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Dated: 13th October 2016

To,

Shri S. K. Mishra,
Pr. Advisor (F & EA),
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan
J.L. Nehru Marg, Old Minto Road
New Delhi - 110002

Subject: Airtel's Response to TRAI's Consultation Paper on Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Commercial Very Small Aperture Terminal Service Providers

Dear Sir,

This is with reference to your above mentioned consultation paper. In this regard, please find enclosed our response for your kind consideration.

Thanking You

Yours Sincerely
for Bharti Airtel Limited

A handwritten signature in blue ink, appearing to be 'Ravi P. Gandhi', written over a horizontal line.

Ravi P. Gandhi
Chief Regulatory Officer

encl. : as stated above

Bharti Airtel's Response to TRAI's Consultation Paper on Spectrum Usage Charge (SUC) and Presumptive Adjusted Gross Revenue (AGR) for Internet Service Providers (ISPs) and Commercial Very Small Aperture Terminal (VSAT) Providers

Introduction

At the outset, we would like to thank the Authority for issuing the consultation paper on SUC and presumptive AGR for ISPs and VSAT providers. We sincerely hope that the present consultation process will culminate in forward-looking recommendations that will help the country to achieve the vision of 'Digital India' and 'Broadband for All'.

Currently, ISP operators are being allocated spectrum on an administrative basis in 2.7, 3.3, 5.7 and 10.5 GHz spectrum bands for last mile access, which is renewed annually. The spectrum in these bands is being granted on a spot or link-by-link basis, unlike access spectrum, which is being granted on a service area basis. In its consultation paper, TRAI has raised an important issue around whether the spectrum in these bands should continue to be allocated in the same way or if any alternate assignment mechanism needs to be formulated. This is critical since global developments are taking place related to these spectrum bands.

The Government of India has listed 'Digital India' as a national priority/objective, with 'Broadband for All' as one of its most important pillars. With over 1034 million wireless consumers and a mere 25 million wireline consumers, it is obvious that wireless is going to be the driver of broadband growth. Clearly, the catalyst for broadband growth is going to be the management and policy framework regarding spectrum—a very scarce and precious national resource.

In the last few months, the Government of India and TRAI have taken various progressive steps to increase the availability and efficiency of spectrum, including spectrum trading, spectrum sharing, harmonization of spectrum, auction of more spectrum in various bands. Although 309 MHz (unpaired) of spectrum has been allotted to all TSPs per circle, there is still a huge demand for spectrum at the right price, as India needs more spectrum in various bands to meet the vision of 'Digital India' and 'Broadband Highways'. Thus, more spectrum bands will have to be explored so they can be made available to meet the rapidly growing demand for mobile broadband services; as per global trends seen worldwide.

After the success of 4G in various bands, 5G technology will further increase the demand for spectrum (for capacity enhancement and overall improvement) for its use in cases such as Machine-to-Machine (M2M) and Internet of Things (IoT), where everything will be connected. These 5G services will require access to spectrum in a variety of bands to support the upcoming technologies and applications. Therefore, we believe that TRAI should take adequate steps to explore spectrum in other bands so that it can be utilized for mobile broadband in sync with global harmonization plans. For example, 3.3-3.4 GHz spectrum band has already been declared as an International Mobile Telecommunications (IMT) band by the

International Telecommunication Union (ITU) and vendors have already begun demonstrating the TD-LTE capability over this band for 5G technology.

India should also develop a roadmap for all spectrum bands, including these bands, enabling all stakeholders (telecom operators, handset manufacturers, vendors, etc.) to formulate strategies around various bands. Such a plan should be aligned with the efforts at the global level to ensure efficient spectrum use, seamless communication services as well as economies of scale in network and end-user equipment to drive down costs. Furthermore, a long-term migration plan should also be developed for the existing users of the 3.3 GHz band, which has been declared as an IMT band, to the 2.7 GHz band.

In light of the above, a detailed response to the questions posed in the consultation paper is given below:

Q 1. Should the spectrum assignment on location basis/link-by-link basis on administrative basis to ISPs, be continued in the specified bands. If not, please suggest alternate assignment mechanism. Please justify your answer.

Bharti Airtel's Response:

We recommend the following approach for the allocation of 2.7, 3.3, 5.7 and 10.5 GHz spectrum bands:

1. A detailed plan related to these bands should be developed in line with international developments. Out of these spectrum bands, 3.3 GHz has already been declared as an IMT band by the ITU. TRAI should take note of these developments and align India's spectrum policy with the global harmonization process.
2. The existing users in the 3.3 GHz spectrum band may be migrated to the 2.7 GHz frequency band as part of a long-term migration plan at an appropriate time. Such a plan is essential for re-farming the 3.3GHz band for the IMT and to align with the global harmonization process. It will also protect the investments of existing users in 3.3 GHz band and enable them to begin deployment in 2.7GHz band.
3. Since the spectrum in these bands (2.7, 3.3, 5.7 and 10.5 GHz) in the current scenario can only be used for last mile access and not for creating a ubiquitous mobile network across the service area, the same should continue to be allocated administratively and on a link-by-link basis in the interim.
4. Band-wise response based on the merit of their usage is as below:

a) 3.3 GHz band (3.3-3.4 GHz) & 2.7 GHz band (2.7-2.9 GHz)

The 3.3 GHz band (3.3-3.4 GHz band) has been identified by the ITU as an IMT band in its Resolution 223 (Rev. WRC-15) in WRC -15, which states¹:

ac) that this conference has identified the frequency band 3 300-3 400 MHz for use by administrations wishing to implement terrestrial IMT systems in Nos. 5.429B, 5.429D and 5.429F;

The clauses 5.429B, 5.429D and 5.429F have additionally allocated 3.3-3.4 GHz band to be used as an IMT band for all its three regions. They are reproduced below:

5.429A *Additional allocation: in Angola, Benin, Botswana, Burkina Faso, Burundi, Ghana, Guinea, Guinea-Bissau, Lesotho, Liberia, Malawi, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sudan, South Sudan, South Africa, Swaziland, Tanzania, Chad, Togo, Zambia and Zimbabwe, the frequency band 3 300-3 400 MHz is allocated to the mobile, except aeronautical mobile, service on a primary basis. Stations in the mobile service operating in the frequency band 3 300-3 400 MHz shall not cause harmful interference to, or claim protection from, stations operating in the radiolocation service.*

5.429D *In the following countries in Region 2: Argentina, Colombia, Costa Rica, Ecuador, Mexico and Uruguay, the use of the frequency band 3 300-3 400 MHz is identified for the implementation of International Mobile Telecommunications (IMT). Such use shall be in accordance with Resolution 223 (Rev.WRC-15).*

5.429F *In the following countries in Region 3: Cambodia, India, Lao P.D.R., Pakistan, the Philippines and Vietnam, the use of the frequency band 3 300-3 400 MHz is identified for the implementation of International Mobile Telecommunications (IMT). Such use shall be in accordance with Resolution 223 (Rev.WRC-15).*

In a Global TD-LTE Initiative (GTI) workshop in Shanghai in July 2016, China Mobile and Huawei demonstrated end-to-end (E2E) TD-LTE system operating over the 3.3-3.4 GHz frequency band, which is seen as a move towards establishing 5G technology in sub-6 GHz band².

In line with the resolution passed by WRC-15, we recommend that the 3.3-3.4 GHz band should be used for IMT and request TRAI to devise a roadmap of the migration

¹ Final Acts WRC-15, World Radio communication conference, Geneva 2015

² <http://www.huawei.com/en/news/2016/7/shouge-33-34GHz-TD-LTE-duandaoduan-xitong>

of existing users from this band to the 2.7 GHz band so that the 3.3 GHz band can be freed for IMT services.

b) 5.7 GHz band (5.725-5.875 GHz) and 10.5 GHz band (10.15-10.65 GHz):

ITU, in its Resolution 239 (WRC-15), *Studies concerning Wireless Access Systems including radio local area networks in the frequency bands between 5150 MHz and 5925 MHz*, has invited studies for the 5.725-5.875 GHz frequency band to be designated for industrial, scientific and medical (ISM) applications in WRC-19.

We suggest that both the aforementioned bands be continued to be allocated on an administrative and link-by-link basis.

Q 2. Should minimum presumptive AGR be introduced in ISP license for the purpose of charging SUC? If yes, what should be the value of minimum presumptive AGR and basis for its computation? Please provide justification for your response.

Q.6 In case minimum presumptive AGR is prescribed for the ISP license, what percentage should be applied on minimum presumptive AGR to compute SUC? Please provide justifications for your response.

Bharti Airtel's Response:

1. We believe that formula-based royalty charges are quite high and need to be reduced to ensure a viable business case for ISP operators. Thus, imposing minimum presumptive AGR for levying SUC will further aggravate the situation and adversely affect the business case for ISP operators.
2. Further, the concept of minimum presumptive AGR is relevant only in cases where the government has a concern that TSPs would not roll out their services or use their spectrum immediately and that the government would be deprived of their minimum legitimate revenue. However, in the current scenario, ISP operators start paying SUC/royalty charges from the date of the allocation of the spectrum.
3. Thus, there is no need to introduce any minimum presumptive AGR for ISP operators.

Q 3. Is there a need to introduce SUC based on percentage of AGR for ISPs or should the existing formula based spectrum charges continue? Please give justification while suggesting a particular method of charging SUC.

Bharti Airtel's Response:

1. TRAI has correctly noted in the consultation paper that the spectrum in these bands is not assigned for use in an entire service area, but is allocated on a site-by-site basis. Thus, the entire AGR accruing from a service area/national level cannot be allocated for the SUC when the spectrum is being allocated only on a site-by-site basis, that too only in a few cities in a service area. Therefore, it will not be prudent to levy an SUC based on the AGR of the entire service area. Further, for the operators holding spectrum in other bands and providing mobile broadband services, it will be difficult to segregate the revenue from these bands from the revenue from the other bands being used for mobile broadband services.
2. Further, we believe that a large number of ISPs are primarily concentrating on particular geographies and, therefore, their requirement will continue to be on a city/link-by-link basis. Assigning such spectrum on a circle basis is neither required nor will it result in the efficient utilization of the spectrum. We, therefore, believe that the charges on these bands should also continue to be levied on a link-by-link basis.
3. Levying the SUC on the basis of the AGR is more relevant in cases where the assignment of the spectrum is done for the entire service area and is used to create a ubiquitous mobile network for the entire service area.

Q 4. If AGR based SUC is introduced, whether the percentage of AGR should be uniform for all ISP licenses or should it be different, based on revenue/spectrum-holding/any other suitable criteria? Please suggest suitable criteria with reasons.

Bharti Airtel's Response:

1. As stated above, the AGR-based SUC should only be introduced if the spectrum bands under discussion are granted for the entire service area for the creation of a ubiquitous mobile network.
2. Since the requirement of ISPs is limited to a city/link-by-link basis and the nature of the spectrum assignment will remain the same, we do not foresee such a scenario. Thus, we support the existing formula of SUC (on a link-by-link basis) to continue.

Q 5. What mechanism should be devised for ISP licensees to identify revenue generated from use of spectrum and revenue generated without use of spectrum? Please give your view on this with justification.

Bharti Airtel's Response:

1. We have already recommended the continuation of link-by-link charges for these bands instead of an AGR-based SUC.
2. Further, we firmly believe that the SUC should only be levied on the revenue earned for rendering the telecom services provided using the spectrum in question. To reiterate our stance, any revenue earned from telecom services or otherwise by a licensee, which has no linkage with the spectrum in question should not be subjected to an SUC for those bands.

Q 6. In case, Formula based spectrum charging mechanism in ISP license is to be continued, do you feel any changes are required in the formula being currently used that was specified by DoT in March 2012? If yes, suggest the alternate formula. Please give detailed justification.

Bharti Airtel’s Response:

1. We submit that the current royalty charges are exorbitantly high for creating a viable business case. Even TRAI, in its recommendation dated 17th April 2015³, has recognized this:

***“Annual Royalty Charges for 3.3-3.4 GHz band for last mile access are excessive.** These need to be reviewed and rationalized in line with the recommendations of the Authority on E-band. The maximum EIRP of the band also needs to be increased to enable its use in rural areas. This decision also needs priority attention and should be taken within 6 months.”*

2. We recommend that the current royalty charges be reduced by at least 50%. This will not only help in creating a viable business case, but will also increase the affordability of telecom services. Thus, we propose the following changes in the existing formula:

Distance Cat.	Maximum distance (km) over which the F/L/M network would operate*	Current royalty charges (in Rs.) for the Basic Link	Proposed royalty charges (in Rs.) for the Basic Link
		M	M
I	<=2	1500	750
II	<=5	3000	1500
III	>5<=25	6000	3000
IV	>25<=60	12000	6000
V	>60<=120	22500	11250
VI	>120<=500	37500	18750
VII	>500	50000	25000

³ TRAI’s Recommendations on Delivering Broadband Quickly: What do we need to do? Dated 17th April 2015

Q 7. Do you propose any change in existing schedule of payment of spectrum related charges in the ISP license agreement?

Bharti Airtel's Response:

The payment of spectrum-related charges is made annually in advance. Since it is a fixed charge, we do not recommend any change in the schedule of payment.

Q 8. Should a separate regime of interest rates for delayed payment of royalty for the use of spectrum be fixed in ISP license or should it be the same to the prevailing interest rates for delayed payment of license fee/ SUC for other licensed telecom services?

Bharti Airtel's Response:

1. Currently, the various licenses provide for charging interest from TSPs due to a delay in the License Fee Payments made by them. For instance, as per the Financial Conditions specified in Chapter III of Unified Licence, the following clause is applicable for charging interest from TSPs due to a delay in license fee payments:

“20.7 Any delay in payment of Licence Fee, or any other dues payable under the license beyond the stipulated period will attract interest at a rate which will be 2% above the Prime Lending Rate (PLR) of State Bank of India existing as on the beginning of the Financial Year (namely 1st April) in respect of the licence fees pertaining to the said Financial Year. The interest shall be compounded monthly and a part of the month shall be reckoned as a full month for the purposes of calculation of interest. A month shall be reckoned as an English calendar month.”

2. Initially, the interest for the delayed license fee payments was charged at SBI PLR + 5%. In 2005, this rate was reviewed by DoT and reduced to SBI PLR + 2%.
3. Earlier, the PLR rates were considered to be an effective and transparent mechanism for charging interest. However, in FY 2011, the Base Rate system replaced the Bank Prime Lending Rate (BPLR) system (Vide RBI circulars RBI/2009-10/390x1 DBOD. No. Dir. BC 88 /13.03.00/2009-10 and RBI/2010-11/361 DBOD.No.Dir.BC.73/13.03.00/2010-11).
4. In the present context, the PLR rate is no longer used and is treated as a representative of the cost of capital in the economy. The same is also recognized by DoT in the NIAs for spectrum auction, including in the current NIA of August 2016, wherein the current SBI Base Rate of 9.30% has been used as the Internal Rate of Return (IRR) in case of payment to be made as per the deferred payment option.

5. Thus, we request TRAI to replace the rate of interest currently charged at “SBI PLR Rate + 2%” with “SBI Base Rate” for all licences with immediate effect.

Q 9. Should separate financial bank guarantee or single financial bank guarantee be submitted by the ISP licensee covering LF payable, fees/charges/royalties for the use of spectrum and other dues (not otherwise securitized)? If yes, what should be the amount of such financial bank guarantee in either case?

Bharti Airtel’s Response:

For the link-by-link/location basis spectrum which is assigned administratively, the royalty and spectrum charges are paid annually in advance for the renewal and usage of assigned links; therefore, the point of securitization doesn’t exist.

Q 10. Is there a need to specify minimum presumptive AGR for commercial CUG VSAT license for the purpose of charging SUC? If yes, what should be the value of minimum presumptive AGR and basis for its computation? Please provide justifications for your response.

Bharti Airtel’s Response:

1. We believe that the introduction of the minimum presumptive AGR in the VSAT license is not required, and it has been rightly stated by TRAI itself in its consultation paper that VSAT service providers are already paying substantial charges and levies.
2. As per the present regime, the CUG VSAT operators are levied a license fee at 8% of the AGR and an SUC at 3% to 4% of the AGR. In addition to this, for hiring the satellite/transponder bandwidth, 5 crore per transponder (36 MHz) is also being paid to the Department of Space.
3. Therefore, it is not recommended to introduce the concept of presumptive AGR in the VSAT license.

Q 11. Should the SUC applicable to commercial VSAT services be reviewed? If yes, what should be the rate of SUC to be charged? Please give your view on this with justification.

Bharti Airtel’s Response:

1. Presently, the SUC for commercial VSAT services is charged at 3-4% based on the data rate. The details of the same are as follows:

Range of the Data Rate	Spectrum Charges
Up to 128 Kbps	3% of AGR
Higher than 128 kbps and up to 512 kbps	3.5% of AGR
Higher than 512 kbps and up to 2 Mbps	4% of AGR

2. In the case of VSAT services, the market is divided into four parts, i.e., capacity for rural mobile backhauling, capacity for enterprise applications in non-fiber and microwave sites (such as for remote ATMs), capacity for rural e-Government applications and, finally, for consumer connectivity. VSAT players majorly serve rural and far-flung areas where the laying of copper and fiber and/or the connectivity through mobile is not viable or feasible. Therefore, the affordability of VSAT services should be maintained to ensure the reach of telecom services in rural areas by treating them as essential services.
3. Presently, the high cost of operating VSAT services is a major area of concern. VSAT operators are incurring huge costs for providing their services, such as transponder cost, monitoring charges levied by NOCC, SACFA charges, 8% license fee and 3-4% SUC.
4. In the past, TRAI had recommended⁴ that there should be a single rate of SUC and the ceiling of 4% should be lowered to 1% to cover administrative charges only. Since the cost of VSAT services is already high and these services are primarily being used in rural areas, the SUC for VSAT operators should either be zero or charged at a nominal rate, say 0.1-0.2% of the AGR.

Q 12. In addition to the issues mentioned above, comments of stakeholders is also invited on any other related matter/issues.

Bharti Airtel's Response:

1. Currently, the VSAT industry is facing a significant delay in the assignment of the VSAT spectrum. While ISRO allocates the bandwidth and begins charging from day one itself, the WPC Wing of DoT takes an average of 6-8 months' time for the assignment of the respective spectrum.
2. This is in spite of the fact that the spectrum allocation by WPC only mirrors the frequency assignment by ISRO and its approval by NOCC. The space segment charges payable by the VSAT operator to ISRO during this period are passed on to the rural customers. This is an unproductive cost incurred by the VSAT operator on account of an administrative delay on the part of the WPC.

⁴ <http://www.trai.gov.in/WriteReadData/Recommendation/Documents/recom3oct05.pdf>

3. This delay also causes a loss to the Government in terms of the license fees and the SUC as the VSAT operators begin to earn revenue only after the spectrum is assigned by the WPC.
4. Therefore, we request the Authority to recommend a time-bound process for the assignment of the VSAT spectrum to operators.