

Ongoing efforts on development of quantum technology by SK Telecom

Sean Kwak

SK Telecom, South Korea

SK Telecom, the largest mobile operator in South Korea, has developed QKD system, QRNG chips and core technology for quantum computer. SK Telecom has deployed its QKD-based commercial LTE network backhaul from June 2016 and currently upto 350K LTE subscribers are using QKD service everyday already. We also making QRNG chips based on quantum shot noise, which was initially developed to fuel our own QKD systems. A commercial version of QRNG chips with physical size of 5x5mm is expected to be released in this year. SK Telecom is also pursuing quantum computer technology, and has demonstrated a few fundamental qubit operations using a ion-trap system on a silicon chip. The scalability of this chip-based technology allows it to be developed into a quantum repeater for QKD systems in the short term, or a fully-grown universal quantum computer in the long term. We hope to keep making innovations in the field of quantum technology and maintain our position as a leading company in the quantum-tech market.