

## **Awards and honors**

## > The Innovation Award 2013 for the Panama research project during the European Nanoelectronics Forum

The Panama (Power Amplifiers and Antennas for Mobile Applications) project won the 2013 Innovation Award during the <u>European Nanoelectronics Forum</u> which took place on November 27 in Barcelona. Panama is a project by the teams of Télécom Bretagne (with Christian Person and Michel Ney) and Télécom ParisTech (in particular with Patricia Desgreys and Patrick Loumeau).

The Panama project has put forward innovations relating to transmission systems and power amplifiers to improve their performance and productivity. Different types of systems have been studied for the following applications: 3G/4G cell phones, base stations for 3G/4G cell phones, avionics, communication via satellite and home networks. Beyond these systems, the project has used the development of innovative tools for characterization, modeling and simulation.

Télécom Bretagne has been working in particular on the roll-out of antenna solutions integrated directly into Silicon, for very high-speed applications for 4G Smartphones and tablets @60Ghz.

Télécom ParisTech has developed an innovative solution (patented) for the digital output signal of the power amplifier. This architecture followed by a digital processing of the appropriate signal increases the efficiency of the RF transmitters by 30% in the base stations.

This innovation award is an acknowledgement from the European Union at the highest level in the micro and nanoelectronics sectors. Panama was selected as the most innovative of the 40 projects retained in the <u>Catrene program</u>, a European program which finances cooperation between research institutes, the semi-conductor industry and user businesses.

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About the Institut Mines-Télécom www.mines-telecom.fr

The Institut Mines-Télécom is a public establishment dedicated to higher education, research and innovation in the engineering and digital fields. It is made up of 10 Mines and Télécom "grandes écoles", under the aegis of the Minister for Productivity. There are 2 subsidiary schools and 2 strategic partners and a network of 11 partner schools.

The Institut Mines-Télécom is nationally and internationally renowned for the high standard of its courses for engineers, managers and PhD students, and its research and innovation activities.

The Institut Mines-Télécom is a member of the Allistene, Aviesan and Athena national alliances for research planning. It maintains close relationships with the business world and has two Instituts Carnot. Every year, some one hundred start-up businesses are born.

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