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| Title: ITU logo | INTERNATIONAL TELECOMMUNICATION UNION  **TELECOMMUNICATION STANDARDIZATION SECTOR**  STUDY PERIOD 2022-2024 | | | TSAG-TD101 |
| TSAG |
| **Original: English** |
| **Question(s):** | | N/A | | Geneva, 12-16 December 2022 |
| **TD (Ref.:** [SG15-LS27](http://handle.itu.int/11.1002/ls/sp17-sg15-oLS-00027.docx)**)** | | | | |
| **Source:** | | ITU-T Study Group 15 | | |
| **Title:** | | LS/r on the outcomes of FG QIT4N (reply to TSAG-LS46) [from ITU-T SG15] | | |
| **LIAISON STATEMENT** | | | | |
| **For action to:** | | | - | |
| **For information to:** | | | TSAG | |
| **Approval:** | | | ITU-T SG15 meeting (30 September 2022) | |
| **Deadline:** | | | N/A | |
| **Contact:** | | | Jean-Marie Fromenteau Corning Incorporated USA | Tel: +49 9561 42 74 20 E-mail: [fromentejm@corning.com](mailto:fromentejm@corning.com) |
| **Contact:** | | | Paul Doolan Infinera US | Tel: +1 972 357 5822 Email: [pdoolan@infinera.com](mailto:pdoolan@infinera.com) |
| **Contact:** | | | Vincent Ferretti Corning Incorporated USA | Tel: +1 828 234 3353 Email: [ferrettive@corning.com](mailto:ferrettive@corning.com) |

This liaison statement answers [TSAG-LS46](https://www.itu.int/ifa/t/2017/ls/tsag/sp16-tsag-oLS-00046.docx).

A new liaison statement has been received from SG15.

This liaison statement follows and the original file can be downloaded from the ITU ftp server at <http://handle.itu.int/11.1002/ls/sp17-sg15-oLS-00027.docx>.

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|  | INTERNATIONAL TELECOMMUNICATION UNION  **TELECOMMUNICATION STANDARDIZATION SECTOR**  STUDY PERIOD 2022-2024 | | | **SG15-LS27** |
| **STUDY GROUP 15** |
| **Original: English** |
| **Question(s):** | | All/15 | | Geneva, 19-30 September 2022 |
| **LS** | | | | |
| **Source:** | | ITU-T Study Group 15 | | |
| **Title:** | | LS/r on the outcomes of FG QIT4N (reply to TSAG-LS46) | | |
| **LIAISON STATEMENT** | | | | |
| **For action to:** | | |  | |
| **For information to:** | | | TSAG | |
| **Approval:** | | | ITU-T SG15 meeting (30 September 2022) | |
| **Deadline:** | | | N/A | |
| **Contact:** | | Jean-Marie Fromenteau Corning Incorporated USA | | Tel: +49 9561 42 74 20 E-mail: [fromentejm@corning.com](mailto:fromentejm@corning.com) |
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| **Abstract:** | This LS contains the reply of ITU-T SG15 to TSAG’s request to consider the final report of FG QIT4N and its deliverables and explore the study of QKD network transport technologies. |

ITU-T Study Group 15 would like to thank TSAG for its liaison statement [TSAG-LS46](http://handle.itu.int/11.1002/ls/sp16-tsag-oLS-00046.docx) on the outcomes of FG QIT4N.

ITU-T SG15 reviewed the above liaison statement during its meeting 19-30 September 2022 and took note of TSAG request to ITU-T SG15 to consider the final report of FG QIT4N and its deliverables in its study group mandates for further development and to explore the study of QKD network transport technologies.

We have extracted the suggested actions for SG15 from your liaison and present them in Table 1 below.

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| Deliverable | | Suggested SG15 action |
| D1.2 | Quantum information technology for networks use cases: Network aspects of quantum information technologies | SG15 to receive aspects related to quantum time synchronization for further discussion |
| D1.4 | Standardization outlook and technology maturity: Network aspects of quantum information technologies | All Study Groups to review the standardization outlook and technology maturity on the network aspects of quantum information technologies and discuss its impact, if any, to their respective mandates. |
| D2.2 | Quantum information technology for networks use cases: Quantum key distribution network | SG15 to review the possibility of studying transport aspects of QKDN |
| D2.3 | Quantum key distribution network protocols: Quantum layer | There is no suggested action for SG15 |
| D2.4 | Quantum key distribution network transport technologies | SG15 to consider and explore the study of:   * QKD transport system architecture, reference points, technical requirements for key components (e.g., single photon detector) * Technical requirements for implementing Co-Existing Quantum and Classical (CEQC) solutions e.g., central wavelength distribution for various signals and their wavelength intervals, the isolation requirements between quantum signal and classic signal, reasonable optical transmission power limitation. |

**Table 1: TSAG suggested actions on QKD for SG15**

How, and to which, if any, Questions of SG15 to map the suggested work items to, will require some study. In order to facilitate that one of our Working Party Vice Chairs has agreed to take the responsibility to consult with the Rapporteurs of SG15 and propose which questions should address which topics. We will conduct this consultation before our next Study Group plenary (planned for April 2023) and we will report the results of discussion during the SG15 meeting to TSAG. SG15 is driven by contributions, we hope this exercise will create additional awareness of the interesting field of QKD in our sector members and result in contributions addressing aspects of the field where SG15 has the expertise to contribute to its development.

ITU-T SG15 looks forward to further cooperation with TSAG.

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