

CC-03-07

Satellite-based QKD for global quantum cryptographic network construction

Saori Kijima Yokote

Space & Defense Business Division Space&Satellite Business Group Space Business Unit SKY Perfect JSAT Corporation

Abstract

In recent years, the development of quantum key distribution (QKD) and cryptographic techniques have been promoted worldwide. Also in Japan, various QKD research and development projects are being conducted, including a publicly solicited R&D project by the Ministry of Internal Affairs and Communications (MIC).

SKY Perfect JSAT Corporation (SJC), Asia's largest satellite operator, has been selected as the representative company of the consortium for "Research and Development of Satellite Onboard QKD and Cryptography Technologies for the Construction of Global Quantum Cryptography Network" (MIC public offering) publicly solicited by MIC in 2021.

The consortium to execute the project which consists of National Institute of Information and Communications Technology (NICT), NEC Corporation, TOSHIBA CORPORATION, and SJC, and they have been contributing on Japanese QKD and Cryptographic Technology development.

This presentation describes the latest QKD R&D and commercialization trends in several countries around the world, the concepts and the requirements of MIC public offering, and the role of the consortium in the project and its progress so far. In addition, this presentation describes about the prospects for future business development of SJC, associated with the satellite-based QKD.