



International Electronics Manufacturing Initiative

# Long Term Access to SnPb BGA Components



*Ken Stuchlik*  
*Lucent Technologies*  
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**Lucent Technologies**  
Bell Labs Innovations



- **RoHS and other Global environmental legislation has lead to potential supply continuity issues**
  - **Our customers have not relaxed reliability expectations for most products targeted toward industrial applications**
  - **Insufficient predictive models and lack of empirical data has raised concerns about the ability of Pb-free assemblies to perform over the product life expectancy of a number of industrial products.**
  - **RoHS has granted exemptions for the continued utilization of Pb in solders for many of these industrial applications, but not for large volume commercial product usage**
  - **Suppliers are now faced with the question about the economic impact of maintaining dual supply chains to support both conventional SnPb and Pb-free products**

- **We have been fairly successful at getting our major component suppliers to commit to meeting our requirements out to at least 2008**
- **We are now pushing this to 2010**
  - **Initial response so far seems to indicate a general willingness to support OUR requirements**
    - **However**
      - » **The caveat “as long as it is economically viable” still remains**
    - **May see lead-time push outs and cost increases**
      - **Limits flexibility**
      - **Already occurring on peripherally leaded devices**
    - **DRAM and NAND memory suppliers are pushing Pb-free BGA quicker than others**
- **Have to pay attention to third part designs**
- **Starting to see problems with SnPb option on new components**

- **What are our options?**
  - **Band together and approach suppliers in commodity areas that are most resistant to maintaining SnPb BGAs**
    - Memory (DRAM, FLASH)
    - Other products that are consumer oriented
    - Put together a general business case to demonstrate that there is enough long term demand for certain critical components to overcome economic concerns
    - Organize workshops for BGA supply base to encourage support for this market
    - Publicly acknowledge suppliers who agree to meet this market need
  - **Develop custom specifications on BGA components**
    - Creates cost and availability issues if supplier is willing to support need
  - **Work with third parties or directly with contract assemblers to re-ball packages with SnPb materials**
    - Introduces other reliability risks and may void warranties
    - Adds costs and reduces flexibility
    - Consider working through a distribution channel to maintain an inventory of commonly used components
  - **Selectively characterize and allow mixed assembly on SnPb process**
    - Low pin count BGA's (e.g. DRAM/ FLASH may form reliable interconnects - Need more data)
  - **Ignore the risks and convert to Pb-free**
    - Problem of getting Pb-free parts on certain products
      - Older LTB inventories are especially problematic
    - Potential cost of failure difficult to calculate



*Helping you connect with and strengthen your supply chain*

**[www.inemi.org](http://www.inemi.org)**

**Email contacts:**

**Ken Stuchlik**

**[kstuchlik@lucent.com](mailto:kstuchlik@lucent.com)**