



ANANTH TECHNOLOGIES LTD.

Ananth Info Park, Plot No. 39, Hitec City, Phase-II, Madhapur, HYDERABAD - 500 081, India
Ph. No. +91-40-6615 6615, Fax No. +91-40-6615 6531, 6615 6652
E-mail: 1) mail@ananthtech.com; 2) psr@ananthtech.com
Website : www.ananthtech.com



AS9100D & ISO 9001 : 2015

Dr. SUBBA RAO PAVULURI
CHAIRMAN & MD

ATL/41/2018

October 30, 2018

To
Telecom Regulatory Authority of India (TRAI)
Mahanagar Doorsanchar Bhawan
Jawahar Lal Nehru Marg,
New Delhi- 110002

**Kind Attn: Shri Syed Tausif Abbas,
Advisor (Networks, Spectrum and Licensing)**

Dear Sir

**Sub: Comments for TRAI Consultation Paper No. 6/2018 -
Consultation Paper on Methodology for levy of Spectrum
Charges for provision of Satellite based Services using
Gateway installed in India under 'sui-generis' category**

Ananth Technologies Limited (ATL) founded in 1992 is an Indian Company servicing Fortune 1000 clientele, is a global broad based Software and Hardware, Services and Solutions provider. On the IT services front ATL supports enterprises business processes and systems, with innovative services, solutions and products. On the hardware front ATL specializes in the design and development of highly sophisticated aerospace subsystems and other embedded systems.

ATL also wants to bring the advantages of the latest Satellite technologies for providing IP based Internet and value added services uniformly across the country – urban, suburban, rural and remote areas. ATL idea is establishing Satellite Platforms as Indian Satellite System (ISS) which can be used by Internet and Telecom Service Providers (ISPs and TSPs) for providing services in the country.

ATL also sees Satellite IP Platform infrastructure as an enabler for providing internet connectivity, entertainment and value-added services directly to the customers and enterprises. Satellite IP Platform will be also useful for providing carrier grade IP trunking and backhaul and mobility services. ATL is also considering business collaborations and arrangements with Service providers in India for the establishment of an Indian Satellite System (ISS).

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Keeping in view the above considerations, ATL wants to provide the enclosed comments on TRAI Consultation Paper (No. 6/2018) on Methodology for levy of Spectrum Charges for provision of Satellite based Services using Gateway installed in India under 'sui-generis' category.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Dr. Subba Rao Pavuluri'.

(Dr. SUBBA RAO PAVULURI)

Encl: Consultation paper.



Consultation Paper on Methodology for levy of Spectrum Charges for provision of Satellite based Services using Gateway installed in India under 'sui-generis' category

<https://traai.gov.in/consultation-paper-methodology-levy-spectrum-charges-provision-satellite-based-services-using>

This particular consultation is triggered by BSNL. BSNL provides Inmarsat services in L band with Gateway at Ghaziabad and MSC at Meerut. For these services, BSNL wants DOT to consider licence fee and spectrum usage fee on the basis of AGR like Commercial VSAT services instead of the present formula method applicable for captive networks. DOT has referred the matter to TRAI. This consultation therefore is specific to BSNL Inmarsat services. BSNL may not have plan for expansion of this service with a very large subscriber base. Moreover Inmarsat is a global system and hence use of Inmarsat space segment may not be viable for providing very intense domestic land mobile applications from business as well as technical and operations points of view.

We offer the following comments on TRAI questions.

TRAI QUESTIONS	Comments
<p>Chapter-III: Issues for Consultation</p> <p>Q1. Do you agree that the formula based spectrum charges should be replaced with AGR based SUC in respect of provision of services by BSNL under its license for 'Provision and Operation of Satellite based services using Gateway installed in India' under 'sui-generis' category? If yes, what percentage of AGR should be the spectrum usage charges?</p> <p>Q2. In case your response to Q1 is negative, what should be the spectrum charges and how should it be calculated?</p>	<p>Comments for Q4</p> <ol style="list-style-type: none"> 1) This consultation is specific to BSNL Inmarsat services. Moreover Inmarsat is a global system and hence use of Inmarsat space segment may not be viable for providing very intense domestic mobile applications from business as well as technical and operations points of views. 2) Authorities must encourage design and operate satcom systems as Indian Satellite Systems (ISS) in various frequency bands which can cater to the needs of national mobile and fixed telecom and internet applications. Government of India Satcom Policy enables such approaches.



Q3. In your opinion, while determining the AGR for the purpose of levy of license fee and SUC, whether the cost of handsets (which is separately identifiable) should be allowed as deduction from the Gross revenue of BSNL's Satellite based services under 'sui-generis' category?

Q4. If there are any other issues / suggestions relevant to the subject, stakeholders may submit the same with proper explanation and justification.

3) Implementation of such systems are also made possible by advances in technologies like Geostationary High Throughput Satellites (HTS), Multiple Spot Beams enabling efficient use of spectrum, Onboard processors like "Channelizers", Adaptive Modulation Codes, ITU Frequency Allocations and associated regulations in various frequency ranges, Non Geostationary (NGSO) Satellite System, Advance capabilities of different types of Satellite Platforms and other related developments.

4) Present telecom regulations for commercial and captive VSAT networks may be more suited for NLD/Back-haul/B2B/CUG type carrier communications services. Inmarsat type satellite services are more for meeting the consumer "Access Network" requirements. Therefore for Inmarsat type services while some adhoc solutions can be found adapting certain regulatory provisions applicable for VSAT. Hence, the AGR approach may be adopted in this case also. The AGR adopted could be same as per wireless land mobile communications. Also handset costs should not be included in the AGR as in future systems there could be multiple suppliers. Existing VSAT regulations are not adequate / suitable to fully address all the relevant regulatory issues especially for Indian Satellite Systems designed to meet mass market national "Access Network" requirements as per Satcom Policy.



	<p>Moreover VSAT regulation itself should undergo changes for supporting internet over Satellite (ioS) applications.</p> <p>5) It is therefore necessary to come out with a set of regulations more appropriate for satellite communications systems designed to meet “Access Network” requirements for telecom and Internet applications. In fact the regulatory framework already exists in the DOT GMPCS policy and regulations and it is only necessary to review and revise the this policy and regulations to make it more appropriate to meet both national and global systems and at the same time taking into account the current requirements as well as latest technology developments and changes in applicable ITU regulation environment.</p> <p>6) In view of the above considerations, detailed studies need to be undertaken for preparation of draft regulations to be followed for implementation and operation of satellite communications systems in various frequency bands to meet the “Access Network” requirements for telecom and Internet applications including ioS applications.</p>
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