COMMENTS ON QUESTIONS RAISED IN THE CONSULTATION PAPER

CHAPTER 2: Broadband – Demand & Supply

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

and

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

Response;

In our view, Broadband services could act as a catalyst to arrest the shrinking number of fixed lines in the country. The government should encourage the penetration of broadband through community based and shared access to the broadband content. Villages and rural areas should be encouraged to use community oriented applications on the broadband.

Interactive applications and media over broadband like IPTV should be popularized and used to bring such applications on the broadband and popularize its usage.

Focus and attention should be given by the government to popularize and increase the penetration of fiber to the home and fiber to the enterprise.

The following factors would definitely improve the perceived utility of broadband among the masses and help increase the demand:
1. Awareness about the broadband based net services. This will require the use of mass media and NGOs with government funding support.
2. Affordability and Low Tariff for the broadband connection.
3. Change in the regime by operators from "Pay what you use" to "Fixed monthly rental unlimited usage"
4. Low CPE cost for accessing broadband - uniform duty structure and indigenous manufacturing must be encouraged to achieve this goal.
5. Promote use of intelligent terminals.
6. Content should be produced and made available in Local languages.
7. Sustainable Revenue sharing model which can benefit both the content producers, the operators as well as the consumers.
8. Always on Connectivity to the internet for wire line media only.
9. Uninterrupted power supply to make the services available when required.
10. Interactive IPTV usages for e-Governance, e-Education, e-Agro, e-Commerce etc.

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

Response;

Usefulness of applications for broadband is dependent on region, level of literacy, nature of livelihood activities, demographics, etc. No single application can be regarded as useful across the entire nation. Even in entertainment area, language and tastes matter. The use of IPTV technology can certainly create a base on which other applications can be attracted though applications of banking and e-governance nature can hold on their own. The steps which could be taken to promote the availability of applications include:

1. Participation of NGOs for identification of the nature of application which is likely to become popular in a given area
2. Government financial support and tax incentives for development of applications which will not easily have a business case
3. Use of local language and graphics instead of English
4. Easy access to data bases of interest in a given region with governments administrative and financial support.

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

Response;
1. More and more content should be created in Video format and that too in local language in order to remove the barrier of English and computer literacy.
2. IPTV can then be used to bring interactivity to this content and video content can bridge the gap.

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)

Response;
Yes. We do see a prominent role of fiber based technologies in access network in providing high speed broadband in the medium and long term. In order to facilitate the high speed broadband penetration, the fiber networks of the various agencies and operators in the country should be consolidated to make a huge network. Backhaul network upgradation and strengthening by pooling of resources

and existing media as well as financial support for further spread of OFC network, is urgently required.

There should be sufficient stress paid to up gradation of Cable TV Network for making bidirectional communication. The cable TV network is the largest in the country (although fragmented). It reaches the largest masses. If financial incentive is made available to make it bidirectional in a given time frame (phased manner), this cable network can be used in conjunction with the fiber network to make high speed broadband a reality.

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)

Response;
1. Laws and regulations controlling the "Right of Way" should be simplified for speedy connectivity to homes and enterprises. As of today, "right of way" clearances and fees are the biggest hurdle in the penetration of fiber and wired broadband in the country.
2. Infrastructure status to be provided to the Cable TV Network to make cable broadband a successful business model in the country.
3. Increase in the FDI Limit for Cable network to attract funding.

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)

Response;
Yes, non-availability of optical fiber from districts/ cities to villages is one of the major bottlenecks for effective backhaul connectivity and impacts rollout of broadband services in rural areas.

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

Response;
Yes, there is a need to create national optical fiber network extending upto villages.

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)

and

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)

Response;
Yes, there is need for specialize agency to deal with other agencies. The international best practices may be adopted for getting in to the work. Clear demarcation of the funds from Govt. scheme and USO should be taken for funding such a national optical fiber network. The key aspect that needs attention for such an agency is the operational aspect i.e. ensuring adequate, equitable and easy availability of backhaul bandwidth to all operators wishing to utilize the national backbone. This will require representation of the operators in the agency in a manner which gives them voice. The aspect of setting up of the network has to be left to individual operators for which financial and ROW related assistance is provided by the government.

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)

The key to judging the success of such a network as a national resource to promote broadband access will be the ability of the network to offer adequate and reasonably priced access to bandwidth in the access as well as backhaul network to all operators in an equitable manner. In short, the success of the network as a national resource will be judged by the creation of a competitive environment for broadband access available at a reasonable input price to all operators. The success aspect is therefore linked more with the streamlined operational aspect more than the mere creation of the network.

CHAPTER 4: Regulatory Challenges and Future Approach

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)

and

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)

Most of the commonly used applications which are adequate for boosting the economy through enhanced and more efficient commercial activity and e-

governance can be met adequately with a 256 kbps broadband connection. This speed requirement can not be met with dial up fixed line PSTN connections but can be easily met by dial up wireless connections using present day wireless technologies. Therefore, while retaining this speed in the definition for broadband, the requirement of 'always on' in the present definition need only be retained in the fixed wireline case. Thus, there should be two separate definitions for broadband – one for fixed wireline and another for wireless while the speed to define broadband should remain the same viz. 256 kbps. This classification and minimum speed will not interfere in the provisioning of higher speeds needed for video based applications such as IPTV.

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)

This is a major factor in the growth of advanced broadband services including IPTV through the laying of optic fibre cables in the access network. Currently, the states and municipalities are treating telecom services as a milch cow putting arbitrarily high cess. These local authorities also create excessive clearance requirements before granting permission to lay underground cables. In short, the eco system is not right to support the growth of broadband. There is therefore a need to have a mutually arrived at set of guidelines including reasonable tariffs accepted as a legally mandated set for ROW. Without this basic step, it is most unlikely that a boost to broadband spread can be provided both from financial (good business case to incentivize private operators) as well as infrastructure development points of view.

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

There is no doubt that there is hardly any competition in the broadband sector. This is evident from the fact that the 5 or 6 operators account for most of the broadband connections. This lack of competition is because of two reasons:
- o Access network is controlled by UAS Licencees and there are no regulations to control the monopolistic behaviour of these operators.
- o ISPs are not permitted to offer all services which IP based networks are capable of – in particular, VoIP services.

There is need for the government to accept the existing TRAI recommendations for Internet Telephony permitting ISPs to offer this service and introduce Local Loop Unbundling and regulatory measures for equitable and reasonably priced access to wholesale bandwidth to all service providers in both Access and Backhaul networks.

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)

and

5.21 Do you think simple and flat monthly broadband tariff plans will enhance broadband acceptability and usage? (Reference Para 4.42)

and

5.22 Should broadband tariff be regulated in view of low competition in this sector as present? (Reference Para 4.42)

and

5.23 What should be the basis for calculation of tariff for broadband, if it is to be regulated? (Reference Para 4.42)

Due to lack of genuine competition and high backhaul costs, broadband usage charges are high which clearly is a hindrance to its popular adoption. Flat broadband tariff plans determined by genuine competition will help. However, these need not be regulated by TRAI. Instead, the market in a genuine competitive mode should determine these. If in the short run a subsidy is felt necessary for rural areas, it should be adopted as a policy matter.

5.24 How can utilization of International Internet bandwidth be made more efficient in present situation? (Reference Para 4.42)

and

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)

and

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

and

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

No comments are being offered at this time.

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)

and

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)

and

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)

and

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)

CPE cost constitutes a major entry barrier for increased demand for broadband services. One possible method to reduce these costs would be to promote the use of intelligent terminals. Given adequate demand and adequate supplies, the price of the basic CPE can be reduced. To encourage spending on laptops or notebooks or intelligent terminals i.e. a CPE capable of being used for broadband access, income tax relief could be considered by the government.

5.32 What measures are required to encourage development of content in Indian vernacular languages? (Reference Para 4.68)

The issue really is how to popularize the use of Internet based applications in an environment of illiteracy or non familiarity with English. Applications developed

on the basis of user friendly graphics would go a long way to meet this requirement. Use of vernacular language will help since familiarity with English in rural areas is low. Rather than only attempting transliteration based on appropriate software, encouragement to local entrepreneurs to add value to such application programmes in vernacular through fiscal incentives including local and central tax benefits will be more desirable.

5.33 Do you perceive need for any regulatory or licensing change to boost broadband penetration? (Reference Para 4.71)

                              and

5.34 Are there any specific competition and market related issues that are hindering growth of broadband? (Reference Para 4.71)

                              and

5.35 What other fiscal/non-fiscal measures should be considered to boost broadband penetration? (Reference Para 4.71)

No comments are offered at this stage.