

SK Telecom and Samsung Successfully Completed 4G and 5G Network Interworking Trial in Seoul

The success of the trial ensures seamless user experience on next generation networks using different technologies and frequencies

Seoul, Korea – September 28, 2017 – SK Telecom and Samsung Electronics Co., Ltd. (“Samsung”) have successfully completed the world’s first 4G LTE and 5G end-to-end network interworking trial in a real outdoor environment in Seoul.

To enable interworking between 4G and 5G, the companies used the current 4G LTE commercial network in the 2.6GHz band and newly built 5G networks using frequencies of 3.5GHz and 28GHz, as well as virtualized core and a test device that supports both 4G and 5G technologies.

In the Eulji-ro area of South Korea where the SK Telecom headquarters is located, 360 degree virtual reality video was streamed live between a user in a traveling car and another in their headquarters’ building. The significant radio frequency (RF) challenge that the two companies faced for this trial was with the dense urban outdoor environment consisting of closely situated office buildings and busy traffic in Eulji-ro.

The successful trial showed that users can experience seamless uninterrupted streaming service when transitioning from 4G to 5G networks and vice versa. Furthermore this test also implies a potential 5G deployment scenario, where end users still will be able to enjoy seamless mobile service going to and from 4G and 5G service areas during the initial phases of 5G network deployment where full coverage areas have not been fully built out.

“Users will be able to experience seamless communications service regardless of their location with 5G, in which the nationwide deployment of 4G will work together with base stations that support the 3.5GHz band for wide coverage as well as the 28GHz band for ultra-high speed transmission,” said Park Jin-hyo, Senior Vice President and Head of Network Technology R&D Center of SK Telecom. “We will continue from today’s success to solidify our stance as the leader of 5G commercialization.”

“Interworking between 4G and 5G is a prerequisite for the early stage of 5G commercialization. Likewise, the interworking between 3G and 4G was the key driver to foster the 4G eco-system and its commercialization,” said Dongsoo Park, Executive Vice President and Head of Global Sales & Marketing Team in Networks Business, Samsung Electronics. “The success of the test has proved that end users’ demand for a seamless and better experience can be met, on 4G-5G-intertwined next generation network.”

This trial served as a means to test and verify that seamless service is assured while a device moves to and from 4G LTE and 5G’s 3.5GHz and 28GHz networks. SK Telecom and Samsung established a virtualization network consisting of virtual 4G LTE and 5G cores with Software Defined Network (SDN) technology. Another critical element of the trial was to design in and test network slicing technology. The network slicing technology which can be

used by network operators to offer different services and service levels was also evaluated to ensure consistent quality across diverse services in the multi-Radio Access Technology (Multi-RAT) setting.

With the achievements and lessons learned from the test, SK Telecom and Samsung will continue with various tests and trials to come up with ideal commercial scenarios and further identify 5G use cases by maximizing the use of the existing 4G commercialized networks.

For further information on joint efforts between SK Telecom and Samsung for 5G trials using the 3.5GHz band based on 3GPP New Radio latest specification, 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, Foundry and LED solutions. For the latest news, please visit the Samsung Newsroom at <http://news.samsung.com>

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