
BIF RESPONSE TO TRAI CN ON PUBLIC WIFI

India is hugely starved of Broadband penetration and one of the ways to go forward is by the proliferation of Public Wifi . BIF supports TRAI's initiative for large scale deployment of Public Wifi Networks in improving Broadband penetration & adoption in the country .BIF is in favour of creating Regulatory guidelines for successful, scalable & sustainable Public Wifi Infrastructure. BIF is of the opinion that Public Wifi Networks should be scalable to provide ubiquitous and affordable broadband. The response to the questions are suitably tailored accordingly and are in consonance with the unanimously endorsed objectives and mission of BIF viz., the expeditious proliferation of the broadband ecosystem in a technology-neutral, holistic and all-inclusive manner that fully embraces carriage,content and manufacturing segments in an equal and harmonious manner.

Q1.& Q2. Will the architecture suggested in the consultation note for creating unified authentication and payment infrastructure enable nationwide standard for authentication and payment interoperability?

BIF RESPONSE

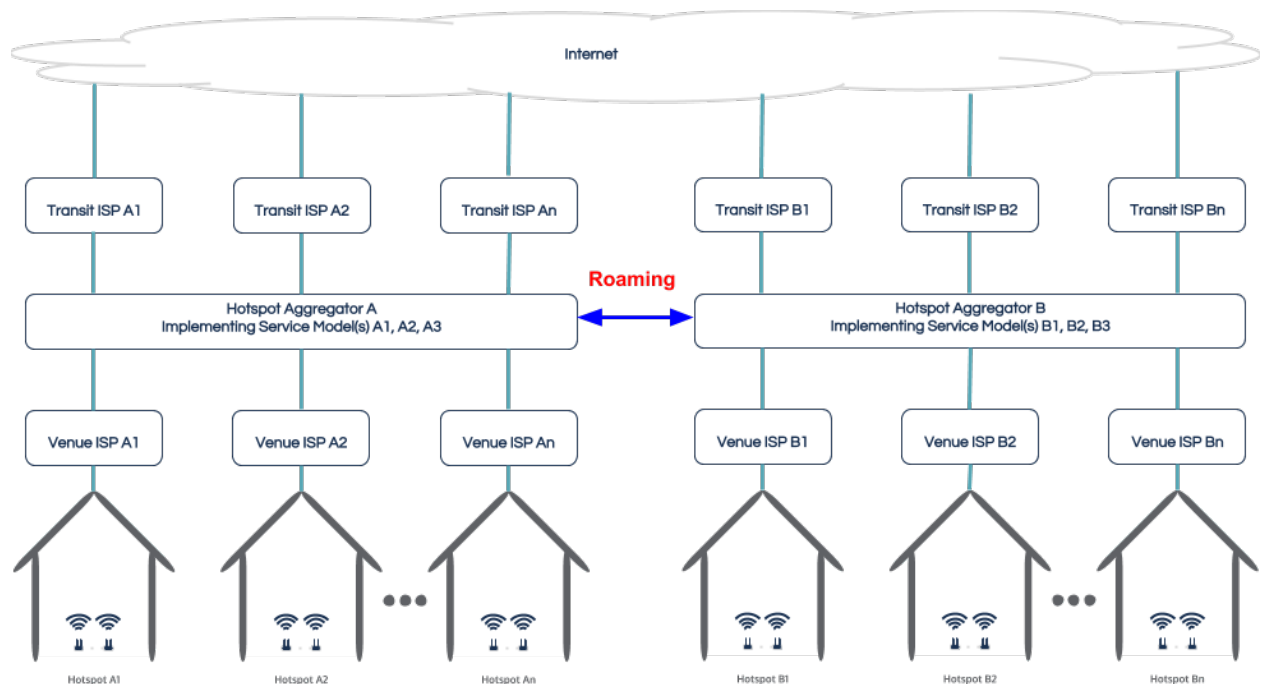
Yes-TRAI proposed architecture does appear to be a good method for authentication & payment interoperability However, it is felt that Govt need not mandate or prescribe any particular model and should leave it to the Wifi Hotspot provider to choose if it wants to use the authentication services of any other authentication agency or build its own or to continue with the existing method of OTP based verification. Also, it should be ensured that the burden of subscriber verification/ authentication should not be shifted to the Hotspot Provider if they are using some authentication agency for this purpose. As regards payment inter-operability, it could be left to the willing service providers to choose any solution or design their own arrangements for providing services .

As mentioned in the above paragraph, BIF is in favour of allowing different Wi-Fi models to come up. Instead of prescribing a particular model, it should be left to the market forces to determine which model which supports govt's overall objectives of broadband pdnworks best. To achieve the goals of scaling Public Wi-Fi, getting more people online and providing high quality internet experience to users across networks, we believe that regulations should enable innovation in architectures, business models and types of participants.

NOTE:

The above may be construed as views of BIF barring three TSPs viz. Airtel, Vodafone & Telenor who have a slightly different point of view.

The earlier TRAI consultation paper on Public Wi-Fi discussed different models. One promising model is the aggregation model, wherein a neutral entity partners with various players like Wi-Fi providers, Internet Service Providers (ISPs), TSPs (Telecom Service Providers), payment providers, venues, others to enable Wi-Fi services. Unlike the central model proposed by TRAI, where it is not clear who would be stitching the different components (could lead to creation of a possible monopoly, which may not be a desirable outcome), in this model the aggregator drives service integration across the value chain - collaborating with ISPs, TSPs, payment providers and venues. There could be multiple aggregators driving competition. The aggregator would use authentication mechanisms and payment solutions which are in compliance with the government regulations. The monetization could happen through freemium services, advertisements, offering mobile data offloading and paid Wi-Fi services. The aggregator would be responsible to an extent for user experience, and this will drive the aggregator to promote service and technology standards across the value chain. The aggregator could also enable international roaming by tying up with international players.



In essence, Wi-Fi aggregator would do the following:

- homogenize a set of heterogeneous hotspot networks and help operate these hotspots for hotspot owners
- provide cloud services to enable business models and service operations as a service to the hotspot owner
- provide end user onboarding services including authentication, authorization & accounting to the hotspot owner
- offer traffic management services to the hotspot owners
- enable a seamless and secure user experience for the users within the aggregated network and between aggregated networks by contracting with multiple ISPs/TSPs

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- offer mobile data offloading enabling mobility of users from TSP networks to the aggregated network

The policy and regulatory environment governing Public Wi-Fi should enable the aggregation model explained above (in addition to other models) to proliferate. In this context, some of the key policy recommendations are provided below:

- Cloud-based Wi-Fi solutions can efficiently provide user authentication, KYC & other compliance, and accounting at scale across millions of users and hundreds of ISPs. Such services will enable ISPs/TSPs and hotspot owners to achieve interoperability and economies of scale
- Allow aggregators to sign **roaming agreements** with TSPs/ISPs/hotspot providers. This will enable the aggregator to efficiently scale public Wi-Fi and make networks interoperable
- Explicitly allow **offloading of mobile data** by the TSPs to an aggregated network. This will help in generating revenue stream for Wi-Fi providers and cut costs for the TSPs by reducing the usage of licensed spectrum
- Allow deployment of **neutral host** Public Wi-Fi networks. This can be achieved through broadcasting of the SSID by the neutral host provider and enabling of sharing of the network via back end integrations (and not by sharing of Access Points via different SSIDs). This will enable efficient utilization of spectrum and contribute in making the Wi-Fi services affordable. Indeed, to prevent fragmentation of public Wi-Fi experiences in India, TRAI should consider rules that affirmatively encourage neutral host arrangements for public spaces and venues, while being strictly neutral with respect to business models for private Wi-Fi deployments.
- Allow **Direct Carrier Billing** as one more option for users to pay for Wi-Fi services. Since the majority of the population has mobile accounts with the telcos, DCB provides a great opportunity for the masses to access digital services without any security concerns and inconvenience

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?

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

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

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Keeping in view the stark deficiency of Wifi hotspots in India as compared to the Global benchmark today which has been highlighted by TRAI in its Consultation Paper and the fact that whatever approaches have been used in the past have not had the desired results, BIF feels that there is an urgent need to adopt a fresh innovative approach that could lead to large scale proliferation of Public Wifi hotspots all across the country.

The WiFi Hotspot provider is defined as someone who takes broadband capacity from the nearest POP (eg. DSLAM) and provides last mile using a WiFi Hotspot. The ISP on the other hand can set up the Broadband network including the POP, backhaul and connectivity

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to internet cloud e.g. in case of fixed network the DSLAM, backhaul and international bandwidth to internet servers, etc. Therefore a Wifi Hotspot Service Provider is a subset of the Internet Service Provider. Another difference between a Wifi Hotspot provider and an ISP is that while the Wifi Service Provider will only operate in the unlicensed spectrum band where there is no guarantee of interference, such is not the case with an ISP which is allowed to operate in licensed bands as well which guarantees interference free service. Hence they cannot be given similar treatment.

It should be noted that Under Section 4 of Indian Telegraph Act, 1885,

"The Central Government may, by notification in the Official Gazette, delegate to the telegraph authority all or any of its powers under the first proviso to sub-section (1). The exercise by the telegraph authority of any power so delegated **shall be subject to such restrictions and conditions as the Central Government may, by the notification, think fit to impose.**" (emphasis applied)

Under the said Section, the Licensor therefore has the powers as it deems fit under special terms & conditions, to allow either some services as licensed, license-exempt or the registration category. BIF is of the opinion that there is merit to recommend this category of Wifi Hotspot Service providers to be permitted under 'online Registration', as this would give a big impetus to the penetration of broadband across the country.

Reselling of bandwidth is also an activity which can help in further proliferation of broadband penetration. Therefore BIF strongly recommends encouragement of such activities which would lead to proliferation of broadband and supports any move by the Authority to permit this activity as per appropriate guidelines. While doing so, it may impose suitable terms and conditions.

Further, WiFi is unlicensed spectrum available to the general public to use free of cost and it should not be treated like mobile services.

KYC of the users at hotspot will be handled through a centralized or decentralized authentication platform or by using the underlying ISP/ TSP's authentication facility. The choice may be left to the hot spot provider which option it chooses for authentication.

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?

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It should be left to the various market players if they want to enter into some arrangement for sharing cost or revenue and this may be subject to any over arching regulations

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