

Jean-Pierre Noblanc Award

AUTOMOTIVE COMPONENT ACCELERATED TESTING PROJECT WINS 2009 NOBLANC AWARD



The 2009 Jean-Pierre Noblanc Award for Excellence went to the MEDEA+ 2T204 ELIAS project for achievements in accelerated test and simulation methodologies to speed up the introduction of robust new electronic components for the automotive industry. This Award honours the most innovative and sustainable project carried out in MEDEA+ and was presented during the European Nanoelectronics Forum in the Netherlands. Three projects were short-listed; the other two were 2A708 LOMOSA+, where results are reducing power consumption in mobile devices, and 2A702 NANTOTEST, already reducing the costs of manufacturing testing for ever smaller devices.

Micro and nanoelectronics are continuing to be drive innovations in all types of vehicles. However devices have to withstand extreme conditions for extended periods as the smallest defect can have a major impact on accident risks and call-back costs. The MEDEA+ 2T204 ELIAS project set out to develop test methodologies to accelerate the introduction of more robust devices.



Partners have developed and validated modelling of major stress mechanisms, accelerated measurement methods to speeding up reliability investigation and obtain fast feedback on failure modes, achieved more accurate lifetime and end of life predictions in less time and de



Charlotte Rohr, project leader of ELIAS received the award on behalf of the whole team.

veloped an improved zero-defect strategy.

As a result of ELIAS, partners have already been able to improve measurement methods and new models with appropriate software tools, suitable for the design flow, and acceptance of these methods/models by major players – including JEDEC standardisation. The results will enable more accurate prediction in less time as well as full and fast exploitation of the benefits of new technologies.

Boosting low power expertise

As mobile devices become ever smaller yet more powerful, designers have had to face up to the problems of preventing the heat degradation generated from increasingly dense system-on-chip (SoC) solutions. The MEDEA+ 2A708 LOMOSA+ project developed new low-power chip-design methods for mobile applications from phones to multimedia equipment that have enabled an overall reduction of 30 to 40% in power consumption.



ELIAS project partners

The overall result of the project has been to boost European low-power expertise – a key driver for SoC technology. This will accelerate the development of battery-operated devices combining high computing power with ultra low power dissipation and low cost, enabling Europe to remain in the global vanguard through development of world-beating products.

Reducing chip testing in production

Chip testing has become an increasingly significant part of total production costs. Advanced test technologies are required to detect defects becoming apparent as manufacturing techniques have advanced into the nanotechnology arena and automated production has shortened time-to-market, particularly for SoC and system-in-package (SIP) applications. The MEDEA+ 2A702 NANOTEST project developed advanced and innovative test methods that reduce costs and the time required – increasing the speed of the introduction of new products in the latest technologies.

Many of the partners have already applied the technologies and approaches developed to their own product development and manufacturing cycle. The test technologies developed in NANOTEST will be key contributors to the commercial success of products in the new technology nodes, and thus to the competitiveness of the European microelectronics industry.

Forum dinner snap shots

