

Shri Akhilesh Kumar Trivedi Advisor (Networks, Spectrum and Licensing) Telecom Regulatory Authority of India advmn@trai.gov.in

Subject: Reply comments to submissions on the Assignment of Spectrum for Space-based Communication Services.

GSOA is responding to the submissions to the Consultation Paper on the Assignment of Spectrum for Space-based Communication Services (the "Consultation"). As a global association representing the satellite industry, our reply comments are focused on clarifying the record.

- Arguments against the feasibility of satellite spectrum sharing are mistaken and overlook the
 extensive and successful practices within the satellite industry. Both Geostationary Orbit
 (GSO) and Non-Geostationary Satellite Orbit (NGSO) operators have effectively demonstrated
 the feasibility of efficient spectrum sharing between other satellite networks/systems in both
 orbits. Harmonious coexistence within the same frequency bands ensures the best use of the
 scarce spectrum resource. Consequently, band segmentation is not the only solution to
 prevent interference between satellite networks as proven by decades of successful sharing
 resulting in an efficient use of the spectrum resource.
- 2. The example given for Thailand's orbital slot auction reflects a misunderstanding of the distinct aspects of satellite communication and operations. Orbital slots and spectrum, while interconnected, serve different functions, and are regulated differently. An orbital slot represents a specific geostationary position for a satellite, based on filings submitted to the ITU by individual countries. Spectrum, on the other hand, refers to the radio frequencies that satellites use to transmit and receive signals.
 In any case, auctioning an orbital slot does not grant exclusive rights to specific frequency bands or spectrum. As discussed above, fixed satellite service (FSS) spectrum can be shared among various satellite operators with satellites in different orbital slots. Therefore, conflating the auctioning of orbital slots with the auctioning of spectrum indicates a lack of understanding of the distinct roles and complexities involved in managing these separate resources in satellite operations.
- 3. Using the T Saudi Arabian example of Mobile Satellite Service (MSS) spectrum auctioning as a universal model fails to consider the broader international trend against such auctions for satellite services. The key operational and technical differences between MSS and FSS necessitate different approaches to spectrum allocation, and, because of the global nature of the spectrum resource, auctions have never been a sustainable model for assigning spectrum or orbits.
 - Moreover, the MSS blocks sold in Saudi Arabia came with a path to convert their usage to terrestrial services, raising concerns about if the auction was aimed primarily at space-based communications. A comprehensive consultation by the Communication and Information Technology Commission (CITC) of Saudi Arabia clarified that satellite bands are protected and outside the purview of auctions.



- 4. The criticism of 'first-come-first-served' (FCFS) basis of administrative allocation, invoking the Supreme Court's stance, overlooks the unique nature of satellite spectrum. As pointed out by the court, an auction is not the only valid method for resource allocation. Unlike terrestrial services, which require exclusive use of spectrum, satellite services thrive on efficient sharing among multiple operators. In such an environment, the FCFS basis provides a fair, non-discriminatory approach to resource allocation, promoting competition and innovation while upholding public welfare.
- 5. The assertion of "same service same rule" does not hold when comparing mobile and satellite services due to their unique operational characteristics and spectrum usage requirements. Mobile services primarily target densely populated areas where the high costs of spectrum and infrastructure can be justified by the potential for a large number of subscribers. In contrast, satellite services play a crucial role in providing connectivity to rural and underserved areas. These services operate on a non-exclusive basis, which allows for efficient sharing of the spectrum among multiple operators, ensuring the cost-effectiveness and accessibility of satellite services. Spectrum allocation policies need to recognize and respects the individual contributions and requirements of all services, ensuring a balanced spectrum allocation that takes into account each service's distinct needs and societal value.

In conclusion, it is crucial to recognize and respect the unique characteristics, benefits, and societal value that each service brings to spectrum allocation and usage. By doing so, we can maintain a balanced and equitable approach that best serves public welfare.

Thank you for your attention to these matters. We look forward to providing further clarification if required.