

Jean-Pierre Noblanc Award

Blu-ray disc technology wins 2008 Noblanc Award

The Paris forum maintained the tradition of the Jean-Pierre Noblanc Award for Excellence that honours the most innovative and sustainable project carried out in MEDEA+. Four short-listed projects were presented during the first day of the Forum. The 2008 winner was the 2A201 BLAZE project which developed the semiconductor technology for the Blu-ray disc – and helped ensure Blu-ray is now the global standard for high definition TV (HDTV) recording. The other three short-listed projects were the 2A206 ASIC-CCD application project together with the 2T201 NEMeSys and 2T103 FOREMOST technology projects.

At the beginning of the BLAZE project (companies involved : Datarius, INPG, LETI, NXP SC NL, NXP SC FR, Pace France, Philips Applied Technologies, STMicroelectronics, Thomson R&D), it became clear that if Europe did not invest in Blu-ray disc technology, a successor of the DVD standard allowing for greater storage capacity and hence opening the door of true High Definition for home, European companies would no longer participate in the huge global optical storage market. "We developed the key components for Blu-ray disc recording, Blu-ray disc testing and HDTV broadcasting," said Willem van der Brug, System Architect, Philips "Innovations included the most-integrated single-chip solution for Blu-ray playback on the market today, an award-winning video transcoder and the most-flexible decoder suited for multiple applications."

At 427 person-years, BLAZE was one of largest MEDEA+ projects with a particularly high innovation level – it resulted in 48 patents and several spin-off companies. In addition, good



Award winner project team - BLAZE

commercial results are forecast for the chip technology developed in the framework of the project. BLAZE has also strengthened the position of several European knowledge centres. "The task was not always easy with the competing high-definition digital versatile disc (HD DVD) technology, not only did we have lots of fun but we saw the success of Blu ray," said project presenter Willem van der Brug from Philips, accepting the award.



Willem van der Brug, Philips Applied Technologies

Application and technology projects

ASIC-CCD developed a high-speed platform for professional charge-coupled device (CCD) imaging applications that included sensor technology, supporting chips, camera technology, video processing and transmission technology. Despite the success of CMOS imaging, CCD technology is still important in providing image quality for high-end applications. The success of the project has strengthened the European imaging industry for professional applications – particularly in the development of slow-motion technology for HDTV and a new standard based on a single coax connection for industrial cameras.

The FOREMOST Project set out to develop and integrate full CMOS 45 nm process technology in the then Crolles2 Alliance – Freescale, NXP and STMicroelectronics – and Qimonda plants. "We aimed at the wireless market," explained project leader, Jean-Louis Carbonero of STMicroelectronics.

"More and more functions are going into mobile devices with mobile internet devices expected to overtake personal computer volumes by 2010." The key was to increase speed without increasing leakage. As a result of the project, customer prototyping has already started for the wireless low-power, low-cost market and there is interest for consumer electronics application such as printers and set top boxes. New processing equipment and materials are also being commercialised as a result of the project.

The NEMeSyS Project set out to develop embedded flash memory for applications such as smart cards, automotive microcontrollers and the more general consumer and industrial market. This area is driven by considerations that include cost, performance and security. It is also complex as it combines very different technologies – CMOS, flash memory and high voltage in a single system-on-chip (SoC) device. The initial goals were to develop embedded flash for the 90 nm node and prepare future innovative cell and module concepts for 65/45 nm nodes. This is the third in a series of projects on flash memory with the same partners; such continuity is a big plus as it builds trust between partners – a prerequisite for co-operative success.



Jean-Pierre Noblanc Award ceremony



MEDEA+ / CATRENE Chairmen, Enrico Villa announcing the Jean-Pierre Noblanc award winning project BLAZE



BLAZE Project Leader, Wiel Louvenberg accepting the award