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# Qualcomm, ZTE and China Mobile Announce Collaboration on 5G NR Trials at 3.5 GHz to Accelerate Wide-scale 5G Deployments in China

**-- Trials will be Compliant with the 5G NR 3GPP Specification, the Global 5G Standard; Driving the Ecosystem Towards Rapid Commercialization at Scale --**

BEIJING, Feb. 21, 2017 /PRNewswire/ -- Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated (NASDAQ:QCOM), ZTE, and China Mobile today announced plans to conduct interoperability testing and over-the-air field trials based on the 5G New Radio (NR) specifications being developed by 3GPP. The trials will operate in sub-6 GHz mid-band spectrum at 3.5 GHz and intend to drive the mobile ecosystem toward rapid validation and commercialization of 5G NR technologies at scale, enabling timely commercial network launches based on 3GPP Rel-15 standard compliant 5G NR infrastructure and devices.

In the trials, the Companies will showcase 5G NR technologies to efficiently achieve multi-gigabit per second data rates at significantly lower latency and better reliability than today's network, amongst other capabilities. These technologies will be critical to meeting the increasing connectivity requirements for emerging consumer mobile broadband experiences such as virtual reality, augmented reality and connected cloud computing, as well as enabling new high-reliability, low-latency services for use cases such as autonomous vehicles, drones and industrial equipment.

The trials will utilize device prototype and base station solutions from Qualcomm Technologies and ZTE respectively, to simulate real-world scenarios across a broad set of 5G NR use cases and deployment scenarios, following the guidelines of China Mobile. The focus of the trials will be on 5G NR operation in sub-6 GHz mid-band spectrum at 3.5 GHz, which is a critical band in China for achieving ubiquitous coverage and capacity to address the large number of envisioned 5G use cases, including those that demand very low latency and high reliability. The trial will make use of advanced 3GPP 5G NR technologies including Massive Multiple-Input Multiple-Output (MIMO) antenna technology, adaptive self-contained TDD, beamforming techniques, scalable OFDM-based waveforms to support wider bandwidths, advanced coding and modulation schemes, and a new flexible, low-latency slot structure based design.

"Qualcomm Technologies is committed to the continued success of China's wireless industry and we are excited about collaborating with China Mobile and ZTE to accelerate the path to 5G in China," said Matt Grob, executive vice president and chief technology officer, Qualcomm Technologies, Inc. "Trials based on the global 3GPP 5G standard, such as this, are critical to ensure timely deployment of 5G networks and continuing our long history of leadership integrating advanced wireless technologies."

"5G is very important for future development and we have put much resources on 5G research, standardization and industrialization, and built a 5G joint innovation center to cultivate the cross-industry innovation," said Wang Xiaoyun, the general manager, technology department, China Mobile. "We have finished our phase I trial on 5G key technologies and started the phase II trial on 5G system. The collaboration with Qualcomm Technologies and ZTE will push the devices and base station to be matured and ensure their time to market. We encourage more partners to work together, facilitate the completion of the global unified 5G standard, drive the industrialization and build a harmonized ecosystem through the trial, test and cross industry innovation."

"ZTE is delighted to cooperate with Qualcomm Technologies to work on this IoT and Trial for China Mobile," said Xu Huijun, CTO of ZTE. "As a global leader in telecommunications and information technology, ZTE sees the significant importance of 3GPP standard beneficial to whole industrial chain and keeps contributing actively to global standards. ZTE will work together with partners to push forward 5G test and trial steadily, to promote the 5G commercialization world widely."

The interoperability testing and trials, which will launch in China starting in the second half of 2017, are intended to track closely with, as well as help accelerate, the first 3GPP 5G NR specification that will be part of Release 15 – the global 5G standard that will make use of both sub-6 GHz and mmWave spectrum bands. Tracking the 3GPP specification is important

because it promotes adherence and validation with the global 5G standard, accelerating the time to standard-compliant devices and infrastructure. It will also drive forward compatibility to future 3GPP 5G NR releases.

### **About Qualcomm**

Qualcomm's technologies powered the smartphone revolution and connected billions of people. We pioneered 3G and 4G – and now we are leading the way to 5G and a new era of intelligent, connected devices. Our products are revolutionizing industries, including automotive, computing, IoT, healthcare and data center, and are allowing millions of devices to connect with each other in ways never before imagined. Qualcomm Incorporated includes our licensing business, QTL, and the vast majority of our patent portfolio. Qualcomm Technologies, Inc., a subsidiary of Qualcomm Incorporated, operates, along with its subsidiaries, all of our engineering, research and development functions, and all of our products and services businesses, including, our QCT semiconductor business. For more information, visit Qualcomm's [website](#), [OnQ blog](#), [Twitter](#) and [Facebook](#) pages.

### **About China Mobile**

China Mobile Limited (the "Company", and together with its subsidiaries, the "Group") was incorporated in Hong Kong on 3 September 1997. The Company was listed on the New York Stock Exchange ("NYSE") and The Stock Exchange of Hong Kong Limited ("HKEx" or the "Stock Exchange") on 22 October 1997 and 23 October 1997, respectively. The Company was admitted as a constituent stock of the Hang Seng Index in Hong Kong on 27 January 1998. China Mobile had 500.1 million 4G users and that its TD-LTE network extended to 1.46 million base stations by November 2016.

### **About ZTE**

ZTE is a provider of advanced telecommunications systems, mobile devices, and enterprise technology solutions to consumers, carriers, companies and public sector customers. As part of ZTE's M-ICT strategy, the company is committed to provide customers with integrated end-to-end innovations to deliver excellence and value as the telecommunications and information technology sectors converge. Listed in the stock exchanges of Hong Kong and Shenzhen (H share stock code: 0763.HK / A share stock code: 000063.SZ), ZTE's products and services are sold to over 500 operators in more than 160 countries. ZTE commits 10 per cent of its annual revenue to research and development and has leadership roles in international standard-setting organizations. ZTE is committed to corporate social responsibility and is a member of the UN Global Compact. For more information, please visit [www.zte.com.cn](http://www.zte.com.cn).

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