was also posted on [smart-e-link](#).

**Keep up to date on SMART Group Website with all our activities including:**

News : Surveys : Jargon Busters : Featured Defects : In-House Training :

How to get the best out of *smart-e-webinars*

[www.smartgroup.org](http://www.smartgroup.org)

# Lean Manufacturing Expose Seminar



Thursday January 20<sup>th</sup>, 2011 - Henkel, Tallaght, Dublin, Ireland



**Valerie Aherne, Chair of SMART Group Ireland opened the event and welcomed all to Henkel, Tallaght.**

The first Paper was presented by Dr Hugh Fay, Henkel, who gave an insight as to how 'Lean' has been implemented in the plant and the associated savings and benefits to the company. Additional papers were presented by Hugh Stevens, Enterprise Ireland, John Cunnane, BDS Consulting, Steven Campbell, Baker Tilly, Ryan Glennon and by Peter Grundy, PG Engineering.

There were two different approaches to the topic and it was acknowledged by all that the main subject of how 'Lean' works has been covered many times before. There was a Management approach viewpoint where speakers pointed out that management must buy into the concepts and the structures to put in place must be upheld by everyone in the factory or business, there was also a manufacturing viewpoint that looked at efficiency aspects of applying 'Lean' technology.

Everyone agreed that 'Lean' on its own does not solve all the problems and is generally efficiency based and therefore it is also important to include other techniques such as "6 Sigma" or "Kaizen" that are more quality based.

The topic is so huge that it was only possible to scratch the surface in so short a time. Everyone agreed that the topic deserved one or two full days to do it justice but, just as has been found in the UK, delegates are not prepared to be available for such a time and so the event covered the topic to the best of its ability.

SMART Group Ireland knew that this topic would need extensive approaches from the speakers and that there would not be enough time to give it full coverage, however, as an update, the event worked. Most people know how 'lean' or "6 Sigma" work in theory but there are still many companies that have not really implemented the concepts properly and so this seminar offered some examples of how it should work and the benefits it should bring.

There was nothing "brand new" on the table but the event helped cement in the delegates' minds just how much benefit these technologies, particularly Lean Manufacturing can bring. Philip O'Rourke of SMART Group Ireland thanked all for attending the event and thanked Henkel Ireland and Valerie Aherne for hosting the event.

Report by Peter Grundy / Philip O'Rourke, SMART Group.



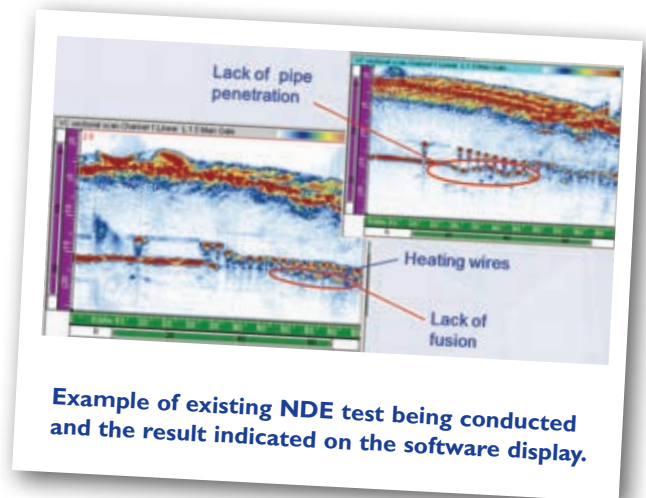
## Now for something completely different!

### Monitoring Quality in Plastic Pipes – SMART EU Project

**TestPEP has been running successfully for twelve months, the goal is the development and validation of an automatic non-destructive testing of welded joints in plastic pipes.**

SMART Group's role in the project, like our other EU activity, is to disseminate information on the project and provide training. A further activity is to take the equipment and, using inspection criteria produced from mechanical testing, confirm the test equipment can detect joint failure that does reduce the life of the welds. A highlight for the author is to test welds in deep muddy ditches, half full of water and test the robustness of the equipment.

Although this application of non-destructive testing is a little different from SMART's normal activity the testing methodology, use of electronic, setting and training inspection staff is what we do well. The EU FP7 funded project involves 13 organisations from seven European countries.



**Example of existing NDE test being conducted and the result indicated on the software display.**

Further information on the project and some of the results are available at [www.testpep.eu](http://www.testpep.eu) SMART Group will be holding a webinar on the subject in the next few months, further details at [www.smartgroup.org/diary](http://www.smartgroup.org/diary)

The TestPEP project is managed by TWI and has received funding from the European Community's Seventh Framework Programme managed by REA-Research Executive Agency (FP7-SME-2008-2) under grant agreement no. 243791.

## Do YOU have a technical question? Let *smart-e-link* help!

*smart-e-link* is an email technical forum organized by the SMART Group. Visit our website [www.smartgroup.org](http://www.smartgroup.org) for subscription information, rules of use and questions.

As examples, two recent questions prompted excellent debate and comment:

1. Ioan Tempea, Ing Ingenieur Principal de Fabrication/ Senior Manufacturing Engineer; Digico Electronics Manufacturing, posed the question: "I need to know how package on package is assembled in real life. I attended Bob Willis' course and found it very good, it's just that neither our Mydata or Fuji IP3 machines are able to handle the process (pick-dip-place)."

So how are you doing it? What insertion machines can handle the process and if you do it automatic-manual manner; how do you go about it?

2. Mike Fenner, Indium and SMART Group Committee Member asked: "Here's a piece of string question! What percentage - a range would do - would you guess/estimate of modern PCB area is solder pads? I was asked this and said 10 - 15% maybe 20% without a second's thought, then put the phone down. Now I realise I don't really know, but rather think I ought to. Also that someone has measured it from their Gerber or something. If not I'll take an average number from this group. That is probably as good as it will ever be."

These questions prompted much comment, thanks to all who participated *smart-e-link* is archived on our web site [www.smartgroup.org](http://www.smartgroup.org)

## RoHS Directive Recast Implementation Delayed

The new version of the RoHS Directive voted through at the end of November 2010 failed to make progress at the Environment Council meeting in December due to translation problems and its members decided it would approve the text at "one of its meetings next year" after "linguistic revision" so there is a mildly welcome additional delay before the new version will be enforced.

With the WEEE Directive recast still under negotiation perhaps the two will be implemented simultaneously after all. Updates will follow in future newsletters after our webinar on **Feb 1<sup>st</sup>**.

## EXHIBITION WATCH

### Southern Manufacturing/Electronics

'Five' Farnborough 16-17 February 2011

**APEX** Las Vegas 12-15 April 2011

**NEW National Electronics UK 12-13 April 2011**  
(This show is co-located with 'The Gadget Show')

## SMART GROUP CONTACTS

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## SMART GROUP EVENTS DIARY 2011

### 1<sup>st</sup> February

RoHS/WEEE/REACH – The Latest Impact on Your Company  
**Online smart-e-webinar**

### 16<sup>th</sup> & 17<sup>th</sup> February

Southern Manufacturing and Electronics Exhibition  
SMART Group Stand No 97 + Seminars (free entry)  
**Five, Farnborough, Hants**

### 24<sup>th</sup> February

Design for Manufacture & Assembly Workshop  
**Enterprise Ireland, Dublin**

### 23<sup>rd</sup> March

uBGA, PoP & Fine Pitch Paste Printing Workshop  
**The Oxfordshire, Thame**

### 29<sup>th</sup> March

TestPEP European Project Update  
**Online smart-e-webinar**

### 31<sup>st</sup> March

Soldering Technology Seminar  
**Jabil Livingston Scotland**

### 19<sup>th</sup> April

uBGA European Update  
**Online smart-e-webinar**

### 5<sup>th</sup> April

No Clean Materials & Process Reliability Workshop  
**The Oxfordshire, Thame**

### 12<sup>th</sup> May

Quality Workshop  
**Antrim, Northern Ireland**

### 5<sup>th</sup> July

PCB Specification – What an Engineer Really Needs To Cover  
**Online smart-e-webinar**

### 22<sup>nd</sup> September

Green & Portable Energy Workshop  
**Tyndall National Institute, Cork**

**To keep up to date with events and any amendments please check the Diary Page on our website.**

SMART Group Scotland meetings are held at the Royal Scots Guards Association Club (opposite Haymarket Station), Edinburgh. For location visit <http://tinyurl.com/rd4qxz>