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M/S Telecom Regulatory Authority of India

Mahanagar Doorsanchar Bhavan
Jawahar Lal Nehru Marg (Old Minto Road)
Next to Zakir Husain College
New Delhi 110 002

Kind Attention : Mr. S K Gupta , Advisor (CN)

TRAI recommendations on Internet Telephony

Dear Sir,

At the outset the Company welcomes the TRAI initiative to come out with the consultation paper on “Issue related to Internet Telephony” and identifying the key issues which need wider consultations.

The introduction of IP technology into the PSTN marks another step in the evolution of telecommunications networks. India is far short of Broadband penetration especially in small cities / remote and rural areas. Unrestricted Internet Telephony could be one application which can boost the broadband penetration by providing a economical via media for the citizens to call within as well as outside India. Security and Monitoring are becoming a serious issues in light of the National Security which is paramount for every service provider, it is high time for government to consider central monitoring by interconnecting various networks. It will meet the security concern by monitoring all the networks at central locations as well convenience for the masses to use PC/device to making a call.

We are giving our responses to the queries placed before us in the referred consultation paper:

4.1 Whether Internet service provider should be permitted Internet Telephony services to PSTN/PLMN within India? If yes, what are the regulatory impediments? How such regulatory impediments can be addressed?

Yes, ISPs should be allowed to interconnect for wider connectivity and benefit for the masses. It is worth mentioning here that ISPs are dependent on the NLD/ILD/UASL for resources. Over 85% of the ISP revenue goes back to these service providers. Most of the services offered through Internet create an indirect income to the government, and that's the precedence in most of the countries. Government should adopt a light regulatory approach as accepted by most of the countries, keeping in view the growth of broadband and benefits of end users.

4.2 Whether allowing ISPs to provide Internet Telephony to PSTN/ PLMN within country will raise issues of non-level playing field? If so, how can they be addressed within present regulatory regime?

Voice business opportunity through the world is more inclined towards mobile technology, hence land-line and other dependent voice services like Internet Telephony should not be seen at par with mobile or traditional wireline technology. The business opportunity, because of the technical and functional advantage is not same between mobile / wireline and Internet Telephony services. As per recent media news, government is considering removing entry fee and revenue share for wireline connections. The issue of level playing field does not arise in this case as well as for the proposed Internet telephony, as each will have it's niche market but together has and will grow the overall market including increased revenue for the Govt.

ISPs are basically-sellers of the services provided by UASL/NLD/ILD Operators. It is worth mentioning here that ISPs are dependent on the NLD/ILD/UASL for most resources. More than 85% of the ISP revenue goes back to these service providers, primarily the state-owned incumbents. Moreover, Government should see the same in light of growth of broadband across the country, bridging the digital divide and benefits to the end consumers.

4.3 ISPs would require interconnection with PSTN/PLMN network for Internet telephony calls to PSTN/PLMN. Kindly suggest Model/ architecture/ Point of Interconnection between ISPs and PSTN/PLMN?

Interconnection should be required at circle level. ISP should be allowed to carry the traffic over Internet or through dedicated links between their POPs and could handover the call to the PSTN/PLMN interconnection partner at a desired location. TRAI should ensure that ISPs should not deny interconnection by UASL/NLD/ILD operators and at reasonable cost..

4.4 Please give your comments on any changes that would be required in the existing IUC regime to enable growth of Internet telephony? Give your suggestions with justification to provide affordable services to common masses?

Technically ISPs could be restricted only to PRI interconnect. Hence, the IUC charges could be lower than the other Telco services.

Government should ensure that Interconnection should not be more than one location with all the operators. However, ISPs should be allowed to hand over the traffic to more than 1 locations.

4.5 What should be the numbering scheme for the Internet telephony provider keeping in view the limited E.164 number availability and likely migration towards Next Generation Networks?

The number of Internet Telephony links traditionally hasn't overtaken mobile connections, in any part of the world. Internet Telephony as a service is used due to its functional advantage and commercial usage. The number of connections would not be much comparing to mobile industry. Hence, the numbering plan could be limited within a numbering plan of a land line number or a mobile number.

As mentioned in 4.2, ISPs are the re-seller of UASL/NLD/ILDs and will be happy to carry on with the numbers of Mobile/ PSTN Operators. To differentiate the Internet telephony calls from PSTN/PLMN, Government may consider 3 digit service providers code and 7 digit code/ number to consumers. Provision can be kept to start a new series when the same is extended for mobile operators. In the event that an ISP utilizes the number resources allocated to it, additional 3 digit code can be allocated. ISPAI in association with TEC can work on it if required.

4.6 UASL and CMTS operators are allocated number resources and permitted to provide Internet telephony including use of IP devices/Adopters. Whether such devices should be allocated E.164 number resource to receive incoming calls also? If so, whether such number resources should be discretely identifiable across all operators and different than what is allocated to UASL and CMTS to provide fixed and mobile services? Give your suggestions with justifications?

Not necessary to be discretely identifiable. Yes, the devices are to be allocated with a E.164 numbers for incoming calls, as an user, he/she won't be interested in using any other format to make a call these days. Hence an E.164 number should be allocated per IP device. However, service providers can offer two differentiated services – with incoming facility and without incoming facility. The number resources can be used better by this.

Moreover, as mentioned above ISPs will be too happy to take numbers from PSTN/PLMN operators and pass it on consumers. However, to differentiate the Internet telephony calls from PSTN/PLMN, government may consider 3 digit service providers code and seven digit code/ number to consumers. ISPAI in association with TEC can further work on it if required.

4.7 If ISPs are allowed to receive Internet telephony calls on IP devices/ Adopters, what numbering resources should they be allocated?

Same as mentioned above 4.6.

4.8 Is it desirable to mandate Emergency number dialing facilities to access emergency numbers using internet telephony if ISPs are permitted to provide Internet telephony to PSTN/PLMN within country? If so, Should option of implementing such emergency Number dialing scheme be left to ISPs providing Internet telephony?

Offering Emergency Number Dialing facility should be left to the discretion of the ISP. In case if a service provider is not offering the same, the information should be provided to the customers in advance as per practice being adopted by operators world wide.

4.9 Is there any concern and limitation to facilitate lawful interception and monitoring while providing Internet telephony within country? What will you suggest for effective monitoring of IP packets while encouraging Internet telephony?

We fully appreciate the government concern on national security and fully committed to wards this aspect. Monitoring of calls won't be an issue for all calls that are landing on to a PSTN/PLMN service provider. **We think that lawful interception and monitoring Internet telephony calls should also be done at operators level beside the central monitoring. ?????**

We intend replying to this as follows:

Since the PSTN/PLMN infrastructure already has the lawful interception and monitoring available with them, all calls switching to PSTN/PLMN from IP Telephony will be monitored and intercepted at the PSTN/PLMN network.

This is to reduce the CAPEX for IP Telephony infrastructure. Below model can be used for LI and monitoring.

IP to IP call ISP's will do the LI and monitoring.
IP to PSTN/PLMN PSTN/PLMN will do the LI and monitoring
PSTN/PLMN to IP PSTN/PLMN will do the LI and monitoring

4.10 Is there a need to regulate and mandate interoperability between IP networks and traditional TDM networks while permitting Internet telephony to PSTN/PLMN within country through ISPs? How standardization gap can be reduced to ensure seamless implementation of future services and applications? Please give your suggestions with justifications.

Initially government should not regulate. However, at a later stage same can be done on mutual cooperation and agreed terms and conditions amongst the service providers. However, TRAI must ensure that no access / protocol / data incoming or outgoing should be stopped.

4.11 Is there a need to mandate QoS to ISPs providing Internet telephony to PSTN/PLMN within country? Please give your suggestions with justifications.

QoS could be prescribed to a limited level of MoS, ASR and. However, it shouldn't be mandatory to be same as the other TDM services instead should be made as an option to the operator. In case if the operator is offering a differential service of different quality, the same should announce in advance to the customers.

We look forward to the honourable Authority's recommendation in the matter.

Thanking You,

Your s truly

For VSNL Internet Services Limited

Authorised Signatory.