Comments on the issues for Consultation on "Delivering Broadband Quickly: What do we need to do?"

Q2. What are the impediments to the deployment of wireless technologies in the access network? How can these deployments be made faster?

The major concern is not the type technology being used, but regulations of the regulator TRAI in this domain i.e the licence distribution and dissimilar situations prevailing in the market along with the high licence fee, which is 8%.

The way TRAI is regulating the operators leads one to belivev that market is being prepared for few exclusive operators.

Notwithstanding that major players are in dominant position in the market, regulations should be as such which allows small operators to blossom with appropriate safeguards.

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?

Apart from licensed user, 200 MHz of frequency band in 5.8 Ghz should be provided in unlicensed band, which is available but not being used. As, in United States, several bands of spectrum are available for unlicensed (or license exempt) communication. These bands are also used for point to point applications such as backhaul. They are governed by FCC Code of Federal Regulations Device power and EIRP are limited in order to alleviate interference concern.

Q5. What are the specific reasons that ISPs are proactively not connecting with NIXI?

The National Internet Exchange of India is the neutral meeting point of the ISPs in India, to facilitate exchange of domestic Internet traffic between the peering ISP members which enables more efficient use of international bandwidth, saving foreign exchange. It also improves the Quality of Services for the customers of member ISPs, by avoiding multiple international hops and thus reducing latency. It is a hidden agenda of the Mobile operators & the few companies who does not want NIXI to flourish, as, if all connectivity is made through NIXI, there Mobile operators would not be in dominant position.

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Q6. Would the hosting of content within the country help in reduction of the cost of broadband to a subscriber?

The hosting by the local subscriber should be made mandatory.

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

PSUs being under control of the Government are most suitable for accomplishment of the project. Yes by all means, only PSU is the ideal choice and should do this work. What has been done by the private operators is not behind the curtains. The ongoing spectrum cases in various courts and strictures passed against them by the courts is not a secret any long.

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

All the PSUs are now doing extremely brilliant work and giving their best in taking the nation forward. After, what surfaces in so many international and national bidding, entity with talent, PSUs are the only reliable body.

B) Is it possible to piggyback on the existing private sector access networks so as to minimize costs in reaching remote rural locations?

TRAI is not creating a level playing field polices (past & present) . It seems that the regulator is loosing sight of the fact that only few players in this game are surviving by availing more & more government grant. BSNL was the first to penetrate deep into the remote areas of the land and not the private operator.

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 our opinion, there is no major issue related with ROW for laying fiber.

<u>All industries pay same percentage of taxes. Telecom is no different.</u>

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?

Fiber optics have a large capacity to carry high speed signals over longer distances without repeaters than other types of cables. The information carrying capacity increases with frequency. Fiber optic cables are much cheaper than coaxial cables. The main difference comes when all the other components of fiber optics add up, such as transmitters, receivers, couplers and connectors. So, the rates should be fixed by TRAI for equal access by any user.

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.

During the Union Budget in July this year, the Indian government had also proposed a pan-India programme called 'Digital India', whose one of the objectives was to ensure Broadband connectivity at village level. This program was expected to provide broadband to 2.5 lakh villages, 400,000 public internet access points, Wi-Fi in 2.5 lakh schools and universities along with public Wi-Fi hotspots for citizens among other things. This program received the cabinet approval last month.

There were also reports of Department of Telecom (DoT) planning to to make Broadband Internet a basic right as part of the new National Broadband Policy in the same month. The same can only be possible and achieved by expansion of broadband through cable network.

Q15. What are the reasons that installation of Wi-Fi hotspots has not picked up in the country?

There's a big disparity between the cost of consumer access points (AP) with business-centric models from leading brands. At the moment, there are two main frequencies bands designed for 802.11 Wi-Fi networks: 2.4GHz and 5GHz. The larger amount of bandwidth available in the 5GHz band makes it the preferred option in business environments, though Wi-Fi clients operating at the 2.4GHz frequency block do have a better range. Most business-grade APs can operate in both frequency bands, while higher-end models can serve Wi-Fi clients in both bands simultaneously. Management and security of Wi-Fi networks is another aspect that businesses need to consider.

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

Existing unlicensed spectrum in 2.4GHz & 5.8 GHz should be enhanced by 200 MHz to accommodate expanding requirements of Wi-Fi in urban and rural areas.

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?

Department of telecommunications is considering the sale of airwaves across most commercially used spectrum bands in the current fiscal year 2014-15. Spectrum in 900, 1800, 2100, 2300 and 2500MHz bands will be put up for sale across the 22 telecom circles in India.

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

The government shall not be suggested to surrender frequency band 698-806 MHz (700 MHz band) on account of the national security interests. The unutilized spectrum in the frequency band 698-806 MHz may be unlicensed and assigned for backhaul applications.

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