



## PRESS RELEASE

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In collaboration with Nokia and Qualcomm Technologies Inc

### TELEFÓNICA SUCCESSFULLY DEMONSTRATES DATA TRANSFER SPEEDS OF UP TO 800 Mbps IN ITS 4G NETWORK

- **Several technical advances, such as MIMO 4x4 technology or the new 256QAM modulation, have been incorporated.**
- **All of these elements will be introduced in the Telefónica Spain 4G radio network in order to gradually increase the speed in mobile terminals.**

**Madrid, October 11, 2016.-** Telefónica, Nokia, and Qualcomm Technologies, Inc. have demonstrated download speeds of up to 800 Mbps. in mobile terminals, obtained with the implantation of several technical advances in the operator's 4G radio network.

Nokia radio network equipment was used in the demonstration; Nokia is one of the main suppliers of 4G radio network in the world and also of Telefónica Spain. Also used in the demonstration was a test terminal equipped with the Qualcomm® Snapdragon™ X16 LTE modem.

Several technical advances were combined in order to reach the download speed of 800 Mbps., advances such as the incorporation of two carriers that allow mobile terminals to simultaneously download data from two frequency bands: MIMO 4x4 technology (*Multiple-input Multiple-output*), which multiplies the number of data flows that a mobile terminal can use with a given cell, and the new 256QAM modulation (*Quadrature Amplitude Modulation*), which allows the use of a greater amount of bits per signal transmitted through the air.

All of these technological advances will be introduced into the Telefónica Spain radio network in order to gradually increase the speed that mobile terminals can reach; the chipset used in the pilot test will be used in advanced, next generation smartphones.

For Director of Operations and Network at Telefónica Spain, Joaquín Mata: "We still have a long way to go to reach 5G. We first have to move forwards in the development of LTE networks. And that's what we're doing with partners such as Nokia and Qualcomm. Today's



test is one more milestone in Telefónica's commitment to bringing the best Mobile Broad Band network capabilities and best services to all customers. Without a doubt LTE-A will greatly surpass data transmission speeds of 1 Gbps in the next few years. Today, after having reached 800 Mbps, we're a little bit closer".

"We're pleased to have worked with Telefónica and Nokia in the achievement of this milestone. 4x4 MIMO and 256QAM, both of which are supported by our Snapdragon X16 LTE modem, offer the operator significant advantages in terms of speed and capability, and we will continue to collaborate with all the parties involved so as to transfer this improved usage experience to the end user", said Enrico Salvatori, Senior Vice-President and President of Qualcomm Europe, Inc.

Agustín Menchén, Telefónica Spain Mobile Networks Account Director for Nokia, commented: "The demand for data continues to accelerate while operators evolve their networks to carry out new opportunities and challenges. With this simple update to 4.5G we have demonstrated that our technology is absolutely prepared to help Telefónica respond to the growing demand for data. Our 4.5G technologies. 4.5G Pro and 4.9G provide operators with a smooth transition evolutionary path in order to increasingly offer more capabilities and make the usage experience more attractive while developing new business opportunities".



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