

Singapore
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Shri Akhilesh Kumar Trivedi
Advisor (Networks, Spectrum and Licensing)

TRAI

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Dear Sir:

Submission in response to TRAI Consultation Paper No. 6/2023 –
Assignment of Spectrum for Space-based Communication Services

AVIA would like to express its appreciation for the opportunity to provide feedback on the Consultation Paper issued by the Telecom Regulatory Authority of India (**TRAI**) on Assignment of Spectrum for Space-Based Communications. As you may be aware, AVIA is the trade association for the video industry and ecosystem in Asia Pacific. Its aim is to support a vibrant video industry for the benefit of all stakeholders. Our membership consists of a combination of local, regional and multi-national companies, many of which are substantial cross-border investors. They create and distribute video content to meet rapidly-expanding consumer demands and invest in India's communications and creative industries. Members include multi-platform content providers, conditional access and middleware technology platforms and the satellite operators providing the broadcasting technology needed to conduct business both within and outside of India; the video industry is heavily dependent on efficient space-based communications to distribute our products.

The TRAI consultation paper is comprehensive and informative. It includes many technical questions which we will not attempt to answer; others are better situated than we to provide TRAI with information on those questions.

However, given the vital importance of space-based communications to the Indian broadcasting, video and media industries, we wish to express several very firm views on the part of our industry:

- The Indian media industry is vital to the country's future. Hundreds of millions of Indians rely upon it for entertainment, information, education, religious participation and so on. Reaching these consumers, now and in the future, requires satellite-based distribution. In this, India is like every other large country on the globe.

- The Indian authorities (including but not only the TRAI) should not put this industry at risk without taking cognizance of international precedents and the learnings from other countries. There is no other country on the globe that actually auctions satellite frequency assignments. As the TRAI CP cogently notes, “countries like the US, Mexico, and Brazil had attempted to sell frequencies for satellite usage but eventually did not succeed and at last resorted to administrative licensing.....Internationally, there is no design model available for auction of the frequency spectrum in higher frequency bands such as C-band, Ku band, and Ka band, which are sharable among multiple service providers.” The current system of coordination among countries and among licensees has worked well, and produced an open and competitive market for satellite services that has broad public benefits.
- The quote above alludes to the key characteristics of satellite communications and frequency use which make auctions of spectrum impractical: unlike terrestrial communications, satellite spectrum is a completely shared resource among different satellite operators. Satellite frequencies are today re-used many, many times at the same geographic location. This re-use is governed by ITU international rules and procedures whereby satellite networks get international recognition and rights. By auctioning and granting exclusive rights to one user, all the current extensive re-use would be gone and the spectrum resources available to India would be greatly reduced compared with today. Today, every operator and all users share access to the entire band. This sharing greatly increases the efficiency of satellite spectrum use, but it is dependent on ITU international spectrum coordination, cooperation among satellite operators, and specific spectrum management rules and procedures.
- Auctioning of satellite spectrum implies slicing up the band and assigning frequency blocks to deep-pocketed bidders on an exclusive basis. This would fragment the bands now shared by all satellite services and destroy the efficiency of satellite spectrum. This would in no way serve the public interest – the honourable Supreme Court of India has noted that “Auction may be the best way of maximising revenue, but revenue maximisation may not always be the best way to serve the public good.” (The Court also held that auctioning is not mandated by Art. 14 of India’s Constitution.)
- India has a huge unconnected rural population. The only practical way to connect far-flung and rural regions is by satellite – 5G telephony will not serve these regions any time in the foreseeable future. It is advances in satellite technology that are now bringing the government’s “Digital India” goals within reach. However, fragmenting and auctioning the satellite communication bands will destroy this industry’s ability to contribute to those goals.
- Auctions would also be anti-competitive. They would raise the prospect of a few wealthy players grabbing huge blocks of spectrum precisely to keep out competition. This would be disastrous in the media industry, where plurality of voices is the goal. Consumer welfare would also be greatly reduced. This reduction in competition would also threaten net neutrality (the ability of consumers to access internet content of their

choice), and free speech on the part of those who make use of today's more open and competitive system to speak.

- Broadcasters are major users of satellite services; however the nature of their businesses render it impractical for them to bid themselves for satellite spectrum; the reduction in competition will have great adverse impacts on India's broadcasting and media industries. Preservation of diverse and open media industries is critical to India's future.
- It would greatly damage India's interests to sacrifice the broadcasting and media ecosystem – which is operational now and serving the interests of hundreds of millions of Indians, in favor of particular spectrum interests that have no need for the spectrum today, and only a theoretical future need. A detailed audit of spectrum actually used, and already available, for IMT should be undertaken before there is any consideration to further spectrum allocations. Ability to pay is not the same as demonstrating a pressing national need. There is ample spectrum available – even in the mid-band – to establish a thriving 5G ecosystem in India without taking over the entire C-Band, nor the Ku and Ka bands. (Related to this, we do not believe that blocks of 100 MHz are required for each of three mobile operators, and we do not believe national policy should be constructed around slaking that thirst.)¹

While we are unable to offer views on the totality of the questions TRAI posed in the Consultation Paper, we do wish to offer our feedback on a few specific matters:

Q4. For space-based communication services, whether frequency spectrum in higher bands such as C band, Ku band and Ka band, should be assigned to licensees on an exclusive basis?

We do not believe these bands can be assigned to licensees on an exclusive basis without producing the collapse of the Indian broadcasting and media industries. The current frequency allocation system is consistent with the existing ITU system of frequency coordination among countries and among companies. There is no existing international example of auctioning specific frequencies to licensees on an exclusive basis. India should not attempt to reinvent on its own a well-established international practice.

Q9. In case you are of the opinion that the frequency spectrum in higher frequency bands such as C band, Ku band and Ka band for space-based communication services should be assigned on shared (non-exclusive) basis, (a) Whether a broad framework for sharing of frequency spectrum among satellite communication service providers needs to be prescribed or it should be left to mutual coordination? In case you are of the opinion that broad framework should be prescribed,

¹ In this connection, we would commend to the TRAI's attention this GSOA paper on spectrum assignments in Africa, which discusses most of the same issues present in India: https://gsoasatellite.com/reports_and_studies/ten-good-reasons-why-mobile-operators-in-africa-do-not-need-100mhz-of-contiguous-c-band/ The paper explores the reasons why mobile operators do not each need 100 MHz of contiguous spectrum.

kindly suggest the framework and elements to be included in such a framework. (b) Any other suggestions may kindly be made with detailed justification.

AVIA believes the current internationally-accepted system of assignment of satellite frequencies on a shared basis should be continued. We believe the current system relying on mutual coordination has worked satisfactorily and has made it possible for all countries to benefit from satellite technology. Breaking this system is not in the interest of India or its masses of people.

Q10. In the frequency range 27.5-28.5 GHz, whether the spectrum assignee should be permitted to utilize the frequency spectrum for IMT services as well as space-based communication services, in a flexible manner? Do you foresee any challenges arising out of such flexible use? If yes, in what manner can the challenges be overcome? Kindly elaborate the challenges and the ways to overcome them.

Flexible utilization of this spectrum in this manner necessarily implies assignment of the spectrum on an exclusive basis. As noted above, AVIA opposes fragmentation of the satellite spectrum and exclusive assignment of frequencies. The TRAI has rightly noted that use of this band for IMT services will require exclusive spectrum, and this will foreclose all other (satellite) users.

We hope this feedback is useful to the TRAI, and that the Government of India can rethink the ill-conceived plan to auction satellite spectrum, in defiance of all international experience.

Sincerely yours,



Louis Boswell

CEO