REPORT ON

TSDSI TECH DEEP DIVE

TTDD 2025

STANDARDISING 6G:
ARCHITECTING INTELLIGENT, SECURE AND
SUSTAINABLE NETWORKS & SERVICES

ORGANIZED BY

**Telecommunications
Standards Development
Society, India**

tsdsi
India's Telecom SDO

on **15th - 18th July 2025**

Executive Report on TTDD 2025

TSDSI organises its Annual Flagship program - TSDSI Tech Deep Dive (TTDD) Conference to bring together technocrats, researchers and standards experts from around the world for discussions on topics related to global standardisation activities, and emerging and futuristic technology trends. The Conference has come to be widely acclaimed in the digital communications ecosystem for its choice of topics and the high-quality deliberations.

The 8th edition of the conference TTDD2025 was held from 15 to 18 July 2025, with the theme *"Standardising 6G: Architecting Intelligent, Secure and Sustainable Networks & Services"*. As global 6G standardization initiatives gather pace, the conference deliberated on the foundational aspects of 6G standardization, shaping a path towards future-ready, inclusive, and resilient digital infrastructure.

The conference hosted 63 distinguished speakers representing a balanced mix of research and academia, government bodies, international standard development organizations (SDOs), regional forums, and industry players, including startups. They enriched the conference through keynotes and panel discussions, addressing a wide range of topics in following six technical fully online sessions:

- New network architecture possibilities for 6G
- Will AI find a central role in 6G?
- Future path and Challenges for integration of Non-Terrestrial (Satellite, HAPS and UAVs) & Terrestrial Networks for 6G communication
- Security in a hyper connected world, especially for 6G
- Management and Service Delivery Architectures
- The OFDM dilemma and Potential new Waveforms for 6G

The conference concluded with a workshop on New Network & Services Ecosystems for 6G that was held in hybrid mode in New Delhi.

Key takeaways

Key takeaways from the technical deliberations in the conference are given below:

Simplified standalone designs with AI/ML-native features were highlighted as critical, since they reduce complexity, enable faster adoption, and ensure long-term scalability

Embedding AI across all functions will make networks autonomous and efficient, though addressing energy, bias, and privacy challenges is vital for trust and global adoption

Satellites, HAPS, and UAVs can bridge connectivity gaps in remote areas, showing how 6G can drive digital inclusion, though interoperability remains a hurdle

Security-by-design with quantum-safe cryptography and Zero Trust will safeguard future networks, ensuring user trust and resilience against next-generation threats

Cloud-native frameworks and AI-driven orchestration can cut operator costs and improve efficiency, making 6G services more reliable and commercially viable.

Exploring new waveforms beyond OFDM is crucial, as it supports extreme mobility and IoT use cases, ensuring flexibility and innovation in 6G deployments.

Highlighted India's strategic vision for affordable, sustainable 6G, reinforcing its leadership role in shaping global standards and ecosystems.

Emphasized a user-first approach and cross-sector collaboration, ensuring 6G services deliver real value, drive monetization, and align with global standardization efforts.

Overall, the conference stressed on an intelligent, secure and sustainable 6G, with AI, NTN integration, quantum-safe security, and India's leadership in driving inclusive global standards.

(Visit conference website for the session recordings and presentations) **"https://ttdd.tsdsi.in/archive-2025-home/"**

Conference in nos.

The conference witnessed a robust and diverse participation, drawing over **675 unique attendees from across the globe,** including **174 returning participants from previous editions**—reflecting the continued relevance and impact of the event. On an average, participants engaged in three technical sessions, demonstrating sustained interest in the programme content. A notable highlight was the active inclusion of **over 200 women participants,** reinforcing the event's commitment to diversity and inclusivity in the technology ecosystem. Individual technical sessions recorded **participation ranging between 154 and 336 attendees,** underscoring the wide appeal and relevance of the topics discussed.

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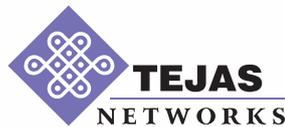| **675**	**174**	**200**	**154-336**	**63**
unique attendees	returning participants from previous editions	women participants	participation range across sessions	distinguished speakers (R&D, Government, Global SDOs, regional forums, industry, startups)

TSDSI thanks SAMEER and Tejas for providing sponsorship support to the conference as the Gold Partner and Silver Partner respectively!

Memories

(Visit conference website for more photographs) **"https://ttdd.tsdsi.in/archive-2025-home/"**

TSDSI

Telecommunications Standards Development Society, India

TECH DEEP DIVE

TTDD 2026 CONFERENCE (9th EDITION)

📅 **7-10 July 2026**

visit here for previous editions of TTDD

"https://ttdd.tsdsi.in/"

About **TSDSI**

Telecommunications Standards Development Society, India (TSDSI), aims at developing and promoting India-specific requirements, standardizing solutions for meeting these requirements and contributing these to international standards, contributing to global standardization in the field of telecommunications, maintaining the technical standards and other deliverables of the organization, safe-guarding the related IPR, helping create manufacturing expertise in the country, providing leadership to the developing countries (such as in South Asia, South East Asia, Africa, Middle East, etc.) in terms of their telecommunications-related standardization needs.

TSDSI is recognised by the Department of Telecommunications as India's Telecom Standards Development Organisation (SDO).

TSDSI is registered as a Society under the Societies Registration Act (Act XXI of 1860).

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India's Telecom SDO

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