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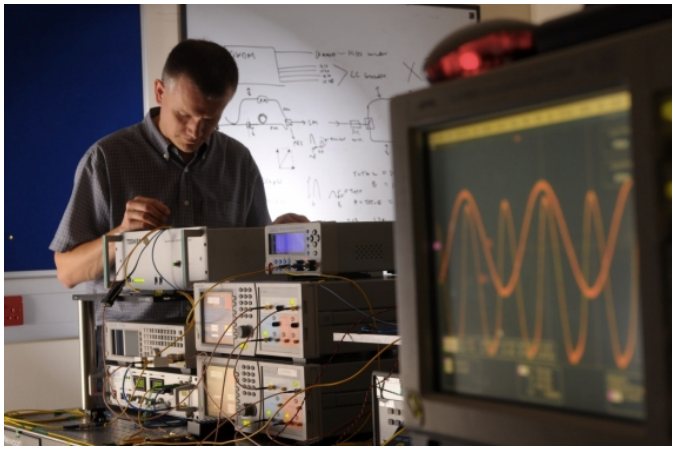
Nature publishes a Toshiba research paper detailing means of inching quantum cryptography commercialisation-- a quantum access networking able to handle up to 64 users.



Quantum networking relies on the theory stating that the observation of a quantum object (such as a photon) changes the object in question, making potential hackers detectable and any cryptographic keys unusable. Commercial quantum crytpography systems are already available from firms including ID Quantique and MagiQ, but such systems can only send messages from A to B over a single cable.

The Toshiba technology uses of an improved hub photon detector able to count up to 1 billion photons per second. It allows the adding of more users to the network via the connection of (relatively) basic quantum transmitters, thus reducing overall costs.

“This kind of communication cannot be defeated by future advances in computing power, nor new mathematical algorithms, nor fancy new engineering,” Toshiba researcher Andrew Shields tells Quartz.com. “As long as the laws of physics hold true, it will ensure that your communications are fully secured.”

However quantum technology still has drawbacks-- dedicated fibre optic cable can carry photons for only up to 200km before degradation. Researchers are working on means of carrying quantum bits over "noisy" fibre, but until that happens it's better to assume the worst

when it comes to security.

Go A Quantum Access Network (Nature)

Go Toshiba Has Invented a Quantum Cryptography Network (Quartz.com)