



DIGITAL  
LIFE

RJIL/TRAI/2019-20/702  
11<sup>th</sup> March 2020

To,

**Shri S.T. Abbas**  
**Advisor (NSL)**  
**Telecom Regulatory Authority of India**  
**Mahanagar Doorsanchar Bhawan**  
**Jawahar Lal Nehru Marg, New Delhi 110002**

**Subject: Comments on Consultation Paper dated 29.01.2020 on 'Provision of Cellular backhaul connectivity via Satellite through VSAT under Commercial VSAT CUG Service Authorization'.**

Dear Sir,

Please find enclosed comments of Reliance Jio Infocomm Ltd. on Consultation Paper dated 29.01.2020 on 'Provision of Cellular backhaul connectivity via Satellite through VSAT under Commercial VSAT CUG Service Authorization'.

Thanking You,  
For Reliance Jio Infocomm Limited,

  
**Kapoor Singh Guliani**  
Authorised Signatory



**Enclosure:** As above.

**RELIANCE JIO INFOCOMM LTD'S COMMENTS ON TRAI'S CONSULTATION PAPER ON  
"PROVISION OF CELLULAR BACKHAUL CONNECTIVITY VIA SATELLITE THROUGH VSAT  
UNDER COMMERCIAL VSAT CUG SERVICE AUTHORIZATION"  
(Consultation Paper No. 02/2020 dated 29<sup>th</sup> January 2020)**

**General Comments:**

1. Reliance Jio Infocomm Limited (RJIL) thanks the Authority for giving the stakeholders an opportunity to share their views on this important issue pertaining to providing mobile connectivity to remote and rural areas. Considering the difficulty in deploying the conventional backhaul of Fiber, Copper and Microwave in such remote areas and difficult terrains, Satellite based backhaul for mobile services can be useful.
2. We agree with the Authority that the VSAT technology is useful for backhaul connectivity in the remote and rural areas and this technology should be promoted and be made viable and even lucrative to invest. The role of the VSAT Technology and Satellite Communication technologies has been duly acknowledged in the National Digital Communications Policy – 2018 (NDCP-2018). The Policy while planning to strengthen these technologies by reviewing and simplifying the regulatory oversight and optimizing these services as part of Connect India mission, also lays emphasis on developing an ecosystem for satellite communications in India and mentions their role in Public Protection and Disaster Relief (PPDR) plan for the country.
3. Considering the cost and procedural bottlenecks of laying new backhaul infrastructure, it will also be prudent to promote usage of existing infrastructure set up by the existing Commercial VSAT service providers (CVSPs). We understand from the Consultation Paper that there already exists a country wide extensive installed base 250,000 terminals, and this should be leveraged in connecting the unconnected.
4. We submit that permitting the CVSPs to offer this infrastructure to Access service providers for backhaul connectivity on a commercial basis will be positive infrastructure infusion for the access services in the country and would be incremental addition in meeting the aspirational goals of programs like "Digital India".
5. We submit that in order to utilize the available infrastructure and to increase the viability of CVSPs, a license amendment in scope of service would be required, enabling these service providers to offer backhaul connectivity for mobile services and Wi-Fi hotspots via Satellite.
6. We submit that the consequent infrastructure sharing would promote efficiency and would also create additional revenue avenue for CVSPs, while at the same time providing





a relatively low-investment option to Access Service Providers to provide communication services in hitherto uncovered remote areas. Even a small number of Small Cells with Satellite based backhaul can have the desired effect of covering multiple remote and sparsely populated areas. Thus, a small enhancement of the scope of service in one authorization, making it useful for access services, can have cascading economic, educational and societal effect in the most-needy parts of the country and the Authority should endorse it immediately. The adoption of the Satellite based backhaul can further be encouraged by treating the payments made by Access Service Providers to CVSPs as pass through in AGR calculations.

7. We further submit that in order to enhance the optimum utilization of resources and infrastructure, the enabling provisions like Clause 4.3 of the Access Services Authorization should be made applicable for all service authorizations. This will also pave way for the true Unification of the Licenses.
8. We would also like to highlight the very obvious and pertinent issue of unnecessary and irrational forbidding levies imposed on the service providers in creating and operating VSAT based backhaul infrastructure. The Authority should recommend the immediate rescinding of the Department of Telecommunications (DoT) order dated 22.03.2012, prescribing formula-based Spectrum Usage Charges (SUC) for frequency authorization for satellite-based system. The Authority should reiterate its earlier recommendations dated 07.03.2013 that the SUC should not be more than 1% of Adjusted Gross revenue (AGR) irrespective of the data rate in respect of Commercial VSAT CUG Services.
9. Summary

- 1. Commercial VSAT CUG service providers should be permitted to offer backhaul connectivity for Mobile Service and Wi-Fi hotspots via Satellite through a license amendment.**
- 2. The other Licensees with multiple authorizations under the Unified License should be permitted to share their own active and passive infrastructure for providing other authorized service, as permitted to authorised Access Service Providers.**
- 3. There should be uniformity in the mode of calculating the SUC and it should be calculated basis the AGR, for all License Authorizations under the Unified License.**



Our issue wise response is as below:

**Q1. Keeping in view the connectivity requirements in remote and difficult areas, should the Commercial VSAT CUG service provider be permitted to provide backhaul connectivity for mobile services and Wi-Fi hotspots via Satellite? Please justify your answer.**

**And**

**Q2. Whether the scope of Commercial VSAT CUG Service Authorization be enhanced under both Unified License and UL(VNO) license to enable the provision of the said backhaul connectivity? Please justify your answer.**

**RJIL Response:**

1. As mentioned in our General Comments, RJIL is supportive of leveraging all mediums to meet the connectivity requirements in the remote and difficult areas. As VSAT backhaul is not encumbered by the problems of other backhaul media like Fiber and Microwave, in the remote areas, it can help bridge an important gap in providing communication to remote and difficult areas. Therefore, in order to meet the national goals of universal connectivity and digital literacy, it would not be incorrect to permit the Commercial VSAT CUG providers to provide the backhaul connectivity for mobile services and Wi-Fi hotspots via Satellite.
2. As per the current scope of VSAT CUG Service authorization in the Unified License, the licensees are not permitted to provide backhaul connectivity for mobile services. However, in case the CVSPs is a holder of NLD Authorization, then it can lease the Satellite based backhaul for mobile services. We submit that the enabling provisions are already available in the Unified License framework and only minor adjustments by means of license amendment are required.
3. The Authority should recommend for extending the scope of service for CVSPs by permitting provision of satellite based backhaul for mobile services post paying the difference in entry fee from NLD authorization. Further, the CVSPs with both Authorizations can be permitted to use their own common infrastructure for providing both the services.

**Q3. Should the licensee having authorization for both Commercial VSAT CUG and NLD services be allowed to share VSAT Hub & VSAT terminals for the purpose of providing authorized services? Please justify your answer.**

**And**

**Q4. Whether the licensee should be permitted to share its own active and passive infrastructure for providing various services authorized to it under the other service authorization of UL and/ or other licenses? [In other words, whether clause 4.3 of Chapter**





**-VIII (Access Service authorization) be made applicable for all other authorizations also] Is there a need to impose any restrictions? Please enumerate and justify your answer.**

**RJIL Response:**

1. RJIL has always supported the true Unification of the Licenses and sharing the common resources within the purview of applicable restrictions and permissions for all authorized services should be permitted for all licensees. We submit that this will optimize the resource utilization and will also enhance efficiency. However, the service providers should ensure full compliance with respective authorizations and should also keep the DoT informed of such sharing.
2. We submit that considering the need to optimize the resource utilization and spare the additional investments for more productive objectives, the sharing of own active and passive infrastructure to provide various services under the other service authorizations of the Unified License and/or other license should be permitted to all service providers.
3. We submit that the clause 4.3 of Access Services Authorization should be instead made part of Operating Conditions under chapter 5 of Part 1 of the Unified License, thereby extending this facility to all Unified Service Licensees. The Licensees would, as always, be required to ensure that any such sharing should not increase or alter the scope of service under their respective authorizations.

**Q5. Whether formula-based spectrum charging mechanism for VSAT services in NLD/Access license is adequate and appropriate? If not, whether spectrum charging for VSAT services in NLD/Access service license should be made on AGR basis instead of existing formula basis mechanism? Whether it will require accounting/ revenue separation for satellite based VSAT services under NLD/Access license? Please elaborate and provide proper justification.**

**RJIL Response:**

1. We submit that the charging mechanism for spectrum should be same for the same/similar services provided under the Unified License using similar or different technologies. The License should be completely technology neutral and should promote the viability and sustainability of service providers. Furthermore, the Authority should recommend doing away with multiple charging mechanisms in favour simple and nominal administrative spectrum usage charges regimes.
2. While we cannot stress enough on the need to reduce the spectrum levy burden on all service providers under the Unified License, it is imperative that procedural anomalies be done away with immediately. We reiterate that all spectrum charging should be uniform



across service providers and the formula-based changing mechanism for spectrum should be done away in favour of AGR based charging.

3. We further submit that in order to encourage the use of VSAT as a backhaul, the Authority should also recommend the payments made by Access Service Providers to CVSPs as pass through under the AGR calculation. There is also a fit case to deduct the payment made by licensee to Department of Space for transponder allocation charges from the Gross Revenue while calculating AGR.

**Q6. Please give your comments on any related matter not covered in this Consultation paper.**

**RJIL Response:**

1. We would like to avail this opportunity to bring the Authority's attention to various hurdles faced by Access Service providers in availing VSAT connectivity for backhaul and few measures that would enhance the 'Ease of doing business' in promoting VSAT backhaul services.
2. The first and foremost measure to this effect would be simplifying the entire licensing and regulatory approvals process for VSAT services, with a focus on single window time bound clearances. We submit that in the current form, it takes around 10 to 15 months to set up a VSAT network with HUB and Gateway and this remains a major deterrent to new investments. We request the Authority to recommend simplification of this process so that the entire activity can be completed in around 30 days through a single window approval mechanism to incentivize new investment in sector.
3. Further, as per the current process, the Licensee desirous of using the VSAT for backhaul connectivity after getting transponders allocated from Department of Space (DOS) are required to take in-principle clearance from Data Services Cell of DOT. We submit that this application is reviewed and approved by a committee comprising members from DOS, NOCC, DOT and WPC, which is a time-consuming activity and takes approximately 3 – 4 months.
4. We request the Authority to replace this lengthy process of in-principle clearance with an intimation to the concerned government agencies regarding the intent to using the VSAT network after obtaining necessary bandwidth from DOS. The Government will of-course retain the right to audit the VSAT network established to ensure conformity with applicable norms at any time.
5. Another issue is the mandatory requirement of Mandatory Performance Verification Testing (MPVT) for all remote terminals. We submit that MPVT is primarily done by NOCC to verify 'Radiation Pattern' of VSAT antenna. The tests conducted during MPVT are (i)





Trans radiation Pattern (ii) Trans Gain (iii) CPD (iv) G/T (v) HPA Stability. It is pertinent to mention that antennas installed by Licensee adheres to the TEC specifications as issued from time to time. Further TEC Interface Requirement bearing number TEC/IR/SCB-08/02.SEP 2009 stipulate that *“All antennae with circular equivalent of 3.8 meters and above shall have to be approved by NOCC for mandatory performance verification test and certification. The antennae with less than 3.8 meters circular equivalent diameter in CUG and Access network shall be tested and certified by NOCC on a sample basis. All antennae to be used for =backhaul connectivity, transmission network, DTH, & TV broadcasting Teleport & DSNG terminal and any other new service irrespective of sizes will be tested and certified by NOCC.”*

6. We submit that in view of above specifications, the requirement of MPVT for each Remote Terminal installed by licensee should be done away with, as the licensee are already complying with the specifications issued by TEC from time to time. However, in order to the ensure compliance, MPVT can be carried out on sample basis for all antennae sizes as being presently done for antennae with less than 3.8 meters circular equivalent diameter installed in CUG and Access networks. We submit that this will reduce the unnecessary testing requirements.

