



Press Release

Geneva, June 29th 2020

ID Quantique and SK Telecom announce the First Smart Power Plant secured by 5G Quantum Cryptography

ID Quantique (IDQ), the world leader in Quantum Safe security solutions and SK Telecom (NYSE:SKM), Korea's Telecom giant, today announced the First Quantum Secured Smart Plant in Korea providing ultra-high security for its network.

By partnering with ID Quantique, SK Telecom has put a clear focus on quantum technologies through Quantum Random Number Generation (QRNG) and Quantum Key Distribution (QKD), to future-proof their network security and offer innovative solutions to their customers.

After launching the world's first 5G network in 2019, SK Telecom was also the first to choose to implement quantum technologies as a security advantage, fully embracing its well-known pioneering reputation. SK Telecom applied QRNG to the subscriber authentication center of its 5G network, as well as QKD to the Seoul-Daejeon section of its LTE and 5G networks – where the most data traffic concentration in Korea occurs – to prevent hacking and eavesdropping. In May 2020, ID Quantique, SK Telecom and Samsung Electronics also announced to the world [the first 5G smartphone equipped with a Quantum Random Number Generator \(QRNG\) chipset](#).

This June, Korea Hydro & Nuclear Power Co., Ltd.(KHNP) decided to apply Quantum Key Distribution (QKD) to the communication network connecting its Hydro & Nuclear Power headquarters (in Gyongjue) and its Power plant (in Samrangjin) to improve the security of their network at the plant, blocking the source of hacking concerns. SK Telecom and KHNP have been working together to make various pilot projects, streamline the power generation process, and enhance security since signing the “4th Industrial Revolution-Based ICT Competitiveness Agreement” in June last year.

Park Sang-hyeong, Head of the Digital Innovation Unit, KHNP says: “The implementation of smart plants is the goal of digital transformation that KHNP wants to achieve, and wireless communication technology is responsible for the same functions as the nerves in digital transformation.

Among new projects, SK Telecom and KHNP are building a private 5G base to prevent leakage of mobile business data in power generation facilities. They plan to implement a full-fledged smart plant starting this year to produce energy efficiently using 5G, quantum cryptography with ID Quantique's quantum-safe solutions, artificial intelligence and the cloud. Moreover, Quantum Key Distribution (QKD) and Quantum Random Number Generation (QRNG) will be applied for Dual Security for on-site mobile access.

Shin Yong-sik, VP and Head of Massive IoT Business Office, SK Telecom, quotes: “The application of advanced ICT such as 5G and quantum cryptography helped to create optimal conditions for Smart Plant implementation.” And added “We will continue to collaborate with Korea Hydro & Nuclear Power Co., Ltd. for innovation of power generation facilities that are a stable foundation for Korean industry and people's lives.”

“We are very proud of this partnership with KHNP and SK Telecom” said Grégoire Ribordy, CEO and co-founder of ID Quantique. “Beside government and finance, we see critical infrastructure as a key area of attacks. With our solutions, we focus on providing long-term security solutions for our customers’ IT infrastructures and we are dedicated to accompanying companies who wish to prepare for the quantum decade.”

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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