



Press Release

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ID Quantique and SK Telecom Lead International Standardization of Quantum-Safe Technology

The two companies are working closely to promote international standardization of quantum-safe technologies including QKD and QRNG, while expanding the quantum technology ecosystem and market. Their joint technical report has received final approval from ITU-T, the telecommunications standardization sector of the International Telecommunication Union.

ID Quantique (IDQ) and SK Telecom (NYSE:SKM) today announced that their technical report titled ‘Security Considerations for Quantum Key Distribution Network’ has received final ITU-T approval at ITU-T Study Group 17 (SG17) e-meeting held from March 17 to 26, 2020. This marks the first-ever Quantum Key Distribution (QKD)¹-related standardization work completed by SG 17, which coordinates security-work across all ITU-T Study Groups.

“This great achievement is a strong signal given to the whole ICT industry.” says Grégoire Ribordy, co-founder and CEO of ID Quantique. *“We are sure that this will foster and accelerate the adoption of quantum technologies.”*

The technical report provides security matters to be considered when applying QKD to telecommunications networks, including the required security level for network nodes that manages the distribution of quantum keys, and security requirements for transmission of quantum keys between distantly located network nodes.

ID Quantique and SK Telecom have been leading global standardization efforts for quantum technologies, including QKD and quantum random number generator (QRNG).

On November 13, 2019, the two companies announced that their recommendation titled ‘Quantum Noise Random Number Generator Architecture’ received final approval as an ITU-T standard (X.1702) at ITU-T Study Group 17, marking the first international QRNG standard.

Meanwhile, SK Telecom has been cooperating with companies including Telecom Italia, Telefonica and Ericsson on GSMA’s new work item ‘Quantum Computing, Networking and Security’ since March 3, 2020. The companies are currently studying the future perspectives for quantum technology for mobile operators, and plan to publish a white paper within this year.

“This important standardization milestone comes as a result of long-term joint efforts of SK Telecom and ID Quantique in developing cutting-edge quantum cryptography communication technologies for safe and secure 5G services,” said Kim Yoon, Chief Technology Officer of SK Telecom. *“Going forward, SK Telecom will further strengthen its leadership in quantum technologies by expanding its global partnership ecosystem and spearheading standardization efforts.”*

¹ Quantum Key Distribution technologies generate and distribute symmetrical cryptographic keys with information theoretic security based on quantum information theory between a sender and a receiver. If any adversary tries to intercept a single photon during quantum key distribution process, this observation causes errors in the sequence of bits exchanged by the sender and the receiver and these errors reveal an eavesdropping.



About SK Telecom

SK Telecom is Korea's leading ICT company, driving innovations in the areas of mobile communications, media, security, commerce and mobility. Armed with cutting-edge ICT including AI and 5G, the company is ushering in a new level of convergence to deliver unprecedented value to customers. As the global 5G pioneer, SK Telecom is committed to realizing the full potential of 5G through ground-breaking services that can improve people's lives, transform businesses, and lead to a better society.

SK Telecom boasts unrivaled leadership in the Korean mobile market with over 30 million subscribers, which account for nearly 50 percent of the market. The company now has 47 ICT subsidiaries and annual revenues approaching KRW 17.8 trillion.

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About ID Quantique

Founded in 2001 as a spin-off of the Group of Applied Physics of the University of Geneva, ID Quantique is the world leader in quantum-safe crypto solutions, designed to protect data for the future. The company provides quantum-safe network encryption, secure quantum key generation and Quantum Key Distribution solutions and services to the financial industry, enterprises and government organizations globally. IDQ's quantum random number generator has been validated according to global standards and independent agencies, and is the reference in highly regulated and mission critical industries – such as security, encryption, critical infrastructure and IoT – where trust is paramount.

Additionally, IDQ is a leading provider of optical instrumentation products, most notably photon counters and related electronics. The company's innovative photonic solutions are used in both commercial and research applications.

IDQ's products are used by government, enterprise and academic customers in more than 60 countries and on every continent. IDQ is proud of its independence and neutrality, and believes in establishing long-term and trusted relationships with its customers and partners.

For more information, please visit www.idquantique.com.

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