TEC signs MoU with IIT Kanpur for collaboration on Joint Studies and Technical Contributions in Telecom Technologies and Standardisation Activities

Partnership Aims to Advance India-Specific Telecom Standards and Future Network Technologies

Collaboration to Enhance India's Leadership in Global Telecom Standardization and Emerging Technologies

This partnership also aims to accelerate indigenous R&D and increase India's influence in global standardisation processes

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The Telecommunication Engineering Centre (TEC), the technical arm of the Department of Telecommunications (DoT), Government of India, has signed a Memorandum of Understanding (MoU) with the **Indian Institute of Technology, Kanpur (IIT Kanpur)** to collaborate on joint studies, research, and technical contributions in advanced telecom technologies and global standardisation activities.

The partnership will focus on the development of India-specific standards and testing frameworks for emerging and future communication technologies, including 6G, Artificial Intelligence in Telecom, Non-Terrestrial Networks (NTNs), Internet of Things (IoT), Digital Twin, Metaverse, and Quantum Communication. It also aims to enhance India's active participation and leadership in global standard-setting and radiocommunication bodies such as ITU-T, ITU-R, 3GPP, and other relevant international forums.

The MoU was signed on 8th January 2026 by Shri Amit Kumar Srivastava, DDG (Mobile Technologies), TEC and Prof. Tarun Gupta, Dean (R&D), IITK, in presence of Prof. Manindra Agrawal, Director, IITK, Prof. Rohit Budhiraja, IITK and Shri Shashi Mohan, DDG(Information Technology), TEC.

The partnership creates a formal framework for TEC to work closely with IIT Kanpur on next-generation telecom and standardisation activities.

Key Areas of Collaboration:

- **6G:** Exploration of 6G architecture and enabling technologies with contributions to research, pre-standardization and standardization activities in global forums such as 3GPP and ITU.

· **Telecom Networks & Architecture:** Joint studies and technical contributions in 4G, 5G, LTE-A, NB-IoT and future networks covering architecture, signalling, protocols and interoperability testing.

· **AI-Enabled Telecom Systems:** Joint research in AI/ML for network automation, optimization and intelligent management, with a roadmap towards AI-native capabilities for future networks.

· **Radio, Antenna & MIMO Technologies:** Collaborative research in advanced antenna systems, massive MIMO and related radio access technologies.

· **Satellite & Non-Terrestrial Networks (NTNs):** Joint studies in satellite communication systems, NTNs, HAPS and satellite-terrestrial integration, including disaster-resilient and emergency connectivity solutions.

· **IoT, Digital Twins & Immersive Systems:** Joint research in IoT ecosystems, digital twin technologies and immersive communication platforms.

- **Quantum Communication:** Joint studies in quantum communication technologies including QKD, PQC, QRNG and related components for secure communications.

This partnership aims to increase India's influence in global standardisation processes by strengthening India's contributions to global standardisation bodies such as ITU and 3GPP. This collaboration will further the Atmanirbhar Bharat vision by strengthening indigenous research, design and manufacturing in telecom - developing India-specific standards, test frameworks and home-grown solutions that bolster national self-reliance, secure critical communications infrastructure and reduce dependence on imports.

About TEC

The Telecommunication Engineering Centre (TEC) is the technical arm of the Department of Telecommunications (DoT), Government of India. TEC formulates technical standards, specifications, and conformity assessment requirements for telecom equipment and networks in India, ensuring interoperability, quality, and alignment with global best practices. TEC represents India in international fora such as the ITU-T, ITU-R and coordinates National Working Groups for global standardization activities

About IIT Kanpur

Indian Institute of Technology Kanpur (IIT Kanpur) is a premier institute of national importance with strong academic and research capabilities in advanced telecommunications, 5G/6G technologies, artificial intelligence applications in telecom, convergence & broadcasting, space technology and emerging ICT domains.

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