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

A. Preliminary Submissions

1. The TRAI has issued a short consultation note [to supplement the existing on-going consultation] proposing a model for a nation-wide Inter operable and scalable public Wi-Fi network.

2. In this regard, it is first submitted that given their established networks and inter operator agreements – existing access service providers are best placed to provide carrier grade and secure Wi-Fi services with seamless authentication and payment solutions to consumers. In this regard, it may be noted that,
   a. Since 2007, we have invested/contributed over 119,100 crores
   b. We have over 140,000 sites all over the country, serving 200 million+ subscribers of which over 50% [106 million] are in rural areas.
   c. We are also rolling out hotspots in high traffic locations in various service areas.

3. We therefore believe that the Wi-Fi revolution in India should be anchored and driven by and through licensed access providers.

B. Vodafone's Overall Submissions on the model proposed by TRAI

Against the above backdrop, we would like to address/response to the model proposed by TRAI.

1. It is first most respectfully submitted that the consultation note does not adequately deal with the licensing and regulatory framework under which such models will be operated.

2. We have already, in our response to the main consultation emphasized that the availability/use of license exempt spectrum cannot and does not mean the absence of a license for the provision of service.

3. Section 4 of the Indian Telegraph Act, 1885 states as below:

   4. ***Exclusive privilege in respect of telegraphs, and power to grant licenses.***
   Within [India], the Central Government shall have exclusive privilege of establishing, maintaining and working telegraphs:

   Provided that the Central Government may grant a license, on such conditions and in consideration of such payments as it thinks fit, to any person to establish, maintain or work a telegraph within any part of [India]:

Thus, as per the provisions of the Act, the activity of establishing, maintaining and working telegraphs requires a license from the Government.

4. **As per extant Unified Licensing framework, the provisions of access services can be only through a relevant authorization under Unified License**.

5. The fact that a license/authorization is required even if the entity is using delicensed spectrum, is evident from the fact that in the ISP authorization under UL, it is stated 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.*

6. We note that **TRAI has itself taken cognizance of the need to promote Wi-Fi whilst recommending the introduction of VNOs**. These recommendations of TRAI have been accepted by the DoT and a UL(VNO) has been issued by DoT.

7. **It is therefore once again emphasized that any entity establishing Wi-Fi network must take the relevant authorization under UL.** It is reiterated that given their established networks and inter operator agreements – existing access service providers are best placed to offer a quality and seamless Wi-Fi experience to the consumers.

8. The **proposal in the consultation note for registration of WiFi providers is not in consonance with the UL regime** and implementation of the same may lead to complexities that will not only be impossible to manage and control but would also be vulnerable to all kinds of security threats and breaches that cannot be enforced at a retail level.

9. We would like to draw the attention of the to some recent media reports that have highlighted the vulnerability of unsecured public WiFi networks:

   - **Public Wi-Fi vulnerable to data theft, says Norton, Business Standard, Bangalore, Mumbai**

     Using free Wi-Fi at an airport could result in data theft. Public Wi-Fi zones can be vulnerable to cyber attacks, owing to bad usage habits, says a study by security software firm Norton by Symantec. As much as 70 per cent of the 20,900 users globally, reached through an online survey, say they use public Wi- Fi for checking e-mail, logging into social media accounts or sharing files. Globally, there are estimated 47 million public Wi-Fi hotspots. India has nearly 31,000. Of the public Wi-Fi users,...

   - **Indians not aware of Wi-Fi risks: report, Deccan Herald, All**

     At a time when Wi-Fi is becoming more popular among Indians, only 56% of consumers surveyed said that they were aware of determining whether the Wi-Fi network they are using is secure or not....

10. We do not agree with the view in the consultation that the authentication is a cumbersome activity; rather, it is our submissions that ecosystems are already in place whereunder TSPs offer a seamless experience to the subscribers in respect of the Wi-Fi hotspots operated by them or operators with who they have already entered into mutual commercial agreements.

11. In fact, a mobile subscriber having logged in once [one-time registration] is assured seamless connectivity across hotspots, operated by his TSP or with operators with whom the TSP has tied up.

12. It is only in cases, where agreements with other operators may not be in place that there is a requirement for providing Wi-Fi connectivity through the modality of a voucher /one time password. This also, in our view is not the complex and cumbersome activity, but in fact a simple well established approach that is followed in most cases, including for banking transactions. Such approach ensures security and traceability and the same has also been cleared by the Ministry of Home Affairs.

13. It is submitted that such seamless services can also be extended to foreigners and tourists who can avail of the Wi-Fi services provided by their visited network – directly or through arrangements with other operators.

14. Further, the GSMA has already launched Mobile Connect, which gives the entire global GSM community to avail of automatic and secured authentication to avail of services offered by other operators.

15. It is our submission that as the mobile penetration has already crossed a billion subscribers and that it is a reasonable assumption that any customer with a laptop, would definitely have a mobile connection, the availability of Wi-Fi connectivity through the existing mobile operators will yield the best results for the end objectives that are sought to be achieved by TRAI.

16. It is again submitted that the challenges of inadequacy of associated infrastructure – such as right of way, power availability, operating conditions, seamless hand offs, etc are again challenges that can be better met by existing licensees.

17. Insofar as payment mechanisms for Wi-Fi networks is concerned, it is submitted that the subscriber today, has at his disposal any number of payment options – prepaid balance, post-paid account, mobile wallets, net banking, debit card, credit card and now, the most recently introduced UPI interface. In case of Wi-Fi services offered by the access service providers, the payment can be made seamlessly through the prepaid/post-paid accounts. These are all trusted authentication and payment options and the subscriber can choose any or all options as per his own profile – setting different default payment options for work, personal use, etc.; further, the payment flows are already well defined in each of the options.

18. In respect of a model of a one-click subscription, we submit that the same may be considered in the light of the existing framework that puts in place safeguards such as double consent for activation of VAS services, alerts to subscribers on broadband usage, etc.

19. We would like to respectfully submit that Wi-Fi is not an alternative, free, cellular mobile network as is being mooted by some stakeholders. This is also recognized by TRAI in the present consultation – where it talks about hotspot providers. Hotspots are areas where there are larger number of footfalls that see increased data activity – where the needs of the subscribers, being in a confined geographical area, can be met through short range Wi-Fi solutions.

20. In respect of the specific model mooted by TRAI, we would first like to submit that any and all models should be permissible within the framework of the existing licensing regime and no model should be imposed by regulatory prescription.

21. We would also submit that the registry/central system of hotspot service providers that is being mooted in the model is inconsistent with the existing licensing framework under UL, which permits the provision of service as per the business model of the connectivity provider after taking the relevant license /authorization [access services/ISP/VNO] under UL.

22. In any event we believe that a registration system is not a desirable model as the information maintained in the Registry will be of a critical nature [which, if hacked into by anti-social elements could severely jeopardize security not only of the so called hotspot providers, but also of the customers to whom the services are being provided.

23. Further, the TRAI may also consider the issue of enforceability of governing rules being applied to an entity that does not have a license. It is also respectfully submitted that as the framework already exists under UL, allowing players to offer an equivalent service, outside the existing licensing and regulatory framework would lead to non-level playing field.

24. It may further be pointed out that the revenues earned by such registered entities – whether through advertisements, other monetization opportunities, etc are, in fact payments for telecom services – and should be exigible to license fee as applicable to the licensed operators under Unified License.

25. We respectfully reiterate that any and all models should be permitted within the framework of the licensing regime and a prescriptive approach is not desirable and market forces should be allowed to prevail.

26. We also submit that issues and discussions related to partnership models, monetization opportunities, importance of local content, etc, should be left to the market and mutual commercial arrangements as these will depend on the business model, feasibility, etc of respect [licensed] Wi-Fi providers.

27. It is also most respectfully submitted that the framework and ambit of the TRAI Act, pertains to licensed telecom service providers and thus also, we believe that the consultation should take place within the parameters of the licensing and regulatory framework.

28. We once again submit to TRAI that there is a very strong infrastructure and eco system that is already in place that has been created by the licensed TSPs, who, in our view are best placed to anchor and drive carrier grade and secure Wi-Fi services with seamless authentication and payment solutions to consumers.

29. The TRAI should look at the fundamental issues that are not allowing Wi-Fi hotspots to take off. These have been highlighted in our earlier response, which includes addressing the issues related to availability of backhaul, in building access, etc.

C. 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?

a) We respectfully reiterate that any and all models should be permitted within the framework of the licensing regime and a prescriptive approach is not desirable and market forces should be allowed to prevail.

b) All issues and discussions related to partnership models, monetization opportunities, importance of local content, etc, should be left to the market and mutual commercial arrangements as these will depend on the business model, feasibility, etc of respect [licensed] Wi-Fi providers.

c) We once again submit that there is a very strong infrastructure and eco system that is already in place that has been created by the licensed TSPs, who, in our view are best placed to anchor and drive carrier grade and secure Wi-Fi services with seamless authentication and payment solutions to consumers.

Q2. Would you like to suggest any alternate model?

- We submit that this should be left to individual business models and feasibility of the same and that TRAI should not try to formulate a prescriptive approach.

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?

a) It is reiterated and emphasized that any entity offering Wi-Fi service must take the relevant authorization under UL. Adoption of any light touch approach must take place within the ambit of the licensing and regulatory framework and should be applicable to all operators.

b) We would also like to point out that reselling has now been facilitated through a VNO authorization under UL. The TRAI, whilst recommending VNO, was cognizant of the use of the VNO authorization to promote the W-Fi ecosystem; some relevant extracts from its 2015 recommendations are reproduced below:

*2.11 There are **several areas where VNOs can be useful in service provisioning. They can provide localized services in small towns and rural areas** using the networks of existing NSOs or by laying last mile connectivity. The VNO model of service delivery can also be effective in **structurally defined geographic areas like airports or smart cities.** In such well defined geographical areas, since the planning and development of the projects takes time, it is not economically feasible or practical for TSPs to lay the last mile infrastructure. The developers themselves have to plan and lay the telecom infrastructure in the form of Optical fiber cables (OFC), ducts, towers etc. Therefore, the **developer can become a VNO and extend telecom services to residents/users of such entities**. In upcoming green-field smart cities like GIFT, Dholera, Dahej, the city services providers can set up their own infrastructure at the development stage and **take a VNO license to provide broadband and other telecom services to their residents inside the smart cities.***

*2.12 There can be **several organizations that want to make their controlling areas/premises Wi-Fi enabled.** For example, cities like Delhi are aiming to become a fully Wi-Fi enabled city to provide broadband services to its citizens so that various e-Governance services are available on their mobile devices. Similarly, the Indian Railways is aiming to make railway stations Wi-Fi enabled for the benefits of its passengers. In the present setup they need to rely exclusively on existing NSOs for provisioning of such services in the controlling area/boundaries. If they are **allowed to become VNOs within their boundaries, they can provide such services according to the needs of the customers** and can design innovative tariff plans to suit customers' needs. However, for connecting to the external world they still need the infrastructure of the existing TSPs.*

*2.16 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.***

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

a) As submitted above, W-Fi services can be provided through a relevant authorization under UL.

b) It may be noted that in the case of UL (VNO) which has recently been introduced under UL, provides as below:
32.1 The terms and conditions of sharing of infrastructure between the NSO(s) and VNO shall be left to the market i.e. on the basis of mutually accepted terms and conditions between the NSO(s) and the VNO.

c) Therefore, in case the service is offered through the VNO route, the sharing of infrastructure of infrastructure should be left to mutually accepted terms and conditions between the NSO(s) and the VNO.

d) Any discussion on unbundling should be part of a larger or more holistic discussion and should not be dealt with in a narrow silo.

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

a) Reselling is not permissible under UL, except after taking a VNO authorization under UL. The licensing and regulatory framework for the same, has been laid down by DoT after considering the recommendations of TRAI.

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?

a) We believe that as the service can only be offered as a licensed activity under UL, the licensing and regulatory framework for access services already laid down in detail –would be applicable to the Wi-Fi licensed operators as well, depending upon the relevant authorization under UL.

b) Any sharing of costs/revenues should be part of business and commercial discussions within the ambit of the overall licensing and regulatory framework.

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