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Telecom Regulatory Authority of India
Mahanagar Door Sanchar Bhawan,
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New Delhi-110002

Subject: Consultation Paper (12/2014) on Delivering Broadband quickly: What do we need to do?

Dear Sir,

Association of Competitive Telecom Operators (ACTO) is pleased to submit its comments on TRAI Consultation Paper (12/2014) on Delivering Broadband.

We hope that our comments (enclosed as Annexure - I) will merit consideration of the Hon'ble Authority.

Thanking you,
Respectfully submitted

Yours sincerely,
for Association of Competitive Telecom Operators



Tapan K. Patra
Director
9899242273

Encl: As above

Annexure-I

Response from ACTO on TRAI consultation paper on Delivering Broadband.

Background

Having phenomenal success in voice communication by connecting over 900 million, next phase of the web in telecom/ICT to be in broadband data segment (which includes Enterprise as well as Consumer broadband) to uplift the quality of the life of the common citizen by increasing efficiency in the systems, enhancing economical activity across the country irrespective of geographic locations to have higher growth in broadband penetration to make a success the initiative taken government on “Digital India” program.

Broadband impact on economy:

The economic impact of broadband manifests itself through four types of effects. The first effect results from the construction of broadband networks. In a way similar to any infrastructure project, the deployment of broadband networks creates jobs and acts over the economy by means of multipliers. The second effect results from the “spill-over” externalities, which impact both enterprises and consumers. The adoption of broadband within firms leads to a multifactor productivity gain, which in turn contributes to growth of GDP. On the other hand, residential adoption drives an increase in household real income as a function of a multiplier. Beyond these direct benefits, which contribute to GDP growth, residential users receive a benefit in terms of consumer surplus, defined as the difference between what they would be willing to pay for broadband service and its price. This last parameter, can be significant, in so far that it represents benefits in terms of enhanced access to information, entertainment and public services.

1. Contribution to economic growth.
2. Contribution to productivity gains.
3. Contribution to employment and output of broadband deployment.
4. Creation of consumer surplus. Ecommerce is an example for consumer surplus.
5. Improvement of efficiencies (Individual, Company, Government system).
6. Improvement in Governance etc.

It would be relevant here to quote from the National telecom Policy (NTP) 2012:

- 3.1. “To orient, review and harmonise the legal, regulatory and licensing framework in a time bound manner to enable seamless delivery of converged services in a technology and service neutral environment. Convergence would cover:**

3.1.1. Convergence of services i.e. convergence of voice, data, video, Internet telephony (VoIP), value added services and broadcasting services.

3.1.2. Convergence of networks i.e. convergence of access network, carriage network (NLD/ILD) and broadcast network. "

"3. Provide affordable and reliable broadband-on-demand by the year 2015 and to achieve 175 million broadband connections by the year 2017 and 600 million by the year 2020 at minimum 2 Mbps download speed and making available higher speeds of at least 100 Mbps on demand. "

ACTO would like to make the following comments on this consultation paper as below:

1. Availability of spectrum at affordable price and realistic:

Availability and cost of spectrum is a big issue in India. Wireless broadband is the primary platform for reaching unconnected/unserved and underserved geographic regions. It is also widely recognized that wireless broadband will be the primary technology used to provide ample broadband coverage in developing countries. By definition, wireless requires wide spectrum bands to be able to provide broadband access at adequate quality levels, which is primarily an issue of download speeds. National broadband plan should focus, in many cases, on policies aimed at reassigning frequency bands (in particular, allocating the "freed" spectrum resulting from the digitalization of broadcasting) or searching for "white spaces" (unutilized bands) and assigning them to the wireless mobile communications sector. The government (DoT) should engage in a dialog with the industry and make spectrum-pricing guidelines more conducive to facilitate the requisite infrastructure build-out. - It is important for government to provide a road map for how much spectrum will be available in each band over the next 10 years. Data will use a lot more spectrum than voice but will offer operators lower revenues per MHz of spectrum. The government must take into account this gap between data and voice revenues and consider the evolving data-based business model when pricing spectrum.

2. Allow resale of bandwidth:

New broadband policy should facilitate resale of bandwidth at the wholesale and retail (service) level for example, by introduction of virtual operators – in tune with the need for robust competition at consumer end while ensuring due compliance with security and other license related obligations. This will be in line with the National Telecom Policy 2012.

It is essential for speedy implementation of VNO which has been initiated by DOT/TRAI in order to boost competition, further investment and optimum sharing of infrastructure/resources.

Resale of bandwidth at whole/retail without or without value addition will lead to innovation, better utilization and make more affordable to customer. This will result in growth/penetration of broad band.

3. Need for convergence of device, technology and networks

In order to realize the true potential of convergence of services, network and devices and to achieve the stated objectives of the convergence goals of Network / Services / devices, the restrictions/ barriers between different PSTN / IP/ CUG-PSTN networks should be removed under the Unified License to ensure seamless interconnection.

In our view, CUG-PSTN interconnection is equally vital and important for continued growth trajectory for the BPOs/Enterprise Data Services sector. Enterprise/BPOs require this flexibility for their in-house captive requirements. In the absence of such flexibility, there would be unnecessary investment on duplicating the infrastructure separately on voice and data networks. CUG/VPN-PSTN interconnection would lead to interconnection of IP and TDM networks. This would necessitate an interconnection regulation, which would be framed by TRAI also mentioned in clause 3.3 of NTP-2012.

Convergence will enable a much advanced and open IP platform which will enhance the end-user experience and will efficiently address the growing business needs by leveraging on the best of both worlds (CUG & PSTN).

Convergence of services will make more affordable to enterprise customers and thus further investment in BPO segment which will lead to further growth and demand for broadband.

4. Revise definition of AGR:

The current AGR definition should eliminate the issue of multi stage assessment of license fee which is currently in vogue and severely impedes competition in the enterprise services and data sector. The input cost (i.e. bandwidth cost for data) should be allowed as deduction while calculating AGR.

Presently, the deductions for pass through charges (interconnection) are applicable to voice services only but not for data services (in terms of bandwidth as an input cost) whereas both services are provided under the same license.

In fact there should be a proper review of the definition of AGR and GR to identify what should and should not form part of the definition from license fee payment perspective.

There needs to be shift from pay license fee on revenues earned under the license as against revenues earned by the company holding the licensee. Imposing fee on revenues from activities which are not accrued on the strength of the license increases the cost of providing services. This leads to unaffordability issue at the hands of

customer.

TRAI has recently concluded a formal broad based consultation on AGR. Operator's margin is squeezed with paying of multi stage license fees and license fees on non telecom activities. Revised/corrected AGR will lead further investment in telecom sector and will also making the telecom services including broadband more affordable to customer.

5. Infrastructure sharing:

In order to reduce backhaul costs, infrastructure sharing (e.g., backbone and towers) should be allowed and encouraged. Infrastructure sharing alleviates cost pressures on competing providers. If multiple broadband providers are not sustainable, sharing or consolidation may produce a broadband access "utility". It allows operators to capture economies of scale and reduce investor risk, which is tantamount to lowering costs.

There are several other ways to reduce costs to network providers in a given area. The Central /state Government may reduce right of way cost or access costs (e.g. spectrum costs or pole attachment fees). A way to address this last issue is to provide grants/ subsidy through USO Fund for capital investment, particularly backhaul capital costs or recurring expenses. These grants could take several forms: a subsidy for purchasing backhaul services (e.g. E1 lines) from an operator or direct underwriting of government-owned backhaul facilities that could offer services at a lower-than-market pricing to remote operators.

The current licensing regime does not allow infrastructure sharing to ISPs. This should be reviewed and allowed as it leads to optimum utilization of available resources and cost / economic efficiencies.

Sharing of infrastructure will lead to less capex cost and thus operators may use this financial saving to enlarge customer base to provide broadband services at more affordable cost.

6. Promote deployment of new technologies and applications:

CLOUD:

Since Cloud Computing is in the nascent / evolving stage in India, we request that steps should be taken to create an enabling environment for it to grow. There should be not any impediments or onerous conditions when India aims to emerge as a Global Leader in Cloud Computing. It has become one of the defining trends within technology, and is expected to evolve. The policy to enable cloud computing should be devised based on industry consultation and providing due consideration to the available international best practices.

Towards this direction, DeitY has already prepared framework for cloud to initiate e-Govt initiatives.

M2M:

It's a new service that will change the dynamics of ICT across the globe. As it is forecasted to have 50 Billion devices will communicate to each other by 2020. We have just 6 billion voice connection across the world. Has huge potential if India can take early lead in deploying this new technology. Need bold decision to implement it faster.

7. Stimulating the demand for broadband:

Thus far, the debate surrounding the digital divide in the use of Internet and broadband has been primarily focused on the statistics regarding computer ownership and broadband penetration. The major issue in the eyes of public policy and public opinion has been the need to increase the adoption of the service through the expansion of the technological coverage. The underlying assumption is that by reducing the obstacles for infrastructure investment, the digital divide challenge would disappear. Yet, while without a doubt supply-side issues such as the gap in investment contribute heavily to the digital divide, demand for broadband services also plays a key role in explaining service penetration.

8. Introduction of tax incentives:

We note that the Governments of countries (like Sweden) with high performing ICT sectors tend to introduce tax incentives designed to encourage the purchase of equipment. In Japan, firms investing in ICT solely for their own use have the option of either taking a 10 per cent credit from corporate tax or a special depreciation equivalent to 50 per cent of the acquisition cost.

Provide benefit on service tax on broad band services in some specific geographical areas to boost demand.

9. Developing e-government services and applications in local content:

By actively developing e-government services, governments can generate additional incentives for consumers and small businesses to join the information society. Such e-government services could include, for example, the electronic submission of tax returns, an e-procurement service for small and medium enterprises selling goods and services to the government, platforms for tele-commuting, and the development of portals that allow the interaction between the government and enterprises for e-business transactions.

This initiative is generally complemented by the implementation of digital literacy

programs that include subsidies for acquiring PCs and online education programs targeted at the elderly and disabled, such as the programs implemented in the Republic of Korea. In the case of small businesses, the Japan Government encourages small and medium enterprises to voluntarily install new IT platforms to reform business management and improve productivity by providing training, collecting and disseminating best practices, and supporting collaboration with local communities.

10. Effective utilization of USOF and reduction of contribution LF/USOF:

Innovative schemes should be introduced to utilize the unspent USO fund of amount 33683 crore for the growth of broadband in rural and remote areas.

It is further submitted that the rate of license fee especially the USO levy which is a major portion (5%) needs to be significantly reduced. TRAI in its recommendations on Unified License dated October 2003 has noted that the license fee should cover USO (5%) and administrative cost (1%) in contrast to 3% currently. The license fee has been significantly reviewed from 15% to 8% currently. However, the USO levy has remained consistent at 5%.

This will certainly help the sector improve its financial viability by reduction of cost leading to affordability at the hands of the consumers.

Also, the reduction in the absolute amount in the collection of the USO levy as a result of such reduction in the percentage, if accepted, will be more or less be offset by the increase in its collection as a result of increase in business of the TSPs .

ISSUE WISE SUBMISSIONS

Q1. What immediate measures are required to promote wireline technologies in access networks? What is the cost per line for various wireline technologies and how can this cost be minimised? Please reply separately for each technology.

ACTO Response

We believe that there are certain areas, where the Government is required to take an immediate measures i.e. Easing out RoW and incentivizing TSPs in terms of rationalization license fee etc.

Q2. What are the impediments to the deployment of wireless technologies in the access network? How can these deployments be made faster? Please reply separately for each technology.

ACTO Response

We believe that for all wireless technologies to be deployed effectively and the most important requirement is availability of sufficient quantity of globally harmonized spectrum in a contiguous manner per operator at an affordable and realistic price.

- Q3. The recommendations of the Authority on Microwave backhaul have been recently released. Are there any other issues which need to be addressed to ensure availability of sufficient Microwave backhaul capacity for the growth of broadband in the country?**

ACTO Response

No specific comments.

- Q4. The pricing of Domestic Leased Circuits (DLC) have been reviewed in July 2014. Apart from pricing, are there any other issues which can improve availability of DLC?**

ACTO Response

We believe that the Infrastructure pricing should not be regulated unless there is a market failure. Further resale needs to be permitted at wholesale and retail level.

- Q5. What are the specific reasons that ISPs are proactively not connecting with NIXI? What measures are required so that all ISPs are connected to the NIXI?**

ACTO Response

We note that NIXI is a neutral Internet exchange for peering ISPs among themselves, so as to route the domestic traffic within the country for better quality of service, reduced latency and reduced bandwidth charges for ISPs.

We believe that the purpose of NIXI is not to compete with other ISPs but supplement the connectivity of the ISPs who do not have direct connectivity. NIXI does not replace the direct connectivity between the ISPs/ operators.

Therefore, we believe that the aim of NIXI cannot be for direct connectivity between the ISPs, its aim is to keep domestic traffic within India by interconnecting ISPs who were not directly connected. Thus, there is no need for all the ISPs to connect to NIXI mandatorily.

Q6. Would the hosting of content within the country help in reduction of the cost of broadband to a subscriber? If yes, what measures are required to encourage content service providers to host content in the data centre situated within India?

ACTO Response

It is suggested that more and more content should be developed in India, which will bring down the cost of content creation and will also improve the utilization efficiency.

It is further suggested that the Government should devise schemes to enhance domestic content thereby reducing dependency on International Internet bandwidth requirement. This will also lead to lower latency. There should be no mandate to localise the content created and hosted elsewhere in the world. In the internet space a customer should have access to the content available in the web. What is important is the content and connectivity which needs to be ensured for broadband. No way there should be any step taken which will balkanize the internet into country specific fragments. While content creation in local languages need to be developed and no measure to localise a data should be done.

Q7. Are PSUs ideal choices for implementing the National Optical Fibre Network (NOFN) project?

And

Q8. Should awarding of EPC turnkey contracts to private sector parties through International Competitive Bidding (ICB) be considered for the NOFN project?

And

Q9. Are there any ways in which infrastructure development costs can be reduced? Is it possible to piggyback on the existing private sector access networks so as to minimize costs in reaching remote rural locations?

And

Q10. What can the private sector do to reduce delivery costs? Please provide specific examples.

ACTO Response

It is submitted that in such a project i.e. NOFN, it is necessary that private sector should be involved as appropriate.

Q11. What are the major issues in obtaining right of way for laying optical fibre? What are the applicable charges/ constraints imposed by various bodies who grant permission of right of way? In your opinion what is the feasible solution?

And

Q14. What measures are required to reduce the cost and create a proper eco system for deployment of FTTH in the access network?

ACTO Response

It is important to mention that the requirement for rollout of backhaul fibre networks has increased the importance of RoW (Right of Way). Some of the Key Issues of RoW are indicated below:

- a. An exorbitant levy being imposed by various municipalities increases the cost of network services/service provision.
- b. Need to approach multiple agencies for obtaining RoW clearance, leading to delays in network rollout.

We note that the NTP'12 has also recognized the problem and set out an objective to "Address the Right of Way (RoW) issues in setting up of telecom infrastructure". The relevant portion is reproduced below:

*"5.3. To review and **simplify sectoral policy for Right of Way** for laying cable network and installation of towers, etc. for facilitating smooth coordination between the service providers and the State Governments/ local bodies."*

Some of suggestions are summarized below:

- a. There is an urgent need for a centralized and common procedure for RoW permissions and their charges, therefore, the Central Government should issue guidelines on RoW under the Indian Telegraph Act.
- b. Supporting trenching activities of USOF through Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) as discussed in TRAI consultation paper on "National Broadband Plan" released on 10th June 2010.
- c. Stipulated time frame with accountability for RoW clearances at reasonable charges (which should not be beyond the cost of maintenance and repair of the road) will enable timely implementation of telecom networks. The Central/ State Government Local bodies I Ministry of Surface Transport etc. should take necessary steps to provide the necessary directives.

It is submitted that FTTH is provided by IP-1 licensees and it should be allowed to be shared amongst the operators. We believe that this can be made possible by allowing Active Infrastructure sharing by the Government. This will also reduce the cost of services.

Q12. Should the Government consider framing guidelines to mandate compulsory deployment of duct space for fibre/ telecommunications cables and space for telecommunication towers in all major physical infrastructure construction projects such as building or upgrading highways, inner-city metros, railways or sewer networks?

ACTO Response

The strong network backbone is critical for the provision of broadband service i.e. fast, uninterrupted and reliable. Based on projections of future demand, it is essential to augment capacities in existing backhaul and access networks.

We believe that to enhance fibre density in the country, the Government should entrust OFC rollout in a PPP mode to potential implementing agencies (such as agencies with a proven track record of meeting target time frames).

Some action steps that can back up the Digital India and NTP'12 strategy suggestions are:

- a. Development authorities should mandate city developers and builders to have properly demarcated sections within buildings and on rooftops for housing broadband infrastructure and antennae. These areas should have uninterrupted power supply for reliable, always-on services.
- b. Change building by-laws which currently deem only electricity, water, and fire safety as necessary infrastructure for the issue of a completion certificate. Including mandatory inclusion of either ducts /optical fibre with well-defined access mechanisms in all upcoming office complexes, commercial spaces and residential complexes would have a measurable net positive impact on the goal of constructing national broadband highways.
- c. During development of a sector/town, all infrastructure agencies such as roads/bridges should have utility ducts provisioned to lay OFC at a later stage. This will avoid unnecessary damage to newly laid roads and utilities.
- d. All buildings/towers should be provisioned with vertical conduits for carrying out last mile building wiring for FTTH services.
- e. Mandate placing ducts, if not optical fibre, with well-defined access mechanisms, on all new road constructions along national highways, as well as inter & intra city roads.

- f. A tower and a common transmission equipment room in every panchayat in the village the rental of tower and room shall fund panchayat running through USOF along with fiber.
- g. Incentives to residential societies & RWA for deployment of small cells WiFi networks.
- h. Use of wireless for providing last mile broadband access is critical. In addition to backhaul, such access requires a large number of towers and small cells. Non-discriminatory access to government land and street infrastructure (street lights etc.) for putting up such towers and small cells is needed. In order to improve the efficiency of resources and reach the masses, such infrastructure should be allowed to be deployed, especially if it is shared among two or more broadband service providers.
- i. Policy for arrangement with the power companies for deploying fiber along the transmission needs.
- j. Places where digging is not possible and RoW is not available, there should be proper overhead space for pulling fiber and associated infra.
- k. Share existing Fibre backbone infrastructure among all operators to reach up to the block level. To enable the same, the government may consider setting up an SPV under a PPP model under which BSNL, with the largest and most extensive fibre backbone, should transfer the same to the SPV. Other private operators could also be free to pool their infrastructure with the SPV. The SPV would then play the role of NOFA (National Optical Fibre Authority) proposed by TRAI and lease fibre bandwidth to TSPs at TRAI's prescribed tariffs.

Q13. What are the impediments to the provision of Broadband by Cable operators? Please suggest measures (including policy changes) to be taken for promoting broadband through the cable network.

ACTO Response

No Specific comments

Q15. Are there any regulatory issues in providing internet facility through Wi-Fi Hotspots? What are the reasons that installation of Wi-Fi hotspots has not picked up in the country? What type of business model needs to be adopted to create more Wi-Fi hotspots?

ACTO Response

It is submitted that there are various regulatory challenges due to which it is not feasible/ viable to have Wi-Fi hotspots in the country. Some of these regulatory challenges are listed below:

- i. ROW / Installation of Pole
- ii. Floor plan for better planning and deployment
- iii. Permissions from various agencies
- iv. Availability of Backhaul
- v. Physical Security of the infrastructure (in idle time)
- vi. Coverage/ speed issues
- vii. Open Area for Coverage/ Right Area for coverage
- viii. Internal wiring/ cable routing
- ix. Power for Equipment

We believe that to overcome these challenges and to create more Wi-Fi hotspots in the country, the following supports are required:

1. Free RoW needs to be facilitated through a single window clearance.
2. Assured electricity connections for Wi-Fi hotspots to be provided on priority.
3. Availability of power and space requirement.
4. Safety and security of equipment to be ensured at the venue by treating it as public infrastructure.
5. Access to public infrastructure like electricity poles, telephone poles, utility structures, hoardings etc. need to be easily available for installations.
6. Market associations & owners to be sensitized to allow usage of outer walls of buildings, roof tops for installation of Wi-Fi Infrastructure.
7. Simple, Secure, Seamless modes of authentication and control across various device types for SIM and non SIM based devices will be required.
8. Rights to the operator to monetize the assets in a commercially viable way from the paying consumers and partners to recover the infra investments.
9. Necessary clearances from relevant ministries/ authorities to be facilitated.

We suggest for Public-Private Partnership (PPP) Model.

Q16. What are other spectrum bands which can be unlicensed for usage of Wi-Fi technology or any other technology for provision of broadband?

And

Q17. How much spectrum will be required in the immediate future and in the long term to meet the target of broadband penetration? What initiatives are required to make available the required spectrum?

And

Q18. Are there any other spectrum bands apart from the ones mentioned in Chapter-2 to be identified for provision of wireless broadband services?

And

Q19. What are the measures required to encourage Government agencies to surrender spectrum occupied by them in IMT bands?

And

Q20. What should be the time frame for auctioning the spectrum in 700 MHz band?

And

Q21. Do you agree with the demand side issues discussed in Chapter 5 and Chapter 6? How these issues can be addressed? Please also indicate any other demand side issues which are not covered in the CP.

And

Q22. Please give your comments on any related matter, not covered above.

ACTO Response

No Specific comments.
