The Center for Electronics Design & Manufacturing (cEDM) mission: *To support industry by means of **knowledge creation and sharing**, **scientifically sound methodologies** and **collaboration throughout the electronic supply chain**, in the development and production of high quality, reliable electronic modules (PBA).*

The Center for Electronics Design & Manufacturing organizes workshops on a regular basis. During these workshops Printed Board Assembly topics are presented followed by a Q&A session. The participation of our cEDM partners allows us to enlighten the topic of the day from different viewpoints in the electronic supply chain.

This workshop is of interest to all involved in or responsible for the design, production, quality, test, supply and system integration of electronics in products for which reliability is an essential property. The workshop will take place on the 24th of March 2017 at imec, Kapeldreef 75, Heverlee, Belgium.

10 years of RoHS : *Part 2*

10 years ago, July 1st, 2006 to be exact, the EU directive 2002/95/EC RoHS (Restriction of Hazardous Substances in electrical and electronic equipment) came into effect. The goal of this directive is to reduce the use of six hazardous materials in the electronics industry : Pb, Hg, Cd, Cr^{6+} and the flame retardants PBB and PBDE.

The electronics industry started preparing for this directive well in advance. It proved to have an impact to the operations of the electronic industry as well as on electronics quality and reliability, larger than what some expected.

Mainly the use of lead-free soldering processes, and the subsequent higher soldering temperature, induced a change in the choice of solder alloys and flux formulations, PCB substrate material, board and terminal finishes, component mold compounds and lead to more thermal stress to the components during soldering. It also changed the way we look at reliability of electronic modules. Even some of the well-established design rules required revision.

On the other hand, the requirement of traceability of RoHS compliancy over the total supply chain was a logistical challenge, both for the component suppliers, for the manufacturers ERP systems and for the quality departments in the companies. As an extra complexity, the exemptions for some sectors meant that most manufacturing companies had the need to run both lead-free and SnPb solder processes simultaneously (some still do).

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During workshop 25 (september 30th, 2016), we already focussed on the RoHS legislation, the impact of RoHS on PCB laminates, and the influence on soldering materials and conductive adhesives.

During workshop 26, we will focus on the impact that the RoHS directive has on the design of electronic products, on the electronic manufacturing processes, on the electronic components and on the reliability and lifetime of electronic modules.

- **RoHS Trends from IPC's Perspective.**
  Vinciane Patelou, Director FMCG at Interel, IPC's Public Affairs partner in Europe.

- **RoHS : impact on components and on the design of electronic modules.**
  Geert Willems, Group leader Electronic Assembly at imec

- **RoHS : impact on EMS activities.**
  Hendri Kortman, Project Managerat Variass, member of Nevat-EMS

The coffee is ready at 13:30, the presentations start at 14:00. At 16:30, we invite you to network, facilitated with a drink and a snack.

Practical information

cEDM workshop participation:

- Participation fee: **€150**
- Participation is free of charge for cEDM members & cEDM partners.
- Location: imec, Kapeldreef 75, 3001 Heverlee
- Registration via e-mail: academy@imec.be
- Imec is a licensed service provider for training according to "kmo-portefeuille" : license number DV.O108298.

Center for Electronics Design & Manufacturing

Interested in member- or partnership of cEDM, or need for more information : please contact: Bart Cox, bart.cox@imec.be, +32 16 283108

More cEDM info: www.cedm.be

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