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Sub: Comments on **Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services.**

Dear Sir,

Kindly find attached herewith comments on **Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services** for your kind consideration.

For AA+ Consultants

Praveen Sharma

CEO

Telecommunications landscape is undergoing a transformative evolution, driven by advancements in technology and changing consumer demands. In recent years, we've witnessed an unprecedented surge in the deployment of high-speed internet, the proliferation of mobile devices, and the expansion of 5G networks. This rapid development has not only increased connectivity but has also blurred the lines between traditional communication methods and emerging technologies. As satellite-based communication systems now seek to rise to prominence in form of LEO networks their standalone as well combination with terrestrial services is going to usher in a new era of advanced and always available seamless and ubiquitous telecom access. This shift supports a diverse range of commercial services and applications, paving the way for a future where communication is truly unified and accessible to all in form of IMT2030.

External standards developing organizations are playing a crucial role in advancing the development of International Mobile Telecommunications (IMT) 2030 radio interface technologies. Their ongoing standardization activities aim to facilitate seamless interworking between IMT and non-terrestrial networks, including satellite communication systems, High Altitude Platform Stations (HIPS), and Unmanned Aerial Systems (UAS). Additionally, these efforts extend to ensure compatibility with other non-IMT terrestrial networks, such as Radio Local Area Networks (RLAN) and broadcast services. As we look forward to IMT-2030, it is essential that this trajectory of interworking continues, as it promises to enhance connectivity experiences for users. This evolution is crucial for providing ubiquitous services and ensuring continuity across various communication platforms, aligning with both service and operational goals.

The interworking of IMT-2030 terrestrial networks with non-terrestrial networks (NTN), including satellite communications and High-Altitude Platform Stations (HIBS) acting as IMT base stations, is poised to significantly enhance the achievement of connectivity objectives. This integration will enable a more resilient and flexible communication infrastructure, allowing for seamless data transmission regardless of geographic or environmental challenges. By leveraging the strengths of both terrestrial and non-terrestrial systems, IMT-2030 aims to provide users with a reliable and uninterrupted connectivity experience, fulfilling the growing demand for comprehensive communication solutions across diverse settings.

Low Earth Orbit (LEO) networks are expected to play a transformative role in the evolution of 6G technology. LEO satellites offer significantly lower latency compared to traditional geostationary satellites, enabling real-time communication and enhanced responsiveness for applications like autonomous vehicles, remote healthcare, and immersive virtual experiences. The integration of LEO networks into the 6G framework will facilitate seamless connectivity in remote and underserved areas, bridging the digital divide and providing global coverage. Furthermore, their ability to support high data rates and massive device connectivity aligns perfectly with the demands of future applications, making LEO networks a critical component in realizing the full potential of 6G.

This consultation paper, which addresses the Terms and Conditions for the Assignment of Spectrum for Certain Satellite-Based Commercial Communication Services is therefore very important from various perspectives for Indian Telecom sector where consumer has got limited choice and competitive intensity also needs a booster dose. This CP is crucial as it lays the groundwork for entry of more Access players albeit Satellite based in the Indian market and ensuring more competition in the evolving telecommunications landscape.

Following are salient submissions which we wish to make in respect of the broader framework for assignment of Spectrum for Certain Satellite-Based Commercial Communication Services.

Mode of allocation of spectrum: As per the Telecommunications Act, 2023, satellite spectrum can be allocated administratively only and not through auction. The section 4 (4) of the Telecommunications Act, 2023 and relevant part of Schedule 1 is reproduced below:

"The Central Government shall assign spectrum for telecommunication through auction except for entries listed in the First Schedule for which assignment shall be done by administrative process."

Explanation. – For the purposes of this sub-section,-

(a) "administrative process" means assignment of spectrum without holding an auction;

(b) "auction" means a bid process for assignment of spectrum."

The First Schedule of the Telecommunications Act, 2023 lists 19 items for 'assignment of spectrum through administrative process'. The relevant items of the First Schedule are reproduced below:

"14. In-flight and maritime connectivity.

15. Space research and application, launch vehicle operations and ground station for satellite control.

16. Certain satellite-based services such as: Teleports, Television channels, Direct To Home, Headend In The Sky, Digital Satellite News Gathering, Very Small Aperture Terminal, Global Mobile Personal Communication by Satellites, National Long Distance, International Long Distance, Mobile Satellite Service in L and S bands."

Once these Satellite services are mentioned in the First Schedule of the Act , it is not open for Authority to contemplate auction of spectrum for these services as it would tantamount to amending the First Schedule of the Act in a very indirect manner.

From above it is clear that spectrum for the Satellite services mentioned above is required to be allocated on an administrative basis.

Level Playing Field Issue: This is a very important issue for existing Access Service Providers as they have spent huge amount of money in buying access spectrum in auctions since 2010.In the Indian Telecom sector , level playing field has been historically an oft repeated argument made by Cellular Operators in 1997-98 against entry of MTNL/BSNL, against entry of limited mobility players in 2003-04 in the fold of mobility services and there are other examples as well. Be as it may , there has to be some form of price parity and level playing field in respect of spectrum which will be allocated to Satellite Operators for substitutable services . We also need to delve into global practices as to how & what price this spectrum for Satellite services has been dispensed in other telecom administrations.

Need for newer Players in Indian Telecom market: It is our submission that there is an urgent need for more players in the Indian Access services/ broadband market and entry of Satellite based LEO/MEO players should be encouraged while taking care of the competitive and level playing concerns of the existing players. This would give a new fillip to the telecom sector in the country.