

REPORT ON THE 2ND EUROPEAN FAILURE ANALYSIS NETWORK EUFANET WORKSHOP

1 INTRODUCTION

It was held at Rimini in conjunction with ESREF 2002 on October, 7th. 20 people attended this meeting. The main topic of this workshop was "Putting Failure Analysis into practice". The object of this workshop was also to present EUFANET overview and results and some FA roadmap.

This workshop was driven by a Panel discussion that represented European failure analysts: Manfred Horst (Philips Semiconductor Hamburg Germany), Tuula Stenberg (Nokia Finland), Olivier Crepel (Philips Caen France), Joachim Reiner (EMPA Switzerland), Philippe Perdu (CNES Toulouse France) and Felix Beaudoin (Thales Microelectronics Toulouse France).

2 PRESENTATIONS

2.1 EUFANET STATUS

The first presentation was on EUFANET status, one year after its start-up. It was summarized in eufanet2002_overview.pdf. In 2002 there are 103 members (mailing list) from 12 countries (60% French). We countered 63 public questions, answers and propositions. In addition, we had also a lot of private answers.

2.2 LATEST STATUS OF PHILIPS FA-BOARD

We started with a presentation on Philips FA board that gathers Philips Failure Analyst from different countries to share experiences and work together on hot topics. It was presented by Manfred Horst (Philips Germany)

2.3 BOARD LEVEL FAILURE ANALYSIS

Because of the increasing level of PCB integration, one of the most challenging issues is now board level failure analysis. Some examples were presented by Tuula Stenberg (Nokia Finland) on mobiles (assembly.pdf).

2.4 MAGNETIC FORCE IMAGING

Magnetic Force Imaging is now a hot topic. Magnetic field cannot be hidden by metallic or impervious to light layers materials, is dependant of current paths and value; it is a good way to localize shorts even if they are buried. Olivier Crepel (Philips Caen France) presented his work in this field (magnetic.pdf).

2.5 "FAILURE ANALYSIS OF ESD DAMAGE IN THE IC CORE"

ESD damage is probably the most common we can encounter. It affects more and more the IC core. Some case studies were presented by Joachim Reiner (EMPA Switzerland)

2.6 "EXAMPLES FOR RELIABILITY-CRITICAL CONSTRUCTION WEAKNESS IN SMALL-POWER-HYBRIDES AND SEMICONDUCTORS»

This presentation prepared by Peter Jacob (EMPA Switzerland) was also presented by Joachim Reiner (EMPA). He presented very interesting case studies on this kind of components (hybrids.pdf)

"DEFECT LOCALIZATION IN SOLAR CELL DEVICES"

We had also a presentation on the use of Emission Microscopy to perform defect localization inside solar cell. The defect can be as small as IC defect but solar cell size is usually more than 10 cm². It was presented by Felix Beaudoin (Thales Microelectronics Toulouse France) (solar_cell.pdf).

3 DISCUSSION AND PROPOSALS

Most of the discussions were carried out on email forum and web site.

For email forum, one proposal is to add a topic in message title to help EUFANET members: if they are not interested in the message, they can get read of it without reading it. On the other side, it could help them to pay attention to messages that interest them.

The web site was also discussed. Attendees thought it could be useful to build it if it contains educational stuff and if it helps technical exchanges. Unfortunately, there were no new volunteers to trigger this process.

4 CONCLUSIONS

This workshop took place before the end of EFUG meeting and during a first tutorial and there were only 20 attendees from 5 different countries. The discussions were about some proposals on email list and on web site. The need of educational content was deeply discussed.

EUFANET is now working but needs volunteers ready to help us! More information? Do not hesitate to contact:

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