

CATRENE Project EAST wins 2018 Innovation Award

AENEAS manages CATRENE programme

Lisbon, 21 November 2018 – Today, it was announced that the EAST project has won the 2018 CATRENE innovation award. The recently completed EAST (smart Everything everywhere Access to content through Small cells Technologies) project has developed highly integrated, highly energy-efficient, cost-effective technologies to support the rollout of 5G mobile communication networks. The award was presented at European Forum for Electronic and Components and Systems (EFECS) in Lisbon, Portugal, 21 November 2018.

Access to mobile data has become fundamental to people's everyday lives and economic activity. But existing 2G/3G/4G networks are power-hungry and have limits on their data-handling capacity. Available spectrum (the radio frequencies allocated by governments to mobile communications) is also becoming a scarce resource. 5G aims to overcome these limitations so people have high-speed access to all the data they want, wherever they are. This includes video, machine to machine (M2M) communication and new services that enable greater collaboration, communication and surveillance – for instance, for public security. Although now in its early stages, it is expected that, by 2025, over 30% of European mobile connections will be based on 5G technology.

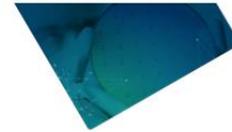
One way to deliver 5G is to create smaller mobile network 'cells' (geographical areas in the network incorporating base stations) that can re-use frequencies and enable higher overall capacity on the network. However, this means increasing the number of base stations and leads to high power consumption. EAST is tackling these challenges through 'small cell' technologies for infrastructure (base stations) and terminals (handsets) for 5G networks up to 6 GHz. These smaller cells with multiple transmitters are key to using multiple frequencies to enable transmission of very large amounts of data (e.g. video) at low cost and low power. The project goals included: enhanced data rates, greater integration, higher functionality, dramatic cost reduction, higher overall system efficiency and reconfigurability.

Europe has a strong position in existing wireless infrastructure. By supporting the technical and commercial success of 5G small cell technology, EAST will contribute to strengthening Europe's competitiveness in this next generation of mobile communication. The project focuses on the low range of frequencies (< 6 Ghz) proposed for 5G because this is expected to be highest value market segment. It is also where there is greatest need for low-power solutions to reduce the environmental impact of 5G.

Communications and data transfer are fundamental enablers of the new Digital Economy. Enabling low cost 5G solutions will transform many industrial and societal activities. New digital manufacturing techniques, essential for European competitiveness, rely on large amounts of data transfer. Equally, assisted and autonomous driving, along with home-based health monitoring and treatment are only two examples of important societal development that can require 5G technology.



PRESS RELEASE



The EAST project consortium covers almost the entire value chain from technology developers and providers to system integrators and end-equipment manufacturers, with expertise across the total radio frequency (RF) system. By having all the necessary competences available in a single consortium, the key elements can be optimized at system level which helps speed radical innovation.

About CATRENE:

CATRENE is a EUREKA cluster programme managed by AENEAS. It was created in 2008 and focussed on micro and nanoelectronics research and innovation, which aims at achieving Technological Leadership for a competitive European ICT industry. It is based on the ambition of European countries, in partnership with European companies, to jointly deliver nano- and microelectronics-based solutions that respond to the needs of society at large, improve the economic prosperity of Europe and reinforce the ability of its industry to be at the forefront of global competition.

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After 10 years of operation, more than 8 calls and 51 complete and still running programmes, CATRENE projects involving SMEs, large corporations, research institutions and universities have, and are, demonstrating great impact on societal challenges while promoting European economic development in this vital area.

About CATRENE: <http://www.catrene.org>

About AENEAS: <https://aeneas-office.org>

About EAST:

EAST is an RD&I project consortium involving 8 European partners from the Netherlands and Ireland. The project partners are NXP-NL (project leader), BESI, Bruco, Anteverta-mw, Nokia, TU-Delft, TU-Eindhoven and TNO.

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