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Entry into a consignment contract and the start of research and development in the leading research project of METI and NEDO

Nihon Dempa Kogyo Co., Ltd. (Shibuya-ku, Tokyo) proposed "Innovative Communications Devices and Applications Development based on Extreme Time Synchronization" to the public solicitation of the "Post 5G Information and Communications Systems Fundamental Reinforcement R&D Project/Leading Research (consigned)" project of the New Energy and Industrial Technology Development Organization (NEDO) under the five-party collaboration of the National Institute for Information and Communications Technology ("NICT"), the National University of Tokyo, the National University of Tokyo, the Institute of Electrical Communications Research at Tohoku University, and the National University of Tohoku's Tough and Cyberphysical AI Research Center. We are pleased to announce that we have recently concluded a consignment contract and started research and development .

Ultra-high-speed communication services have already been launched in the 5th generation communication system (5G), but in the future, 5G with enhanced functions such as ultra-low latency and multiple simultaneous connectivity (called post 5G) are expected to become core technologies that will lead to smarter manufacturing industries and widespread the use of industrial IoTs. As a pioneering study for addressing technical issues later in the post 5G, this study aims to construct an extreme time synchronization system based on the two-way time synchronization technology (Wi-Wi) developed by NICT in advance of the global market for "time synchronization technique," which is expected to become even more important in the future.

Specifically, we are in charge of the development of high-performance digitally controlled crystal oscillators, and we will also participate in experiments and verification to confirm quality innovations such as multiple connections, delay guarantee, and distributed cooperative communication transmission that take advantage of the advantages of time synchronization using this device and time synchronization using this device. In addition, this research is planned to promote close integrated research with applications, such as equipment mounting on robots and examination of applications.

Through the conclusion of a contract for a leading research project this time, specialized organizations in time synchronization, oscillators, robots, and wireless connection technologies will be able to gather together to conduct R & D. We will eventually aim to shift to the next stage on the assumption of practical application, and we will also work on standardization activities in cooperation with standardization organizations of obtained R & D result.

Since our establishment, as a manufacturer specializing in quartz devices that provides frequency control, selection, and detection, we have created a variety of frequencies and supported the development of the electronics industry from inside. We expect demand for quartz devices to grow further with the development of a digital society. For example, as 5G systems become increasingly popular in the future and vehicles equipped with ADAS (Advanced Driver Assistance System) are increasing. To respond to this trend, we will continue to contribute to the realization of a safe, secure and comfortable society by providing highly reliable and high-precision products.

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