

Recommendations for National Broadband Plan in response to Telecom Regulatory Authority of India (TRAI) seeking comments from stakeholders on a national broadband plan (NBP)

Recommendations for Chapter 2 only [Broadband – Demand & Supply]

Introduction:

Broadband is the great wireless infrastructure challenge of this century and broadband in India is no exception. Like electricity a century ago, broadband is an underpinning foundation for economic development, employment creation, universal competitiveness and an enhanced way of life.

Availability of ubiquitous broadband enables entire new industry and unlocks vast new possibilities for existing ones. Broadband is changing how we educate children, deliver health care, manage energy, ensure public safety, engage government, and access, organize and disseminate knowledge. The number of Indians who have internet access has grown from eight million in 2006 to nearly 15 million in early 2009. Increasingly capable fixed and mobile networks allow Indian consumers to access a growing number of internet applications and helping them in transforming their life.

It is unfortunate that broadband in India is not all it needs to be. Less than 5 % of the household population in India has true broadband connection in country and more than a billion people has limitation in accessing broadband. This in contrast with the number of subscribers who

have voice connection. Broadband in India is catching up but behind many developing countries and developed nations.

The situation of broadband has worsened further with continual delay in allocation of 3G and broadband spectrum in country. Government of India has the responsibility to design policies which will ensure fair competition for consumer welfare, efficient allocation of spectrum, right of way to ensure network availability and reform laws, policies, standards and incentives to maximize the benefits of broadband in sectors government influences significantly, such as public education, health care and government operations.

Nation Broadband Initiative:

The press release issued by the Telecom Regulatory Authority of India (Trai) on 10 June seeking comments from stakeholders on a national broadband plan (NBP) has generated a lot of enthusiasm for more than one reason. The move could mark a milestone in India's quest for information and communication technology (ICT) for digital equality, if sound thinking and real action can be achieved.

The Trai move—triggered by the department of telecom's (DoT) search for broadband solutions—is worth a consideration. A specific feature of this is DoT seeking Trai's recommendations on the need to review the definition of broadband connectivity in view of future growth in Internet/broadband driven by wireless technologies. No doubt, this calls for the development of a robust national broadband infrastructure to reach out to the villages.

The NBP could be looked at through this backdrop:

Broadband penetration in India is just 0.74%, while tele-density stands at 52.74%, despite at least 100 telecom service providers offering broadband services. Net broadband addition per month is 0.1-0.2 million, in contrast to approximately 19 million mobile phone connections per month. In this context, the broadband penetration in the country is likely to touch 214 million by 2014, to support which the industry expects government to invest around Rs 17,000 crore

laying fibre cables, according to Confederation of Indian Industry and IMRB Broadband Report 2009.

Though 70% of Indians live in rural areas, broadband facility is limited to the major cities. Out of nine million broadband subscribers at the end of April, just 6% are in rural areas. This is attributed to lack of transmission media connectivity channels at the village level.

Availability of broadband services at affordable tariffs is critical for the development of rural areas to provide access to vast information, facilitate civic services delivery, increase economic growth rate, power employment avenues and increase productivity.

An option being explored is taking optical fibre to 375,552 villages having a population of 500-plus. The funding could be sourced from the Mahatma Gandhi National Rural Employment Guarantee Scheme for non-skilled work and from the Universal Services Obligation Fund for material and equipment cost. This optical-fibre network would be linked with the backbones of various service providers and users would then be able to get broadband with types of wired and wireless solutions.

Many options can be weighed to find a wireless solution. Last-mile infrastructure can be encouraged for Internet penetration through wireless local loop and wireless mesh networks. In fact, a policy such as National Wireless Connectivity Project can be considered to reach out to distant areas through wireless technology—involving identified stakeholders to roll out the programme. This can be then integrated with a national m-governance platform—initiating steps for basic information services in select departments and ministries towards achieving digital equality goals for rural empowerment.

Issues for consultation:

Chapter 2: Broadband- Demand and Supply

5.1. What should be done to increase broadband demand?

- i. Using various mobile device networks, wireless clusters could be developed in rural areas, which then connected to mobile phones can deliver information and facilitate civic services delivery.
- ii. The benefit of wireless networks is not to be missed. It is an inexpensive and rapid way to be connected to the Internet in countries where the telecom infrastructure is poor, as in most developing nations.
- iii. The principal challenges in delivering broadband to masses are excessively high right way charges, fragmented cable operators, non cooperation in last mile copper unbundling and low data ARPU. The total amount of spectrum allocated by regulators for broadband application in country was too little to support proliferation of broadband services.
- iv. The new 3G/BWA spectrum and the advent WiMAX and LTE based 4G technologies will play crucial role in shaping broadband industry in India. Our analysis in this paper exemplifies the competence of 4G technologies like WiMAX and LTE to deliver broadband in most competitive manner. 4G technologies has the potential to bridge the digital data gap in India and will play very similar role what 2G technologies played in Voice.

- v. A need for strong national broadband policy is felt to foster social and economic development in India and accomplish broadband leadership.
- vi. A great policy push is a must now. Making broadband mandatory as a legislative measure for IC service providers can be thought of. All existing infrastructure networks can be pooled into a parallel IC channel networks through such measure

5.2. What, according to you, will improve the perceived utility of broadband among the masses?

- i. A National plan to connect all networked institutions and agencies
- ii. There are at least 2,000 industrial training institutes with 373,000 seats and 2,850 industrial training centres with another 305,000 in India. They provide post-school technical training. These institutes need to be connected with broadband.
- iii. There are also at least 120,000 recognized educational institutions and at least 50% are in rural areas. There are at least 252,000 village councils in India.
- iv. The nationwide Nehru Yuva Kendra Sangathan caters to the needs of at least eight million rural youth in the age group of 13-35 years. It has 2,551 youth development centres across the country.
- v. There is need of a specific broadband plan roll out for the above.

i. 5.3. What measures should be taken to enhance the availability of useful applications for broadband?

- i. Adequate and need based content and applications must. The digital content that can be delivered through broadband covers a wide range of applications including: Societal Applications; Commercial Applications
- ii. Content and services readiness assessment and Initiatives
- iii. Setting up of a nodal Central Digital Content & Services agency that would coordinate and ensure coherence of all the initiatives and programs

- iv. Involving nodal private / NGO sector players may play some role in creating content for the commercially viable segments and even some select niche users
- v. The Government has a critical role here with regard to direct investment in content and services domain to enhance availability of useful applications for broadband
- vi. Chart a national digital content strategy and roadmap
- vii. Link up all Government establishments to public broadband networks as they are rolled out
- viii. Promote investment from all private sector participants
- ix. Develop standards and put in place mechanisms for resolution of all legal issues
- x. Promote awareness and acceptance through media campaigns of successful pilot programs
- xi. e-governance services can be delivered using the public broadband network and the resources thus freed up can be made available for alternate developmental needs of the country.
- xii. Computerization of all relevant operations within the Government so as to provide a seamless online experience to citizens once the operations are e-enabled. Re-engineering of internal Government processes and the interface points of these processes with the public
- xiii. E-enabling the applications and content so that the public may be able to access them and commence transactions at kiosks
- xiv. Need to maintain video – audio services that do not require the user to interact with only text based content / applications.
- xv. Encourage public – private participation in funding of initiatives
- xvi. Promotion of *application services*. Primarily three applications services are expected to generate demand over broadband. They are: Online retail, Online finance, Video conferencing

5.4. How can broadband be made more consumers friendly especially to those having limited knowledge of English and computer?

- i. More availability of content and services in local languages

- ii. Knowledge enhancement and skill development
- iii. ICT mediums made amenable to information, content sharing and exchange in audiovisual mode like the world is experiencing today through various social media platforms, such as Facebook and YouTube.
- iv. Connecting with broadband all networks of rural institutions

5.5. Do you agree with projected broadband growth pattern and futuristic bandwidth requirements?

The projected broadband growth pattern could be more than estimated. The demand and supply estimates for bandwidth requirements could vary and gaps will be more visible due to less than actual of rural needs.

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?

Yes, existing telecom infrastructure is not adequate.

- i. Ensuring efficient allocation and use of government-owned assets Spectrum. More efficient allocation and assignment of spectrum will reduce deployment costs, drive investment and benefit consumers through better performance and lower prices. As wireless will become the predominant way of broadband delivery in country and hence the availability of adequate spectrum is even more important for India.
- ii. Infrastructure such as poles, conduits, rooftops and rights-of-way play an important role in the economics of broadband networks. Ensuring service providers can access these resources efficiently and at fair prices can drive upgrades and facilitates competitive entry.

- iii. The current right of way chargers are exorbitantly high. If government can maintain low ROW charges for broadband networks, it will have direct impact on delivery of broadband services and will allow delivery at affordable levels.
- iv. Facilitate efficient new joint infrastructure construction and allowing joint deployment of broadband infrastructure.
- v. Support deployment of a nationwide, interoperable public safety mobile broadband network in next 10 years.
- vi. A way is to enable at least 2MBPS speed or more broadband connection reaching out to a maximum number of rural institutes and target groups.
- vii. Deployment of optical fibre communications network, WiMax, WiFi technologies as mandated by a futuristic national plan are all possible connectivity options to reach out to the rural landscape and the rural youth.

Sd/-

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