

PRESS RELEASE

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ERICSSON, QUALCOMM AND AT&T ANNOUNCE COLLABORATION ON 5G NEW RADIO TRIALS INTENDED TO ACCELERATE WIDE-SCALE 5G DEPLOYMENTS

- Trials will be compliant with the expected 5G NR 3GPP specification, the global 5G standard
- Driving ecosystem towards rapid commercialization at scale

Ericsson (NASDAQ: ERIC), Qualcomm Technologies Inc., a subsidiary of Qualcomm Incorporated, and AT&T today announced plans to conduct interoperability testing and over-the-air field trials based on the expected 5G New Radio (NR) specifications being developed by 3GPP, which will form the basis of the global standards. The trials intend to help move the mobile ecosystem to faster 5G deployment based on standards-compliant 5G NR infrastructure and devices once 3GPP completes the first release of the official specifications, which is expected as part of Release 15.

The trials will support operation in millimeter Wave (mmWave) spectrum, aiming to accelerate commercial deployments in the 28GHz and 39GHz bands. In the trials, the Companies will showcase new 5G NR mmWave technologies that utilize wide bandwidths available at these higher frequency bands to increase network capacity and expect to achieve multi-gigabit per second data rates. These technologies will be important to meeting the increasing consumer connectivity requirements for emerging consumer mobile broadband experiences such as virtual reality, augmented reality and connected cloud services. Additionally, the proliferation of 5G NR mmWave technology can make it more cost-effective and easier for multi-gigabit Internet service to reach more homes and businesses.

The trials will utilize device and base station prototype solutions from Qualcomm Technologies and Ericsson respectively, along with spectrum from AT&T, to simulate real-world scenarios across a broad set of use cases and deployment scenarios. The trials will employ 3GPP 5G NR Multiple-Input Multiple-Output (MIMO) antenna technology with adaptive beamforming and beam tracking techniques to deliver robust and sustained mobile broadband communications at the higher frequency bands, including non-line-of-sight (NLOS) environments and device mobility. It will also make use of scalable OFDM-based



waveforms and a new flexible framework design that are also expected to be part of the 5G NR specifications. The trials are expected to yield valuable insight into the unique challenges of integrating mmWave technologies into mobile networks and devices.

“The roadmap of 5G technologies is complex, and collaborations such as this are critical to ensuring timely deployment of 5G networks,” said Matt Grob, executive vice president and chief technology officer, Qualcomm Technologies, Inc. “The 3GPP-based trials we are planning with AT&T and Ericsson will help us accelerate integration of advanced 5G New Radio technologies in form-factor accurate devices, building upon our long history of 3G and 4G LTE leadership and paving the path to wide-scale 5G deployments.”

“5G technology comes with new challenges, but more importantly, it offers tremendous opportunity to revolutionize the way we use mobile networks across industries,” said Tom Keathley, senior vice president, wireless network architecture and design, AT&T. “We’re tackling these challenges head-on through testing in our labs and field trials. We look forward to working with Ericsson and Qualcomm on these standards-based trials as we continue to accelerate standards efforts and move down our 5G evolution path.”

“5G is the greatest opportunity our industry has ever experienced. It will provide a platform for operators to address new markets, such as media, transportation and manufacturing,” said Ulf Ewaldsson, senior vice president and chief technology officer, Ericsson. “This important 5G standard-based trial collaboration will demonstrate compliance to 3GPP and support the accelerated commercialization of the global 3GPP 5G standard. Ericsson continuously works with leading operators and ecosystem players in 5G to enable global scale and drive the industry in one common direction.”

The interoperability testing and trials, which are planned to launch in the United States starting in the second half of 2017, are intended to track closely with the first 3GPP 5G NR specification that we expect to be part of Release 15 – the global 5G standard that is expected to 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. Focusing on the 5G NR standards also should validate that the technology will work correctly with any future 3GPP 5G NR updates.

NOTES TO EDITORS

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Our services, software and infrastructure – especially in mobility, broadband and the cloud – are enabling the telecom industry and other sectors to do better business, increase efficiency, improve the user experience and capture new opportunities.



With approximately 115,000 professionals and customers in 180 countries, we combine global scale with technology and services leadership. We support networks that connect more than 2.5 billion subscribers. Forty percent of the world's mobile traffic is carried over Ericsson networks. And our investments in research and development ensure that our solutions – and our customers – stay in front.

Founded in 1876, Ericsson has its headquarters in Stockholm, Sweden. Net sales in 2015 were SEK 246.9 billion (USD 29.4 billion). Ericsson is listed on NASDAQ OMX stock exchange in Stockholm and the NASDAQ in New York.

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