



TCL/RA/TCL/TRAI CP-SUC/2016/10

October 13, 2016

Mr. S.K. Mishra
Pr. Advisor (F&EA),
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg (Old Minto Road),
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Sub: TCL Response to TRAI 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,

Kindly find attached herewith Tata Communications Ltd. response on the TRAI Consultation Paper dated 19.08.2016 on "Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Commercial Very Small Aperture Terminal Service Providers".

It is requested that the same may kindly be taken on record.

With kind regards,

For Tata Communications Ltd.

(Praveen Sharma)
Authorized Signatory

Encl: a/a.

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Tata Communications Ltd.'s response to Consultation Paper on Spectrum Usage Charges and Presumptive Adjusted Gross Revenue for Internet Service Providers and Commercial Very Small Aperture Terminal Service Providers

Q1: 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.

R1: Tata Communications Ltd. holds the view that spectrum assignment for the specified bands viz. 2700/3300/5700/10500 Mhz, should continue on location basis/link-by-link basis on administrative basis to ISPs. Spectrum bands in 800/900/1800/2100/2300/2500 Mhz frequency are largely employed to serve a large volume of mobility (retail) users that are spread across vast License Service Areas (LSA). This is unlike the use case for the specified spectrum, which is primarily used for fixed wireless deployment to serve enterprises and fixed broadband, the former typically concentrated around areas of economic activity. Hence, charging on link-by-link basis would result in better utilization of the spectrum, especially when the assignment is for a limited geographical location and not exclusively for the entire LSA, as is the case for the specified spectrum. We believe that the mechanism to levy spectrum charges should be in keeping with the government's objective of encouraging internet availability and adoption. Accordingly, location/link-by-link assignment on administrative basis is the preferred mechanism for the specified spectrum.

Q2: 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.

R2: No, the current mechanism of charging spectrum fee should be continued with and no minimum presumptive AGR in ISP license.

Q3: 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.

R3: As elucidated above and also noted in the consultation paper, charging on link-by-link basis would result in better utilisation of spectrum as TSPs will use the carrier frequencies judiciously because they have to pay based on the number of links. Further, it notes that AGR based charging should be implemented only if assignment of carriers to ISPs is done on an exclusive basis for a geographic location. Use case for the specified spectrum bands is primarily for fixed wireless deployment and hence does not require exclusive assignment. Also, it is operationally cumbersome to differentiate revenue arising from use of access spectrum and that from non-spectrum based access media. The volume of fixed wireless deployments is limited in number and spectrum

charges, as revised by the WPC in March 2012, are in any case very high and need to be rationalized and brought down nearer to pre 2012 levels. Moreover, introducing an SUC would be detrimental to the government's push to increase broadband penetration in the country. Hence, it is NOT recommended to introduce SUC based on percentage AGR for ISPs.

Q4: 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.

R4: It is proposed that AGR based SUC for the specified spectrum be NOT introduced.

Q5: 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.

R5: As noted in the consultation paper, in most of the cases, ISPs do not have spectrum in all the cities in a licensed service area (LSA) and there is limited fixed wireless deployment. Deployment is done on a mix of fiber and licensed spectrum and it is a cumbersome overhead to segregate revenue arising from spectrum usage and governing the same on a periodic basis. Since deployment of fixed wireless is limited and low in count, a link-by-link mechanism is better suited to track and govern spectrum usage. Hence, continuing with a formula based mechanism to levy spectrum charges, albeit modified/rationalized to pre-2012 levels, shall obviate the need to identify revenue generated from use of spectrum and revenue generated without use of spectrum.

Q6: 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.

R6: The current mechanism of charging spectrum fee should be continued, with no minimum presumptive AGR in ISP license

Q7: 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.

R7: It is proposed to continue with formula based spectrum charges, however with additional factors taking into account use cases of the specified spectrum. Since higher band carriers have lower propagation characteristics than lower bands, carriers at higher frequencies should be progressively low priced. The following band factor values are being recommended:

- = 1 for frequency band <= 1 GHz
- = 0.9 for frequency band > 1 GHz and <= 3 GHz
- = 0.7 for frequency band > 3 GHz and <= 6 GHz
- = 0.5 for frequency band > 6 GHz and <= 10 GHz
- = 0.3 for frequency band > 10 GHz and <= 20 GHz
- = 0.2 for frequency band > 20 GHz and <= 30 GHz
- = 0.1 for frequency band > 30 GHz and <= 42 GHz

Along with the usual factors such as end-to-end distance, channel bandwidth and the number of carriers, the formula should also consider demographic and geographic factor. Thinly populated rural areas should attract relatively lower charges as against dense urban and suburban areas.

The following geographical factor values are being recommended:

- = 1 for Metro circles
- = 0.5 for A & B Circles
- = 0.25 for C Circles

A revised royalty calculation formula, with the inclusion of frequency band and geographic area as determining factors, would then be as mentioned below:

$$R (\text{Royalty}) = M \times C \times W \times \text{FB} \times \text{GEO}$$

where,

FB represents frequency band and

GEO represents geographic area

Q8: Do you propose any change in existing schedule of payment of spectrum related charges in the ISP license agreement?

R8: It is proposed that payment terms should be changed to Quarterly in advance instead of yearly advance. This will help ISPs to manage cash flows in an appropriate manner.

Q9: 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?

R9: As mentioned above, it is recommended to continue with a formula-based spectrum usage charge, as against moving to an AGR-based charging for spectrum assignment to ISPs.

Accordingly, no separate rate for delayed payment of royalty for the use of spectrum should be charged in the ISP license. At the same time, the current regime for delayed payment of spectrum charges for the specified bands is exorbitantly high and it is recommended that the rate be brought in line with interest rate regime applied by the DOT in case of the Unified License.

Q10: 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?

R10: As recommended above, link-by-link charges on administrative basis be continued to be charged for the specified spectrum. And since the spectrum is allocated on an annual renewal basis, it is not recommended to charge a separate financial bank guarantee.

Q11: 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.

R11: No comments

Q12: 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.

R12: No comments

Q13: In addition to the issues mentioned above, comments of stakeholders is also invited on any other related matter/issues.

R13: We would like to propose a few modifications from the perspective of spectrum allocation and life cycle of licenses

- It is strongly recommended that other spectrum bands be opened in the delicensed as free bands so that ISPs can help in improving the broadband numbers with best-in-class services.
- Partial surrender of AIPs/WOLs in the decision letter must be permitted. Each AIP in the decision letter be treated as independent allocation
- CPE AIPs be granted along with BTS AIPs to facilitate faster deployment (currently CPE AIPs are obtained post BTS WOL)
- Allocation methodology should allow for transfer or migration of BTS sites seamlessly across the country or at the least within a state or circle. This would facilitate continuous

optimization of deployment basis customer density or business clusters and/or overcome any other issues hampering business continuity for the users

- Tier based charging viz. for 2km, 5km and 25km slabs must be introduced for the specified bands. Distances of connected customers can be amply calculated and validated, as necessary. In addition, given the dynamic nature of end customer requirements and hence coverage needs, licensees must be permitted to change the coverage distance at the time of annual spectrum renewal
- It is also recommended that given the current and future technology roadmaps and ecosystem spectrum allocation be re-farmed to 20 Mhz with 5Mhz channel sizes
- Last but not the least, all records of licenses applied, renewed, modified, payments made, validity thereof, etc. be digitized and made available for quick and easy access to both the licensor and the respective licensees. This would facilitate easy access to accurate information and cut down on time and effort consumed in transactions
