Comments on TRAI Consultation Paper on National Broadband Plan

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Spectranet welcomes this TRAI timely initiative with objective of enhancing Broadband penetration in India. We are giving suggestions as below to some of the questions posed by TRAI Consultation paper.

CHAPTER 2: Broadband – Demand & Supply

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

We suggest to take up specific initiatives for increased awareness about the benefits of broadband based Net services through the mass media (including TV and Cinema screens) as also demonstration kiosks at shopping centres and shopping markets.

And further to promote offering bundled voice, video and data services by all operators irrespective of type of license thereby encouraging competition based tariffs for broadband while ensuring business case for all operators.

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

Through Government sponsored and supported training (computer literacy) and awareness programmes to bring home the advantages of broadband through practical demonstration and hands on experience.

And greater participation of governments at Centre, State and Local Self Government levels in e-governance through compulsory offering of all government services for the citizen.

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

TRAI should promote promote local entrepreneurs who has emotional attachment and competitive spirit sometime to even work with minmal profits so that services in his location are as good as anywhere else.

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

- Local entrepreneurs would help.

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

There is need to divide bandwidth requirements if 3 segments
Local, NLD and ILD. This distinction is necessary. It would clearly split cost accordingly and would help focus reduce cost as well as bring Content close to the users.

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)

- There is urgent need to supplement NLD infrastructure and supported by the Government.
- For Local access, any capacity created should be allowed to be shared among IP1/ISP/UASL/ Local cable operators and other service providers. All service providers to offer whole sale prices to other service providers.
- There has to be a plan to aggresively promote **Content Hosting** in the country such that need for International bandwidth reduces.

CHAPTER 3: National Broadband Network

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

- Mandate all service providers to share infrastructure on swap basis and whole sale price offer. All infrastructure whether local loop copper, optical fiber and active equipment should be allowed to be shared to achieve greater competitive environment.

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)

- Mandate all service providers to share infrastructure on swap basis and whole sale price offer. All infrastructure whether local loop copper, optical fiber and active equipment should be allowed to be shared to achieve greater competitive environment.

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)

- Sharing with ISPs would be very helpful. Regulation should facilitate this.

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)

- Government has to make All NLD capacity available at an affordable price.

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

- 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)

- Neutral and Operator Independent agency.

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)

- Yes. While the day to day operations need to be controlled by a Neutral national agency. It has to be mostly funded by the government or PPP mode.
- Agency should take the stock of all existing network by the various operators including incumbents across the country. Extra capacity available with Service Providers in different states/region shall be parked with this Agency. Capacity should be made available to all the Service Providers on fair and equitable basis even to their own companies which have provided their spare capacity to the Agency. Agency should also be tasked with the enhancement of such capacities for unleashing the potential.

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)

- There are two issues for consideration in the definition of broadband are the aspect of an 'always on' connectivity and the minimum speed which qualifies a connection to be regarded as a broadband connection. For wireless a separated category of definition should be there such that peak and non peak performance should be specified.

- The second issue of minimum speed is more difficult to handle. Fixed networks based on optic fibre technology are capable of speeds which can not be matched by wireless connections. There is therefore need to have separate definitions for fixed and mobile broadband.

- Since 256 kbps minimum speed is adequate for several common applications, there is no need to revise this value but the networks have to be planned with high bandwidth usage particularly because as the perception of utility of broadband increases, the number of much higher bandwidth connections will increase.

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 clear from the facts that despite being permitted to offer VoIP services, none of the UASL operators are offering this service. Lack of competition is also 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:
    - Access network is controlled by UAS Licencees and there are no regulations to control the monopolistic behaviour of these operators.
    - ISPs are not permitted to offer all services which IP based networks are capable of – in particular, VoIP services.

- Mandate all service providers to share infrastructure on swap basis and whole sale price offer. All infrastructure whether local loop copper, optical fiber and active equipment should be allowed to be shared to achieve greater competitive environment.

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)

- There is lack of genuine competition and high access and backhaul costs.
- TRAI should facilitate competition and not regulate the prices.

5.24 How can utilization of International Internet bandwidth be

made more efficient in present situation? (Reference Para 4.42)

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)

There should be 2 classes of services , latency (2 way) of less than 100 msec and lass than 400 msec. This would put focus and create awareness of measuring ratio of domestic to international bandwidth.

5.26 What steps should be taken to bring down the cost of international internet bandwidth in India? (Reference Para 4.48)
5.27 How can competition be enhanced in the International bandwidth sector? (Reference Para 4.48)

More competition has to be facilitated. Already number of ILD licenses are now in place. But availability of international bandwidth is still not available from many of them.

The reason is very clear. There is uncompetitive price charged by the incumbent Gateway licensees and NLD capacity holders. For example

STM1 price charged by the entity holding all licenses delivered at Delhi; Rs 35 to 40 Lacs per year.

When new ILD capacity wants to crate capacity say STM1 , it is given quote of Rs 5 to 7 lacs per year for gateway access charge and Rs 30 to 50 Lacs for NLD capacity.

On top of it, ILD needs to pay for international capacity and internet port charge.

Thus there is clear need to separation of cost elements and wholesale price to be made available to ILDs . If so, competition would emerge.

Further, Local hosting should be promoted aggressively such that the need for International carriage reduces.

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)
5.29 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)

5.30 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)

- Quality of Experience (QoE) needs to be established. QoE is a measure of the overall acceptability of an application or sevice, as perceived by the user.

- ITU in Y.1541 recognises 7 classes of service. While it is still very early to define all 7 classes of services, we should introduce two classes of service. Class A ; end to end latency (2 way) less than 100 msec and Class B ; end to end latency (2 way) less than 400 msec

We want to give here an example of effect of latency on download time

a) FILE SIZE ; MP3 song of 5 minutes duration; 10 MByte approx.
   1.5hour duration Video MPEG4 ; 1100 MByte approx.
   1.5hour duration Video HD ; 5 GByte approx.

b) Latency effect on download (download speed ; TCP window/latency)

   - 400 msec ; best download 1 Mb (125 KByte/s), 1100 MB file would need approx 145 minutes to download.

   - 40 msec : best download 10 Mb (1.25 MByte/s), same 1100 MB file would need approx 14.5 (one tenth) minutes to download.

Hence it is very important for provision to recognize importance of latency in QoE.

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

- We should empower local entrepreneurs and facilitate him with a business plan. This local entrepreneur should not be saddled with onerous regulatory and license conditions.

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

- ISPs should be allowed unrestricted VoIP services.

- We should empower local entrepreneurs such that he is not saddled with onerous regulatory and license conditions.

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

Resources are not available on retail minus prices for ISPs from UASL/NLD/ILD service providers. Such Integrated players are offering to the end customer bundled price which is lower than even access price quote to ISPs.

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

Fiscal Measures

Broadband services should be exempted from Service Tax and AGR .

Non-fiscal measurers

Remove entry barriers faced by ISPs in providing all data and Internet based services including internet telephony.

Ensure fair competition between telecom access providers and ISPs by mandating that telecom operators undertake effective functional separation of their ISP business from their telephony business. Mandate access service providers sell bandwidth and leased lines to ISPs at non discriminatory wholesale prices. Retail minus formula may be adopted while offering such services to ISPs.

USO fund should be available to ISPs who wish to provide Internet/Broadband Services in the rural/semi-rural areas.

While making or amending or streamlining any policy / regulation Govt must ensure that interest of existing ISPs should not be affected.