



SSTL/Reg/TRAI/ 1410/423

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**Subject: Response to TRAI Consultation Paper on 'Delivering Broadband Quickly: What do we need to do?' dated 24<sup>th</sup> September 2014**

Dear Sir,

At the outset we appreciate and welcome the Authority's consultation paper on 'Delivering Broadband Quickly: What do we need to do?' dated 24<sup>th</sup> September 2014 at this juncture.

With reference to above please find enclosed our comments and point wise response to the consultation paper on 'Delivering Broadband Quickly: What do we need to do?' dated 24<sup>th</sup> September 2014.

We hope that the Authority will consider our views and comments enclosed while making the recommendations for 'Delivering Broadband Quickly: What do we need to do?'.

Thanking you,

With Regards,

**For Sistema Shyam TeleServices Limited**

  
**Sunil Gupta**  
Associate Director

Enclosed: As above

**Sistema Shyam TeleServices Limited**

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## Response to TRAI Consultation Paper on Delivering Broadband Quickly: What do we need to do?

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1. Sistema Shyam Teleservices Ltd (SSTL) welcomes opportunity extended by TRAI to comment on the important issue raised in the Consultation Paper on Delivering Broadband Quickly.
2. Most critical impediment in delivering broadband is non-contiguous allocation of spectrum. In 800 MHz spectrum band 2x20 MHz spectrum been earmarked but actual allocation is much below as much spectrum has been wasted in inter-operator guard bands. The spectrum allocation is also fragmented. Thus spectrum holdings in 800 MHz are very small and generally non-contiguous which is not conducive for deployment of Next Generation Technologies. Thus one of the most important step required to be taken for delivering broadband quickly is to harmonize spectrum and allocate it in contiguous frequencies.

### **Harmonization of Spectrum in Contiguous Blocks would lead to efficient Utilization of Spectrum**

- (i) The current spectrum allocations in 800/900/1800 MHz bands is largely non-contiguous. Due to fragmented spectrum allocation, large quantum of spectrum is being wasted for inter-operator guard bands. The optimal use of spectrum can be achieved by harmonizing the spectrum and allocating it in contiguous frequencies. The harmonization would ensure minimum spectrum wastage on account of guard-bands. The channel allocation in contiguous frequencies would lead to cost optimization in network rollout and at the same time additional spectrum could be harvested within existing band.

### **Harmonized and Contiguous Spectrum would lead to efficient utilization of spectrum, fetch higher Revenue for the Government and bring Societal benefits**

- (ii) After harmonization and contiguous allocation of spectrum, additional blocks of spectrum would be available for next auction. Contiguous allocation of spectrum would also facilitate deployment of advanced technologies as next generation networks require minimum 5 MHz contiguous spectrum.

**Thus harmonization of spectrum and its allocation in contiguous frequencies is one of the most important step needed for quickly delivering broadband services.**

### **Comments on specific issues raised in the consultation paper**

**Q.1. What immediate measures are required to promote wireline technologies in access networks? What is the cost per line for various wireline technologies and how can this cost be minimized? Please reply separately for each technology.**



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- (i) Exorbitant RoW charges, delay in RoW approvals, difficulty in getting access to private buildings, SDCA wise connectivity between SDCAs and STD calling even in adjacent SDCAs etc are few of the challenges in wireline networks rollout.

**Q2. What are the impediments to the deployment of wireless technologies in the access network? How can these deployments be made faster? Please reply separately for each technology.**

- (i) Following are main impediments in deployment of Next Generation Wireless Technologies in Access network:

- Non- contiguous allocation of spectrum
- Wastage of spectrum for inter operators guard bands
- Significant allocation of IMT Spectrum to Government agencies like Defense
- Delay in notification of spectrum trading and spectrum sharing guidelines and unfavorable M&A guidelines do not support spectrum consolidation.
- Delays in allocation of MW Access spectrum,
- Delays in SACFA clearances
- Delays in obtaining import license and operating licenses from WPC

**Q3. The recommendations of the Authority on Microwave backhaul have been recently released. Are there any other issues which need to be addressed to ensure availability of sufficient Microwave backhaul capacity for the growth of broadband in the country?**

- (i) There is inequitable distribution of MW Access spectrum in 15 GHz band. Few early entrants are holding large number of carriers in 15 GHz band and in most circle additional spectrum in 15 GHz is not available for allocation to new entrants. Considering benefits of 15 GHz MW spectrum in terms of propagation properties and eco system, large holdings in 15 GHz MW spectrum holdings gives incumbent operators an unfair competitive advantage.
- (ii) As spectrum is being administratively allocated it is important to allocate spectrum judiciously and in a fair manner so that there is equitable distribution of spectrum in 15 GHz band. We therefore suggest a cap of max. 2 carriers in 15 GHz band against and excess spectrum already allocated should be withdrawn and re-allocate to other TSPs in the service area.
- (iii) In view of the above we request TRAI for a limited review of its MW spectrum recommendation to an extent mentioned above.

**Q4. The pricing of Domestic Leased Circuits (DLC) have been reviewed in July 2014. Apart from pricing, are there any other issues which can improve availability of DLC?**



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- (i) DLC is an input service for TSPs for providing other retail services. TRAI is requested to allow pass thru on all charges paid to other TSPs for input services else there would be cascading impact of license fee charges.

**Q5. What are the specific reasons that ISPs are proactively not connecting with NIXI? What measures are required so that all ISPs are connected to the NIXI?**

- (i) ISPs not connecting directly with NIXI are due to economic reasons as it entails incurring extra cost (Capex and Opex). Smaller ISPs generally connect at the nearest point, to a higher level ISP who in turn is connected to the NIXI. Due to these reason we do not believe any corrective regulatory measures are needed at this stage.

**Q6. Would the hosting of content within the country help in reduction of the cost of broadband to a subscriber? If yes, what measures are required to encourage content service providers to host content in the data centre situated within India?**

- (ii) Hoisting in India would definitely reduce cost of broadband service. At present most content is hoisted outside India which results in high usage of International bandwidth. The internet bandwidth cost is most significant cost for delivering broadband. If content is hoisted in India, it will not only result in reduction of cost of bandwidth but will also enhance customer experience.
- (iii) To encourage hoisting in India, Government should consider following changes in policy:
  - ✓ Hoisting of content is a non-licensed activity which is undertaken by licensed TSPs and other non-licensed operators. . There is an anomaly that exists amongst the licensed and non-licensed hosting operators. Hosting of content by TSPs requires payment of a license fee at 8% of the AGR, however, the unlicensed hosting operators do not have any license fee. A level playing between licensed and non-licensed operators would ensure more efficient telecom structure and more investment by TSPs.
  - ✓ Hoisting in India has potential to earn large scale foreign exchange. Therefore SFIS benefit earlier available for telecom service provider under Foreign Trade Policy should be revived.

**Q7. Are PSUs ideal choices for implementing the National Optical Fibre Network (NOFN) project?**

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**Q8. Should awarding of EPC turnkey contracts to private sector parties through International Competitive Bidding (ICB) be considered for the NOFN project?**

- 1. **PSUs are not the ideal choices for implementing the NOFN project.** The project should be awarded through a competitive bidding as that is more efficient way of awarding projects. Any project awarded to PSUs without competitive bidding may result in higher costs.



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**Q9. Are there any ways in which infrastructure development costs can be reduced? Is it possible to piggyback on the existing private sector access networks so as to minimize costs in reaching remote rural locations?**

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**Q10. What can the private sector do to reduce delivery costs? Please provide specific examples.**

- (i) Private Sector has laid down fiber in large part of the country. NOFN should not duplicate infrastructure by rolling out additional fiber if same is already available in any area. The fiber already available should be used in NOFN which would expedite rollout and reduce overall cost.
- (ii) Private Sector can contribute in the NOFN project as it can quickly execute projects. Private sector has more efficient in procurement process compared to PSUs which have time consuming procurement process. Thus Private sector would be able to deliver NOFN quickly and in a more efficient manner.

**Q11. What are the major issues in obtaining right of way for laying optical fibre? What are the applicable charges/ constraints imposed by various bodies who grant permission of right of way? In your opinion what is the feasible solution?**

- (i) The key issues related to RoW are as follows:
  - ✓ High one time RoW charges
  - ✓ Recurring charges for RoW being imposed by many municipalities and state Governments.
  - ✓ Aerial fiber not permitted which can be a short term option for speedy deployment
  - ✓ Delays in giving RoW permissions.
- (ii) The feasible Solution is to offer RoW permissions at reasonable charges and the process of granting approvals should be simple and time bound.
- (iii) RoW permissions in rural areas should be granted to private operators at the same terms these are provided to NOFN.
- (iv) Defining utility Corridor : Utility corridor should be earmarked on all NH , SH and MDR as this would ensure minimum Public disturbance while execution of OFC projects and would also help in preventing damage to already laid telecom assets while expansion of these Roads
- (v) NO Upfront payment for laying of OFC along NH / SH / MDR: as the area along these Roads are largely Barren land, Hence No RoW Charges should be levied, at the maximum Govt may take BG.



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- (vi) Railway Permission/ Charges : It should be one time facilitation charges , Currently Land use is being charged based on commercial value with Year on Year escalation
- (vii) Fixation of RoW charges based on category of cities for different type of Roads like Concrete / Bitumen / WBM roads. RoW should be charged equivalent to restoration costs and not on per meter basis.

**Q12. Should the Government consider framing guidelines to mandate compulsory deployment of duct space for fibre/ telecommunications cables and space for telecommunication towers in all major physical infrastructure construction projects such as building or upgrading highways, inner-city metros, railways or sewer networks?**

- (i) Yes, the Government should frame guidelines to mandate compulsory deployment of duct space for fiber/telecom cables in all major building and infrastructure projects. In addition building by-laws should be changed to mandate city developers to have properly demarcated sections within buildings and on rooftops for housing broadband infrastructure and antennae. These areas should have uninterrupted power supply for reliable, always-on services.
- (ii) BTS transmit power should be reviewed for new technologies like 3G & LTE and for rural areas. The Max transmit Power allowed is 4 W, which if increased would help in increasing cell radii and also improve in-building coverage. Higher power levels would be particularly beneficial in rural areas and would help increase coverage and make broadband services more affordable.

**Q13. What are the impediments to the provision of Broadband by Cable operators? Please suggest measures (including policy changes) to be taken for promoting broadband through the cable network.**

- (i) The state of cable networks is not such to provide good quality broadband service. These networks are not ready for Global Standards based Forward and Return path and thus Broadband service is generally not possible on cable networks. Investment capability of Cable Operators to upgrade Network is a major impediment in the provisioning of Broadband services over cable networks. Cable Industry is fragmented and not ready for large scale investment for network up gradation.
- (ii) The new policy of the Government to impose license fee on pure internet services would make it further difficult for Cable Operators to provide Broadband services.

**Q14. What measures are required to reduce the cost and create a proper eco system for deployment of FTTH in the access network?**



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- (i) The main impediment for deployment of FTTH in access network is relating to RoW issues. Our suggestions given in Q.11 for addressing RoW may kindly be considered for creating proper eco system for FTTH access network.

**Q15. Are there any regulatory issues in providing internet facility through Wi-Fi Hotspots? What are the reasons that installation of Wi-Fi hotspots has not picked up in the country? What type of business model needs to be adopted to create more Wi-Fi hotspots?**

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**Q16. What are other spectrum bands which can be unlicensed for usage of Wi-Fi technology or any other technology for provision of broadband?**

- (i) At present business models does not support Wi-Fi based Internet services due to High costs of ROW, internet bandwidth. As data usage increase taken place, there would be more investment in deployment of Wi-Fi hotspots. Due to this reason there seems to be no immediate requirement to unlicensed additional spectrum bands.

**Q17. How much spectrum will be required in the immediate future and in the long term to meet the target of broadband penetration? What initiatives are required to make available the required spectrum?**

- (i) There are 4 main spectrum bands viz. 800 MHz, 900 MHz, 1800 MHz an 2100 MHz for wireless telecommunication. However, DoT has not made available complete spectrum in any of the spectrum band for commercial deployment. Additional spectrum can be carved out through contiguous allocation of spectrum and by migrating non-commercial Government users like defence in alternate spectrum bands.
- (ii) The allocated spectrum is fragmented which cannot be used to deploy next generation broadband technologies. SSTL suggests to urgently carry out harmonization of spectrum in above mentioned bands so that maximum allocation could be made in contiguous frequencies. In 800 MHz band significant part of spectrum is being wasted for inter-operator guard bands. These guard bands can be retrieved in case spectrum is allocated in contiguous frequencies. The harmonization process and allocation of complete spectrum in above mentioned 4 bands would address the spectrum problems to a large extent.
- (iii) India has highest subscriber density, high Concrete Density and very high vegetation density. Due to these reasons each TSP should have at the least 1 carriers of IMT Spectrum of 2x10 MHz Channel width or 2 carriers of 2x5 MHz width.
- (iv) In view of the above it is suggested that harmonization of spectrum should be carried out so that spectrum is allocated in contiguous frequencies.

**Q18. Are there any other spectrum bands apart from the ones mentioned in Chapter-2 to be identified for provision of wireless broadband services?**



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- (i) The immediate need of the industry is harmonization of existing access spectrum bands so that maximum spectrum is available in contiguous frequencies. Harmonization would facilitate early migration to Next Generation Technologies.

**Q19. What are the measures required to encourage Government agencies to surrender spectrum occupied by them in IMT bands?**

- (i) To encourage vacation of spectrum by government agencies from the IMT bands, the Government should fully compensate losses on account of migration from the auction proceeds.

**Q20. What should be the time frame for auctioning the spectrum in 700 MHz band?**

- (i) The auction of 700 MHz spectrum band should be done after:.
- ✓ The band is completely vacated by existing users;
  - ✓ The eco-system for this band is developed globally. At present only 7 operators have commercially launched LTE services in 700 MHz band and all in configuration known as 3GPP band 28((2 x 45 MHz :703-748 MHz for the uplink, 10 MHz guard band, 758-803 MHz for the downlink.

**Q21. Do you agree with the demand side issues discussed in Chapter 5 and Chapter 6? How these issues can be addressed? Please also indicate any other demand side issues which are not covered in the CP.**

**Q22. Please give your comments on any related matter, not covered above.**