

20 December 2021

Telecom Regulatory Authority of India (TRAI)
 Mahanagar Doorsanchar Bhawan
 Jawahar Lal Nehru Marg
 New Delhi – 110 002
 India

Attention: Shri Syed Tausif Abbas, Advisor, Networks, Spectrum and Licensing

Re: Intelsat Comments to TRAI’s Consultation Paper On Licensing Framework for Establishing Satellite Earth Station Gateway

Intelsat is pleased to submit to the Telecom Regulatory Authority of India (TRAI) its comments in response to TRAI’s Consultation Paper on Licensing Framework for Establishing Satellite Earth Station Gateway in India ("Consultation").

Intelsat wishes to highlight the benefits of effective regulation and the international approach regarding the licensing of gateway earth stations. Such an approach lessens the administrative burden on the part of telecommunication regulators, eases the regulatory burden on the part of the satellite operators and increases competition and consumer welfare.

Intelsat would like to thank the TRAI for the opportunity to provide comments on the Consultation and offers the following comments for TRAI’s consideration.

Question #	Response and Comments
Q1. Whether there is a need to have a specific license for establishing satellite Earth Station Gateway in India to provide satellite-based resources to service licensees?	<p>Intelsat supports the TRAI proposal to introduce a regulatory framework for Satellite Operators to be able to establish a satellite Earth Station Gateway (“Gateway”) without the requirement to have a telecommunications services license.</p> <p>As indicated by TRAI in Section 1.7 and 1.8 of the Consultation there is no specific license for operating an Earth Station to provide satellite-based services. Instead, the respective service licensees are required to establish their own Earth Station (Hub) and Terminal Station and provide the service after obtaining the satellite transponder bandwidth from the satellite operator.”</p> <p>Intelsat supports the initiative of the Indian Government and agrees that there is a need to have a specific authorization for establishing the satellite Earth Station gateway by a satellite operator or any entity having a tie-up with the satellite operator. Such a specific license should be dissociated from the telecommunications service license.</p>

	<p>Establishing a framework for a Gateway license will allow infrastructure sharing, avoiding the duplication of infrastructure opex cost and will ensure faster rollout of provisioning of satellite transponder capacity. Infrastructure sharing will lead to cost reduction and therefore to more affordable end-user services.</p>
<p>Q2. If yes, what kind of license/permission should be envisaged for establishing Satellite Earth Station Gateway in India? Do provide details concerning the scope of the license and technical, operational, and financial obligations, including license fee, entry fee, bank guarantees, and NOCC charges, etc.</p>	<p>The use of Gateways should be licensed under a Separate Earth Station Gateway License in India. This license will not be a telecommunication services license nor a Spectrum/WPC license. The Gateway License should be subject to similar regulatory requirements as the Infrastructure Provider (IP-I) License,¹ because the IP-I license had the same purposes as the Gateway License, meaning that it enables a pure infrastructure provider to put up infrastructure that is shared between multiple Telecom Service Licensees. Hence the light-touch licensing mechanism as for IP-I license should apply.</p> <p>A telecommunications license should not act as a prerequisite for obtaining a gateway license, because in the case of the gateway operation, the satellite operator is not involved in the end-to-end signal transmission or provision of telecom services to end-users. We recommend that if a gateway is operated by a party that does not provide connectivity services to end-users, no telecommunications license will be required. Such an approach not only removes the regulatory burden from gateway operators, exempting them from telecommunications obligations (including paying high regulatory fees), but also allows operators of gateways to apply for the use of gateway frequencies without a requirement to be licensed as a telecommunication provider. Therefore, entities that purely operate gateways without providing services to the end-users should not be required to obtain a telecommunications license and should not be subject to any authorization of the Unified License (UL) Regime. We agree, however, as stated in Section 2.28 of the Consultation, that in cases where the satellite operator entity may wish to provide the services directly to the end-users, the satellite operator entity will be required to obtain the requisite telecommunications service license for the provision of services to the end-users.</p> <p>In relation to the technical, operational, and financial obligations, the latter should be proportionate to the purposes of the Gateway License as presented above. As proposed similar regulatory requirements as the IP-I License should apply. More specifically, there should be no restriction on foreign equity and number of entrants. A local point of contact/local address should be</p>

¹ [DoT: Infrastructure Provider License.](#)

	<p>sufficient as an operational requirement to obtain the Gateway License.</p> <p>In relation to the financial obligations, as for the IP-I License, there should be no entry fee and no bank guarantee. The cost of the authorization should be limited to the recovery of the regulator's administrative costs to process the application and maintain the license (e.g., the applicant company to be required to pay Rs. 5000/- as processing fee along with the application).</p>
<p>Q3. Whether such Earth Station license should be made available to the satellite operator or its subsidiary or any entity having a tie-up with the satellite operator</p>	<p>The Earth Station License could be made available to the satellite operator or its subsidiary, as well as the entity having a tie-up with the satellite operator.</p> <p>It is also important to note the changing landscape of the use of gateways – where the provision of telecommunications services was previously operated from start to end by one telecommunications operator, the telecommunications market now consists of multiple different actors. These actors include, as an example, i) retailers of services that do not operate gateways; and ii) satellite operators that control a gateway without providing any services to third parties or by providing satellite backhaul by only operating earth stations to facilitate the transmission of a signal to remote areas for Mobile Network Operators. It is therefore important for TRAI to take into consideration these different actors and the different use of gateways or earth stations and allow both the satellite operator (or its subsidiary) and an entity having a tie-up with the operator to obtain the license.</p>
<p>Q4.What mechanism/framework should be put in place to regulate the access to satellite transponder capacity and satellite-based resources of a Satellite operator/Earth Station licensee by the service licensees to get the resources in a time-bound, transparent, fair and non-discriminatory manner</p>	<p>Intelsat endorses TRAI's input in Section 3.3. and 3.5 of the Consultation regarding the Spectrum Authorization and the method of access to the satellite transponder capacity. In addition to a Spectrum Authorization, Intelsat believes that TRAI should also promote the possibility of service providers obtaining access to satellite capacity through a partnership with satellite operators that have the associated space asset authorization. All forms of market access are important to foment the local industry and competition, increasing the space capacity offered in the market.</p>
<p>Q5. Whether the Earth Station Licensee should be permitted to install baseband equipment also for providing satellite bandwidth to the service licensees as per need?</p>	<p>If the Baseband is shareable between multiple Telecom Service Licensees, the Gateway license holder should be able to invest and provide that. This baseband could include satellite networking baseband, routers, internet gateway, cloud access, collocated servers for storage or hosting, cyber-security solutions, lawful intercept solution, etc. However, all legal compliance for delivery of such services that use internet, or</p>

	<p>cloud, or other such facilities provided by the Gateway License holder, remain solely with the Telecom Service Operator / Licensee.</p> <p>We note that the service being provided is satellite capacity and not a telecom service for which the Licensee should be required to obtain a telecom service license. We also do not believe it is relevant whether the satellite capacity is provided in MHz or Mbps, as TRA notes in Section 2.34. In both cases presented, the satellite operator is only involved in the provision of wholesale satellite capacity, so that only authorization to use the satellite segment is required.</p>
<p>Q6. What amendments will be required to be made in the existing terms and conditions of the relevant service authorizations of Unified License,DTH License/Teleport permission to enable the service licensee to connect to the Satellite Earth Station Gateway established by Earth Station Licensee/Service Licensee, for obtaining and using the satellite transponder bandwidth and satellite-based resources? Do justify your answer.</p>	<p>This Gateway license will not overlap in its scope with any of the Telecom Service Licenses, except in relation to the establishment of the Earth Station Gateway. All the Telecom Service Licenses would need to have an amendment so as to allow the licensee to operate their services through a licensed Earth Station Gateway infrastructure, rather than being forced to put up their own Gateway in their premises. Existing Telecom Service Licensees, who have established their own Earth Station Gateway under the license, should be able to continue to operate their own Earth Station Gateway, if preferable.</p>
<p>Q7. Whether the sharing of Earth Station among the licensees (between proposed Earth Station licensee and Service Licensee; and among service licensees) should be permitted</p>	<p>Earth station sharing should be permitted as the purpose of the Gateway License is to allow infrastructure sharing, avoid duplication of infrastructure Capex and duplication of Opex on such infrastructure.</p> <p>Intelsat supports DoT's position referenced by TRAI in Section 1.11 of the Consultation, that sharing of the gateway established by the satellite constellation operator among different service providers, wherein the service providers need only to deploy baseband systems at gateways to start harnessing the satellite capacity, may result in cost-effective and optimum use of resources. It should be therefore allowed for the Earth Station Licensee to provide satellite bandwidth to other service licensees using the same Earth Station Gateway. As mentioned by TRAI in Section 2.37 of the Consultation, this will ensure the faster rollout of provisioning of satellite transponder capacity. Infrastructure sharing will lead to cost reduction and therefore to more affordable end-user services.</p>

<p>Q8. To whom should the frequency carriers be assigned: the Earth Station Licensee, or the Service Licensee, or whoever establishes the Satellite Earth Station? Do justify your answer.</p>	<p>The spectrum use should not be associated with the Gateway license, except in case the Gateway Licensee wants also to provide telecommunications services, beyond the provision of satellite capacity. All permissions, licenses, monitoring charges, usage charges on the spectrum (WPC or NOCC) should continue to be associated to the Telecom Service Licensee, who uses the infrastructure created by the Earth Station Gateway license.</p>
<p>Q.9 What should be the methodology for the assignment of spectrum for establishing a satellite Earth Station? Provide a detailed justification.</p>	<p>Assignment of spectrum should be associated to the Telecom Service Licensee and not with the Earth Station Gateway License.</p> <p>Additionally, the methodology of assignment of frequencies within different frequency bands may differ from service to service depending upon the demand, supply, possibility of shared use, and other social and economic considerations. Spectrum used by satellite services in C, Ku and Ka, and other bands (e.g., Q/V band in the near future) allows for shared use and limited interference. Lastly, Intelsat's suggestion is that spectrum for Gateways for satellite services should be assigned on case-by-case requests and not through auction, as referenced by TRAI in Section 3.16 of the Consultation, except in cases of limited spectrum availability.</p>
<p>Q10. What should be the charging mechanism for the spectrum assigned to the satellite Earth Station licensee? Elaborate your answer with justification</p>	<p>Intelsat believes that a cost-based approach is the most efficient pricing system to ensure affordable satellite services.</p> <p>The cost of the authorization should be limited to the recovery of the regulator's administrative costs to process the application and maintain the license. Internationally, in most of the administrations, spectrum for Earth Station license is charged as an administrative fee generally to cover the administrative costs. Licensing fees should not be used as a source of revenue or be excessive, as licensing fees are generally passed on to the customer.</p> <p>Additionally, regulatory spectrum fees should not be based solely on the amount of MHz overallly used, A pricing policy that considers situations when satellite service providers must use broad bandwidth because of the configuration of satellite systems, requiring use of a substantial part of bandwidth. For instance, Intelsat's network may employ multiple different access schemes, which include dynamic return link channel sizing and transmit frequency selection. Based on traffic conditions and resource availability, earth stations may be able to transmit in the</p>

	<p>whole Ku band but by transmitting at a variable bandwidth, the earth stations will only utilize a small portion of the band at a time. However, if the service provider only has a few earth stations throughout the country, this may become economically unfeasible due to high regulatory fees.</p>
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As a final note, Intelsat is very thankful to TRAI for its intention to establish a licensing framework for establishing an Earth Station Gateway. Intelsat stands ready to provide additional information on any of the topics discussed in this contribution.

Respectfully submitted,



Sherille Ismail

Associate General Counsel