



SK Telecom and Samsung Complete 5G End-to-End Network Trial Based on 3.5GHz 5G New Radio (NR) Technologies

The success represents key milestone for 5G services like ultra-low latency and massive connection

Seoul, Korea – June 28, 2017 – SK Telecom and Samsung Electronics Co., Ltd. (“Samsung”) announced today that they successfully completed a trial to deliver a 5G end-to-end connection based on 5G New Radio (NR) technology. Today’s trial represents the successful case of a 5G end-to-end connection, using the 3.5GHz spectrum, through virtualized core, radio and device based on 5G NR technology.

The trial, which took place in Samsung’s R&D center in Suwon, was comprised of Samsung’s 5G virtualized core, virtualized RAN, Distributed Unit (baseband unit and radio unit) and test device that are based on the 3GPP NR standards elements established to date. The 3GPP Release 15 standard is expected to be completed around the end of 2017, and to date, technologies such as numerology, frame structure and channel coding have been defined in the 3GPP NR specification.

Results achieved today were speeds over 1 Gbps and low latency of 1.2 millisecond. The ultra-low latency was made achievable by reducing the Transmission Time Interval (TTI) down to 0.25 millisecond, which relative to today’s 4G LTE networks is one fourth the time. In addition to the latency improvements, while 20MHz is the maximum channel bandwidth for LTE, a wide channel bandwidth up to 80MHz was used to make consistent gigabit performance possible at today’s trial.

“SK Telecom has successfully acquired all the essential technologies necessary for 5G commercialization using 3.5GHz and 28GHz frequencies, made possible through joint efforts with Samsung,” said Park Jin-hyo, Senior Vice President and Head of Network Technology R&D Center of SK Telecom. “We will maintain our leadership in 5G by taking initiative in 5G NR standardization and commercialization.”

“We achieved another milestone today, taking 5G in to the sub-6GHz spectrum for use cases and applications requiring wider area network coverage. The below 6GHz spectrum has been identified by the industry as ideal for enabling 5G services such as autonomous/connected car that require a wider area network,” said Dongsoo Park, Executive Vice President and Head of Global Sales & Marketing Team in Networks Business, Samsung Electronics. “Today’s trial with SK Telecom serves as a significant development in our collaborative efforts to accelerate 5G commercialization.”

Samsung’s virtualized solutions played a significant part in the trial’s success, representing the flexible nature of next generation networks. New applications and functions for unprecedented services can be deployed with Mobile Edge Computing (MEC). In addition to efficiency and cost-savings, network virtualization will provide operators with a real-time, ultra-low latency platform for new communication services.

SK Telecom and Samsung have been jointly exploring and studying the different frequencies optimal for 5G communications. 28GHz, one of the ultra-high frequencies, enables the transmission of large volume data like high definition videos at super-fast speed thanks to its wide bandwidth availability up to 3GHz. On the other hand, 3.5GHz, one of the below 6GHz frequencies, promises a wider and more stable coverage. In accordance to this, the two companies will continue their joint efforts to create unprecedented services that are optimized to the distinct traits of 28GHz and 3.5GHz frequencies, as well as next generation network architecture.

For further information on joint efforts in 5G field trials @ 28GHz, please visit [here](#).

About SK Telecom

SK Telecom is the largest mobile operator in Korea by both revenue and number of subscribers. As of March 2017, the company holds around 50 percent of the Korean market. SK Telecom has led the advancement of mobile technologies ranging from 2G to 4G, and is currently setting important milestones in its journey to 5G. The company is not only leading innovation in the field of mobile network, but also providing IoT, media, home and platform services. SK Telecom is determined to play a significant role in the Fourth Industrial Revolution by achieving innovations and promoting shared growth with other players in the industry. For more information, please contact skt_press@sk.com

About Samsung Electronics

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI and LED solutions. For the latest news, please visit the Samsung Newsroom at <http://news.samsung.com>.

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