

A roadmap for building quantum key distribution devices

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Adopting the emerging quantum communication technologies seems to be a logical answer to the security challenges implied by the ever expanding communication networks and computing and storage facilities. Quantum communications are based on quantum key distribution, which uses quantum mechanical processes to generate cryptographic keys and to securely distribute them to the users in the networks.

There already are quantum key distribution devices on the market, but it is ill advised to fully rely on such devices, in the national security use cases. Thus, each country in EU is actively trying or has already succeeded in developing their own prototypes.

We present our roadmap for building such a quantum key distribution prototype and the current status of the R&D activities undertaken by our collaboration ITIM-UTCN in that direction.

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