EUREKA: Digital AM radio

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Combining the quality of disturbance-free digital radio with the range and global popularity of AM

Despite the technical advances of digital FM radio, offering increased choice and crystal clear, disturbance-free radio reception, AM (medium and long-range) radio is still the most common medium used to broadcast news and entertainment around the world. Now EUREKA project E! 2390 DIAM has combined the benefits of digital radio with the range and popularity of AM.

Following on from the work of the EUREKA project E! 1557 NADIB which defined the technical standard necessary to achieve digital audio quality for AM bands, the phase 1 of the DIAM project has developed a platform digital AM receiver, the second phase will allow to develop an affordable chip for the consumer market.

“We devised a chipset powerful enough yet small enough to minimise silicon use and energy consumption, and can now combine digital AM as well as analogue AM and FM in a single receiver,” says Dr Ben Altieri, CEO of IPiTEC Advanced DSP, an Italian subsidiary of the project’s lead partner Atmel.

Pierre Vasseur, Director of Advanced Techologies and Marketing of the French partner Thales Broadcast and Multimedia, describes how investing in the EUREKA project outside Thales’ core business area allowed it to get a return on a previous decade of investment in the digitisation of the AM bands.

“Helping to develop a chipset and a receiver opens up the market for our radio transmitter core business. If the digital radio system is successful, broadcasters will have to either upgrade their transmitters or invest in new ones. This will not only secure our existing market but should increase it by 50%.”

Vasseur regards DIAM as an incredible step forward. “We have completed long-distance trials from Europe, Canada and Australia, bringing FM quality sound and data services to regional, national and international broadcasting via the existing digitised AM channels.”

There is a massive potential market with about two billion analogue AM receivers around the world today, including India and China where long-range, low-cost and low-power radio is ideal for general communication and for distance learning in such huge countries. “We’ve already had a tremendous response and the Chinese government hopes to have digital radio in place in time for the 2008 Beijing Olympics,” says Vasseur. “As we have established a long-term relationship with Chinese receiver manufacturers we hope that they will use the DIAM chipset!”

EUREKA has enabled DIAM to be perfectly positioned for success, the partners collaborating with the major receiver manufacturers to bring the first affordable digital AM radio receivers onto the market in 2003 and early 2004.

“Without EUREKA, DIAM would not have happened,” claims Dr Altieri. “It’s much more flexible than other funding schemes and allows you to do the work you want to do without getting bogged down in bureaucracy.”

The original press release is available here.