

# China completes tests of quantum communication network



Command center of Jinan quantum communication network [Photo/Ta Kung Pao]

Quantum communication network, which boasts ultra-safe connection impenetrable to hackers, is expected to be put into commercial use in a Chinese city by the end of next month.

Jinan Institute of Quantum Technology announced Sunday that the network, connecting Communist Party and government bodies in Jinan, capital of East China's Shandong Province, had lately been tested and the designers were satisfied with its performance, especially in secured communications.

Liu Hong, a professor with Shandong University who was involved in the test, said the network has proved to be in a "very ideal" condition.

In the test, which involved over 50 programs, the network transmitted data with quantum encryption keys among nearly 200 terminals in the city. Between users, more than 4,000 keys were generated in just a second, said Zhou Fei, an assistant director of the institute.

Quantum communication uses quantum entanglement of photons to make sure that nobody taps into the line, for doing so would inevitably corrupt the signal.

In quantum communication, any interference is detectable. Two parties can exchange secret messages by sharing an encryption key encoded in the properties of entangled particles.

Zhou said the success of the test is a landmark in the development of quantum communication technology worldwide, paving the way for its commercial use first in government and then in finance, energy and other sectors.