

Government of India
Department of Telecommunications
Telecommunication Engineering Centre
Khurshid Lal Bhawan, Janpath
New Delhi – 110001
(Future Network Division)

File No. 13-6/2026-FN/TEC

Date: 08.09.2026

Subject: Inviting nominations for constitution of Working Group for preparation of “Technical Report on Performance, QoS (Quality of Service) and QoE (Quality of Experience) for Telecommunication Services using Satellite Network . “

Dear Madam/Sir,

Telecommunication Engineering Centre (TEC) is the technical arm and standards setting organization of the Department of Telecommunications (DoT), Ministry of Communications, Government of India. TEC formulates standards for the telecommunication equipment and telecommunication Networks to ensure interoperability, safety, quality and compliance through rigorous testing and certification process . TEC is also engaged with the global standardization body's viz. ITU, APT, ETSI etc. and contributes to the global standardization activities.

2. The satellite systems and satellite based services play an important role in the broader deployment of space based infrastructure to offer telecom services anywhere in the world. In recent years, the main development of satellite networks has been to provide broadband services directly to consumers. Also satellite based telecom services are going to be deployed at a large scale in India. To have a focused and coordinated approach and to have views/expertise of industry/academia/start-ups etc. , working in this field, TEC proposes constitution of a Working Group for bringing out Technical Report on this subject.
3. This working group aims to study and provide insights of technology, standards and best practice of Satellite based Services in terms of QoS, Performance and QoE in line with evolving global standards and practices followed in world along with recommendation.

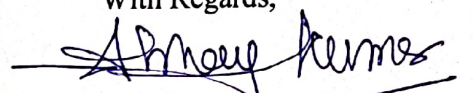
The objectives of this workgroup is to prepare **“Technical Report on Performance, Quality of Service and Quality of Experience for Telecommunication Services using Satellite Network “**. The various aspect to be covered in proposed Report are as follows :-

- a) Technology and latest development of Satellite based Services in India and for World.
- b) Study of technical requirement on Performance, QoS and QoE aspects of satellite-based broadband service and D2D services including operational aspects.

- c) Identify relevant QoS indicators, methods of measurement, and factors influencing QoS, Performance and QoE.
 - d) Identify applicable existing ITU-T QoS and QoE standards on satellite based telecom services.
4. The duration of Working Group will be six months (till March'2027) from its inception during which the report is expected to be finalized. The technical report (Term of Reference) may cover the following sub-topics (ST) (may be further expanded, if required):-
- A. Introduction
 - Brief of Satellite (GSO &NGSO) Technology and its uses.
 - Scenario of satellite Services in India and Globally
 - B. Non-GSO satellites factors affecting Performance , QoS and QoE ,
QoS Metric attributes :-
 - Throughput
 - Handovers
 - Error Rate
 - Availability (Link & Services)
 - Signal to Noise Ratio's
 - Packet Delays / Latency
 - Interference to other network
 - C. D2D Connectivity and services
 - D2D connectivity serves as a vital 'last resort' in rural and remote regions
 - D. Performance, QoS and QoE aspects of satellite-based Internet services and its measurement.
 - E. Satellite IoT /D2D services offered by a Satellite market player
 - F. Future Market of Satellite Services
 - G. Any other issues
 - H. Recommendation
5. In view of the above, TEC invites nominations of subject matter/domain experts from industry, academia, R&D organizations, service providers, startups, Government organizations, etc. for constitution of working Group for preparation of this Technical Report. Experts willing to contribute in any of the sub-topics mentioned in para 3 or other related topics are requested to share their details.. The details/nominations may kindly be sent by e-mail to dirn1.tec@gov.in, and ddgn.tec@gov.in in the following format **latest by 14.09.2025**:

S.No.	Name	Designation	Organization	Email ID	Contact No.	Area of interest (may choose multiple sub-Topics (STs)) If other, please specify

With Regards,


09/09/26

ABHAY Kumar
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TEC, K.L. Bhawan
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Pin- 110001

To,

All Stakeholders through TEC and DoT website/email.

Copy:

1. Sr. DDG, TEC for kind information please.
2. All DDGs TEC
3. DDG(Satellite) /DDG(SMC) DoT HQ
4. AD (IT), TEC for uploading the letter on TEC Website
5. ADG (IT), DoT HQ for uploading the letter on DoT Website