

September 10, 2008 Reflector Submission From the Reliability Chapter

CENTER SECTION

Reliability – 6:00 PM, Wednesday, 10 September

ROHS Panel Discussion

ROHS Industry Experts Panel Led by Gene Bridgers

Restriction of Hazardous Substances (RoHS) has had a major impact on the US Electronics Industry and remains a significant concern and reliability risk. One of the present misconceptions is that there was a lot of turmoil during the year before RoHS formally started, but the turmoil has dissipated, a perception, which is just not true!

This meeting is a ROHS panel discussion featuring a number of RoHS opinion leaders to cover a wider view on the implementation and reliability risks.

This will be held Wednesday, September 10th at EMC Corporation, Hopkinton, MA. To register, please visit the IEEE Boston Reliability Chapter website at: <http://www.ieee.org/bostonrel>

ARTICLE

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Restriction of Hazardous Substances (RoHS) has had a major impact on the US Electronics Industry and remains a significant concern and reliability risk. The European Union (EU) RoHS went into effect July 1, 2006. One of the present misconceptions is that there was a lot of turmoil during the year before RoHS formally started, but the turmoil has dissipated, a perception, which is just not true!

Consumer Electronics Association (CEA) recently published the research showing RoHS globally cost more than \$32 billion. The average cost per company was \$2.6 million to get the initial RoHS compliance and another \$482K for annual maintenance.

The EU is currently considering adding 46 more prohibited substances to the list of the original six.

RoHS project implementations can be broadly described in four categories as follows:

1. Before RoHS – Historical processes prior to introduction of any changes caused by RoHS and which have been irrevocably changed as a result of RoHS.
2. RoHS_5 – Is also called the Server Exemption. This is where the electrical parts meet the RoHS expectations, but these parts are attached using leaded solder. This is considered the lowest risk for implementing RoHS if the boards are moderately complex or complex. (Note: This is LOW risk but it is not “NO” risk)
3. RoHS_6 – Is where the parts meet RoHS and the parts are attached using lead-free solder. This requires higher temperatures and the chance for damage increases if the board is complex. There is also a valid worry about the long-term life and reliability. One of the many concerns for long-term reliability is the risk of tin whiskers. There are still a lot of RoHS_6 technical concerns about the long-term reliability of complex boards and these concerns need to be collected and shared by the technical community. Therefore Boston IEEE Reliability Chapter has created a project through the ADCOM called ALERT. Gene Bridgers is the initial project Chairman and Bob Landman is the project Vice-Chairman.
4. No RoHS – Some buyers want to return to Before RoHS in an attempt to return to reliability risk levels before the introduction of RoHS compliant processes.

This meeting is a ROHS panel discussion featuring a number of RoHS opinion leaders to cover a wider view on the implementation risks. The meeting calls for audience participation and interaction. The meeting will be a Q&A Session where the audience will get the opportunity to ask questions to the experts in the panel.

Some of the members of the panel (incomplete list) are:

- RoHS Panel Moderator and ALERT Committee Chairman
– Gene Bridgers
- IEEE Reliability ALERT Committee Vice-Chairman – Bob Landman
- RoHS CM Expert – Bon Ferrell, Benchmark (Invited)
- RoHS COTs Design Leader – Darryl McKenney
- NASA Goddard Tin whisker Researcher – Jay Brusse (Invited)

The list of finalized panelists will be subsequently updated and confirmed through the e-notices from IEEE Reliability Chapter and Chapter Website: <http://www.ieee.org/bostonrel>

This meeting will be held on Wednesday, September 10th, 2008 at EMC Corporation, Hopkinton, MA. It will begin with personal networking and a light dinner at 5:30 PM. The presentation will follow at 6:00 PM. IEEE members and non-members are welcome. There is no charge for the dinner or presentation, but we request that you register to attend by Friday, September 5, so we can plan the refreshments. You can register online by visiting the Reliability Chapter's website at <http://www.ieee.org/bostonrel>.

EMC Corporation is located at 176 South Street, Hopkinton, MA. From Rte. 495 North or South take exit 21B, West Main Street. At the end of the ramp head West. At the first set of traffic lights (after the on/off ramp) take a left onto South Street. Building 176 will be about 1.5 miles on your right. There is a traffic light at the entrance. Proceed up the hill, bear left to the Main entrance parking lot, which will then be on your right.

For a map and more directions, see the EMC website at:
<http://www.emc.com/about/facilities/index.jsp>