

**To,
Shri S.K. Gupta
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TRAI, New Delhi.**

Subject: Comments on TRAI consultation paper on National Broadband Plan dated June 10, 2010.

Response of MTNL on TRAI consultation paper on National Broadband Plan issued vide press release No. 09/2010 on June 10, 2010 is as below:

5.1 What should be done to increase broadband demand? (Reference Para 2.23)

5.1 The following measures are suggested for increase in Broadband demand:

- (i) Affordable prices specially for down loading / uploading volumes and CPEs.
- (ii) Affordable and easily operable user devices with optimum power requirements, customized for Indian climate conditions.
- (iii) Cloud computing and Net PC devices should be promoted so as to make the PCs simple and cheap.
- (iv) Local content interactive applications on internet which improve the quality of life of an individual and community..
- (v) Local content creators and providers should be encouraged to provide Broadband specific content. This content hub may be accessed by all at nominal charges.
- (vi) Government should take initiative to market broadband service as an emerging necessity of modern life. More publicity for e-governance projects to encourage people to use these services through broadband.
- (vii) Ensuring high speed and reliable connections.

5.2 What, according to you, will improve the perceived utility of broadband among the masses? (Reference Para 2.23)

5.2. From the popularity of e-ticketing and e-tax payment sites, it can be seen that the applications on internet which reduce harassment and hassles of common man by reducing or completely eliminating human interfaces and thus reducing corruption and increasing transparency have become popular and increased utility of broadband. More and more Government to citizen transactions should be put on internet. The other application which are making broadband useful for masses are those which provide choices to them. On line shopping should be promoted and also regulated to instill confidence in users in them. The applications like e-

education and e-medicine should be promoted through incentive offered to educational and medical institutes.

Web conferencing kiosks should be developed, logging to which should be possible through fingerprints or other non text interfaces. The migrants in cities shall be able to have conferencing with their families living far away through these kiosks. Other such applications and dedicated platforms should be developed.

5.3 What measures should be taken to enhance the availability of useful applications for broadband? (Reference Para 2.23)

5.3 Efforts should be made to encourage development of local and relevant content on the internet which should be hosted on local servers to reduce the international bandwidth requirement. Student and development communities should be encouraged to develop such contents. More and more government data and records should be digitalized and put into the net.

5.4 How can broadband be made more consumer friendly especially to those having limited knowledge of English and computer? (Reference Para 2.23)

5.4 The contents should be developed in local language. More and more graphical user interfaces and icons should be used. Options should be there to interact with voice or touch interfaces. More user friendly devices should be developed.

5.5 Do you agree with projected broadband growth pattern and futuristic bandwidth requirements? (Reference Para 2.35)

5.5 Yes we agree.

5.6 Do you agree that existing telecom infrastructure is inadequate to support broadband demand? If so what actions has to be taken to create an infrastructure capable to support futuristic broadband? (Reference Para 2.35)

5.6 The existing telecom infrastructure is inadequate to support broadband demand. A high capacity fibre back-bone along with mix and match of various wireless and wire-line access technologies are required to support futuristic broadband. Further building laws should be modified so that the all new buildings have the requisite infrastructure available when the building is ready for possession. This will not only reduce the broadband provisioning time frame but also will enable the broadband service providers to provide high speed broadband services. Therefore, provision of infrastructure as mentioned below to provide broadband in future in all multiple dwelling units/buildings should be ensured by concerned Municipal authorities:

- Builders should provide one room as communication room in the building.

- Duct should be provided to lay 6-fibre Optical Fibre Cable from road to the communication room.
- Fibre should be laid from communication room to each flat house with flexibility to reach every room in the house. Also duct should be provided between the communication room to each house.

5.7 What network topology do you perceive to support high speed broadband using evolving wireless technologies? (Reference Para 3.22)

5.7 High capacity fibre backbone should be developed along the national highways. These back bones should be connected with the city and town based high capacity ISP networks. Connectivity to villages should be provided by laying fibre along village roads. The cluster of village which are very near to each other can be served by BWA. BWA can also be used to serve inaccessible and difficult Terrance. In the city pocket where fibre laying is not permitted or not possible BWA should be used. The servers of NIXI should be located in multiple locations in the country and services of other public sector utilities like MTNL – STPL should be utilized for web hosting.

5.8 What actions are required to ensure optimal utilization of existing copper network used to provide wireline telephone connections? (Reference Para 3.22)

5.8 The service providers should be encouraged to use newer technologies like VDSL2 and improved ADSL2+ technologies on the existing copper network. However in future, the role of copper for broadband connectivity shall be limited since most of the usable copper has already been utilized for providing these connections and broadband technologies on copper may not support future bandwidth hungry applications.

5.9 Do you see prominent role for fibre based technologies in access network in providing high speed broadband in next 5 years? What should be done to encourage such optical fibre to facilitate high speed broadband penetration? (Reference Para 3.22)

5.9 Role of optical fibre shall be limited in access network in next 5 years for providing high speed broadband due to high cost of laying and end equipments. However optical fibre shall be useful in providing broadband in new residential and commercial buildings. For this the building code may be modified making it mandatory for the builders to provision optical fibre in the building during constructions. The implementation of fibre in access can be done in phases. In first phase fiber to the curb may be implemented and in second phase fiber to the home may be done.

5.10 What changes do you perceive in existing licensing and regulatory framework to encourage Cable TV operators to upgrade their networks to provide broadband? (Reference Para 3.22)

5.10 No comments.

5.11 Is non-availability of optical fibre from districts/cities to villages one of the bottlenecks for effective backhaul connectivity and impacts roll out of broadband services in rural areas? (Reference Para 3.39)

5.11 Yes

5.12 If so, is there a need to create national optical fibre network extending upto villages? (Reference Para 3.39)

5.12 Yes

5.13 In order to create National optical fibre core network extending upto villages, do you think a specialized agency can leverage on various government schemes as discussed in para B? (Reference Para 3.39)

5.13 In place of creating a new agency, the public sector organizations like BSNL / MTNL, PGCIL, RAILTEL, GAIL etc., should be asked to pool in their optical fibre resources for creation of national fibre back bone. These organizations may create an umbrella agency among themselves which shall coordinate with govt. and other agencies. The funds may be allocated from USO fund for upgradation and expansion of the backbone created by such pooling. Further, as suggested in para 3.34, the resources of MNREGS may be utilized for the laying of National Optical Fibre core network.

5.14 Among the various options discussed in Para 3.35 to 3.37, what framework do you suggest for National Fibre Agency for creating optical fibre network extending upto village level and why? (Reference Para 3.39)

5.14 The frame work has been suggested in 5.13 above. This frame work shall ensure optimum utilization of already laid fibre network in the interest of the country. This shall also ensure that the network laid by the public sector and entities is not wasted and a duplicate infrastructure is not created. This shall also ensure the faster roll out of national back bone.

5.15 What precautions should be taken while planning and executing such optical fibre network extending upto villages so that such networks can be used as national resource in future? What is suitable time frame to rollout such project? (Reference Para 3.39)

5.15 The network should be planned keeping in view the geographical diversities of the country so that it remains weather and future proof. The maintenance of the network should be easy. The efforts should be made to cover the entire country

by optical fibre however wherever not possible other technologies like BWA and satellite communications should be used. The time frame for roll out can be divided in various phases and the roll out should complete in next five years.

5.16 Is there a need to define fixed and mobile broadband separately? If yes, what should be important considerations for finalizing new definitions? (Reference Para 4.18)

5.16 There is no need to define fixed and mobile broadband separately. The definition should mainly focus on defining the speed of down linking and uplinking for broadband. However, the definition should be technology neutral. The technology specific term like “Always On” may be deleted from the existing definition.

5.17 Is present broadband definition too conservative to support bandwidth intensive applications? If so, what should be the minimum speed of broadband connection? (Reference Para 4.18)

5.17 Already responded in 5.16.

5.18 What specific steps do you feel will ease grant of speedy ROW permission and ensure availability of ROW at affordable cost? (Reference Para 4.30)

5.18 As mentioned in this paper, the roll out of broadband shall have positive impact on GDP of the country, the same should be declared as priority and special clearances within a given time frame should be given for RoW at discounted rates. The local authorities should be enlightened with the advantage of broadband assess so that they shall grant speedy permission. Telecom may be treated as an essential service instead of commercial service and accordingly all the concessions and priorities which have been given to power sector should also be extended to telecom sector.

Further, the following should be considered for streamlining RoW procedures:

- There should be cost based charges for RoW and service provider should not be squeezed by claims of exorbitant amounts of reinstatement charges. Ideally, State Government should keep RoW charges to as minimum as possible.
- Priority should be given for laying cables in existing ducts meant for Broadband provision.
- Municipal authorities should be directed to give permission on priority for digging to lay the cables meant for Broadband provision to achieve the targets set by the Government.
- Local authorities should not have profit motive in RoW as it is adversely affecting the development of Broadband infrastructure.

5.19 Does the broadband sector lack competition? If so, how can competition be enhanced in broadband sector? (Reference Para 4.42)

- 5.19 All the major telecom service providers are providing broadband services. In addition there are a number of ISPs. With successful auctioning of 3G & BWA spectrum more service providers shall be providing broadband service. So there is sufficient competition in this sector. Impact on tariff due to competition.
- 5.20 Do you think high broadband usage charge is hindrance in growth of broadband? If yes, what steps do you suggest to make it more affordable? (Reference Para 4.42)**
- 5.20 Yes, high bandwidth usage charges are hindrance in growth of broadband. The services can be made more affordable by reducing the prices of international bandwidth through regulatory mechanism and by increasing the number of international bandwidth providers. Domestic web hosting sites should be encouraged and developed to reduce international bandwidth demand and consequently the cost of access. In addition, flat and nominal charges which are not related to usage should be charged for downloading and uploading from the domestic servers. The prices of equipments may also be reduced through discount on taxes and duties.
- 5.21 Do you think simple and flat monthly broadband tariff plans will enhance broadband acceptability and usage? (Reference Para 4.42)**
- 5.21 Yes, MTNL is already providing unlimited usage plan at flat rates. Further, if the conditions mentioned in 5.20 above are met this will bring down the tariffs, which in turn will increase the broadband penetration.
- 5.22 Should broadband tariff be regulated in view of low competition in this sector as present? (Reference Para 4.42)**
- 5.22 No, the competition in the market will itself regulate the broadband tariffs.
- 5.23 What should be the basis for calculation of tariff for broadband, if it is to be regulated? (Reference Para 4.42)**
- 5.23 No comments in view of reply at 5.22.
- 5.24 How can utilization of International Internet bandwidth be made more efficient in present situation? (Reference Para 4.42)**
- 5.24 More and more websites should be encouraged to be hosted in India. The financial and technical aspects of promotion of NIXI as a preferred exchange may be looked into.
- 5.25 How can use of domestic and international internet bandwidth be segregated? Will it have direct impact on broadband affordability? If so, quantify the likely impact. (Reference Para 4.42)**

5.25 As already suggested in 5.20, the nominal charges independent of usage for domestic bandwidth shall ensure fall in the subscriber tariffs and shall hence improve the broadband affordability.

5.26 What steps should be taken to bring down the cost of international internet bandwidth in India?(Reference Para 4.48)

5.26 Kindly refer reply at 5.20.

5.27 How can competition be enhanced in the International bandwidth sector? (Reference Para 4.48)

The Government has reduced the entry fees for ILD licenses in the year 2006 which has resulted in sufficient competition in this area and reduction in international bandwidth rates. Further, the charges for the download/ upload volume from domestic servers should be nominal, flat and independent of volume of usage.

5.27 5.28 QoS of broadband, availability of bandwidth, adherence to given contention ratio, affordability, availability and spread are some intricately linked parameters. In your opinion what should be done to ensure good quality broadband to subscribers? (Reference Para 4.59)

5.28 TRAI has already benchmarked the contention ratio for broadband services. The affordability, availability and spread of broadband can be ensured through the measures mentioned in the replies to earlier questions.

5.29 Do you think that bad quality of broadband connection is impacting the performance of bandwidth hungry applications and hence crippling the broadband growth? If so, please suggest remedial actions. (Reference Para 4.59)

5.29 The performance can be improved by upgrading the capacity and technology of the networks.

5.30 Is there a need to define new/redefine existing quality of service parameters considering future bandwidth hungry applications, time sensitivity of applications and user expectation? What should be such parameters including their suggestive value and should such parameters be mandated? (Reference Para 4.59)

5.30 The first the focus should be on increasing the penetration of broadband and once the targets are achieved than only the focus should be shifted to stringent parameters for bandwidth hungry applications. Till that time the parameters should not be mandated and should be market driven.

5.31 What measures do you propose to make Customer Premises Equipment affordable for common masses? Elaborate your reply giving various options. (Reference Para 4.64)

- 5.31 The customer premises equipment can be made affordable through following measures:
- (1) Financial support by government for development of low cost equipment with bare minimum features.
 - (2) Tax exemptions
 - (3) Development of indigenous chips for these devices.
 - (4) Governmental financial support for manufacturing and distribution.
- 5.32 What measures are required to encourage development of content in Indian vernacular languages? (Reference Para 4.68)**
- 5.32 The e-governance projects should be implemented in vernacular languages. The vernacular content should be hosted at discounted rates on web hosting sites within the country. However, these steps shall be effective only if the download/upload volume based usage charges from domestic servers are rationalized as suggested earlier. Further, the incentives should be given to develop content in vernacular language.
- 5.33 Do you perceive need for any regulatory or licensing change to boost broadband penetration? (Reference Para 4.71)**
- 5.33 Government/ regulator should issue the guidelines related to ROW so that the speedy ROW permissions are given to telecom operators for providing broadband services. The telecom services should be treated as essential services as these have become the integral part of day to day life. Further, the local authorities should charge nominal charges for ROW.
- 5.34 Are there any specific competition and market related issues that are hindering growth of broadband? (Reference Para 4.71)**
- 5.34 No
- 5.35 What other fiscal/non-fiscal measures should be considered to boost broadband penetration? (Reference Para 4.71)**
- 5.35 No comments.

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