Atria Convergence Technologies Pvt. Ltd.

Date: 20.07.2010

To:

Telecom Regulatory Authority of India, Mahanagar Doorasanchar Bhavan, Jawahar Lal Neru Marg, (Old Minto Road), New Delhi-110 002

Dear Sir,

Subject: Consultation Paper on National Broadband Plan dated 10th June 2010.

At the outset we thank you for the opportunity given to us to express our view points and comments on the National Broadband Plan. We enclose herewith our comments on the consultation Paper issued on National Broadband Plan dated 10.06.2010 inviting our comments on the same. Our chapter wise comments on the summary of issues of consultation in the same manner as per the consultation paper issued by the Hon'ble Regulator are as follows:-

CHAPTER 5: Summary of Issues for Consultation

CHAPTER 2: Broadband - Demand & Supply

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

- Educating the consumer on all-encompassing benefits of BB including the areas of interactive education, infotainment, on demand infotainment and overall economic development – this should be done thru a communication drive by the Nodal agency
- Making the broadband affordable by facilitating right of way, enabling unrestricted availability of proprietary content such as broad cast channels, educational content and public accountability programs including RTI information
- 3. By making broadband based platforms such as IPTV as the key focal platforms at the centre of home

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

Empowering the end subscriber including the population in less economic strata thru affordable Broadband connectivity and CPE.

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

A strategic thrust to make triple play of Video, Voice and Data availability in every Indian home at marginal cost. Providing thrust to inter-operable middleware and content platforms.

Opening up VOIP and Video Calling. Provide number series for VOIP termination with PSTN. Promote more data centres and localize them. Ensuring large connectivity with NIXI

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

The best platform to make this happen is utilise the existing equipment such as Television and mobile phones and provide broadband based value adds thru IPTV. This takes of impediments of investments in computers and provides thrust to English agnostic reach.

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

While these projections are ambitious, the platform being a growth multiplier, Govt and industry should help achieve these projections.

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)

Existing infra is insufficient as already captured in the report. There is a requirement to build Shared Infra for Core (Nationwide) and Access (Citywide) Network. Government should promote this by taking Broadband into the "Essential Infrastructure" category and giving it necessary SOP's and exemptions in order to promote the roll out of the Nationwide networks

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Govt should roll out a synthesised Right of Way with last mile access to all the ISPs, which will not only facilitate broadband reach but also enhances the competition thus making the end user cost most affordable

CHAPTER 3: National Broadband Network

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

Wimax and LTF

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

Unbundle the Local Loops and encourage sharing of POP's, for all operators

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)

Yes. To encourage fiber optic rollout, allow the build up of shared capacity. Ensure that the company which is responsible for building up this capacity is not a Telecom Service Provider, as their role must only be to build and sell capacity. This needs to be done at a National and City wide basis, both for core and for Access networks

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)

Its important to recognise the Cable networks as infrastructure industry. Given that vast majority of the cable operators are self employed, its important to extend financial credit to the cable industry.

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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)

Yes

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

There is an urgent need for putting this nationwide access network in place

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)

Its best to roll out this scheme thru an agency , ala Private – Public ownership in Aviation industry , with clear cut framework that encourages equitable reach .

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)

AS covered in the above question

- 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 only precaution to ensure success of such a BOT based approach, needs to be suitable support from Civic Authorities in all cities. The entire roll out needs to be time bound with rewards for timely execution and penalties for delays

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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)

Its important to align the definition in line with international definition and drive the policy change towards the same. Also given the technological advances, mode of reaching with higher pipe should be a key criteria for distinction between fixed and mobile broadband rather than Always on criterion.

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)

Reference speed keeps evolving as the industry becomes more competitive and the service becomes more affordable coupled with technological advances. To start with the reference point can be put at 512 kbps and the revision can be effected as the time passes and technology advances by way of a notification.

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 All ROW's being considered / awarded by the Civic Authorities, should be informed in advance and any operator should be allowed to share the cost of the same by putting their own infra along with the infra of the original proposer. This can be like a time bound bidding exercise wherein the rate for the ROW is decided and put up online, and as more and more people share this cost, the cost per individual company gets shared and becomes more affordable. Here too, the Non Telco Infra Provider, should be encouraged and given a discount for all such routes that they opts for.

Alternately, a national Fiber plan be created for each circle and PPP should be encouraged with a clearly defined framework.

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

Broadband sector has seen many players liquidating due to a host of problems such as unparalleled competition from state players, lack of finance from an infrastructure perspective, technological intensity and operational bandwidths. While there is enough room for many players, non existence of level playing field hindered competition in this sector

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)

High broadband charges are certainly a significant hindrance to the growth of BB. Building enablers such as ROW, Fiber access across the breadth and length, encouraging competition and encouraging easily adoptable technologies like IPTV will help resolve the affordability issue.

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

No . imperfect markets become perfect due to the improved competition and policy thrusts. Market forces should find the equilibrium , ala mobile tariffs, and that should be left to the competition.

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

No, should not be regulated. Market forces will decide and ensure the best experience for maximum value to the consumer.

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

No, should not be regulated. Market forces will decide and ensure the best experience for maximum value to the consumers

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

More number of localised data centres, availability of more local content and connectivity to NIXI's will ensure that International BW utilisation will be substituted by National Bandwidth. This would also require creation of a good National Infrastructure.

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)

At policy level both should be treated separately and the national players be encouraged to offer both of them to other ISPs in a differential pricing

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

As per point 5.24, a shared national fiber infa, will bring down the cost of BW, since one of the large costs is the cost from Gateway to ISP/Telco Node or POP in individual cities. Also, as more consumption happens in India and broadband penetration increases in India, the overall quantum of bandwidth brought into the country would increase sufficiently, thereby ensuring that volume discounts are available and this would result in a cheaper per MB cost.

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

Allow ISP's to share the Cable Landing Stations and also effectively using the propose National Infra Providers network to carry the International BW across the country

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)

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While the current parameters are reasonable, in the long run , market forces equilibrium on these parameters thus rewarding the ISP with best QOS.

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)

Yes: The enablers discussed above should by and large address this issue

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)

Existing parameters should be used as guiding principles and mandating a monthly publication of these parameters by top 10 players should improve the quality conscience.

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)

Remove taxes on import of CPE hardware to make it more affordable. Encourage manufacturing of chipsets in India. Encourage Microsoft to provide subsidised "no frills"OS or alternatively, provide the option to users to get the OS at a low monthly rental of Rs. 10 to Rs. 50. The Government must also promote the usage of Open Source OS's like UBUNTU, CentOS, Open Office etc. If the entry barrier of acquiring a computer is removed then automatically PC/CPE penetration levels will improve dramatically, thereby resulting in increased broadband penetration as well. Banks should also promote PC makers and allow them to offer zero interest easy EMI's on PC's and CPE's.

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

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Content in vernacular languages exists already thru Television platform, this should be made available thru IPTV and other GUI interfaces, as specific development for internet purposes will be a very expensive proposition.

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

Positive boost thru incentives and making the capital available and ensuring the level playing field are some of the regulatory initiatives expected to give a Phillip to the penetration. Further encouraging broadband usage thru home Television with the help of IPTV will bring in the paradigm shift in broadband adaptation.

- 5.34 Are there any specific competition and market related issues that are hindering growth of broadband? (Reference Para 4.71)
- 5.35 What other fiscal/non-fiscal measures should be considered to boost broadband penetration? (Reference Para 4.71)
 - 1. Making proprietary content available for faster BB growth
 - 2. Making CPE affordable thru fiscal benefits
 - 3. Tax holiday for service tax on access and core investments
 - 4. Recognising network investment as priority infrastructure investments
 - 5. Creating a PPP in national fiber access
 - 6. Providing priority industry status to IPTV and Mobile TV
 - 7. Distinction between national and international bandwidth and separating the cost of such access.

Thanking You,

For Atria Convergence Technologies Private Limited

Authorised Signatory

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