



Response to TRAI Consultation Note on Nation-wide Interoperable and Scalable Public Wi-Fi Networks

I. Executive Summary

1. We welcome the intention of Authority to enable the spread of Broadband in the country but any steps taken in this direction should be in line with existing Licensing and Regulatory framework.
2. Unified License (UL) authorization for Internet services provide that even if the delicensed spectrum is used, the licensee is bound by directions/instructions of DoT.
3. Reselling of Internet Services is permitted only under UL-VNO framework.
4. In case any entity wants to set-up a Wi-Fi hotspot to resell capacity and bandwidth it should obtain a relevant License/authorization under UL/UL-VNO to do so.
5. Regulatory predictability and Level Playing field is required to ensure further investments in the sector.
6. We have achieved a significant growth in Telecommunication sector under licensing Regime and the same should be continued.
7. There is no need for any Regulatory intervention in unbundling of Wi-Fi value chain as these are commercial decisions; can be best handled by market forces.

II. Preamble

A. Telecom Services are to be provided under the ambit of Unified Licensing Regime

While we welcome the intention of the Authority to increase the spread of Broadband in the country but we submit that the enabling steps in this direction should be in line with the current Licensing and Regulatory Regime.

1. The Unified Licensing Regime was brought in place with the objective that with the diminishing differences between the various technologies providing the same services, all the telecom services have to be provided under the Authorization through Licenses.
2. Along with the convergence of technologies, there is convergence of markets as well wherein various technologies/services become substitutes and compete with each other.
3. In the current Licensing Regime, Internet Services to the end consumers are sold by Licensed TSPs and ISPs only.

4. This license/authorization under UL is required even if the entity is using delicensed spectrum. It may be noted that the ISP authorization under UL, which states as below:

“ 5.5 In case the Licensee provides the Internet Access using de-licensed frequency band, the licensee shall adhere to the prevailing directions/instructions and shall also abide by further directions / instructions as may be issued by Licensor from time to time in this regard.”
5. Any model for providing Internet service through Wi-Fi technology should be compliant to the Licensing conditions; these can be created under the following arrangements
 - i. Wi-Fi hotspots created by licensed TSPs/ISPs at public places and services sold to the consumer through coupons and online payments options
 - ii. Wi-Fi hotspots created by consumers at their home, work places or any other places for own consumption or for sharing it with others on a non-commercial basis.
 - iii. Wi-Fi hotspots created by commercial or non-commercial entities such as hotels after taking Internet services from licensed TSPs/ISPs. These services are being offered free of charge or on payment basis **only to close group of people** (such as guests staying at hotels etc.) **not for open public use**. Under this model, the entity deploying the Wi-Fi hotspot such as hotel etc. is the customer for TSP/ISP who is extending the service to closed group of people only.
6. **The Reselling of the Services is only permitted under the VNO framework;** guidelines for the same have already been framed considering security and maintenance of level playing field between different types of service providers providing the similar services.
7. **Therefore, we submit that any party intending to sell telecom capacity and bandwidth to retail users should obtain a License to sell the service. Allowing reselling of Internet Services under a Registration would lead to creation of Non-level playing field and would thus hamper the growth of investments in network and infrastructure.**

B. Telecom Operators: Backbone of Digital India

There is great excitement as country takes its steps to achieve the aim of Digital India. As the country prepares itself for the upcoming revolution to connect the next billion Indians to the world of Internet, it is important to look at the role and efforts of telecom operators who have contributed to this revolution and would play a major role in shaping its future as well.

1. Consistent Investments made by Telecom Sector in the Infrastructure:

- a. Telecom sector has attracted huge investments in infrastructure, about **INR 9,27,000** crores have been invested so far by TSPs in building world class Telecom Infrastructure **which is 2nd largest private sector investment in infrastructure among all the sectors in the country.**
- b. Telecom sector has also been among the highest contributors to FDI in last two decades; about **INR 111,000 crores of FDI has been infused in the Telecom Sector from April 2000 to Sep 2016.**
- c. To support the orderly growth of the Telecom Sector, TSPs have invested around **INR 3,27,000** crores in Spectrum Auctions alone since 2010.

2. Launch of advanced communication technologies

- a. The huge investments made by the Indian operators in the infrastructure have led to the deployment of advanced technologies in India. All the LSAs have now been covered under LTE coverage which provides high speed Broadband access to consumers.
- b. Without these investments in infrastructure, this rapid roll-out of advanced technologies would not have been possible.

3. Revenue to the Exchequer

- a. TSPs are among the highest contributors to Govt. Exchequer, nearly INR 70,000 crores per annum are contributed by TSPs towards the Exchequer.
- b. Further Telecom Sector contributes directly to 22 Lakh employment and indirectly to 18 Lakh jobs contributes 6.5% to India's GDP

C. Results achieved:

1. BTS Deployed

Till November 1, 2016 over 13 Lakh BTSs have been installed in the country. Of these, over 6.5 Lakhs BTSs provide high speed broadband speeds on 3G and 4G networks.

Technology wise Total BTS Count	
System Type	As on 27-Oct-2016
	Count
2G	6,56,745
CDMA	29,869
3G	3,18,594
4G	3,34,569
WIMAX	3,783
Total	13,43,560 *

*Source tarang sanchar

2. Subscriber Growth

The urban Tele-Density in India stands at 152% and rural tele-density at 51% with overall tele-density at 82.5 percent as of August, 2016.

The reach of telecom services is further set to unfold the opportunities to increase financial inclusion as well.

3. Lowest voice tariffs in the world

Indian TSPs offer lowest voice tariffs in the world to the consumers. Despite facing challenging policy environment with respect to installation of Telecom Infrastructure, TSPs have been able to offer the lowest tariffs to consumers due to the rapid roll out to increase the volume of traffic.

D. Investment in network infrastructure is necessary to ensure future growth

1. From the above, we conclude that the orderly growth of telecom Industry in the country has been enabled through investments made by the operators in the Telecom infrastructure.
2. **The above results have been achieved by the operators who have obtained Licenses to operate and provide telecommunication services and are not only providing world class connectivity and services to consumers but also contributing to Government exchequer.**
3. It is equally important that in our further journey towards connecting next Billion Indians to Internet through broadband requires further investments in network, market distribution and infrastructure. Therefore, it is important to maintain conducive ecosystem for attracting further investments in the sector which can be achieved through:
 - a. Regulatory Predictability and consistent Regulatory policies
 - b. Maintenance of Level- Playing Field
4. The priority for the country is to attract further investments in the sector to scale and upgrade networks for future so that these networks are able to connect the next billion.
5. Any entity who wishes to sell capacity to end users should be governed by the same licensing and regulatory framework in order to ensure level playing field. Any concept of Registration will lead to unfair competition and a regulatory and revenue arbitrage over licensed players who are not only contributing to cause of building networks but are also contributing to the Government exchequer. A uniform Licensing and Regulatory framework is the only way to ensure this commitment from the entities who wish to sell the Telecommunication and internet services to end users like licensed operators.
6. **Therefore, we firmly believe that the current method of providing Internet Services only under a License is necessary to maintain Regulatory stability**

and consistency. Allowing a service like Internet to be resold under a Registration would be against the very basic foundation of Unified Licensing Regime.

7. We would like to highlight an important aspect related to the proposal of TRAI regarding the setting up of Wi-Fi hotspots by entities like owners of Private buildings such as Hotels, Malls etc. It is to be noted that even in the current scenario, TSPs are already facing issues in getting permissions for installing their equipment for Telecom and Wi-Fi access inside various buildings. This is on account of the building owners using this opportunity for earning revenue from telecom infra deployment on their premises by charging exorbitant rentals. In the scenario envisaged by the Authority in the Consultation note, wherein various building owners etc. would be allowed to set-up their own Wi-Fi hotspots will lead to situation in which these entities will block the installation of Telecom equipment of TSPs inside their premises as they would want to establish their monopoly inside their buildings in providing the services. Under such an uncontrolled environment it would become a challenge for TSPs to set up their In-building solutions/Wi-Fi hotspots inside various buildings and thus, can lead to following:
 - a. Adverse impact on QoS of Telecom Services at various Public Places like hotels, malls etc.
 - b. Lack of choice for consumers due to monopoly of building owners.
8. Even if such entities install Wi-Fi hotspots by obtaining a relevant License, it needs to be ensured that there should be necessary provisions to prevent such practices. We thus request TRAI to consider and prevent such practices as appropriate.

E. Need to prioritize and resolve real issues hampering growth of various telecom access technologies:

1. We submit that need of the hour is to resolve the real issues hampering the growth of Wi-Fi and other access technologies such as Cellular Networks.
2. Support is required to resolve the following issues for increasing the reach of Broadband services in the country:
 - a. **Backhaul and Infrastructure Issues:** Though we appreciate that RoW policies have been framed, but it needs to be ensured that these are enforced in the time bound manner to ease the deployment of Telecom infrastructure.
 - b. **Availability of Power Supply:** Availability of adequate power supply is required to improve Quality of services for broadband services. The lack of supply not only increases the costs but also hampers the services in case power backup is not available.
3. As far as ease of access is concerned, even today, TSPs are entering into partnerships with entities such as hotels etc. to provide Wi-Fi services at various public places. Many of the TSPs are using Wi-Fi to offload mobile data.

4. We further submit that the market forces and advancement in technology has led to evolution of access and payment mechanisms; a regulatory intervention is required only for creating the enabling policies with respect to backhaul, power etc.

- **We sincerely submit that issues listed above such as enforcement of RoW policies, power etc. need to be resolved first rather than proposing a new model structure, which should be left to the market and business decision of players, subject to a uniform licensing and regulatory framework.**
- **Further, TSPs are best placed and are deploying Wi-Fi hotspots and have adopted suitable models to facilitate easy access to hotspots.**

III. Issue wise response to Consultation Note

Q1. Is the architecture suggested in the consultation note for creating unified authentication and payment infrastructure will enable nationwide standard for authentication and payment interoperability?

and

Q2. Would you like to suggest any alternate model?

COAI Comments

- a. We submit that there is a flaw in the model suggested by TRAI since it envisages the establishment and maintenance of telegraph activities, which inter-alia include Wi-Fi hotspots, by unlicensed entities. Further, any integrator/registration provider handling Authentication, Authorization and Accounting (AAA) is also an unlicensed entity. We believe this kind of model creates gatekeepers (unlicensed entities), Thus, any model should only involve the licensed entities, both at the level of 'Hotspot provider' as well as 'integrator/registration provider/any entity' handling AAA.
- b. Even today, TSPs have deployed various Wi-Fi access solutions which provide seamless Wi-Fi experience to consumers For example
 - i. OTP based login methods deployed by TSPs to provide Wi-Fi services at various places provide easy access to Wi-Fi at various places.
 - ii. Prepaid coupons and mobile offload also provide easy methods for access to Wi-Fi.
- c. **We submit that with regard to the model suggested by the Authority there should not and cannot be any Regulatory mandate.** The TSPs should be free to choose the login and payment methods which are compliant to the Licensing conditions.
- d. **Model Suggested in the Consultation Paper: While maintaining that any provision of a telecom service including Wi-Fi as well as entity handling AAA should necessarily take a relevant license/authorization under UL,** we submit that the Model for the Wi-Fi and access mechanism as suggested in the Consultation Paper is a technical high level model and lacks the clarity on the Regulatory aspects, for example:
 - i. Clarity is required on the role of various entities such as Registry Providers etc.
 - ii. Clarity on the Regulatory and Licensing framework that will govern these entities
 - iii. KYC requirement fulfillment, security etc.

It would not be possible to give inputs on the suggested model unless clarity is provided on the above issues.

Q3. Can Public Wi-Fi access providers resell capacity and bandwidth to retail users? Is “light touch regulation” using methods such as “registration” instead of “licensing” preferred for them?

COAI Comments

We submit that the reselling of Internet service is permitted only under License in the Unified Licensing Regime. Further our inputs in this regard are:

- a. Reselling of Licensed Services is **permitted only under VNO framework**.
- b. As per the recommendations of TRAI dated 1st May, 2015 on the Introduction of VNO, the Authority had recommended for the reselling of Licensed Service like Internet Access through VNO Licensing Framework.

“In addition, under the ‘Digital India’ program the Government has identified three key areas viz. ‘Digital Infrastructure as a Utility to Every Citizen’, ‘Governance & Services on Demand’ and ‘Digital Empowerment of Citizens’. It aims to create infrastructure including public wi-fi hotspots for citizens and wi-fi in 2.5 lakh schools and all universities. This program envisages VNOs for service delivery and mandate communication infrastructure in new urban development and buildings.”

- c. Any entity or hotspot provider who wishes to resell the capacity and bandwidth to retail user must obtain a License for doing so.
- d. Allowing reselling under a Registration would create a non-level playing field and various security related issues (in absence of enforcement of security conditions through Licensing conditions).

Q4. What should be the regulatory guidelines on “unbundling” Wi-Fi at access and backhaul level?

COAI Comments

There should be no Regulatory mandate or guidelines for Unbundling of Wi-Fi Services. We would like to make the following submissions in this regard:

- a. The issues of unbundling of Networks are commercial decisions driven by Business Strategies of individual companies.
- b. Market forces are the best drivers for carving out partnerships between various entities; the same cannot be achieved through a Regulatory mandate.
- c. Even today Licensed Service Operators are entering into partnerships with various entities (who become franchisees of TSPs). These partnerships are based on the objective of achieving mutual benefit and for the ease of use for the consumers.

Q5. Whether reselling of bandwidth should be allowed to venue owners such as shop keepers through Wi-Fi at premise? In such a scenario please suggest the mechanism for security compliance

COAI Comments

Please refer to our response to Q3.

Q6. What should be the guidelines regarding sharing of costs and revenue across all entities in the public Wi-Fi value chain? Is regulatory intervention required or it should be left to forbearance and individual contracting?

COAI Comments

Sharing of costs and revenue across the entities is a commercial decision and partnerships between various entities are carved out, after taking into cognizance, various factors involving commercial and business related aspects. Therefore, prescribing guidelines or any Regulatory intervention in this regard would not be appropriate.
