Conference Valedictory Session and TSDSI Awards Ceremony
19 July 2024

N Mohanram , DG TSDSI

Day#1 : 16 July 2024

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SESSION 01: Usage Scenarios [1400: 1600 IST]

- eMBB (Enhanced Mobile Broadband) along with mMTC (Massive Machine Type Communication) emerged as key use scenarios for discussion for 5G Advanced

- Need for latency as a KPI for driving XR use cases, energy efficiency, ubiquitous connectivity and coverage were highlighted as key KPIs

- Seamless communications between space, air, ground, and sea, as well as the 6G healthcare vertical covering aspects of AI/ML and the metaverse, were extensively discussed.

SESSION 02: Emerging Technology Trends [1630 – 1830 IST]

- This session looked at new technologies and advancements to existing technologies in order to enable use cases and achieve the KPIs proposed for 6G communication. Challenges and gaps associated with 5G were also discussed.

- It was opined that the experience from 4G and 5G should guide the development of technologies to meet 6G requirements.

- It was suggested that there should be close engagement between industry and academia in the area of research to address the needs of the industry and market.

SESSION 03: Ubiquitous Intelligence: AI/ML enabled Future Networks [1400: 1600 IST]

This session analysed a comprehensive view of AI/ML in future networks, including

- AI readiness for deployment and relevant considerations. Important aspects of explainability, bias, robustness in AI/ML were clarified and practical suggestions on improving AI were provided.

- The drivers for AI, real-world use cases and applications, particularly AI as a Service in 6G, were described.

- An expert panel debated the impact of AI/ML in networks, focusing on positive human and societal impacts. This included discussions on QoS and operations, techniques such as AI Native, LLMs and resources such as data, compute, and edge AI.

SESSION 04: Security & Privacy [1630 – 1830 IST]

- This session focussed on Security & Privacy in the context of 6G and also end-to-end security relating to Quantum Technologies .

- The session also covered aspects of end-to-end security in 6G, including secure data handling and addressing threats from virtualization. The opportunities for leveraging AI for networking intelligence, zero trust principles, and privacy techniques across sectors were discussed.

- Emphasis was placed on the need to leverage Post-Quantum Cryptographic (PQC) primitives for widely used protocols in 6G, such as IPSEC/TLS and integrating Quantum Key Distribution (QKD) for secure communications.

SESSION 05: Spectrum Aspects for 5G Advanced and 6G [1400: 1600 IST]

- Outcomes of WRC-23 and spectrum requirements for 6G up to 2030 were deliberated keeping in view new usage scenarios.

- The requirement of sharing studies in the new bands identified for 6G was analyzed in the context of India.

- Use cases for non-terrestrial networks were highlighted along with various deployment scenarios.

- It was also recommended that TSDSI can be used as a multi-stakeholder platform for carrying out spectrum sharing studies to provide inputs to the government.

SESSION 06: Rural Broadband Technology Landscape [1630 – 1830 IST]

Overcoming digital divide through policy framework, ubiquitous connectivity and education models was discussed

- The Policy framework for BharatNet Udyami scheme was presented, which aims to create employment by enabling skill and entrepreneurship development in rural communities to maintain rural communication infrastructure and smart village applications.

- Ubiquitous connectivity covered use of NTN (Non-Terrestrial Network), Terrestrial Networks and FMA (Fixed Mobile Access) in rural areas, addressing respective technology performance, costing models and use cases.

- To bridge the education divide between rural and urban areas, various e-learning models were proposed, such as hybrid e-learning, model, cloud/edge e-learning, and AI models for assessment and personalized learning. Emphasis was placed on standardization of e-learning models within ITU-T, considering different internet speeds and 6G networks.

Attendance by Session

Session	Approx Attendance
S1- Usage Scenarios	249
S2- Emerging Technology Trends	169
S3- Ubiquitous Intelligence: AI/ML enabled Future Networks	170
S4- Security & Privacy	156
S5- Spectrum Aspects for 5G Advanced and 6G	185
S6- Rural Broadband Technology Landscape	149

Thank You