

June 28, 2018

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Vodafone, EMITE and Ericsson finalize first 5G NR Stand Alone Massive MIMO OTA realistic laboratory tests

Record-setting below 3.5ms E2E latencies were obtained at Vodafone 5G Lab in Düsseldorf, Germany, using EMITE 5G OTA test systems and Ericsson 5G SA mMIMO prototype base station. Results were correlated to other 5G studies. The obtained low latencies provide support evidence for superfast real-time gaming, accessing cloud data, robotics, hospital and virtual experience through 5G applications

Highlights:

- The demonstration made use of EMITE OTA hybrid AC/RC test systems and Ericsson 5G SA prototype base station at Vodafone 5G Lab
- Below 3.5ms End-to-End latencies and User DL TCP TPUT of ~400 Mbps were obtained under Outdoor-to-indoor realistic fading
- Benefits from fast, effective and realistic 5G OTA laboratory tests at Vodafone 5G Lab for meeting most diverse requirements of the upcoming 5G applications in a network



Vodafone, EMITE and Ericsson today announce the first massive MIMO OTA realistic laboratory test for 5G SA at the n78 band. The achievement is an important milestone for meeting most diverse requirements of future applications in 5G on a network.

The demonstration included a Base Station prototype by Ericsson, a real 5G SA UE prototype and the EMITE F200 hybrid anechoic-reverberation chamber, achieving a single-user data rate of ~400 Mbps under outdoor-to-indoor OTA realistic fading. The tests also produced RF latencies below 0.15 ms and End-to-End latencies below 3.5ms under realistic fading. The results did not require calibration on the phased-array, thereby greatly reducing testing costs.

Andreas Dorstel, Head of Vodafone Innovation Park Labs, "We can now test everything under real live conditions before rolling out in life networks".

"The results highlight the importance of accurate and realistic 5G OTA testing and reinforce the potential of 5G networks to deliver what is eagerly expected, taking a step further into a real deployment in the near future", said Prof. David A. Sanchez-Hernandez, CEO of EMITE.

Dr. Eric Kuisch, CTO Vodafone Germany, "With our radio chamber we can now ambitiously test the equipment and system technology that our manufacturers have delivered".

Stefan Koetz, chairman of Ericsson GmbH in Germany, "Since 5G will be an important technology in the context of mobility and industry 4.0 in addition to the enhanced mobile broadband experience, it is important for us as a network supplier with high safety and quality standards to test the use of technology - in this context we are pleased to equip the testing chamber with our latest technology".

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