

Telenor (India) response to TRAI consultation note on Interoperable & Scalable Wi-Fi (dated 15th November 2016)

Preamble

1. Telenor (India) welcomes the TRAI's move to evolve an **Interoperable architecture** of enabling Wi-Fi hotspots with the objective to **improve broadband penetration** and rapid increase in **adoption on a pan-India level**.
2. The aim is to develop an **Interoperable network** of such Wi-Fi hotspots, which can be seamlessly accessed by public at large. The model so developed should be **successful, scalable and sustainable**. The accessibility should not be marred due to **issues in Authentication and Payment mechanism**. The approach should be **collaborative partnership** between various entities of the ecosystem.
3. In addition to that we feel that the following 2 aspects should always be included in any policy to provide telecom services including Wi-Fi.
 - The **traceability of subscribers** whether SIM based or non-SIM wi-fi enable devices should be available at all times to ensure legitimate users.
 - The **lawful intercepts** of the communication exchanged, albeit under proper authority, should be provided to duly authorized LEAs and be available at all times, in the interest of National security.
4. The chapter 1 summarizes the use of network of Wi-Fi hotspots to be:
 - a. Scalable and to provide **ubiquitous coverage**
 - b. Affordable access
 - c. Leverage relevant technology standards
5. The telecom operators are providing affordable access services and there is no denying the fact that we should leverage technology and contribute to develop standards. However, we feel the Wi-Fi technology standards are not designed to provide outdoor coverage in large geographies. The possibility of providing wireless coverage using free to use frequency across large geographies, run the assured risk of interference. Hence, a ubiquitous coverage across metros, cities, towns and villages using Wi-Fi is not possible.
6. The title of **Public Wi-Fi Networks** should be modified as these devices are not designed to provide a cellular network; hence a **Network of Wi-Fi devices in public spaces** is more appropriate. The cluster of these hotspots would cater to nomadic usage, however they can be networked to provide common Authentication and Payment.
7. In the workshop held at Bangalore a concept of STD Booth for Wi-fi was presented,

here we would like to mention that the STD-PCO operator was working as a franchisee of telecom service provider and was selling under the brand name and special tariff offered by TSP (reselling not allowed under UL Access).

8. The consultation note identifies certain challenges in large scale deployment of Wi-Fi hotspots, we present our case as to how these shortcomings can be overcome using the existing infrastructure of TSPs/ ISPs.
 - Stagnant growth in landline infrastructure – The penetration of landline in so far as urban areas are concerned is not an issue.
 - Wireless backhaul running into the spectrum availability issues – This is a policy issue and we request Authority to reiterate its recommendation of Aug 2014 for administrative allocation of MW Access and MW Backhaul.
 - Cumbersome Authentication process with requirement of OTP – We as TSPs/ ISPs are already proving authentication system to our subscribers. We also provide the traceability of subscribers through valid KYC documents. Barring a few cases of international tourists who do not have any roaming facility, nearly 100 crore subscribers are authenticated on our systems on daily basis.
 - QoS issues in Wi-Fi including seamless handoffs – The standards are evolving and we suggest all resources should be deployed in its development. We as TSPs/ ISPs provide QoS for wireless and wireline voice / data services as per TRAI QoS regulation.
 - Seamless interoperable payment system – We as TSPs/ ISPs support all means of payment mechanism viz. cash, credit card, debit card, net-banking, plethora of mobile wallets, ATMs of select banks. We are actively engaged to integrate any other payment mechanism that becomes available at a later date.
9. In so far as the Authentication and Payment mechanism is concerned we as an Industry is already catering to 100 crore subscribers. The system is successful, robust and scalable. The sub-national operators like Telenor (India) are providing pan-India coverage through seamless roaming integration. Our customers do not have to login to multiple systems for payments and authentication, this is done at the network layer and we exchange moneys at the backend on monthly basis. This works both for pre-paid and post-paid subscription mechanism without any flaw.
10. As enumerated in Section E, we are already integrated with national open Application Programme Interfaces (APIs) implemented for Aadhaar, eKYC (e-Know Your Customer), and Unified Payment Interface (UPI).
11. With this as background we feel that the conceptual Model presented or for that matter any technical solution is workable, but the main issue is the cost of deployment and multiplicity of efforts.

12. This can be avoided by **modernizing the existing telecom regulations** to adopt to the changing business models and embrace the advancement in technology. We appreciate the Authorities efforts in conducting a workshop for knowledge sharing at Bangalore and publishing this consultation note.
13. However, we feel that the same can be achieved if the TSPs and ISPs are allowed to share their Wi-Fi infrastructure and also allow them to roam freely. There is a need for regulatory clarity and that will do away with duplicate infrastructure creation.
14. We have presented our case in detail vide our submissions to the principal consultation on Wi-Fi (No.14/2016 dated 13 July 2016). Our key submission are :
- Presently only TSPs and ISPs are licensed to provide telecom services on commercial basis (including data services) there is no provision of Wi-Fi service provider. Any entity who would like to participate in commercial deployment of Wi-Fi infrastructure may obtain Unified License / ISP license.
 - Suitable licensing amendment may be issued to **enable active infrastructure sharing and data roaming between TSPs and ISPs networks** in order to increase broadband access footprints for the benefit of data consumers.
 - The **Advance Authentication** by using protocols such as EAP¹, AKA² may be promoted as an alternate to existing voucher authentication. This will enable seamless customer experience while availing Wi-Fi access points at public places.
 - Clarification may be issued on the **non-applicability of SUC** on internet services using Wi-Fi technology in free/ de-licensed bands in line with TRAI recommendation on AGR.
 - To **avoid double taxation on Wi-Fi**, the treatment of payment made between TSPs and/or ISPs for Wi-Fi services should be allowed as a pass through.
15. **Same Service Same Rule** - There cannot be a policy wherein any individual, entrepreneur or small enterprise starts selling the telecom services under its own brand or the brand of a Platform provider without obtaining a UL access/ ISP license. In case the Authority decides to enable such platform owners to provide data services without payment of LF and SUC, the same benefit should be provided to Licensed TSPs and ISPs.

¹ Extensible Authentication Protocol

² Authentication and Key Agreement Protocol

Issue wise response

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?

Response:

- Please refer points 8, 9, 10 with this as background we feel that the conceptual Model presented or for that matter any technical solution is workable, but the main issue is the cost of deployment and multiplicity of efforts.

Q2. Would you like to suggest any alternate model?

Response:

- The alternative would be to adopt the successful, scalable and sustainable leveraging the Authentication and payment mechanism already developed and deployed by TSPs. This is used to serve 100 crore subscribers and is robust. We are already integrated with national open API implemented for Aadhaar, e-KYC, UPI. We support all available methods of payments present in the market and also adopt to any new payment method that is likely to come up.
- This duplication of infrastructure can be avoided by **modernizing the existing telecom regulations** to adopt to the changing business models and embrace the advancement in technology.
- The TSPs are allowed to share active infrastructure, same may be extended for TSPs and ISPs to share amongst themselves. Similarly ISPs may also be allowed to share active infrastructure amongst each other. The roaming for data services may be allowed between TSPs and ISPs.

In summary TSPs and ISPs should be allowed to share active infra and allow roaming.

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?

Response:

- A concept of STD Booth for Wi-fi was presented in the workshop held at Bangalore. Here we would like to mention that the STD-PCO operator was working as a franchisee of telecom service provider and was selling under the brand name and special tariff offered by TSP (reselling not allowed under UL Access).
- We request Authority to allow TSPs and ISPs to fully leverage their infrastructure already deployed through enabling license conditions.
- There cannot be no case of an individual, entrepreneur or small enterprise to be allowed to resell telecom services without obtaining a UL access / ISP license.

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

Response:

- Please refer our response to Q2.
- TSPs and ISPs should be allowed to share active infra and allow roaming. This will open multiple opportunities of sharing and building common infrastructure.

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.

Response:

- Please refer our submission under point No. 3 of Preamble.
- The reselling of services is not allowed under access license.
- Once the TSPs and ISPs which are licensed to provide telecom services are enabled through suitable license amendments, they may prefer to appoint such shop owners as franchise just like an STD PCO for voice.
- In case the Authority decides to enable such platform owners to provide data services without payment of LF and SUC, the same benefit should be provided to Licensed TSPs and ISPs. The same policy of “light touch regulation” should be uniformly extended to all.

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?

Response:

- The revenue share should be based on commercial negotiations in line with the MVNO license.
