



8TH December 2016

To,
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg,
NEW DELHI # 110002

Kind Attention: Shri Arvind Kumar, Advisor (Broadband & Policy Analysis)

Sub: DVOIS comments on the TRAI Consultation Note on Model for Nation-wide Interoperable and Scalable Public Wi-Fi Networks dated 15th November 2016

Dear Sir,

We refer to the above. We wish to thank TRAI for giving us the opportunity to submit our comments.


Please find enclosed a copy of our comments on the paper.

We look forward to a favorable consideration of our suggestions.

Thanking You,

Sincerely,

For D-VoiS Communications Private Limited


Umesh Chaturvedi
CEO

D-VoiS Communications Private Limited

(Formerly known as D-VoiS Broadband Private Limited)

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Response from DVOIS Communications Private Limited to: Consultation Note on Model for Nation-wide Interoperable and Scalable Public Wi-Fi Networks

At the outset we would like to place on record our appreciation of Governments efforts and in particular TRAI's involvement in developing the Wi-Fi eco-system in the country and for setting up scalable Public Wi-Fi networks.

We would like to highlight D-VoiS is one of the largest wi-fi service provider in the country with over 15,000 wi-fi access points which we own and operate in Education Institutions, Five star hotels, Public Areas viz., Bus stations, Tourist locations, etc.. We have more than a decade of experience in WiFi services. To our credit a) we service more than 15000 students in a campus b) we own and operate possibly the first successful public wi-fi at MG Road, Bangalore. Implemented more than 42 months ago, it is still operational with more than 2000 daily users. Today, we provide free wi-fi to more than 20,000 users a day across multiple locations. c) We have technically integrated various services listed under your previous consultation paper for Wi-Fi monetization.

Our views expressed here are based on our experiences from the WiFi broadband services at various locations ranging from five star properties to bus stations at tier II, tier III cities

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?

DVOIS Response:

Our views on the unified authentication and payment infrastructure suggested in the consultation note are as below:

- a) Authentication: Unified authentication should be provided as an option to the Wi-Fi service provider and should not be made compulsory. It should be left to the discretion of the Wi-Fi service provider to either opt to authenticate the user through the Unified authentication procedure or to have its own authentication system. However, the regulations should provide for the validity of the Wi-Fi hotspot authentication to be reasonably longer say a week or a month. Currently the period is mentioned as temporary and not clearly defined. Providing a reasonable period of validity – say one month would ease login delays and make WiFi usage

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more prevalent. The rationale: Specific to each service provider, authentication for the free wifi, paid wifi and other value added services should be uniform i.e. from the same AAA supported by the same CRM. **For monetizing free WiFi services through advertisements etc., control over authentication is important for the service provider.** Free WiFi would account for bulk of WiFi usage as paid Wi-Fi users percentage is very very low according to our experience. Hence Centralized authentication of the users across multiple services could be a deterrent.

- b) Payment Interoperability: The payment interoperability among service providers is difficult to implement. **It is difficult to standardize payments or price when the quality of service is not standardized.** Today, there are various Wi-Fi hotspot service provider have mushroomed in the country who deploy non-standardized equipment, have no compliance obligations and are not accountable to any regulation. As they are not regulated, they are neither accountable for the quality of service, nor for security compliance. They are also not liable to pay license fee. Such **scenario leads to a large number of fly by night operators.**

Q2. Would you like to suggest any alternate model?

DVOIS Response:

We would recommend that the unified authentication and payment interoperability be made optional to the service providers. Service providers who want to avail this service should be free to do so. Also this is very useful if the centralized authentication can be approved as a one time authentication of the user and is not a pre-requisite for every login session.

While integration into Authentication system such as Aadhar would help in quick user KYC, it is easier to authenticate the user through the mobile numbers and bind the user mobile with their device. Any other method would require user to upload data or information which would be time consuming and difficult. For eg. Uploading PAN Card, Aadhar card etc.

As mentioned earlier, it is important for the service provider to have their own mobile application, login page process enabled in order to monetize the free Wi-Fi

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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?

DVOIS Response:

Under the current regulations, the Internet Service Providers have the following obligations (not an exhaustive list):

- a) They have to pay a license fee on their revenue
- b) They have to ensure security compliance
- c) They have to ensure quality of service
- d) They have to appoint ombudsman to redress the customer complaints etc.

Currently we have come across many WiFi service providers who provide internet over Wi-Fi – both paid and free, but do not meet any of the above obligations. These entities include hotels, café, restaurants etc.. Also, many unlicensed managed WiFi service providers have mushroomed all over the country, who have no security compliance obligations. These managed WiFi entities not only extend paid and free wi-fi services at various hotspots but also collect user data at these locations. This data can be misused. This can comprise security, user data, and also lead to a significant loss to the exchequer through non payment of License Fee by these entities. If the same services were to be extended by the ISPs license fee provisions would have been applicable to them. Permitting Wi-Fi Access Providers to resell, capacity and bandwidth to retail users through light touch regulation such as registration and not licensing would imply

- a) No level playing field with licensed telecom service providers – as these registered service providers need not pay the license fee on their earnings.
- b) No accountability – as they would be de-registered in the event of violation of terms
- c) Fly by night operators – Would give rise to a lot of fly by night operators who will set up access points at various locations to benefit in the short term.
- d) No minimum quality of service.
- e) Possibility of data theft by these fly by night operators.

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It is extremely difficult for the regulator to ensure good quality of service or even compliance by a large number of these operators. In the long run, people will stop trusting the Wi-Fi networks as their data would be compromised.

Hence we strongly recommend that the critical service of providing telecommunication services should strictly be restricted to licensed service providers who are highly regulated and are subject to audit. Also their credentials verified before issuance of such license. We also recommend TRAI should issue a notification clearly and unambiguously restraining non-licensed service providers from providing telecommunication services either free or paid, wired or wireless.

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

DVOIS Response:

ISP license holders should be allowed to setup passive and active infrastructure to aid the deployment of hotspots. These providers should be free to tie up with any telco / ISP to offer their infrastructure at a mutually agreed fee. In addition, there should be a policy for the BSOs to provide backhaul infrastructure (Leased Line, Broadband Line) for the hotspots, especially in the rural and remote areas.

Government needs to have a policy to incentivize ISPs for building hotspots in rural and remote areas. Incentives could be in the form of sharing infrastructure deployed by either BSNL, NOFN, Telcos and further providing free ROW to extend new infrastructure. Space and Power from Government bodies to be given free of cost to host such services from a Government premise.

Currently active equipment can be shared with other TELCOs only by BSO and this is not extended to the ISPs. ISP should also be permitted to share active equipment with other ISPs, telecom operators etc. This would help rapid acceleration of the WiFi deployment across the country.

There are ambiguity in regulations cited by telecom operators viz ISPs can buy bandwidth only from Tier I telecom operators who have International Gateway. If the ISPs themselves cannot buy bandwidth from other ISPs, how can the non ISP hotspot owners buy bandwidth from ISP for reselling purposes? This has to be clarified.

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Also national service providers with good distribution capability i.e. BSNL should be mandated to provide Internet Lease Line bandwidth at competitive rates including in remote areas so that the distribution of internet through WiFi by the ISPs will become viable.

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

DVOIS Response:

For reasons highlighted earlier, we are strongly of the opinion, WiFi Service should be restricted to licensed ISP's only. The venue owners such as shop keepers should deploy Wi-Fi service only in partnership with the Internet Service Provider. This is possible through a revenue share agreement between the ISP and the venue owner. While the ISP would provide backhaul, bandwidth, ensure compliance etc., the venue owner would benefit from the wi-fi deployment in the premises. The ISP shall offer a revenue share to the venue owners thereby providing them an incentive to deploy the Wi-Fi network. All compliance would be the responsibility of the ISP.

Monetization of WiFi is critical for large scale deployment. To monetize, various services should be enabled including data off load, shared SSID etc. If the ISPs who are highly regulated cannot share their active equipment (currently it is permitted only for BSO) extending this to the active equipment owned by the venue owners is not recommended. There are a lot of data collated from the Access Point through the logs and the same can be easily misused. Not every venue owner would have the capability to address the security issue and can be held responsible for data security, while the ISPs can be held accountable.

For reasons mentioned above, no one except the licensed service provider should be authorized to provide internet services either through wi-fi or otherwise.

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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?

DVOIS Response:

Regulatory intervention is not suggested to arrive at revenue or cost sharing. This should be the discretion of the Hotspot Service Provider / ISP based on their business models. However, national operators such as BSNL, Railtel etc. should be permitted / asked to extend their network at market prices to other service providers. Currently, citing regulations they do not extend their network to other service providers and even when it is extended this it is highly priced. There could be a guideline pricing based on the current market rates which shall be revised every year.

This is applicable for Internet, Local last miles and also NLD.

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