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# National Broadband Plan
## Response on TRAI's Paper

# Table of contents

## Document Information

**Contact For Enquiry And Proposed Changes**

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# 1 Objective and Scope

This paper is compilation of thoughts around National Broadband Plan published by TRAI (Consultation Paper No. : 09/2010). It includes review comments, response on questions raised in consultation paper and recommendations for appropriate Broadband strategy in India.

## 2      Introduction

Consultation Paper No. : 09/2010 Titled "Consultation Paper on National Broadband Plan" clearly identifies need for deeper broadband penetration, economic advantages of broadband services, technology deployed and deployable, potential use of broadband services and government plan for eradicating digital divide.

It is a good paper that focuses on integrated efforts of all stakeholders e.g. Regulator, Operator, Government, Consumer and Application Providers. The paper is based on existing policies and Infrastructure; it includes data from leading sources and consulting firms.

The paper has not been very clear on value driven consumption for broadband services, optimum use of existing copper infrastructure that is controlled by BSNL and MTNL, innovation around needs of Indian consumer, dependency and support needed from other Industries for good broadband strategy (e.g. Power, Defence, Railways etc) and business viability of any broadband strategy/Plan.

Moreover comparison of India with any other nation is not always good because India has its own characteristics like large surface area, low per capita income, low literacy and lower English speaking rural population, low hardware (PC or any bandwidth consuming device) penetration. India also has its own priorities around basic infrastructure. Dependency on Information and for that matter internet connection is increasing across the country and it is a very good sign for industry but any plan like 30-40% broadband penetration requires huge investment and some assurance around return on such investment, this in turn requires some tough economic and regulatory decisions. Ambitious plan like State Wide Area Network (SWAN projects) is truly a great plan and it is as good as building national grid of highways.

It may also be important to look at definition of Broadband in current circumstances when major economies are defining benchmark speed in Mbps instead of 256 Kbps.

India also faces problems from heterogeneous data structure and IT systems of different government agencies that make use of IT services like e-governance less fruitful. There is a need of integrating data from various ministries and government agencies that can be offered as one stop solution to consumer to attract more and more people towards e-governance.

Therefore there is a need for having more practical and focused plan that is suitable for India and brining all under one roof that can bring more value to citizen of the nation for every rupee spend, else we'll end up having thick pipes with forcefully invested money.

It may be a better idea to allow Broadband to evolve in its form to suit need of Indians the way Mobile services evolved. Mobile was a luxury for many and need for few when it came in India, both segments need-driven and luxury-driven got balanced in couple of years and now it has become need primarily whereas luxury has transformed to high end handsets, premium content etc. It is more important that Broadband plan first becomes successful in cities and metros as their need.

# 3    Response to "Issues for Consultation" - Section 2.23

## 3.1    Q1:-  What should be done to increase broadband demand?

Broadband demand in urban areas are expected to pick up on its own because of increasing hardware penetration, cheaper broadband plans and increased use of broadband as a service through education, entertainment, information sharing, social networking and dependency on network channels for economic growth. Competition is also going to increase in urban areas due to BWA licenses and investment in landline access from private players.

Rural areas may not get any fruit like this till we do not address very basic question around "Value provided by broadband". As of now content and use of internet is not well integrated with rural part therefore value derived by spending a rupee on broadband is very less in rural or semi-urban areas.

Moreover cost of serving semi-urban and rural areas is very high. If TRAI is serious around these markets then there should be gradual penetration kind of approach from semi-urban to rural areas and followings need to be addressed

a-        Local loop unbundling is very essential to increase competition in semi-urban and non-metro city areas. It will give place to innovation and operators will try to innovate to bring better applications to woo customers if they are assured that they are free to acquire any customer. Operators providing loop may be compensated with base price, arrived in competitive fashion. It is also important to make industry lucrative. Loop owners also need to think it rationally that the utilization of loop is not growing because there is less service consumption and its better to offer this who can be more innovative to serve end customer.

b-        Hardware penetration in semi urban and rural areas is very low. Therefore upfront cost for subscriber is very high. In mobile it was not the case and we need to understand that it was very aggressive pricing of handset especially from CDMA players and couple of GSM players that brought this high tele-density. It requires 2 fold approach to address this issue, 1- Hardware like PC needs to be bundled or offered in such a fashion that upfront cost is around Rs 2000 (Cities) and Rs 500 (semi-urban or rural). 2- Applications and content is made relevant and valuable for rural and semi-urban areas.

c-        Electricity Problem:- Whatever hardware we propose, it'll require more electricity than mobile handset and it remains a big problem for rural areas. It is also harmful for hardware because of fluctuation. Therefore focus needs to be first on Metros, cities and part of semi-urban areas. Government is already doing a lot to solve this issue but it'll take time.

## 3.2    Q2:- What, according to you, will improve the perceived utility of broadband among the masses?

Perceived value depends on type of consumer, demography and social structure. Therefore this question itself is a topic for complete analysis but in summary and specifically to broadband we can exclude markets like metros because they have already started looking on broadband as necessity. To make this happen in non metros there is a need for strong applications.  Government remains biggest source of information and tightly integrated entity with masses therefore government services remain a first one that can be delivered through

broadband to masses and that a wider population eagerly looking for. Services that help to plan a villager to sow seeds based on monsoon progress in good graphical form (not in current form at Met department website that is better inclined to scientists), Service that can make a villager to understand when to cut crop, where to source seed from, how to communicate issues to leaders etc are very important and have long way to go. If government can be brought at a panchayat meeting in less than Rs 50 a month then for sure rural segment will look value into this and it will provide base to grow in education, entertainment etc. Rs 50 is a high amount for a village family but still too low to operator and therefore innovative business models are needed along with support from government, like Agri-product manufacturing companies can advertise their products and directly reach to villagers easily, tourism industry can come forward to support because of growing rural-tourism in few states etc. These were only examples. Bottom line is that things can be worked out and it is not that difficult as long as we are walking together. There is need for more government virtualization and that too with "correct", integrated data in understandable format.

### 3.3 Q3:- What measures should be taken to enhance the availability of useful applications for broadband?

1-      Localization of content and making content relevant to different parts of society

2-      Virtualization of government and providing correct information that can be easily understood/used by people. Therefore an application that can be more appropriate to support e-government projects

3-      Infusing competition in broadband market and separating service from Infrastructure so that consumer can select the operator that provide most useful application and relevant to that consumer. It will force operators to think and to innovate right application focused to target market and this requires unbundling and promoting innovation.

4-      For urban market and cosmopolitan world there is enough on plate and growing everyday.

# 4 Response to "Issues for Consultation" - Section 2.35

## 4.1 Q1 Do you agree with projected broadband growth pattern and futuristic bandwidth requirements?

Broadband growth in terms of number of subscriber will be slower because of lag in rural and semi-urban market but people consuming service will grow much faster than expectation. Because of growth in consumption, bandwidth requirement will also grow faster.

## 4.2 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. Not only in bandwidth but also in services and service management, its inadequate. Moreover whatever is there, is under utilized and degrading.

There is need of huge investment in bandwidth, services and service management but if operators will do so in silos then that will not be proper therefore a separate program is required that is collaborative in nature and includes everyone.

## 5 Response to "Issues for Consultation" - Section 3.22

**5.1 What network topology do you perceive to support high speed broadband using evolving wireless technologies?**

It is very much dependent on scenario.

**5.2 What actions are required to ensure optimal utilization of existing copper network used to provide wireline telephone connections?**

Separate service from infrastructure.

**5.3 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?**

Though Fiber is one of the best options available today but anything like FTTH needs to wait. Housing societies having significant number needs to be connected on Fiber first and then copper or unlicensed wireless needs to be used to reach to individuals.

**5.4 What changes do you perceive in existing licensing and regulatory framework to encourage Cable TV operators to upgrade their networks to provide broadband?**

No Comments to avoid any arguments but Cable and Telecom needs to be seen from one eye.

# 6        Response to "Issues for Consultation" - Section 3.39

## 6.1        Q1:- 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?

In ideal case it is but not in practical world of today. Once need is there and supporting infrastructure is there including some finance for hardware then other things can be worked out. What's point in putting pipe if no water can flow there?

## 6.2        If so, is there a need to create national optical fibre network extending upto villages?

National Fibre Network is good but may not be needed up to villages in next 2-3 years and for last mile wireless or any other option like copper upgrade can be used till demands picks up and usage increases. As said above, we need to focus on linked and value based growth in gradual fashion.

## 6.3        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?

Yes. Moreover other industries should also be brought under umbrella and they can help in bring finance, real useful application and other business to make it more viable.

## 6.4        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?

As of now not required.

## 6.5        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?

Focus should be on utilization and decision can be deferred by 2 years.

# 7 Response to "Issues for Consultation" - Section 4.18

## 7.1 Is there a need to define fixed and mobile broadband separately? If yes, what should be important considerations for finalizing new definitions?

Not required. Just it because Time/Frequency slot is not dedicated 24/7 does not make this separation. Instead it should be seen that access is 24/7 on demand.

## 7.2 Is present broadband definition too conservative to support bandwidth intensive applications? If so, what should be the minimum speed of broadband connection?

Min Broadband speed should be 1 Mbps but it will adversely affect subscriber counts

# 8 Response to "Issues for Consultation" - Section 4.30

## 8.1 What specific steps do you feel will ease grant of speedy ROW permission and ensure availability of ROW at affordable cost?

It has been a bitter area not only for operators and local agencies but also for people because repair and construction work is never aligned with cable deployment. It should have been a coordinated activity, like whenever new road is proposed, telecom operators can be invited to plan and lay down cable along with construction, if they feel so. Or else road and local authorities can be allowed to lay down pipes while doing road work  and that pipe can be auctioned or rented or granted to telecom operators to save a lot of rework, time and cost.

Anything and everything that clears this mess and avoids rework is appreciable.