



EUROPEAN COMMISSION

Press release

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Landmark agreement between the European Commission and South Korea on 5G mobile technology

An agreement signed in Seoul today is a milestone in the global race to develop 5G mobile technologies. Neelie Kroes, Vice-President of the European Commission for the Digital Agenda, and Mr Mun-Kee CHOI, South Korea's Minister of Science, ICT and Future Planning (MSIP) have agreed to work towards a global definition of 5G and to cooperate in 5G research. They also agreed on the need for harmonized radio spectrum to ensure global interoperability and on the preparation of global standards for 5G.











Both sides signed a [Joint Declaration on Strategic Cooperation in Information Communications Technology \(ICT\) and 5G](#), agreeing to deepen discussions in the area of Net Futures (network and communications, 5G, cloud computing), an element of on-going relations on ICT topics. Both sides will also work towards a coordinated call for research project proposals, to be launched in 2016. An industry memorandum of understanding will be signed between the EU's [5G Infrastructure Association](#) (whose [members](#) include Alcatel-Lucent, Atos, Deutsche Telekom, Ericsson, Nokia, Orange, Telecom Italia, Telenor and Telefonica) and South Korea's 5G Forum.

Vice President [@Neelie KroesEU](#) said "5G will become the new lifeblood of the digital economy and digital society once it is established. Both Europe and South Korea recognise this. This is the first time ever that public authorities have joined together in this way, with the support of private industry, to push forward the process of standardisation. Today's declaration signals our commitment to being global digital leaders."

5G is a new network technology and infrastructure that will bring the capacities needed to cope with the massive growth in the use of communication – especially wireless – technologies by humans and by machines. 5G won't just be faster, it will bring new functionalities and applications with high social and economic value. (see [MEMO/14/129](#) on [What 5G can do for you](#))

The two sides reaffirmed to strengthen the agreement of the November 2013 summit meeting, where both sides agreed on promoting R&D collaboration in the area of ICT. As a follow up, both sides decided to set up a Korea-EU ICT working group to prepare for ICT R&D cooperation as well as relevant policy discussions in the areas of 5G, Cloud and Internet of Things (IoT), and eventually to launch jointly funded R&D programs ('coordinated call') in 2016-2017.

Mobile communications: from 1G to 5G

Generation	Device	Specifications	People
1G 		1G Year 1991 Standards: AMPS, TACS Technology: Analog Bandwidth: — Data rates: —	
2G 		2G Year 1991 Standards: GSM, GPRS, EDGE Technology: Digital Bandwidth: Narrow Band Data rates: < 80-100 Kbit/s	
3G 		3G Year 2001 Standards: UMTS / HSPA Technology: digital Bandwidth: Broad Band Data rates: up to 2 Mbit/s	
4G 		4G Year 2010 Standards: LTE, LTE Advanced Technology: digital Bandwidth: Mobile Broad Band Data rates: xDSL-like experience 1 hr HD movie in 6 minutes	
5G 		5G Year 2020-2030 Standards: — Technology: digital Bandwidth: Ubiquitous connectivity Data rates: Fiber-like experience 1 hr HD movie in 6 seconds	People & Things

5G is about Communication, Storage, Processing...

Background

In December 2013 the Commission launched a [Public-Private Partnership on 5G \(IP/13/1261 - Factsheet\)](#). The EU is investing €700 million over the next seven years into the 5GPPP through the [Horizon 2020](#) programme. EU industry is set to match this investment by up to 5 times, to more than 3 billion euros. South Korea is investing and coordinating research its efforts through [5G Forum](#) and there are other major public and industry-led initiatives in China, Japan, Taiwan and the US

In February 2014 at the World Mobile Congress 2014, Neelie Kroes called for bold steps towards global consensus on the scope of 5G ([SPEECH/14/155](#)): *"Let's find a global consensus on the scope of 5G, its main technological constituents, and the timetable for putting it in place. Let's work this out together. And let's work it out soon: by the end of 2015. So all our citizens can get the 5G boost as early as possible."*

For more information

[Video statement \(EBS\) by Ryan HEATH, Spokesperson for Digital Agenda](#)

[Towards 5G](#)

[5G-PPP](#)

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Annex

JOINT DECLARATION BETWEEN THE REPUBLIC OF KOREA AND THE EUROPEAN COMMISSION ON STRATEGIC COOPERATION IN THE AREA OF INFORMATION & COMMUNICATIONS TECHNOLOGY AND 5G

Mun-kee CHOI, Minister of the Ministry of Science, ICT and Future Planning (MSIP) of the Republic of Korea, and Neelie KROES, Vice-President for European Commission, responsible for the EU Digital Agenda (hereinafter referred to as "two sides") held an official meeting on 16 June 2014, where the two sides exchanged views on the enhancement of bilateral co-operation and exchanges between governments, research institutes, educational institutions, private companies, and other organizations.

The two sides reaffirmed to strengthen the agreement of the November 2013 summit meeting, where both sides agreed on promoting R&D collaboration in the area of Information Communications Technology (ICT). As a follow up, both sides decided to set up a Korea-EU ICT working group to prepare for ICT R&D cooperation as well as relevant policy discussions in the areas of 5G, Cloud and Internet of Things (IoT), and eventually to launch jointly funded R&D programs ('coordinated call') in 2016-2017.

The two sides recognised the great importance of timely developing the next generation of mobile communication networks (5G), because the communications infrastructure will be the backbone of the future digital economy, creating more and better jobs, and contributing to a sustainable economic growth for the mutual benefit of the Republic of Korea and the European Union (EU).

The two sides agreed to enhance cooperation in the field of the future generation of communication networks (5G), fostering global consensus on the definition of 5G, developing common interest in research activities, harmonising radio spectrum policy to ensure global interoperability and preparing global standardization for 5G.

The two sides also agreed to jointly work in the area of future mobile network on the following:

- To strive to reach a global consensus, by the end of 2015, on the broad definition, the key functionalities, and target time table for 5G.
- To work together to explore further possibilities in cooperating and implementing joint research actions in the field of 5G, to be launched in 2016. To work together towards global standards for 5G, in support of ongoing standardization in relevant fora, such as 3GPP and ITU.
- To cooperate to facilitate the identification of globally harmonised radio frequency band to meet the additional spectrum requirements for 5G, and to reinforce cooperation in the context of ITU and WRC.

The two sides recognised the importance of public-private partnerships for 5G, and expressed support for the deepening of interactions and exchanges between industry associations dealing with 5G in the EU and in Korea.

Done in Seoul, the Republic of Korea, on June 16, 2014 in English language.

Mun-Kee CHOI

Minister of the Ministry of Science, ICT and Future Planning, the Republic of Korea

Neelie KROES

Vice-President for the European Commission responsible for the Digital Agenda