

# Setting new standards for broadband Internet

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The market for broadband Internet services is expanding rapidly as the advantages of high speed connections are becoming apparent to end users. Companies all over the world are competing to feed this demand by developing faster and more integrated chip sets for existing standards while, at the same time, defining the next generation.

There are currently an estimated 32 million subscribers worldwide for ADSL (asymmetric digital subscriber line) that uses the standard twin copper wires of the phone network to carry digital information. This figure is growing rapidly and industry is developing the next innovation to bring even faster broadband connection to Europe's homes, schools and offices.

A huge investment was made historically to build up the copper phone network, even though voice communications only use a tiny amount of the potential bandwidth. The partners in MEDEA+ project A106 INCA (Integrated Network Copper Access) are exploiting this available bandwidth to provide an even faster broadband technology that could carry innovative digital services. In doing so, they have become world leaders.

VDSL (very high speed digital subscriber line) is seen by many as the next step in providing a complete home-communications/entertainment package. "It provides an incredible amount of bandwidth, with speeds up to about 52 Mbps (megabits per second) compared with 8 to 10 Mbps for ADSL," says INCA project leader, Dr Christophe Del-Toso of French

chipmaking partner STMicroelectronics.

For the end user, this means faster, cheaper and more reliable Internet access, making services such as e-commerce, interactive TV and video-on-demand possible.

## **Competitive edge**

INCA partners STMicroelectronics and Alcatel Electronics have become world market leaders by defining and establishing a new standard for VDSL. They campaigned closely together for its adoption. When it was accepted in 2003, the partners had gained a competitive edge.

According to the partners, it was vital to be involved at the early stage of a new standard, not only for the partners but also so that Europe can compete with the USA and Asia in the global market.

"If Europe cannot compete on low-end products because of higher labour costs compared with other regions of the world, it needs to be very competitive with high added-value products, and innovation is the only way to achieve this," says Del-Toso. "EUREKA MEDEA+ projects that bring together big companies, SMEs and universities to produce products close to the market must be the way forward."

The EUREKA Cluster MEDEA+ (2001-2008) focuses on enabling technologies for the Information Society and aims to make Europe a leader in system innovation on silicon. Twelve partners from six countries were involved in INCA, completing an estimated 165 person-years of R&D with a total budget of 29 million Euros.

Source: EUREKA

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