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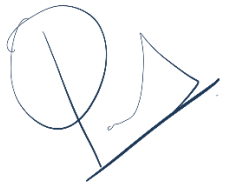
Shri Arun Agarwal
Principal Advisor (NSL)
Telecom Regulatory Authority of India

Subject: Starlink India Responses to TRAI Consultation Paper on
*“Framework for Satellite Communication Network Authorisation, and Assignment of
Spectrum to Satellite Communication Network Providers”*

Dear Sir,

Starlink Satellite Communications Private Limited (“Starlink India”) thank the TRAI for the opportunity to participate in this consultation. Our responses to certain questions are enclosed.

Thank you and sincerely,



Parnil Urdhwareshe
Director - Starlink India

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Q1. What should be the eligibility conditions, area of operation, validity period of authorisation and the scope of the proposed Satellite Communication Network (SCN) authorisation under Section 3(1)(b) of the Telecommunications Act, 2023? Kindly provide a detailed response with justification.

<AND>

Q2. What should be the terms and conditions (general, technical, operating, security related etc.) that should be made applicable for the proposed Satellite Communication Network authorisation? Kindly provide a detailed response with justification.

Starlink recommends that these conditions should be analogous to the conditions applicable to the underlying type of service authorisation under 3(1)(a) that the SCN authorised entity seeks to enable via its network.

Starlink also recommends that (1) entities authorised under Section 3(1)(a) of the Telecommunications Act or (2) existing Unified License holders (in accordance with Section 3(6) of the Telecommunications Act) that establish satellite communications network infrastructure to provide the services they are authorised for should also be allowed to extend the use of these facilities as an SCN authorised entity without additional authorisation conditions or fees under Section 3(1)(b).

Q4. Whether the SCN authorised entity establishing, operating, maintaining, or expanding the baseband system along with SCN should be mandated to extend control, visibility, resource allocation and management of the telecommunication services, being provisioned using SCN to users, to the partnering entity on mutually agreed terms and conditions? Please provide a detailed response with justification.

Starlink recommends against such a mandate being forced via SCN authorisation rules. SCN authorised entities and partnering entities should be free to arrive at mutually agreed upon terms and conditions for the use of an SCN authorised entity's network by a partnering entity (which can include conditions on such control, visibility, resource allocation, and management to the degree and fidelity that the parties see as fit, technically feasible, and economically appropriate).

Q6. Whether there is any need for mandating a reference agreement between the entities holding the proposed Satellite Communication Network authorisation and the authorised entities providing telecommunication service? If yes, what should be the salient features of the reference agreement between such entities? Kindly provide a detailed response with justification.

Starlink recommends against mandating a reference agreement between SCN authorised entities and authorised entities providing telecommunication service. SCNs and partnering entities should be free to arrive at mutually agreed upon terms and conditions for the use of an SCN authorised entity's network by a partnering entity. Given the heterogeneity of system designs, authorisation structures, commercial needs and goals, and integration scenarios that

are possible under the SCN framework, a reference agreement would restrict parties' flexibilities to arrive at efficient and mutually beneficial arrangements.

Q9. Which of the following services should be permitted to be provided by using the SCNs established by the proposed SCN authorised entities:

- (a) Fixed Satellite Service (FSS);**
- (b) Mobile Satellite Service (MSS);**
- (c) Direct-to-Device (D2D) Service via satellite by using MSS spectrum;**
- (d) Direct-to-Device (D2D) Service via satellite by using IMT spectrum?**

Kindly provide a detailed response with justification.

Starlink supports the provision of all four types of services to be provided using SCNs established by SCN authorised entities.

Q10. Whether D2D Service via satellite by using IMT spectrum should be permitted at this stage itself, or should this matter be examined after considering the outcome of WRC-2027? Kindly provide a detailed response with justification.

Starlink supports a recommendation that D2D service via satellite using IMT spectrum be permitted at this stage. Globally, D2D has expanded connectivity to unserved areas, supported critical communications during disasters, and helped countries achieve universal mobile coverage. D2D services can bridge gaps in terrestrial networks, provide access to underserved communities and advancing digital inclusion, enable mobile operators to better allocate capacity, and provide a resilient communications layer for emergencies and disaster response to ensure continuity of service.

In several cases, regulators have enabled D2D services in a timely manner by relying on existing spectrum rules and authorization frameworks (See: Australia, New Zealand, Peru), while global studies are underway in preparation for WRC-2027. Notably, Starlink Direct to Cell service has resulted in no instances of harmful interference in over two years of operations under these country-level authorizations even ahead of the World Radio Congress in 2027.

Q11. From the perspective of holding spectrum for the feeder link and the user link on SCNs, which of the following combinations should be permitted at the SCNs established by the proposed SCN authorised entities:

<u>Combination No.</u>	<u>Spectrum for the feeder link held by -</u>	<u>Spectrum for the user link held by -</u>
1	SCN authorised entity	SCN authorised entity
2	SCN authorised entity	Partnering entity (service provider)
3	Partnering entity (service provider)	SCN authorised entity
4	Partnering entity (service provider)	Partnering entity (service provider)

Starlink recommends that all four combinations be permitted in order to allow commercial flexibility between SCN authorised entities and partnering entities to arrive at mutually beneficial and commercially viable arrangements. Neither type of entity should be precluded from obtaining spectrum in either the feeder link or user link, as -

- Opting into Combinations 1 and 2 will allow an SCN authorised entity to potentially enable multiple partnering entities to provide services by utilising the same underlying SCN while taking on the responsibility for obtaining permissions to utilise the feeder link spectrum and potentially the user link spectrum.
- Opting into Combinations 3 and 4 will allow an SCN authorised entity to potentially enable multiple partnering entities to provide services using its SCN, as long as the partnering entity can obtain the necessary permissions to utilise the feeder link spectrum and potentially the user link spectrum.

All of these scenarios can be potentially viable and efficient business and deployment arrangements depending on the SCN and the partnering entities unique attributes, experiences, and interests.

Q12. Which of the following types of spectrum should be assigned to the proposed SCN authorised entities:

- Spectrum in the frequency bands allocated for FSS**
- Spectrum in the frequency bands allocated for MSS**
- Any other?**

Kindly provide a detailed response with justification.

Starlink does not have specific views on the types of spectrum that SCN authorised entities should be eligible for, but does raise that operators eligible for or obtaining SCN authorizations may also be regulated under existing service authorisations in India. Accordingly, SCN

authorizations should recognize and ensure that the conditions of the SCN do not duplicate or seek to encumber grants or authorisations under existing regimes.

Q13. What should be the broad policy and regulatory framework for the assignment of FSS spectrum and/ or MSS spectrum to the proposed SCN authorised entities? Specifically, -

(a) NGSO-based FSS and GSO/ NGSO-based MSS: Whether in respect of NGSO-based FSS and GSO/ NGSO-based MSS, TRAI's recommendations dated 09.05.2025 on 'Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services' to DoT (read with the TRAI's response dated 08.12.2025 to DoT's back-reference dated 12.11.2025) should be made applicable to SCN authorised entities with necessary modifications? If yes, what modifications would be required in the terms and conditions for the assignment of spectrum for NGSO-based FSS and GSO/ NGSO-based MSS? If no, what should be the terms and conditions for this purpose?

(b) GSO-based FSS: Whether the terms and conditions for the assignment of spectrum to SCN authorised entities for GSO-based FSS should be analogous to those recommended by TRAI for NGSO-based FSS and GSO/ NGSO-based MSS through its recommendations on 'Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services 'dated 09.05.2025 (read with the TRAI's response dated 08.12.2025 to DoT's back-reference dated 12.11.2025) with necessary modifications? If yes, what modifications would be required for GSO-based FSS? If no, what should be the terms and conditions for this purpose?

Kindly provide a detailed response with justification.

Starlink recommends that the TRAI's recommendations on spectrum assignment for NGSO-based satellite services be reasonably ported to the assignment of spectrum for SCN authorized entities also.

Q14. What should be the eligibility conditions for seeking administrative assignment of FSS spectrum and/or MSS spectrum by the proposed SCN authorised entities? Kindly provide a detailed response with justification.

Starlink recommends that these conditions should be analogous to the eligibility conditions that are applicable to entities holding service authorisation under 3(1)(a).

Q19. In case with a view to enable D2D service via satellite using IMT spectrum, it is decided to permit the proposed SCN authorised entity to utilize IMT spectrum assigned to a service authorised entity ("partnering entity") for the purpose of providing SCNaas to the partnering entity, -

[...]

(e) What regulatory framework should be established for ensuring interference-free operation of D2D service via satellite by using IMT spectrum within the country? Specifically, which of the following methods should be followed:

- (i) The SCNs established by SCN authorised entities should be permitted to be used to provide D2D service via satellite by using IMT spectrum only if a single partnering entity (access service provider) holds the relevant IMT frequency channel in all the 22 LSAs of the country and agrees to permit the usage of its IMT frequency channel by the SCN authorised entity at its SCN for the purpose of providing SCNaaS; or**
- (ii) The SCNs established by SCN authorised entities should be permitted to be used to provide D2D service via satellite by using IMT spectrum if one or more access service providers – together holding the assignment of the relevant IMT frequency channel across all 22 licensed service areas of the country – agree to allow the usage of their IMT frequency channel by the SCN authorised entity at its SCN for the purpose of providing SCNaaS; or**
- (iii) Any other method?**

Kindly provide a detailed response with justification.

(e) Starlink supports method (ii) i.e. that SCN authorised entities should be permitted to be able to work with one or multiple service providers – as may be feasible – in order to provide service via the SCN.

We also note that in other jurisdictions such as the United States and Canada, where a single access service provider is unlikely to hold nationwide licenses for a single band, regulators have permitted D2D using IMT with operator partnerships where the operator is the licensed spectrum holder in only one geographic area – so long as the licensee does not cause harmful interference to co-channel neighbouring licensees.

Q22. Regarding the agreement between SCN Authorised entity and a Service Authorised entity providing FSS/ MSS to the end user, for provision of SCNaaS to the Service Authorised entity, which may or may not include provisions for utilisation of FSS/ MSS spectrum assigned to the Service entity, is there a need to regulate charges exchanged between the two entities under such an agreement? If yes, what would be the possible parameters, including SLA parameters, Spectrum utilisation etc., which would form the basis of regulation? Please provide your response with justification.

<AND>

Q23. In case of an agreement between an SCN Authorised entity and a Service Authorised entity providing D2D services using MSS spectrum, for provision of SCNaaS to the Service Authorised entity, which may or may not include provisions for utilisation of MSS spectrum assigned to the Service entity amongst other possible spectrum utilisation arrangements, is there a need to regulate charges exchanged between the two entities under such an agreement? If yes, what would be the possible parameters, including SLA

parameters, Spectrum utilisation etc., which would form the basis of regulation? Please provide your response with justification.

<AND>

Q24. In case of an agreement between an SCN Authorised entity and a Service Authorised entity providing D2D services using IMT spectrum, for provision of SCNaaS to the Service Authorised entity, which may or may not include utilising spectrum for feeder link assigned to the service entity, besides utilising IMT spectrum assigned to the Service Authorised entity, is there a need to regulate charges exchanged between the two entities under such an agreement? If yes, what would be the possible parameters, including SLA parameters, Spectrum utilisation etc., which would form the basis of such regulation? Please provide your response with detailed justification.

Starlink recommends against regulating the charges between SCN authorised entities and service authorised entities providing telecommunication service. SCNs and partnering entities should be free to arrive at mutually agreed upon terms and conditions for the use of an SCN authorised entity's network by a partnering entity, as well as the use of spectrum held by either entity to enable the use of the SCN.

Q25. Should the charges paid by the Service Authorised entity (providing either FSS, MSS or D2D service to the end user) to SCN Authorised entity for provisioning of Satellite Communication Network as a Service (SCNaaS), be permitted to be deducted from ApGR of the Service Authorised entity for the purpose of arriving at AGR for levy of License/ Authorisation Fees and Spectrum charges? Please provide your response with justification.

Starlink recommends allowing service authorised entities to deduct from their ApGR charges paid to SCN authorised entities, in order to avoid double charging the same revenue.

Q28. In case FSS/MSS or any other spectrum is assigned to the Satellite Communication Network (SCN) authorised entities for provisioning of SCNaaS to Service authorised entities, what should be the broad financial terms & conditions of such an assignment?

Starlink recommends that these conditions should be analogous to the financial terms and conditions of assignment that are applicable for assignment of FSS/MSS spectrum to entities holding service authorisation under 3(1)(a).

Q34. In case spectrum is assigned to Satellite Communication Network (SCN) authorised entities, what should be the appropriate payment terms for spectrum charges payable by Satellite Communication Network (SCN) authorised entities? Please provide your response with justification.

Starlink recommends that these conditions should be analogous to the payment terms for spectrum charges that are applicable to entities holding service authorisation under 3(1)(a).