

# ***Improving Design for Cost Effective Assembly Seminars***

***Monday 29<sup>th</sup> October 2007 at the Protea Hotel in Stellenbosch***

***Wednesday 31<sup>st</sup> October 2007 at the Protea Hotel in Midrand***

The excellent speakers from Europe will provide a better understanding of the errors in design which add cost to the final product and the effect lead-free has on printed board design, specification and procurement. Component specification and testing requirements to meet WEEE and RoHS will be discussed along with the simple guidance on ranking circuit board solder finishes.

Layout changes that lead to cost effective assembly will be highlighted as well as other changes to improve yields on existing designs. Design modification that have been used to reduce or eliminate fillet lifting, pad lifting will be illustrated and their apparent success or failure. Even if you are running a tin/lead process and do not intend to change your process these recommendation can improve your existing manufacturing processes. Each delegate will receive a copy of presentation material plus supporting document relating to lead-free processes and design issues. There will be plenty of chances to win interactive training CD-ROMs on PCB Design for manufacture and the process defect guide. There will also be a table top exhibition of related products

## **The Seminar will cover:**

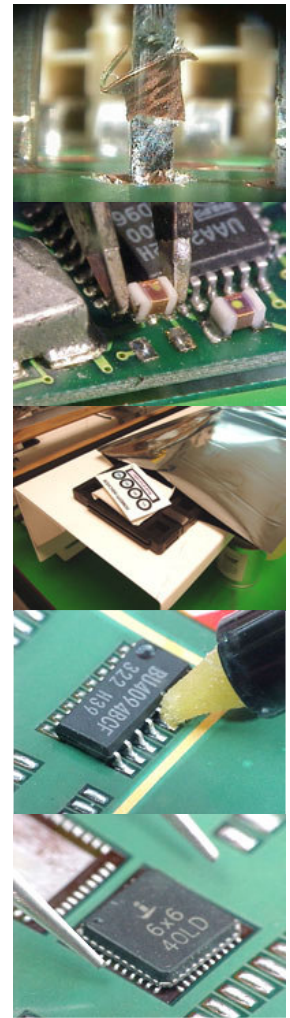
- Component specification, selection and WEEE & RoHS compatible
- PCB Laminate changes, options and industry trends
- Using realistic manufacturing tolerances to reduce costs
- PCB Design for manufacture review check list
- Through hole pad sizes & fillet lifting issues
- PCB Supports for wave and reflow– Eliminating Warp and sag
- Via hole plating and reliability with lead-free processes
- Copper thickness and Lead-Free copper erosion issues
- Solder finish selection, PCB storage life and process compatibility
- Eliminating the wave soldering process with intrusive reflow techniques
- Reliability issues in the lead-free process
- Solder mask specification
- Multilayer thermal break design, for improved reliability
- Through hole solder thief designs to improve yields

## **Who should attend?**

Designers, Engineers tasked with process and new product introduction, quality staff, supervisors wanting to understand the process issues with design and procurement. Purchasing staff will benefit from the impact of component selection and design on process yield. The seminar would also benefit material and equipment suppliers to gain a better understanding of all the issues and interactions with new alloys.

**SMART**  
**GROUP**  
South Africa

**LEADOUT**



**To book your place fax your booking form to SMART Group SA registration 011 908 6488**

Please reserve \_\_\_\_\_ places at the seminar on Monday 29<sup>th</sup> October 2007 in Stellenbosch  
( R 960 SMART Group members / R 1250 Non members) (10% discount for payment made by 30<sup>th</sup> September 2007)

Please reserve \_\_\_\_\_ places at the seminar on Wednesday 31<sup>st</sup> October 2007 in Midrand  
( R 960 SMART Group members / R 1250 Non members) (10% discount for payment made by 30<sup>th</sup> September 2007)

Name: \_\_\_\_\_ Name: \_\_\_\_\_

Email: \_\_\_\_\_ Email: \_\_\_\_\_

Company: \_\_\_\_\_ VAT Number: \_\_\_\_\_

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Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Card type: Visa or Mastercard Card no: \_\_\_\_\_

Card expiry date: \_\_\_\_\_ Card security code (Last 3 numerals on signature strip) \_\_\_\_\_

Signature: \_\_\_\_\_

**Banking Details:** SMART Group SA  
First National Bank  
Branch Code: 252155  
Account Number: 62152547661  
Cheque Account

**Detailed Directions etc. will be sent after registration**



**Bob Willis**



**BOOK NOW!  
Places strictly  
limited to ensure  
Workshop quality**

## ***SMART Group SA Event Diary 2007***

<b>Oct 29th Design for Manufacturing Seminar</b>	<b>Stellenbosch</b>
<b>Oct 30th Hand Soldering &amp; BGA Rework Workshop</b>	<b>Stellenbosch</b>
<b>Oct 31st Design for Manufacturing Seminar</b>	<b>Midrand</b>

## ***Table Top Exhibition Space***

**If you would like a table top exhibition space at a SMART Group SA event please contact Jacquie to discuss availability at the date in question**

**SMART Group SA Facsimile: 011 908 6488**  
info@smartgroupsa.org www.smartgroupsa.org www.leadoutproject.com