



Vodafone Response to TRAI Consultation Paper on Proliferation of Broadband through Public Wi-Fi Networks dated 13 July, 2016

A. EXECUTIVE SUMMARY

1. Vodafone supports the national objective of proliferation of Broadband to deliver on the Government's vision of Digital India and Broadband as a utility for every citizen.
2. However delivery of any broadband services should only be through a licensed entity – under an Access services or ISP license/Authorization.
3. We believe that WiFi services are cheaper, not because of any inherent advantages of the technology/medium, but because these services are not burdened with the high cost imposed on the access service providers – such as acquisition of licensed spectrum at exorbitant prices, the high burden of regulatory duties and levies, etc.
4. We believe that access service providers [TSPs/ISPs] are best placed to set up WiFi hotspots – offering their customers a seamless user experience, carrier grade services and a secure user experience.
5. We submit that one of the key requirements for encouraging the proliferation of WiFi services is ensuring availability of right of way on fair, reasonable, transparent and non-discriminatory terms for all TSPs/ISPs.

We believe that one of the primary reasons for the higher penetration of WiFi hotspots in developed countries is the ubiquitous availability of a robust fibre network, which aspect is completely missing in India.

We believe that availability of fibre will go a long way towards encouraging setting up of WiFi hotspots, thus encouraging the proliferation of broadband in the country.

6. It is also submitted that TRAI should recommend that SUC shall be payable only on revenues arising from licensed spectrum acquired by a TSP.

B. ISSUE-WISE RESPONSES:

Q1. Are there any regulatory issues, licensing restrictions or other factors that are hampering the growth of public Wi-Fi services in the country?



Q2. What regulatory/licensing or policy measures are required to encourage the deployment of commercial models for ubiquitous city-wide Wi-Fi networks as well as expansion of Wi-Fi networks in remote or rural areas?

- a) In India, WiFi hotspots are being created by the TSPs/ISPs based on requirement, business case and feasibility study.
- b) It is also submitted that WiFi which is in the nature of a short range wireless access to the internet needs to ride upon an existing internet infrastructure [offered on wireline/wireless access] and ubiquity of the latter is a pre-requisite for WiFi. Thus, in India, it is first important to ensure available of the internet infrastructure, on which these hotspots will be operated.
- c) Any comparison with developed countries is not correct as these countries have highly penetrated fixed and mobile networks. In contrast in India, the connectivity is mainly through mobile networks.
- d) It is submitted that WiFi is in the nature of hotspots that are set up in areas which require additional localized capacity and that the concept of ubiquitous city wide Wi-Fi networks is technically and practically not feasible.
- e) Further, as noted by the Authority itself, the unlicensed bands operate at very low power levels; this is to avoid interference, and thus the range is also not very large.
- f) The consultation itself recognized WiFi being a WLAN – i.e. a Wireless Local area Network, short range public network known as hotspots.
- g) A consideration of a ubiquitous city wide WiFi network would amount to a backdoor entry into cellular mobility on the basis on delicensed /free spectrum.
- h) We submit that any telecommunication service can be provided by an access/ISP licensee, duly licensed as per Indian Telegraph Act, 1885 and paying consideration as per the respective agreement. Thus, any policy objective for broadening WiFi proliferation must meet this criteria. A public WiFi service provision by non-licensee is illegal and not allowed under the current laws and set up.
- i) The key requirement of providing any access service is the backhaul and last mile. In our experience providing backhaul to the hotspot is the most critical factor and has factors like costs, upkeep and maintenance associated with it. There are adequate capacities required in last mile, which also requires some interconnectivity between WiFi routers. The upkeep and maintenance of such routers and connectivity is a major challenge in providing carrier grade service.



- j) There are impediments mentioned in the consultation like KYC etc. and TRAI is proposing simplification of the process, which is desirable. We submit that such issues are impediments for provision and growth of telecommunication service too. The industry is facing major concerns, which may get addressed by measures like E-KYC.

Q3. What measures are required to encourage interoperability between the Wi-Fi networks of different service providers, both within the country and internationally?

Q4. What measures are required to encourage interoperability between cellular and Wi-Fi networks?

- a) There is no need for any regulatory intervention in this regard and the same should be left to market forces and mutual commercial agreements.

Q5. Apart from frequency bands already recommended by TRAI to DoT, are there additional bands which need to be de-licensed in order to expedite the penetration of broadband using Wi-Fi technology? Please provide international examples, if any, in support of your answer.

- a) The Authority may appreciate that there is far more delicensed spectrum available as compared to licensed access spectrum available collectively to all TSPs to serve over 1 billion subscribers.
- b) It is thus our view that the existing unlicensed/delicensed spectrum is sufficient and there is no need for any additional bands to be de-licensed.
- c) We believe that the focus of the Authority should be on increasing availability of licensed access spectrum for mobile 3GPP technologies to ensure quality and grade of broadband services for consumers.
- d) It may be noted that spectrum in so called TV White Space is a commercial spectrum. Further, any trials etc. should be done by licensed entities. It is of utmost importance to preserve the framework under which telecommunication services are to be provided. Any changes, like allowing non-licensed entities or entities which have no commitment will not only lead to disruptive changes but will rather destroy the fabric on which telecommunication services are being provided. Incentivizing entities who are not investing or which are trying to prove that they can provide cheaper service, without a due diligence and regulatory impact analysis, will be anti-consumer in the long run.

Q6. Are there any challenges being faced in the login/authentication procedure for access to Wi-Fi hotspots? In what ways can the process be simplified to provide frictionless access to public Wi-Fi hotspots, for domestic users as well as foreign tourists?



- a) Log in is taking place as per the procedure laid down by DoT vide its letter dated 23.02.2009. We believe that the procedure has been finalized in consultation with the Ministry of Home Affairs.
- b) We believe that the existing process is working well and that there are no challenges being faced in this regard.
- c) There are however other options that may be considered by the Authority for seamless authentication – these may include Aadhaar based authentication, etc.
- d) We believe that in case any alternate procedures for login/authentication that may be recommended by the Authority, the same would need to be cleared by MHA from security angle. Further, the TSPs/ISPs should be free to choose from the alternates available.

Q7. Are there any challenges being faced in making payments for access to Wi-Fi hotspots? Please elaborate and suggest a payment arrangement which will offer frictionless and secured payment for the access of Wi-Fi services.

- a) The subscriber has several options/channels for making payment for access to a Wi-Fi hotspot. These include, as noted by the Authority:
 - Payment for physical voucher
 - Electronically through
 - Credit card
 - Debit card
 - Net Banking
- b) Further TSPs/ISPs also tie up with various payment platforms such as PayTM, MobiKwik, BillDesk, Freecharge, SpeedPay etc. There are also the mobile money services such as M-Pesa, Airtel Money, etc., which can be used.
- c) In case of subscribers of TSPs /ISPs, there is the option for the payment to be made through the postpaid bill or through a deduction of the prepaid balance.
- d) We therefore believe that there are enough and ample options available to the consumers – which are being driven by consumer and the market and that there is no need for any regulatory intervention in this regard.
- e) It may be noted that regulatory intervention also cannot be contemplated on account of there being AGR issues involved, which may also be taken into consideration by the Authority while deliberating on this issue.



Q8. Is there a need to adopt a hub-based model along the lines suggested by the WBA, where a central third party AAA (Authentication, Authorization and Accounting) hub will facilitate interconnection, authentication and payments? Who should own and control the hub? Should the hub operator be subject to any regulations to ensure service standards, data protection, etc?

- a) We believe that there is no need to adopt any hub based model and certainly not by any regulatory intervention. Such approaches will, in our view, only add an additional layer of cost and complexity into the system and may also lead to competition concerns.
- b) A similar proposal was also mooted by the TRAI in the context of a different consultation – where also, we have voiced our concerns on introducing unlicensed entities into the system. We firmly believe that any such arrangements, if at all feasible, should be left to market forces and mutual commercial agreements.
- c) We believe that interconnection is mandated only in respect of licensed TSPs and between networks. In all other cases, arrangements can be on commercial basis and mutual agreement amongst parties.
- d) We believe that there is no need for any regulatory intervention in this regard and the same may be left to market forces.

Q9. Is there a need for ISPs/ the proposed hub operator to adopt the Unified Payment Interface (UPI) or other similar payment platforms for easy subscription of Wi-Fi access? Who should own and control such payment platforms? Please give full details in support of your answer.

- a) As submitted above, we reiterate that there is no need for any hub based operator.
- b) Further, as already stated, payment platforms already exist in the market with several options available to the consumer. There is no need for any regulatory intervention in this regard.
- c) As regards a Unified payment interface, we believe that the same may be considered by the Authority for payment directly by the consumer to the concerned TSP/ISP. It is however emphasized that such payment cannot be linked to the prepaid/postpaid balances, vouchers, E-Top ups etc, which are being sold /distributed by TSPs for their own services.

Q10. Is it feasible to have an architecture wherein a common grid can be created through which any small entity can become a data service provider and able to share its available data to any consumer or user?



Q11. What regulatory/licensing measures are required to develop such architecture? Is this a right time to allow such reselling of data to ensure affordable data tariff to public, ensure ubiquitous presence of Wi-Fi Network and allow innovation in the market?

Q12. What measures are required to promote hosting of data of community interest at local level to reduce cost of data to the consumers?

- a) It is submitted that commercial WiFi can be offered by a licensed UASL/UL or ISP. Any entity that takes an access/ISP license can offer these services.
- b) Telecom is a heavily regulated sector because of the security considerations involved in the provision of these services. TRAI, may like to consider, on balance the security considerations involved in allowing neighbourhood entrepreneurs to set up data networks for larger public use.
- c) Attention in this regard is drawn to DoT letter of 23.02.2009 [also referred to by the Authority in the consultation paper] where DoT has issued instructions to all ISPs providing WiFi services under delicensed frequency band – highlighting the importance of ensuring security of WiFi networks, which can be breached and misused by anti-social elements.
- d) If such data providers are permitted, then the rationale of disproportionate regulations on TSPs may need to be reconsidered.
- e) Reselling of data can be done through a VNO, for which a framework has already been laid down.

Q13. Any other issue related to the matter of Consultation

- a) We note that the Authority mentions the use of TV White spaces, VHF and UHF bandwidths in the context of expanding backhaul capacity. In this regard, it is submitted that
 - The term 'TV White Spaces' is a misnomer in the Indian context, as these are primarily vacant/un-used spectrum.
 - The high propagation characteristics of this band make it desirable to be used for broadband access and use as a backhaul spectrum would be a sub optimal utilization of the same.
 - The NFAP 2011 identifies the use of this spectrum for mobile and not for point to point backhaul.
 - The Government has recently clarified that the 470-698 MHz band will not be de-licensed and that decision regarding methodology of allocation and pricing shall be taken by the Government, taking into account all relevant aspects. The DoT also informed that although this band has not been identified for IMT services in India, but that the band or part thereof can still be used for IMT services and will be put to auction



in future when the ecosystem for IMT services is developed for this band. Copy of letter dated 7 June 2016 is attached.

- b) We note that the Authority has mentioned a number of new and innovative services that can be offered through WiFi – which include advertising, location, analytics, retail store interactions, special venues [see para 2.17(c)], caching and downloading content [see para 1.7] for easy browsing, etc. In this regard, we conclude that it is the considered view of the Authority that such services are permissible and thus can also be offered by TSPs/ISPs for their other access services.
- c) It is also our understanding that based on the Authority's view in the consultation [see para 2.18 on advertisement based models] TSP/ISPs can also provide their other access services free to the subscriber if the subscriber views advertisements from sponsors, or connects with the sponsor on social media in order to gain access to the network.
- d) In respect of monetization of personal data to earn revenues, we believe that the same can be done with the consent of subscribers.
- e) We believe that if 'affordability' and broadband penetration' is indeed the national objective, there is a need to review the huge burden of spectrum costs and regulatory fees that are imposed on the TSPs. We believe that it is unjust to look for low cost alternatives, when indeed the high cost of service is the outcome of high regulatory and spectrum costs imposed on the TSPs.
- f) It may be noted that the only difference between broadband access through WiFi and through PLMN is that the former uses unlicensed spectrum. It should not be that the Authority's consideration on proliferation of Broadband through WiFi results in telecom services being offered by unlicensed entities. Such an approach will not only be against the provisions of the Telegraph Act, but also raise issues about the very rationale for a telecom license.

New Delhi
24 August 2016