

Welcome to our latest newsletter

In these difficult & challenging times your trade association is doing all it can to help members.

Our new website is proving very popular with members, Peter Swanson & Bob Willis have done a great job to provide a resource that has been so well received. Did you know that members can access many technology downloads including: a Library of Technical Papers and Reports, Past Seminar and Workshop Presentations, view Assembly Defect Video Clips and in searching for suppliers or industry contacts you can go to a long list of Industry Links?

Need help with training? We offer comprehensive In-House Training on your site, either one or two days covering a host of topics. On the website you can download details of all courses and an example of the certificate of achievement.

Have a look at our library of 'Jargon Busters', useful when it's difficult to get a concise description of a particular term, or

fault, or process or... just about anything! In this Newsletter we focus on our Scotland Group activities. Next month we will feature our Ireland colleagues who have an upcoming Counterfeit Component Prevention Workshop on 12th May in Dublin. Upcoming is our PCB event 'PCB Materials and Finishes – What Assemblers Should Know', to be held in Arundel on 28th April.

Our Chairman, Keith Bryant, continues to actively support our South Africa Group, a series of Workshops and Seminars take place between the 18th - 21st May.

Since the turn of the year activity on *smart-e-link* has increased. In these difficult times I believe our members are sharing their problems and are looking for speedy answers. The link is archived on our website.

Finally, your committee has been working

hard to offer you a major event, a conference dealing with the challenges facing us. It will feature keynote presentations, seminars, workshops, 'Question Time', an Exhibition and Networking Opportunities. This event, 'Electronics Technology '09, is our main feature in this issue.

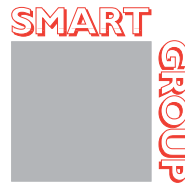
We appreciate your support and look forward to seeing you at an event soon.

Mike Judd PR Director

ELECTRONICS TECHNOLOGY SMART GROUP
Conference – Exhibition – Networking Event



ELECTRONICS TECHNOLOGY



Conference – Exhibition – Networking Event

EXHIBITION AND NETWORKING EVENT AT RICOH ARENA, COVENTRY 30 SEPT – 1 OCT 2009

Our theme is Reduce Waste – Improve Reliability – Increase Profit!

In the coming days and weeks we will be announcing further programme details of our international conference of presentations and workshops. Also with an exhibition running alongside the conference, featuring leading suppliers of equipment, materials and manufacturing solutions, the conference promises to be a timely update covering economic, technology, legislative and manufacturing updates. Already bookings for stand space have been received and reservations made. Here are the speakers confirmed thus far and details of their presentations:

Day 1



Key Note Presentation

Walt Custer, Custer Consulting Group

Business Outlook:

Global Electronics Industry - Preparing your Company for Recovery'. Walt Custer, from Custer Consulting Group USA, is a respected business analyst, regular magazine and media pundit on business/company performance. He returns to the UK after a popular performance at the last SMART Group European Conference.

Here is a brief summary:

The global electronics industry is currently immersed in a severe recession. "Recovery" will occur – but when and where? How long will this downturn last? How will we know when we have reached the bottom and which leading indicators will identify resumed growth?

Topics of this presentation will include:

- Global economy
- Electronics "food chain" – end markets, active and passive components (including PWBs) EMS and ODM companies, materials and process equipment
- Size and market dynamics of the "food chain members" by geography and product type with emphasis on the higher growth and more stable segments

- Inventory levels and their impact on resumed sales growth
- Market drivers for recovery
- Needed data for business planning

The goals of this presentation include:

- Clarifying the dynamics of this current business cycle
- Providing the audience with the timely data and the tools needed to track market conditions
- Identifying the optimum market segments
- Comparing an individual company's performance to its competitors and the industry as a whole
- Preparing for recovery

'QUESTION TIME' EACH DAY FEATURING A PANEL OF EXPERTS

Exhibition Update: Stand bookings are coming in and amongst those committed to be at the event are: Advanced Rework Technology, ALMIT, Anglo Production Processes, Altus, Blundell Production Equipment, Chiltern Connection, Contact Electronics, Electrolube, Electronics Yorkshire, EM&T Electronics Manufacture & Test, ETEK Europe, GEN3, Global SMT & Packaging, HumiSeal, IPC, Kaisertech, Process Support Technology, Production Design & Supply, Totech UK. Of course SMART Group will have a booth to welcome members & for networking. For more on the exhibition contact Marilyn Driscoll Tel 01763 838554 Email marilyn@electronicstechnology.co.uk Website www.electronicstechnology.co.uk

Workshop One

REACH will Impact Your Business

Nigel Burt, Dolby Laboratories Inc
& Marion Quarrington, MTL

Do Environmental Regulations Leave You Feeling Green and Not In A Good Way? Are you left feeling dizzy and slightly nauseous by the rising tide of environmental regulations such as REACH, EUP, and proposed changes to the RoHS and WEEE Directives? In these

difficult financial times it is even more important to understand the genuine impact of these measures on your business. Would you like some help in finding the correct balance of costs to make sure you comply with the actual requirements against possible over-reaction where the necessary implementation is somewhat less clear?

This workshop given by two well known industry engineers will attempt to help you with practical advice as applied to real-life

electronics manufacturing businesses.

Topics to be covered include:

- Proposed legalisation RoHS Update
- Are you told your product needs to be REACH compliant?
- Current legislation: its impact on your company
- Practical onsite implementation
- Cost of compliance
- Impact of global expansion
- Will US Create Federal version of RoHS?



Workshop Two

Manufacturing Wrong:

Case Studies in Non Conformance

Doug Pauls & Dave Hillman,
Rockwell Collins

Doug Pauls holds a B.A. in Chemistry and Physics, and a B.Sc. in Electrical Engineering. His career has been centred on materials science and its relation to electronics manufacturing materials and processes. He has worked for the U.S. Navy, Contamination Studies Labs, and Rockwell Collins. Doug is a leader in the IPC cleaning, coating, and materials test fields.

Dave Hillman holds a B.Sc. in Metallurgical Engineering and a M.Sc. in Material Science & Engineering from Iowa State University.

His career has been centred on materials and processes for military, avionics and high performance equipment applications. He has worked for General Dynamics Convair and Rockwell Collins. Dave is a leader in the IPC Solderability task groups and heavily involved in the electronics materials fields.

Workshop details:

All companies have to deal with numerous parameters in electronics manufacturing in order to produce a high reliability, high quality product. Well tuned manufacturing processes are profitable, but Murphy's Law regularly throws a spanner into the works. Non conformance issues, or the cost of not doing it right the first time, create waste, jeopardise reliability, and cut into corporate profits.

What Delegates Will Learn:

The workshop is designed around case studies, each chosen from the experiences of the presenters, in which manufacturing problems were identified,

diagnosed, root causes determined, and corrective actions put in place. The intent is to provide the attendee with troubleshooting methodologies and practical knowledge of remedial measures or actions to take.

Topics will include:

- Board Finishes
- Evaluating / Qualifying Material Sets
- Soldering Processes
- Cleaning Processes
- Cleanliness Assessment
- Conformal Coating
- Rework and Repair Processes
- Field Returns and Failure Analysis
- Costs of Non Conformance (CoNC)
- Enterprise Sourcing: A Cancer to Be Fought

Who Will Benefit:

This course has been developed for industrial engineers, reliability engineers, quality assurance personnel, or anyone with responsibility to design, implement, or monitor a high reliability manufacturing process.

Fond Farewell and a Warm Welcome

Congratulations and all our good wishes go to Peter Wainwright, Manufacturing Engineer, TDK-Lambda, who is taking early retirement after spending over 30 years in the electronics industry. Good luck and enjoy your time with the grandchildren. Welcome to new SMART Group member, Paul Smith, CEM Operations Manager at Garner Osbourne Circuits. We look forward to your contributions on *smart-e-link*.

Day 2

Key Note Presentation

Dr Peter Barnwell – Chairman, Custom Interconnect Ltd

The Role of an Independent EMS Company in the UK – and Some Observations from the USA

The Electronics Manufacturing Services business in the UK has grown from the rather simplistic contract manufacturing industry to a more sophisticated and important industry. In spite of the threat of

low cost offshore manufacture and the ever deepening recession, it has proved possible to run and grow a significant and successful business.

The presentation discusses the basis for this, with particular reference to the level of technology and investment required. It highlights the critical services that have to be provided and draws a comparison with the author's experience of large high volume manufacturers in the USA. The conclusion is drawn that with the right technical, commercial and sales approach

there is an ongoing role for such a business in the UK.

The presentation will cover:

- Brief background to the EMS business
- Competitive pressures
- Advantages of UK manufacture
- Key needs for a successful company
- The problems facing the large very high volume manufacturers
- Some personal experience in the US market
- What does the future hold?



Key Presentation

World Economic Manufacturing Shift – Its Not All Going East
Trevor Galbraith, Trafalgar Publications

There were clear signs of a shift in manufacturing back to regional centres of excellence prior to the onset of the current economic crisis. This presentation will examine the pressures

driving the EMS markets and trends in manufacturing processes.

Despite the massive lay-offs at the tier one CEMs, we fully expect the trend towards regional manufacturing to continue, with eastern Europe servicing mid- to high-volume products destined for western Europe and Mexico servicing products destined for the United States.

The Speaker will also discuss manufacturing trends such as the rise in selective soldering and vapour phase and recent challenges to

traditional inspection equipment.

The presentation will include:

- A holistic view of the current EMS landscape
- A SWOT analysis of the strengths, weaknesses, opportunities and threats affecting tier one, two, three and four Contract Manufacturers
- What visibility is there and how will this affect individual markets and segments?
- What technical trends are influencing equipment manufacturers and where are the opportunities?

Workshop Three

Reliability – Design, Production and Quality Control

Chris Hunt & Davide de Maio, National Physical Laboratory, Teddington, England

Manufacturing high reliability lead-free circuit assemblies is challenging, and fully understanding the pitfalls and understanding material properties is a necessity for design and production engineers. Component, PCB and solder joint reliability data will provide a fast track to success, saving

money and helping to prevent a company's loss of reputation. Illustrated in a practical manner, NPL has been leading industry lead-free research and providing practical and accessible guidance for over 10 years. The unique aspect of this workshop is that each topic is backed up with detailed reports and practical guidance documents produced by the NPL team. All delegates will be able to access a library of information and online resources to back up all the presentation material presented by the NPL team.

Topics to be covered include:

- Component damage and degradation
- PCB coatings and through hole reliability
- Tin whiskers and tin pest
- Copper dissolution
- Surface contamination and failure modes
- Solder joint reliability and methods of test
- Conformal coatings and reliability results

For more information on the conference contact Tony Gordon info@smartgroup.org

SMART GROUP EVENTS DIARY 2009

April 28th

PCB Materials and Finishes
Arundel, W Sussex

May 12th

Counterfeit Component
Prevention Workshop – Dublin

May 18

South Africa Seminar &
Workshops – Durban SA

May 19-20

South Africa Seminar
& Workshops – Midrand SA

May 21st

South Africa Seminar &
Workshops – Cape Town SA

June 3rd

Troubleshooting Surface Mount
Assembly – Chelmsford, Essex

Sep 24th

ESD Controls & Reliability
Seminar – Shannon

ELECTRONICS TECHNOLOGY SMART GROUP
Conference – Exhibition – Networking Event

Sep 30th - Oct 1st

Electronics Technology
Conference – Exhibition &
Networking – Coventry

November 11th

High End Technology Printed
Circuit Boards – Teddington

To ensure your booking for
events please contact Tony
Gordon info@smartgroup.org

FOCUS ON SCOTLAND

by Martin Tarr

2009 has been a busy year for Scottish SMART people, and the view from the electronics industry is fortunately less downbeat than with our local financial counterparts!

Having started the year with a bumper attendance at our RFID day, February saw the second in the "Back to Basics" series, this time as the guests of BAE Systems site at Hillend. We just about shoehorned everyone who wanted to come into the room, and the delegates benefited from the practical experience both of senior BAE engineers and invited guests from Mydata and Goepel Electronics, who spoke about the applications of their placement and test equipment. The presentations covered the whole of the board assembly and test process, and were supplemented by a line tour – as always, this was the highlight of the day for many delegates, and the level of questions ensured that the event overran!

The 'Back to Basics' story concludes on 23 April, with our long-awaited visit to Jabil, where the topic is "System Integration". Here the plant tour is being integrated within the main

programme, and the presentations cover every aspect of complex high-level system assembly, with a major emphasis on how Lean thinking has underpinned Jabil's success in this area.

As well as the formal all-day events, SMART Group Scotland is experimenting with early evening meetings, intended to combine the usual SMART Group technical content with commercial input and an opportunity for informal networking, facilitated by amber nectar of participants' own choosing! It will take some time to grow an electronics manufacturing community, but we are pursuing this aim on the third Thursday of each month. Our next meeting will be on 16 April – drop an email to scotland@smartgroup.org to be kept in touch with times and places. No cost (except beverages), and no need to register – just turn up and enjoy the networking.



The speakers from left to right, Karl Miles, Bryan Kerr, Alan Colquhoun, Edwin deBlauw, Ken Logan and Neil McIntosh.