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**Ref No. Nelco/TRAI/25-26/008** **15th December 2025**

**To,**
**Advisor (Networks, Spectrum and Licensing-I)**
**Telecom Regulatory Authority of India,**
**4th, 5th, 6th & 7th Floor , Tower F,**
**World Trade Centre, Nauroji Nagar, New Delhi-110029.**

**Kind Attn: Shri Sameer Gupta**

**Subject: Nelco's Comments on Consultation Paper on Review of existing TRAI Regulations on Interconnection matters.**

Dear Sir,

Please find enclosed our suggestion /comments on Consultation Paper on Review of existing TRAI Regulations on Interconnection matters.

We M/s Nelco Ltd. , A Tata Enterprise, is a Satellite Communication Service Provider in India, providing highly reliable connectivity solutions across the country. Nelco Ltd. currently holds licenses for Commercial VSAT Closed User Group (CUG) Communication Services and have the IFMC authorization from DOT.

For any clarification we are available for discussion.

Thanking you

For **Nelco Ltd.**

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**Nelco Response to TRAI Consultation paper on**

**Review of existing TRAI Regulations on Interconnection matters**

Nelco would like to thank TRAI for giving opportunity to Nelco Limited to respond to this important consultation paper on network interconnection matters. Nelco, being a niche satcom service focused licensee, is hereby responding to question related to satellite network interconnect as given below:

**Q34. What should be the interconnection framework for satellite-based telecommunications networks with other telecom networks? Further, whether the interconnection frameworks for MSS and FSS satellite-based telecommunications networks should be distinct? Please provide your response along with end-to-end diagrammatic representation and justification in respect of the following:**

**1) Satellite - Satellite network interconnection**

**2) Satellite - PLMN interconnection**

**3) Satellite - PSTN interconnection**

**Nelco's Response:**

**1) Satellite – Satellite network interconnection**

In the conext of new technological development have enabled satellite interconnection in various combination of LEO, MEO, GEO (LEO-LEO, LEO-GEO, LEO-MEO, MEO-GEO). This interconnection is used only for user/customer traffic but also may be used for important TT&C date.

**TT&C data** : This is important to note that with objective to built more resilient satellite networks, the TT&C data may be routed through different satellites considering more resilient orbital postion of the satellite and frequncies under use for such satellites.

**User Traffic** : Allowig satellite to satellite interconnection for user traffic will allow better uptime, better utilisation of the satellite capacities, more bandwidth availability and better delivery options (& thus better performance wrt user traffic delivery to the destination (satellite gateways/remote sites).

*Satellite-Satellite network Interconnection should considered interconnection of network elements (like routers) in a ISP/network backbone network of the service provider.*

Satellite – Satellite network interconnection at ground station level either of the same satellite operator or even between different satellite operator should continued to be allowed.

**Recommendation:**

It is almost important to allow the Satellite-Satellite network interconnections for :

a) For TT&C traffic
b) For customer traffic, provided such traffic is routed via in-country Ground Earth-stations.

**2) Satellite - PLMN interconnection & Satellite - PSTN interconnection**

Satellites used for data services (Internet/Inranet) don't have voice switch or BTS capability inside the satellite and essentially are working as repeater/reflector in the sky. Considering that PSTN / PLMN to Internet connectivity is restricted in India as of now, there is no need to consider **Satellite - PLMN interconnection & Satellite - PSTN interconnection currently.**

Only select category of NGSO satellites will have `BTS-on-the-satellite' and will enable D2D PLMN connectivity. The transmitting/receiving satcom-capable devices on earth, like specific high-end mobile phones, may use BTS-on-the-satellite to get connected to the destination PLMN/PSTN device.

Only for such D2D NGSO satellites which will have BTS-on-board and will enable D2D PLMN services, there may be need to look only at interconnection with terrestrail PLMN & PSTN networks. The interconnection of and rules for such Satellite – PLMN and Satellite – PSTN should be in simialr direction as `PLMN – PLMN' framework and `PLMN – PSTN' connectivity though the consideration of satcom performance parameters and satellite earth-station being at couple of locations, need to considered in terms of deciding the POI interconnect levels (LSA) & KPIs.

As such Satellite enabled D2D-PLMN services are in nascent stage across the world, this may be looked at later stage when such NGSO enabled D2D-PLMN services are ready over India.

It is important to note that the ITU's standard definition of MSS, FSS may not be relevent with respect to this question/subject here.

**Recommendation :**

**As currently the satellites are used to enable data services and PSTN / PLMN to Internet connectivity is restricted in India as of now, there is no requirement to have changes in the existing interconnection framework for `Satellite – PLMN' or `Satellite – PSTN'.**

D2D-PLMN services globally are at nascent stage and are yet to be matured. NGSO Satellite enabled D2D-PLMN services require separate detailed delibration and associated implications on various aspects.