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**Sub: Response to TRAI Consultation Paper dated 24.09.2014 On Delivering Broadband Quickly: What do we need to do? – Reg.**

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## I. Introduction

Atria Convergence Technologies Private Limited ('ACT') holds a valid Class – A ISP license provides broadband services in the metropolitan cities of Bangalore, Hyderabad, Chennai and few cities in Andhra Pradesh. ACT has been providing wired internet broadband services using Metro Ethernet based Fiber to Home/ Building Technology (ME-FTTX).

We would like to point out that the Consultation Paper (CP) has incorrectly classified ACT and its subsidiary Beam Telecom Private Limited under Ethernet/LAN column. The CP conspicuously missed out inclusion of one of the proven and most easy to adopt ME-FTTX based broadband delivery. ME-FTTX has besides being service provider friendly, always been known for higher speeds and lower maintenance costs. Inclusion of ME-FTTX is critical for wide spread roll out of broadband even by relatively less technologically savvy cable operators and category B and C ISPs. With the advent of faster broadband adoption across the globe especially in countries like South Korea and China, contemporary technologies like ME-FTTX, Fiber to the Home and Fiber to The Edge have become cost effective and affordable. Authority may be pleased to include all of these technology platforms for the purpose of the CP more specifically ME-FTTX.

ACT welcomes this initiative taken by TRAI for consulting all the stakeholders on various issues hampering the broadband proliferation in the country. CP mentions various statistics reports in relation to inadequate growth of Broadband services in India. We would like to point out that India lags behind significantly in the average internet Connection speeds. NTP emphasized on "*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*". The recent 'State of Internet report' published by Akamai Technologies in the year 2014 mentions the average internet Connection speeds in India is 1.7 Mbps and ranks India at 118th position globally. Hence the policy makers need to recognize and encourage the technologies such as ME- FTTX which can deliver upto Gigabit speeds.



## II. Important Issues for Broadband proliferation

Before responding on various questions raised in the CP we would like to draw the kind attention of the Authority on various important issues which are hampering growth of fixed line broadband services. It is globally proven fact that Fixed Broadband services have better speed and meet subscriber's bulk download requirements. Each house must have Fixed Broadband connection in order to enable every citizen of the India to access educational services, health care, energy, job training, public safety and participate in E-Governance initiatives.

As on 31<sup>st</sup> August 2014, wired broadband subscriber base at 15.05 million out of 74.31 (wired + wireless) Broadband subscriber base in India. Out of wired broadband subscriber base around 83% of the subscribers are serviced by BSNL, MTNL and Airtel that leaves a very small base of Broadband subscriber base being serviced by rest of the fixed smaller ISPs. It is submitted that there are many factors which are hampering the contribution of the ISPs in the proliferation of broadband some of which are dealt below.

### 1. Issue of affordability of broadband services –Imposition of License Fee (LF) on Pure Internet services

Standalone fixed wire-line ISPs like us provide pure internet services based on last mile created by using Wireline network. Thus, the nature of the underlying network and capital and revenue cost base, through which pure internet services is provided by the fixed line ISPs are different in comparison to others.

TRAI had mentioned that the primary objective of this levy of LF is to remove regulatory arbitrage for the wireless service providers who give a combined offering of voice and broadband on the same handset. Being a bundled offering, they can hypothetically reduce license fee (earlier applicable only on voice services) by charging artificially higher price for broadband services vis-a-vis that for voice. As a consequence of this recommendation, along with wireless telecom services, the wire line (including ME-FTTX) broadband services will also be subjected to this levy.

- All businesses should normally pay only two taxes- Goods & Services Tax (in this case Service tax) and Income tax. The only exception to this rule is when a scarce national resource is being used. Spectrum is a scarce natural resource and the state can sell it at market price and levy other appropriate tax (such as license fees) on its use. Wire line broadband on the other hand doesn't involve use of any such resource and therefore should not be subject to any additional levy such as license fee. It also needs to be noted that the separation of spectrum price and license fee for wireless services is optical. If there were no license fee, the auction price of spectrum would have appropriately gone up. In other words, the total consideration for spectrum is sum of license fees and auction price.
- The total incidence of tax from all standalone wireline ISP's (i.e. excluding BSNL, MTNL and Airtel) is likely to be insignificant amount for the Government but exclusion of which can go a long way in encouraging standalone wireline ISP's in India.



- Service providers like us have always empowered and enabled subscribers with the most competitive price offering at unimaginable prices ( ranging from Rs 399 for 1mbps and 20 mbps for Rs. 1000 per month), and any additional burden on this fledging industry will discourage the internet penetration of the country.
- The problem of regulatory arbitrage can be mitigated by an appropriate presumptive tax on those offerings which offer both voice and broadband services. In any case pure play Wireline broadband business should not be subjected to tax for the wrong doings of possibly a few.
- Levy of license fee on pure internet services would adversely impact the broadband proliferation which can be done by fixed wireline ISPs.

## 2. Cost and Process for obtaining Right of Way (RoW)

- **Overhead Fiber as a Viable Media**

The Policy makers have not given sufficient attention to the role that can be played by Overhead OFC network in reaching the large population in short period of time. The permission to install overhead fiber would be another enabler for ISPs. Installation and operational maintenance of overhead fiber is far cheaper than that for buried OFCs. In many parts of the world, laying overhead fiber is encouraged and adequate governing rules and regulations are in place. In line with other successful models of fiber deployment aerial mode of fiber deployment in India must be formalized as an operationally viable option with corresponding quality standards laid out. Appropriate RoW application and charging mechanisms must also be specified across geographies. Enabling overhead OFC network would be one of the biggest enablers in the provision of OFC based broadband services by the ISPs.

- **Issues with regard to Underground OFC**

With regard to underground OFC very high ROW charges are being levied by most municipal corporations in India which makes laying and building OFC routes very expensive. Moreover, the current mechanism for charging RoW fee and applicable rules varies across the country by state and municipal limits. Moreover an applicant has to seek approvals from multiple authorities and utilities to get RoW permissions, viz. Fire, Traffic Police, Sewerage, Electricity, et al and the process is tardy.

- To make policy decisions to enable ISPs to provide last mile connectivity through structured Overhead cable network.**
- ROW charges should be kept low for proliferation of Broadband in the country and should be kept as uniform one time charges. Recurring charges applicable should not be applicable on RoW permissions.**
- It is recommended to introduce a single-window process for applying and seeking RoW permissions, preferably through an online portal. Doing so would lend uniformity, speed, transparency and accountability to the process.**
- It is recommended to have uniform policy frame work/guidelines for ROW applicable across all states in India to be mandated by the Central Government.**

### 3. Operational Management

OFCs also have a high cost of operational management. Given rampant infrastructure development across the country, OFCs are subject to frequent cuts. Infrastructure developers and utility providers undertake digging unmindful of the presence of overhead and buried OFCs. So as to alleviate the problems faced, following measures are recommended –

- a) While laying road infrastructure, municipal and state authorities must construct a common duct. ISPs could thereafter lay fiber on need basis upon payment of a reasonable compensation.
- b) Proactive intimation and sharing of plans of road expansion on an online portal would help ISPs plan better.
- c) To avoid repeated digging of roads, alignment of road digging activities must be mandated across public authorities, viz. municipal, public works departments and utilities. Doing so can successfully mitigate preventable fiber cuts

### III RESPONSE TO VARIOUS QUESTIONS RAISED IN THE CP:

**Q.1. 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.**

The Following measures required to promote wireline technologies:

- a) As enumerated section II clause 1 above, Wireline broadband Service Providers should not be subjected to License Fee on Pure internet revenue.
- b) As enumerated section II clause 2 above, Policy makers to recognise the Overhead OFC network as viable & cost effective media and create favourable policies enabling ISPs to provide last mile connectivity through structured Overhead cable network. In order to effectively lay overhead fiber, the poles already laid by the electricity distribution companies and telecom companies may be shared and appropriate pole tax may be charged – such charges should be substantially lower than current ROW charges for underground ducts.
- c) UG ROW charges should be kept low for proliferation of Broadband in the country.
- d) Custom Duty, Excise and other taxes like Octroi for equipments and optical fiber used for developing fiber access networks to be zero for next 5 years.
- e) It is recommended to introduce a single-window process for applying and seeking RoW permissions, preferably through an online portal. Doing so would lend uniformity, speed, transparency and accountability to the process.



**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.**

As we do not provide broadband internet services under this framework we are not providing our comments on this.

**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?**

As we do not provide broadband internet services under this framework we are not providing our comments on this.

**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?**

No Comments

**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?**

No comments.

**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 center situated within India?**

No comments.

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

No Comments.

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

No Comments.

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**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?**

No Comments.

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

The planned National Optical Fiber Network (NOFN) will create a common infrastructure that can be shared against a fee by several Fixed Wireline Service Providers. Similarly once sufficient pool of common infrastructure is made available by consortium of service providers, wired line service providers share such infrastructure and reduce the delivery cost.

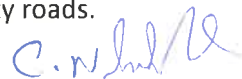
**Q11. What are the major issues in obtaining right of way for laying optical fiber? What are the applicable charges/ constraints imposed by various bodies who grant permission of right of way? In your opinion what is the feasible solution?**

- Present ROW charges in most states in India are expensive for the majority of wired line service providers.
- Inadequate guidelines with regard to permission on ROW.
- Multiple Authorities for ROW within one city.
- Absence of guidelines for Overhead OFC network in many states.

**Q12. Should the Government consider framing guidelines to mandate compulsory deployment of duct space for fiber/ 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?**

Yes we agree with Government framing guidelines to mandate compulsory deployment of duct space for fiber/ 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. While framing the same the below points may be considered.

- a. 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.
- b. All buildings/towers should be provisioned with vertical conduits for carrying out last mile building wiring for access media.
- c. Mandate placing ducts, if not optical fiber, with well-defined access mechanisms, on all new road constructions along national highways, as well as inter & intra city roads.



**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.**

1. Broad band, to be the mainstream service to empower and enable INDIA, needs to be promoted across all platforms including cable based delivery, Metro Ethernet based delivery and fiber based delivery. To that extent the promotion of broadband adaptation shall be technology and platform agnostic. It's important to remove technology arbitrage across cable, Metro Ethernet and Fiber. World over technology is polarising towards high speed technologies like ME-FTTX and regulator should allow the best technology and platform to emerge based on the best service to the end consumer
2. Broadband service has been provided empirically across the country by ISPs with different category of licenses including category A, B and C. Local cable operators have opted for either B category or C category depending upon their area and capability. We would urge the regulator to encourage all categories of ISPs which will be enabling swifter and higher broadband adoption.
3. Many cable operators view broadband distribution as an additional business opportunity particularly in wake of Digitalization efforts undertaken by Ministry of Information & Broadcasting. However, this business is capital and technology intensive. As noted in the CP, today top ten ISP/ TSPs provide bulk of broadband services across the country and this situation can be significantly improved by encouraging all fixed line ISPs including all cable operators to invest in network creation and provision of broadband services to subscribers.
4. CP acknowledges the challenges faced by cable operators on account of low returns on capital arising out of high capital expenditure and License fee being deterrent to provide combined services (broadband services and non-licensed services). We would like to point out that these issues are common to all fixed line service providers.
5. To make creation of fixed line broadband network / upgradation of existing cable network affordable, lot more emphasis needs to be given to lay overhead cables in significant part of the network. Lack of policy framework in this regard needs to be addressed, particularly in the area of allowing cost-effective Right of Way, Safety and undisturbed functioning of such overhead networks and simplified process for obtaining right of way.
6. Cable operators should be allowed as franchisees of ISP license holders to enable them to take advantage of technology and capital strengths of larger players. However, this should be subject to an application and registration process that scrutinizes the operator's current set of capabilities to ensure that only genuine players capable of meeting regulatory compliances register.
7. Levying License fee on pure internet services that these ISPs provide will make this business unviable. These operators being pure internet service providers, there is no question of eligible telecom services slipping out of license fee through any form of billing process modifications. The

License fee also prevents them from bundling services which can be provided even without ISP license.

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

The response in Query no 1 is repeated and applicable.

**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?**

No Comments.

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

We recommend maintaining status quo on the current unlicensed for usage of Wi-Fi technology.

**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?**

As we do not provide broadband internet services under this framework we are not providing our comments on this.

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

As we do not provide broadband internet services under this framework we are not providing our comments on this.

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

As we do not provide broadband internet services under this framework we are not providing our comments on this.







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

As we do not provide broadband internet services under this framework we are not providing our comments on this.

**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.**

No comments.

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

No comments.

Thanks and Regards  
For Atria Convergence Technologies Private Limited and

A handwritten signature in blue ink, appearing to read 'C. N. Subh', is written over the text.

Authorized Signatory.