ISPAI response to Consultation Paper on "Proliferation of Broadband through Public Wi-Fi Networks"

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

ISPAI Response:

Wi-Fi is one of the technologies used to provide Internet Access services to the end consumers in India. As on date, the provision of Internet Access services by any entity can be done only after it obtains UASL/UL (Access Service Authorization) or ISP license or becomes a VNOor a Franchiseeof an ISPS. The provision of Internet Access, through Wi-Fi by any entity who is not an ISP, is a case of resale of services which would necessarily require VNO ISP license. Apart from the licensing issue as aforesaid, there is very important issue of the concerns in respect of national security which come in the way of provision of licensed Internet Access services by the unlicensed entities which need to be taken in to account and tackled with.

Apart from the challenges above some of the other issues which are being faced in provision of public Wi-Fi services are as follows:

a.   ROW / Installation of Pole

b.   Open Area for Coverage/ Right Area for coverage

c.   Internal wiring/ cable routing

d.   Power for Equipment

e.   Floor plan for better planning and deployment

f.   Permissions from various agencies

g.   Availability of Backhaul

h.   Physical Security of the infrastructure (in idle time)

i.   Coverage/ speed issues

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?

ISPAI Response:

The Government has already introduced the UL-VNO (ISP) license regime under which the commercial models for deployment of ubiquitous city-wide Wi-Fi networks as well as expansion of Wi-Fi networks in

remote or rural areas can be done by the entities who are aspiring to enter in to this line of business. In order to encourage deployment of Wi-Fi networks across the country, the license fee on internet access services should be waived off at least for a period of five years. This would result in affordable Internet/broadband and Wi-Fi services and would also reduce the input cost for the ISP service providers. Second policy measure could be to reduce the import duty on the Wi-Fi equipment or make a duty free for a period of five years.

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?

ISPAI Response:

Yes we should encourage interoperability between Cellular and WiFi network of ISP/ TSP, this would improve quality of service by reducing the load on spectrum to the extent of traffic flowing through WiFi network. The regulation should specifically enable such mutual agreement between networks of different TSPs/ISPs. Presently sharing charges should be under forbearance.The Wi-Fi networks of ISP/TSPs are now expanding in reach, coverage and are also becoming popular. AISP/TSP providing its own data network and Wi-Fi access points, may also provide the access to the WIFI access points of their partners/other ISPs/TSPs through their own wallet. For example, two ISP/TSP operators are having their wifi access points at two different locations say in Delhi Railway Station and Delhi Airport. They may enter into a mutual agreement under which their wifi customers can access the wifi access points of both the locations. The end pricing of wifi will continue to be decided by the Principal Operator to whom the customer belongs and the other operator will get a commercial consideration based on mutual negotiations. A commercial freedom to enter into such arrangements and to decide the retail pricing of wifi will enable all TSPs/ISPsto explore various business models.

Furthermore, Interoperability between the Wi-Fi networks of different service providers, both within the country and outside, is a technical and commercial issue. Over a period organizations like WBA and Wi-Fi Alliance have developed Wi-Fi roaming framework across various Wi-Fi networks globally. With the increase in the proliferation of the Wi-Fi networks and services in the country, the Wi-Fi roaming providers will be able to find a viable and sustainable business case for offering their services to the Indian ISP operators . Thus the growth in the Wi-Fi networks is one of the essential pre-requisite for encouraging inter-operability between the Wi-Fi networks of different service providers. it is understood that one of the major access providers in India has based its BWA services strategy on proliferation of Wi-Fi services while surrendering its BWA spectrum. Whether such access provider or even others would agree for roaming arrangement with other service providers is an issue which is left to the commercial considerations of those service providers.

Thus, any interoperability or infrastructure sharing commercial arrangements between two Wi-Fi networks should be mutually decided without any regulatory intervention. The interoperability between cellular and Wi-Fi networks will result in better cellular Voice and Data services and needs to be encouraged.

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.

<u>ISPAI Response:</u>

The value of license –exempt spectrum in bridging the digital divide has been demonstrated through community wireless networking projects as well as inexpensive ITES (IT enabled services) operating on unlicensed spectrum that have been created to spread connectivity to digitally-marginalized areas. As demonstrated by numerous case studies, such networks administer e-learning, e-commerce, telemedicine, e-agriculture, and many other initiatives that lead to equitable social and economic growth, making unlicensed spectrum a "public good".

The International Telecommunication Union (ITU), European Union telecom regulatory bodies, as well as leading state telecom policy makers and regulators such as the FCC (U.S. Federal Communications Commission) and OFCOM (UK Office of Communications) have recognized that the optimal use of radio spectrum is dependent on flexible spectrum management policies and the multi-time sharing of this precious resource.

Of late, the relevance of license –exempt spectrum is being recognized by policy makers in India as well. This is evident from the National Telecom Policy 2012 recognizes the need to reserve more frequencies for unlicensed use. However, the country is still behind when compared to unlicensed spectrum availability in the U.S. and UK which have already integrated innovative spectrum management techniques in their telecom policies. These policies aim to create a flexible, market-driven approach to spectrum regulation and management through integrating spectrum sharing techniques and meeting the industry demand for unlicensed spectrum. India needs to follow suit in order to provide connectivity to remote/rural regions and encourage further innovation in the telecom domain. Therefore, additional frequencies should be freed up for unlicensed use according to demands from community groups, industry bodies, and experts in the field, in line with international best practices. One of the reasons for this request is that the existing 50 MHz of licence-exempt spectrum in the 5.7 GHz band has become choked up as many ISPs switch to providing services using these unlicensed frequencies. The situation is the same in the case of the 2.4 GHz band, which has become overloaded due to the unavailability of more unlicensed spectrum.

The bands which could be considered for de-licensing are 2.483-2.5 Ghz, 2.7-2.9 Ghz apart from E and V band which have recommended for light regulation by TRAI in its latest recommendations on Microwave and Backhaul spectrum. Frequencies in the 5.15 GHz-5.35 GHz bands, as well as 5.725-5.775 GHz bands are unlicensed for indoor use only. These bands should be unlicensed for outdoor use as well in order to facilitate the creation of wider wireless communication networks and the use of innovative technologies. Making available license exempt spectrum for provision of wireless access would enable the investment and services from the ISP community in a big way. This would give a strong impetus to the proliferation of broadband services in the country.

Additionally we would like to submit the following:

1. Given the paucity of available fiber in the country and the high cost and time to deploy the optical fiber it is required that existing de-licensed band of 5.825 to 5.875 GHz be deployed as backhaul for Wi-Fi zones by increasing its maximum EIRP from present 36 dBm to 55 dBm.

2. Current de-licensing in India is different from ITU T & Worldwide norms in ISM bands; we should align ourselves with ISM Bands. In 5.8 GHz band only 50 MHz have been de-licensed vs 120 MHz available in all other countries. This will bring in economies of scale.

3. Most of the countries have already unlicensed 60 GHz band and this band has a good device ecosystem, India should also delicense 60 GHz band immediately and make it available for consumers. 60 GHz band is also known as WiGig band (Wi-Fi at 60 GHz) using IEEE 802.11ad protocol. At present dual band WiFi in 2.4 GHz and 5 GHz spectrum bands is deployed for WiFi. Now tri band WiFi chips are available and shortly tri band WiFi routers devices shall be also available in India. 60 GHz Band is already license exempt spectrum band in countries like USA, UK, Australia and Japan.

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?

ISPAI Response:

For the foreign customers, the OTP should be allowed to be sent on the foreign mobile number and services should be allowed on the same basis as roaming services are allowed. Additionally, a framework for Wi-Fi roaming should be developed on the similar lines as for mobile roaming. The validity period for temporary login credentials need to be clarified by DoT for the adhoc customers. Digital CAF is another idea which can be implemented based on the Aadhar Card since it can be electronically verified by the public Wi-Fi provider.

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.

ISPAI Response:

There is no direct evidence in the public domain as on date that there are any challenges being faced by the customers in making payments for getting access to Wi-Fi hotspots.

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?

ISPAI Response:

Hub based model as suggested by WBA is a market phenomena which should not be brought through regulation. Such a model would be too complex as it would require connectivity with all Internet Service

Providers. Further, the authentication of the subscriber is the responsibility of service providers who owns the customer. The national security implications in respect of third party authentication, accounting and authorization needs to be carefully deliberated upon in the larger public interest before even considering introducing a new type of service and service provider. Further, there can never be a common Wi-Fi packs across all Wi-Fi networks and hence having a common hub is unwarranted. TSPs/Internet service providers should be given complete freedom to explore their various business models and to share their active and passive infrastructure with each other.

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.

<u>ISPAI Response:</u>

The use of unified payment interface or any other payment platform should be left to the option of the service provider and the market forces without any regulatory intervention. In respect of hub operator our response to earlier questions may be referred please.

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?

<u>ISPAI Response:</u>

Data service provider as referred in the question is the entity which would be providing internet access services. It may be noted that Wi-Fi is one of the technology used to provide Internet Access services to the end consumers in India. As on date, the provision of Internet Access services by any entity can be done only after it obtains ISP license becomes a VNO or a franchisee of an ISP.. The provision of Internet Access through Wi-Fi by any entity who is not aTSP/ISP is as per present regulation and licensing regime is a case of resale of services which would necessarily require VNO ISP license.

Therefore, any entity who wants to provide Internet services including Wi-Fi to their customers has to take a telecom licence granted under Section 4 of the Indian Telegraph Act. Sharing of data by any entity/individual against commercial consideration will tantamount of reselling of data services, which cannot be done without getting a valid telecom licence.

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?

<u>ISPAI Response:</u>

Please see response to Question No.10 above.

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

ISPAI Response:

There are two costs for data hosting viz infrastructure /Space cost including power and internet access/connectivity cost. Policy measures should be taken to provide boost to setting up of Data Centers locally. The data hosting services should continue to remain outside the ambit of licensing regime.

Q13. Any other issue related to the matter of Consultation.

ISPAI Response:

Hotspot providers or Wi-Fi providers in a campus generally act as an agent of the ISP who provides ILL services to these providers. We have following suggestions for smooth operation of this arrangement between the Wi-Fi provider and the ISP:

1.   In case the Wi-Fi providers are billing for the services and keeping the consumer records also with them they should ideally take UL-VN) –ISP license for the same.The responsibility of compliance in respect of license conditions will rest with the WI-FI provider as VNO licensee.

Alternatively the Wi-FI providers should bill on behalf of licensed ISP and should be treated as an agent or franchisee of the ISP. The responsibility of compliance in respect of license conditions will rest with the ISP.