



Press Release

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ID Quantique and SK Telecom move one step forward in their standardization roadmap for quantum key distribution

The two companies are leading global standardization efforts for quantum technologies; two draft recommendations covering quantum key distribution (QKD) have just been consented as international standards.

ID Quantique (IDQ), the world leader in Quantum-Safe security solutions and SK Telecom (NYSE:SKM), Korea's leading ICT company, made good progress on standardization of Quantum Key distribution (QKD)¹ at the ITU-T² e-meeting held from August 24th to September 3rd. They today announced that two draft recommendations covering QKD networks have been consented as international standards. Acting as editors, IDQ and SK Telecom coordinated and facilitated the development of these two consented standards that cover security aspects of QKD networks.

"This important standardization milestone will certainly foster and accelerate the adoption of quantum key distribution. It comes as a result of a long-term joint effort of our two companies" says Grégoire Ribordy, CEO and co-founder of ID Quantique.

The first recommendation (X.1710: 'Security framework for quantum key distribution networks') defines a framework which includes security threats, security requirements and security methods for QKD networks.

The second consented standard (X.1714: 'Key combination and confidential key supply for quantum key distribution networks') specifies (1) security requirements on hybrid key methods combining key from QKD with keys exchanged through other means, and (2) security requirements on key delivery from QKD towards cryptographic applications.

IDQ and SK Telecom are working closely to promote international standardization of quantum-safe technologies including QKD and QRNG, while expanding the quantum technology ecosystem and market. These two standards are important milestones in IDQ's standardization roadmap that aims at a wider deployment and implementation of QKD networks. This new step will bring greater trust in quantum technologies. Standards play a central role in building this trust, as the agreement of standards is a sign of the maturity of a technology and its supporting ecosystem.

In addition to these two consented standards, the two companies led the final registration of the "Quantum Noise Random Number Generator Architecture" standard in November 2019, and coordinated the publication of a technical report on "Security Considerations for Quantum Key Distribution Network" in March this year.

"Our collaboration with ID Quantique continues to generate fruitful outcome in the field of quantum technologies." said Kim Yoon, Chief Technology Officer of SK Telecom. *"We will make constant efforts to further solidify our leadership in quantum technologies, ranging from the establishment of standards to commercialization of networks and devices."*

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.

² International Telecommunication Union refers to the field of telecommunication standardization, and Affiliated organizations set standards in the field of communication

At ID Quantique, we are dedicated to the success of our customers in all areas. We focus on providing long-term security solutions for our customers' IT infrastructures. Our [Quantum Key Distribution \(QKD\)](#) solution is used to distribute encryption keys, whose security is based on quantum physics and is thus guaranteed for the long-term. IDQ was also the first company to develop a quantum random number generator (QRNG) in 2001 and it remains the market leader in terms of reliability and certifications, with its [Quantis QRNG product family](#). It is actively developing new QRNG products for its customers in various fields like automobile, consumer electronics, computer, mobile, financial, gaming and security markets. In May 2020, ID Quantique and SK Telecom announced to the world [the first 5G smartphone equipped with a Quantum Random Number Generator \(QRNG\) chipset](#).

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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