

Field trials and recent activities of QKD research in Toshiba corporation

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Abstract

Quantum key distribution (QKD) provides a means for exchanging cryptographic keys, the security of which makes no assumptions about an adversary's computing power or technological capability. Toshiba corporation is leading QKD technology in research, field trials, and standardization activities. This talk presents mainly QKD field trials in medical field: a real-time transmission of genome analysis data, a transfer of online expert panel data, and a backup of large-scale genome analysis data to multiple sites in cooperation with Tohoku University Tohoku Medical Megabank Organization (ToMMo), Tohoku University Hospital, and the National Institute of Information and Communications Technology (NICT). We also overview recent activities of QKD research in Toshiba corporation.