



ITU-T Focus Groups

FG-QIT4N: Focus Group on Quantum Information Technology for Networks

Info session on FG-QIT4N deliverables

06 December 2021

Technical Report FG QIT4N D2.4

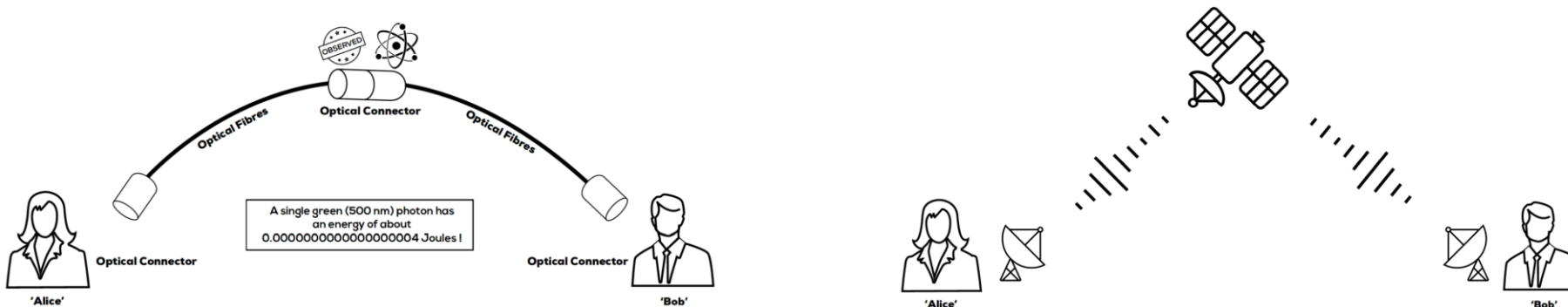
- **Title:** Quantum key distribution network (QKDN) transport technologies
- **Summary:** This technical report is a deliverable of the ITU-T Focus Group on Quantum Information Technology for Networks (FG QIT4N) which discusses QKDN transport technologies such as transport system components, technical solutions, the typical scenarios of the co-existence of quantum and classical signals in a common fibre (CEQC). Analysis about the impact of the classic optical light on the quantum signals is given. Furthermore, some CEQC schemes are shown in the document, both for DV-QKD system and CV-QKD system.
- **Link to the final draft:** <https://www.itu.int/en/ITU-T/focusgroups/qit4n/Documents/D2.4.pdf>

- **Editor Team:**

Yalin Li, QuantumCTek Co. Ltd	Email: yalin.li@quantum-info.com
Chunxu Zhao, China Unicom	Email: zhaocx62@chinaunicom.cn
Ming Cheng, China Telecom	Email: chengm2@chinatelecom.cn
Junsen Lai, China Academy of Information and Communications Technology (CAICT)	Email: laijunsen@caict.ac.cn
Yingming Zhou, Shanghai XT Quantech Co. Ltd	Email: zhouyingming@xtquantech.com
Yi Qian, China Information and Communication Technologies Group Corporation (CICT)	Email: qianyi@wri.com.cn

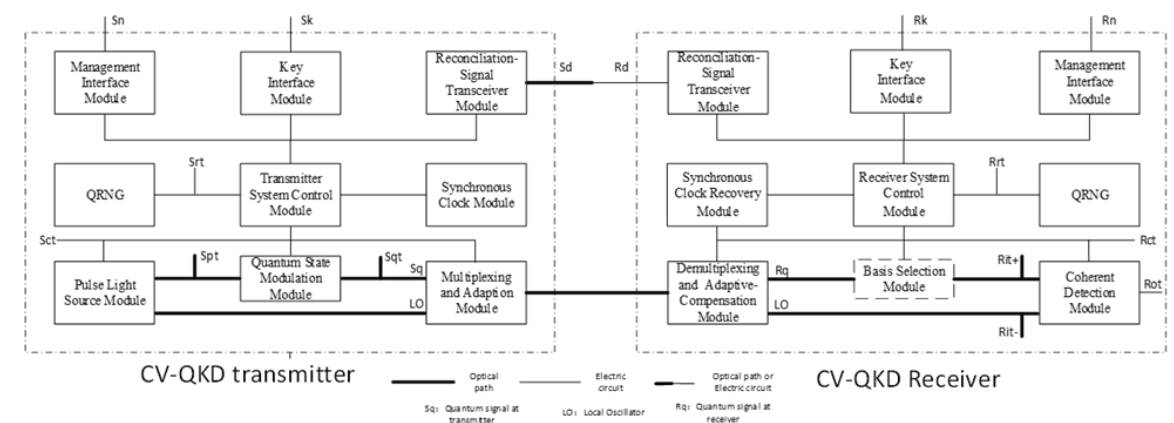
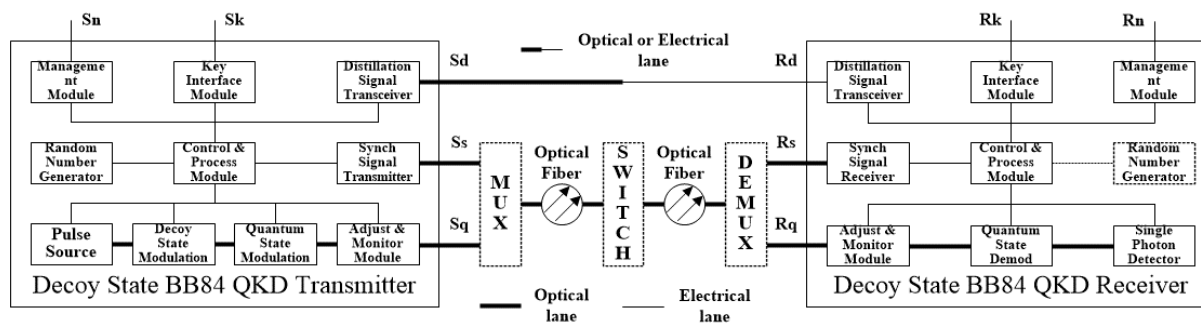
Technical Report FG QIT4N D2.4

- **Skeleton of the report**
 - **Terms & Abbreviation**
 - **Overview of QKDN transport technologies:** QKDN network scenarios based on optical fibers and satellites, and the typical topologies. Extra input from Dr. Bernard Lee.



Technical Report FG QIT4N D2.4

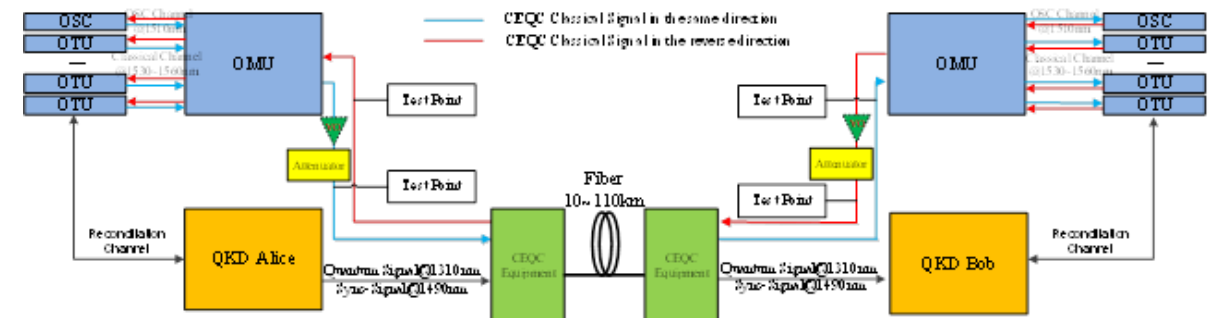
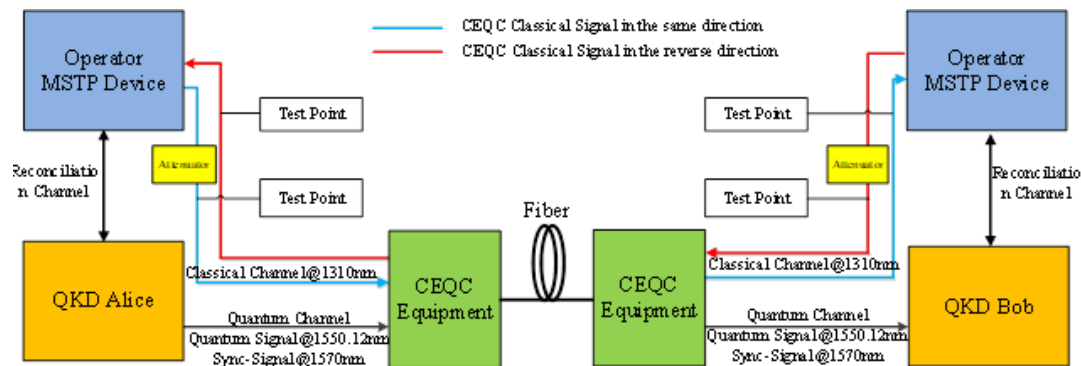
- **Skeleton of the report**
 - **Terms & Abbreviation**
 - **Overview of QKDN transport technologies:** QKDN network scenarios based on optical fibers and satellites, and the typical topologies. Extra input from Dr. Bernard Lee.
 - **QKD System:** Give the system model and reference points for both DV- & CV- QKD.



Technical Report FG QIT4N D2.4

- **Skeleton of the report**

- **Terms & Abbreviation**
- **Overview of QKDN transport technologies:** QKDN network scenarios based on optical fibers and satellites, and the typical topologies. Extra input from Dr. Bernard Lee.
- **QKD System:** Give the system model and reference points for both DV- & CV- QKD.
- **CEQC for QKD systems:** Give the scenarios and schemes of CEQC, both for DV- & CV-QKD. Some experiment results were presented in the appendix.



Technical Report FG QIT4N D2.4

- **Skeleton of the report**

- **Terms & Abbreviation**
- **Overview of QKDN transport technologies:** QKDN network scenarios based on optical fibers and satellites, and the typical topologies. Extra input from Dr. Bernard Lee.
- **QKD System:** Give the system model and reference points for both DV- & CV- QKD.
- **CEQC for QKD systems:** Give the scenarios and schemes of CEQC, both for DV- & CV-QKD. Some experiment results were presented in the appendix.
- **Conclusion.**
 - The QKD transport system architecture, reference points, technical requirements for key components should be standardized;
 - The technical requirements for implementing CEQC solutions should be standardized;
 - The test methods of QKD transport systems should also be studied and standardized.

For more information:



Contact:

- The editors via email addresses in the slides, or
- Secretariat at: tsbfgqit4n@itu.int



Visit the website:

<http://www.itu.int/go/fgqit4n>