

DECLARATION ON A
**QUANTUM COMMUNICATION
INFRASTRUCTURE**
FOR THE EU

All 27 EU Member States

have signed a declaration agreeing to work together to explore how to build a quantum communication infrastructure (QCI) across Europe, boosting European capabilities in quantum technologies, cybersecurity and industrial competitiveness.

@FutureTechEU #EuroQCI



xx/2018 quapital.eu initiative

10/2018 platforma qute.sk

01/2019 qlink Bratislava - Viedeň - St.Polten

06/2019 deklarácia euroQCI

06/2021 plán obnovy SK - vybudovanie uzlov

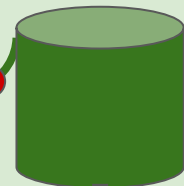
11/2021 Nár. centrum pre kvant. technológie QUTE.sk

12/2021 euroQCI výzva

HORNÁ

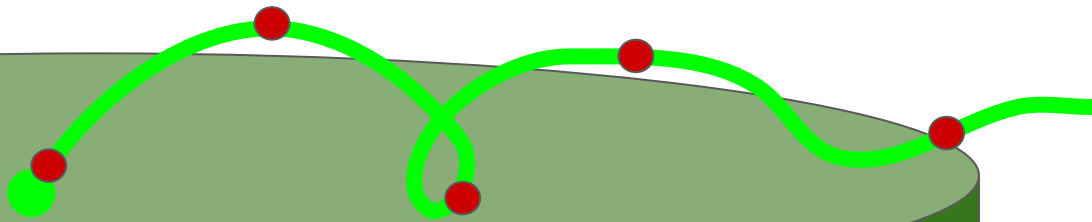
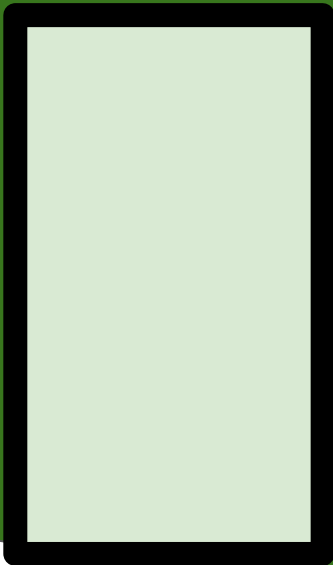


DOLNÁ

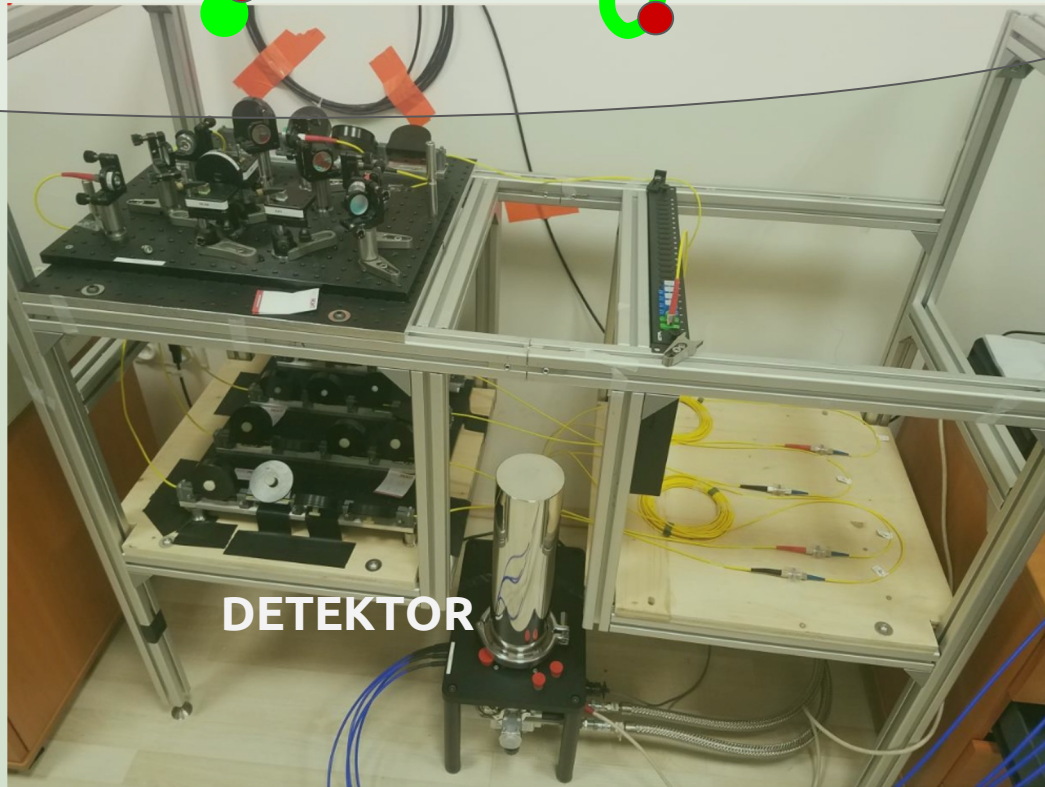
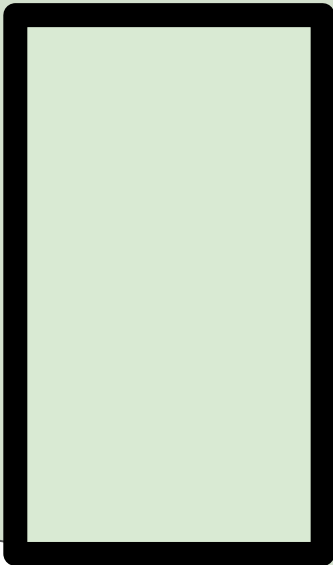


KVANTOVÁ KOMUNIKAČNÁ VRSTVA

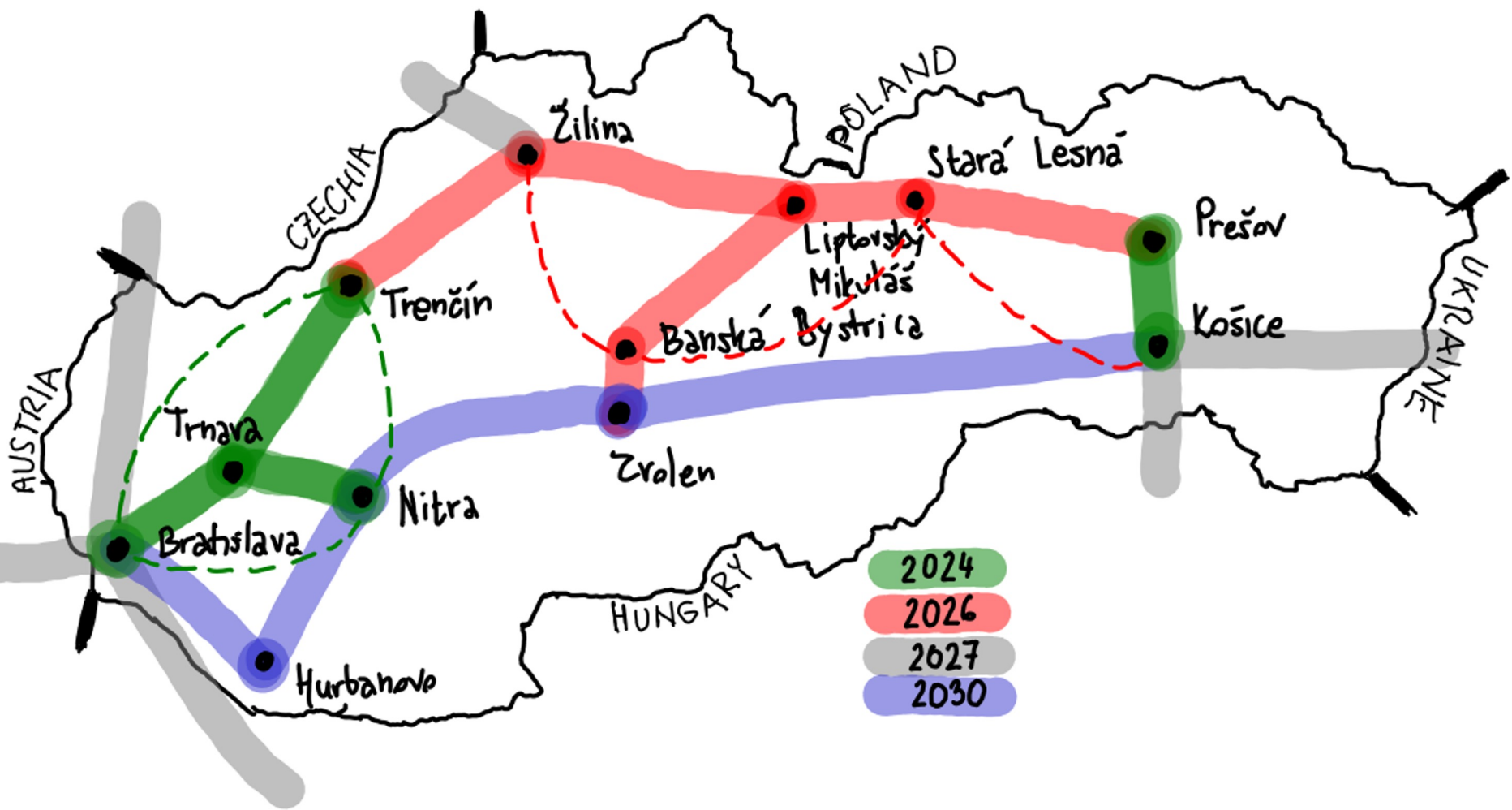
KVANTOVÝ UZOL



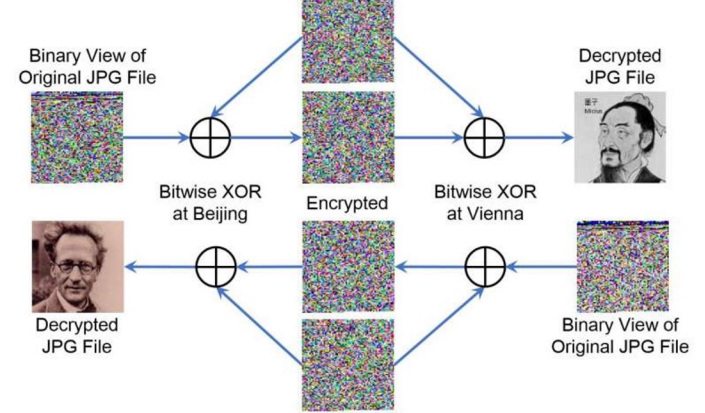
KVANTOVÝ UZOL



DETEKTOR



- 2024
- 2026
- 2027
- 2030



Satellite-Relayed Intercontinental Quantum Network

Sheng-Kai Liao,^{1,2} Wen-Qi Cai,^{1,2} Johannes Handsteiner,^{3,4} Bo Liu,^{4,5} Juan Yin,^{1,2} Liang Zhang,^{2,6} Dominik Rauch,^{3,4} Matthias Fink,⁴ Ji-Gang Ren,^{1,2} Wei-Yue Liu,^{1,2} Yang Li,^{1,2} Qi Shen,^{1,2} Yuan Cao,^{1,2} Feng-Zhi Li,^{1,2} Jian-Feng Wang,⁷ Yong-Mei Huang,⁸ Lei Deng,⁹ Tao Xi,¹⁰ Lu Ma,¹¹ Tai Hu,¹² Li Li,^{1,2} Nai-Le Liu,^{1,2} Franz Koidl,¹³ Peiyuan Wang,¹³ Yu-Ao Chen,^{1,2} Xiang-Bin Wang,⁷ Michael Steindorfer,¹³ Georg Kirchner,¹³ Chao-Yang Lu,^{1,2} Rong Shu,^{2,6} Rupert Ursin,^{3,4} Thomas Scheidl,^{3,4} Cheng-Zhi Peng,^{1,2} Jian-Yu Wang,^{2,6} Anton Zeilinger,^{3,4} and Jian-Wei Pan,^{1,2}

An intercontinental videoconference was also held between the Chinese Academy of Sciences and the Austria Academy of Sciences, employing the Advanced Encryption Standard (AES)-128 protocol that **refreshed the 128-bit seed keys every second**. The videoconference lasted for 75 min with a total data transmission of ~ 2 GB, which included ~ 560 kbit of the quantum key exchanged between Austria and China.



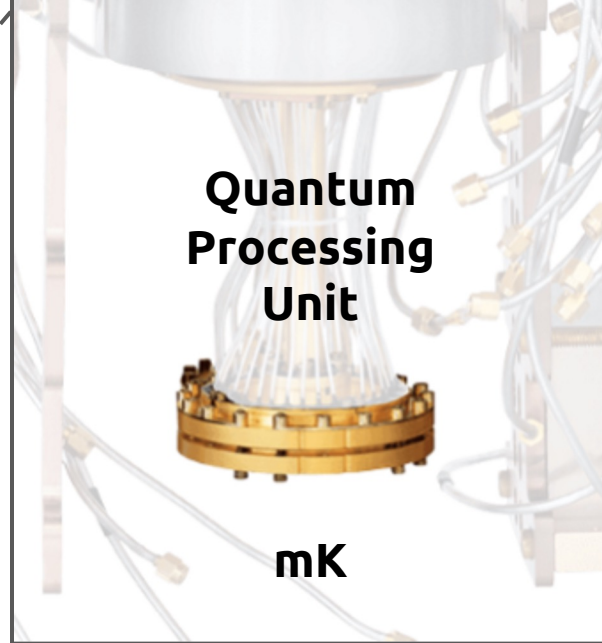
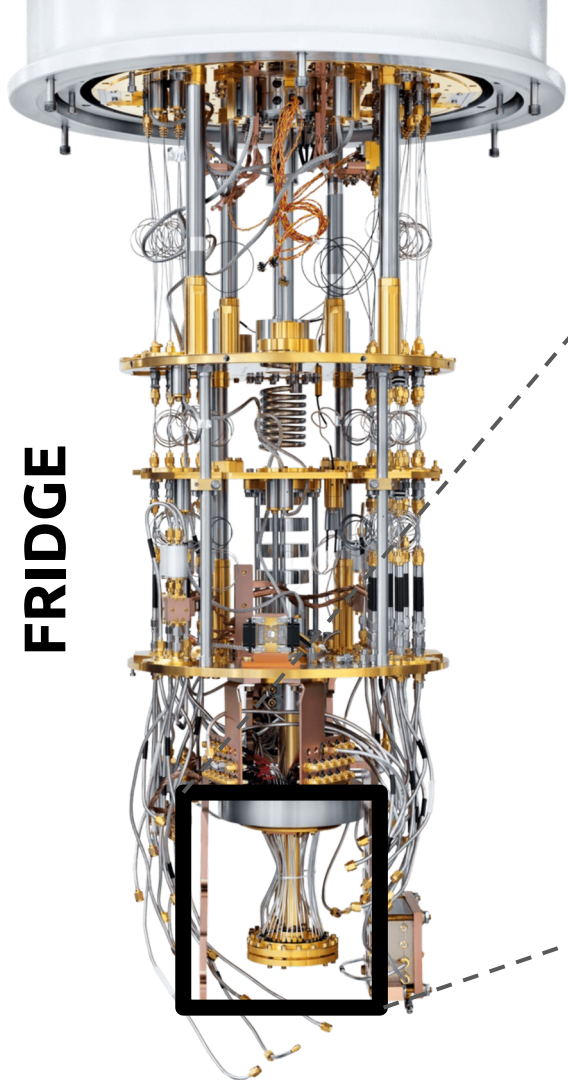
QKD 2018 Austria-China Academies videoconference

QUAPITAL.EU - QuANTum Photonic Intercity TrANsmiSSion Lattice

iniciatíva výskumných skupín zo strednej Európy 2018



FRIDGE



**Quantum
Processing
Unit**

mK

AKTIVITY

netQUTE

aplikačno-technologické

iQUTE

vedecko-výskumné

eduQUTE

vzdelávaco-osvetové

QUTE zzpo

administratívna podpora

PARTNERI

MIRRI

MŠVVŠ

FÚ SAV

FMFI UK

FÚ SAV

FMFI UK

FMFI UK

NBÚ

FÚ SAV

MLC CVTI

ELÚ SAV

MÚ SAV

FEI STU

STU

...

ÚEF SAV

zzpo

ELÚ SAV

PF UPJŠ

PF UPJŠ

DOZORNÁ RADA

MIRRI, MŠVVŠ, SAV

...

ÚEF SAV

FIIT STU

FÚ SAV

VÝKONNÁ RADA

Ziman, Kubica, Ševčík

MLC CVTI

...

...

euroQCI projekt

Rada iQUTE

Rada eduQUTE

VALNÉ
ZHROMAŽDENIE

sabQUTE
PORADNÁ RADA PRE STRATÉGIE

sciQUTE
VEDECKÁ RADA