

SEMICONDUCTORS

As development costs continue to soar, two initiatives are working to support R&D in Europe, writes **David Manners**

Research boost for European industry

KEY POINTS

- R&D to sales ratio of semiconductor industry is prohibitively high
- Software forecast to account for half of silicon process development costs by 2012
- ENIAC projects are already underway; Catrene is defining areas of activity

Current economic challenges make R&D all the more important. “We are in one of the most difficult crises the industry has faced,” Alain Dutheil, chief executive of ST-NXP Wireless and chairman of the European R&D programme AENEAS, told the European Nanoelectronics Forum 2008 in Paris earlier this month. “Visibility is poor. R&D is more important than ever, in the hope that the electronics industry will emerge stronger and faster,” added Dutheil. “The R&D to sales ratio of the semiconductor industry is 16% – higher than the pharmaceutical industry, more than the telecommunications industry. National suppliers can’t afford to stay in the game. They need a network of alliances and partnerships.”



Dutheil: the cost of developing silicon process technology has increased tenfold

Two such networks are Europe’s main pan-continental microelectronic R&D programmes, the European Nanoelectronics Initiative Advisory Council (ENIAC) and the Cluster for Application and Technology Research in Europe on Nanoelectronics (Catrene).

ENIAC is underway. “The programme is in place and we are working on that now,” said Dutheil.

Eight ENIAC projects have been selected and supported out of 12 submitted, according to Dutheil. The eight projects have been allotted the resources to pay for 1,972 person years. The projects are being worked on by 228 parties (companies, research institutions and universities) from 19 countries.

ENIAC’s sister programme, Catrene, has yet to proceed. “They are defining areas of activity. Any proposals will be considered,” said Dutheil.

The chairman of Catrene, Enrico Villa, said, “Catrene has a Eureka label for four years from 2008 to 2011, which is extendable by another four years.”

The first call for projects received 17 proposals, of which 11 were accepted. The 11 projects will take 3,694 person years. A total of 135 parties from 13 countries combined in submitting the 11 projects.

The difference between the two programmes is that ENIAC is more narrowly drawn, with a specific strategy into which proposals must

fit, whereas Catrene can accept any proposal that helps to strengthen the European semiconductor industry.

ENIAC’s strategy is to focus on six areas where it can provide systems solutions in the form of platforms incorporating the silicon and the software.

The six areas are: the ageing society – healthcare solutions; global warming – energy-saving solutions; security – the protection of data and people; transportation – self-controlled systems and safer vehicles; entertainment; and communications – easy access to information everywhere.

Dutheil pointed out that the cost of developing the silicon process technology had gone up 10 times in a decade, but there would be an even bigger cost. “Now, one-third of the system cost is software,” he said. “By 2012, 50% of the cost of systems solutions will be software.”

With a concerted effort on R&D by Europe, the region could come out of the present economic crisis with a stronger position than it went in.

“At the end of the crisis the market will restart and it will be totally different from what it is today,” said Villa. ●

Catrene
www.catrene.org

ENIAC
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