

Government of India
Department of Telecommunications
Telecommunication Engineering Centre
Khurshid Lal Bhawan, Janpath New Delhi -110001

No. 2-1/2023-QT/TEC

Date: 20 Nov, 2024

CIRCULAR

Subject: Inviting nominations for reconstitution of National Working Group on Quantum Technology (NWG-QT) for the ITU-T Study Period 2025-28 – reg.

Telecommunication Engineering Centre (TEC) is a technical organization under Department of Telecommunications, Ministry of Communications, Govt. of India with a vision to position India as a "Lead Telecom Knowledge and Manufacturing Hub" of Asia-Pacific Nations by driving Telecom Standards, Manufacturing Support and Network Building Skill sets in the interests of this region and market. TEC is involved in the development of standards for various telecom equipment and contributing to the standardization activities at Global standardization bodies viz. ITU, IEEE, etc.. TEC had constituted National Working Groups (NWGs), mapped with ITU-T Study Groups, with the objective to contribute to the global standardization activities keeping in view the interest of Indian Telecommunications.

2. Quantum Technology Division in TEC is working on the various standardization activities related to Quantum Technologies. TEC has prepared standards for the Quantum Key Distribution System, Quantum Random Number Generator, Quantum safe and Classical Cryptographic systems.

3. National Working Group on Quantum Technology (NWG-QT) has been constituted in TEC for preparing contributions to ITU-T Study groups in the area of Quantum Technologies which are presently being dealt under ITU-T Study group 11, 13 and 17. NWG-QT is chaired by DDG(QT), TEC. The member of the NWG-QT is from Academia, Startup, Industry, Research organization dealing on the subject matter.

4. International Telecommunication Union (ITU) conducts the World Telecommunication Standardization Assembly (WTSA) every four years to define the work program, working methods and structure of Study Groups for the ITU Telecommunication Standardization Sector (ITU-T) for the next study period of four years. India has successfully hosted WTSA in October – 2024, which has defined roadmap of Study Groups for the next four years calendar period i.e. 2025-28.

5. The standardization aspects related to Quantum Technologies are dealt in the ITU-T Study Group 11, 13 and 17, and are categorized into the following questions for the study period 2025-28:

ITU-T Study Group	Question No.	Title
Study Group 11	Q2/11	Signaling requirements and protocols for services and applications in telecommunication environments
Study Group 13	Q6/13	International mobile telecommunications (IMT) networks and quantum communications: Quality of service (QoS) mechanisms
	Q16/13	Future Networks: Trustworthy and Quantum Enhanced Networking and Services
Study Group 17	Q14/17	Distributed ledger technology (DLT) security
	Q15/17	Quantum-based security

6. During the last study period, various contributions have been submitted by NWG-QT in the areas of Quantum Key Distribution Network (QKDN), Satellite-based QKD, Security profile of QKD, Quantum-safe DLT, Post Quantum Cryptography (PQC), etc. Further, based on the Indian contributions and contributions from other Member states, an action plan on Post Quantum Cryptography has been consented in WTSA-24 for promoting the migration to and utilisation of PQC. This would lead to more standardization activities being taken up on Post Quantum Cryptography in ITU-T Study Group 17.

7. As the development of standards is a consultative and collaborative process, nominations of subject matter experts are solicited for reconstitution of NWG-QT for the study period 2025-28. The NWG-QT shall build consensus by harmonizing the interests of various stakeholders and proactively make necessary contributions to the ITU-T Study Groups in the area of Quantum Technologies. The contributions from India developed through NWG-QT and submitted to ITU-T Study Groups shall be towards inclusion of Indian requirements in the ITU-T recommendations and standards.

8. The nominations in this regard may kindly be forwarded by e-mail to adit2.tec-dot@gov.in and adgqt.tec-dot@gov.in with a copy to ddgqt.tec-dot@gov.in within 15 days in the format given below:

S.No.	Name	Designation	Organisation	E-Mail	Phone No.

K K. Agarwal

(Kamal Kumar Agarwal)

DDG (QT), TEC & Chairman, NWG-QT

To,

All Stakeholders

**(Including Government/PSUs, OEMs/ODMs, Academia,
R&D Institutions, TSPs, Industry Associations)**