

# Viability tests of Ericsson's pre-commercial 5G technology

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In the European race to make 5G a reality by the year 2020, time and opportunity are of the essence. At the Madrid-based 5TONIC Lab, Ericsson is already conducting viability tests of a novel networking technology that aspires to enable the prompt rollout of 5G networks.

5TONIC, an open research and innovation laboratory focused on fifth generation (5G) technologies located at IMDEA Networks Institute, is currently hosting a groundbreaking testbed of the European research project 5G-Crosshaul. A battery of tests will be performed from September 7th to October 10th to evaluate technology developed by Ericsson, one of the lab members. The technology now being tested consists of an integrated fronthaul/backhaul network, also known as the "Crosshaul" network, in which CPRI (Common Public Radio Interface) and packet based information are homogeneously transported over a DWDM (Dense Wavelength Division Multiplexing) network and integrated optical/packet switches.

Mobile data traffic is forecasted to increase 11-fold between 2013 and 2018. 5G networks serving this mobile data tsunami will require fronthaul and backhaul solutions between the RAN and the packet core, which are capable of dealing with this increased traffic load while fulfilling new stringent 5G service requirements, all in a cost-efficient manner. In the context of the 5G-Crosshaul research effort, Ericsson's technology aims to provide a stepping stone towards the creation of the novel transport network that is needed to make the promise of a thousand times more network capacity a tangible actuality. The crosshaul

architecture, with a unified data-plane, allows network providers to reduce their CapEx and OpEx, which is key to adopt the upcoming 5G era.

At this early stage, 5G application scenarios are still being defined, and lab work is required to outline the suitable infrastructure that will enable the launch of 5G communications, services and applications. 5TONIC enables its partner companies to test and proof advanced 5G developments prior to their market launch, speeding up the innovation process and the transfer of research results from the drawing board to production on the basis of their technical and commercial viability. The current testbed is an early effort to perform a realistic evaluation of the capabilities of a concrete pre-commercial 5G technology and establish its actual chances of becoming a building block of the 5G era.

Provided by IMDEA Networks Institute

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