

Comments from
M/s Spanco Telesystems & Solutions Ltd., Mumbai
on
Consultation paper on
Issues related to Internet Telephony
(Consultation Paper No. 11/2008)

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? Please give your suggestions with justifications. (para 3.10)

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? Please give your suggestions with justifications. (para 3.11)

1. Public should not be devoid of fruits which can be delivered by the latest technological developments. At the same time, level playing field should be ensured amongst the service providers.
2. So, Internet Telephony should be allowed to call PSTN / PLMN and vice versa. It will also increase the Broadband penetration in India, which is a stated goal of GoI.
3. Internet Telephony should be opened up for all the licensees of voice calls, i.e., BSO, CMTS, and UASL, as well as for ISPs who wish to migrate to “ISPs with Public Telephony”.
4. Internet Telephony is not going to be a threat to CMTS, UASL or BSO.
 - a. Today there are 280 million wireless customers with a growth rate of 8-10 million per month, whereas wire-line customers are only 40 million with negative growth rate. This indicates that mobility is a big factor for customers while choosing communication solution.
 - b. Since, Internet Telephony is not going to be wireless in near future, Internet Telephony is not a threat to CMTS and UASL. Additionally, CMTS would be progressing towards 3G technology, which would itself be IP extensive.
 - c. Moreover, BSO will be in better position to provide Internet Telephony because of its access network being conducive for providing Broadband.

- d. Thus commencement of Internet Telephony is going to benefit the existing players in voice calls.
5. There should be a separate category of ISP, i.e. “ISP with Public Telephony”, which may be allowed for providing Internet Telephony. This new category of ISP should NOT be levied with the entry fee or licence fee, because Internet Telephony is in nascent stage in India. However, revenue share may be taken @ 6% of AGR in excess of Rs. 10 crore. This would help small players in initial years.
6. Only Category A or Category B ISPs should be allowed to migrate to License for “ISP with Public Telephony”. Category ‘C’ ISPs should not be allowed to migrate.
7. “ISP with Public Telephony” should be required to setup well-defined subscriber grievance redressal mechanism as mandated by TRAI and to ensure QoS in line with BSO, CMTS and UASL.
8. At par with BSO, CMTS and UASL, “ISP with Public Telephony” may also be asked to carry voice calls under well-defined regulatory environment.
9. However, the existing regulations for PC to PC calls without numbering scheme may be continued for existing ISPs with existing light touch regulations.

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? (para 3.12)

1. Since Internet Telephony is a service to be provided through Internet Cloud, it would be appropriate to have interconnection only at L-1 TAX at Circle Level, similar to the arrangement for Mobile.
2. Main reason for adopting Internet Telephony is to obtain cost reduction in STD calls. So call should be carried through Internet Cloud up to destination circle and handed over to L-1 TAX of destination circle.
3. NLDO may be permitted to have an IP cloud for carrying VOIP calls without converting to TDM / traditional format. For carrying the traffic outside the service area, the call should not be made over to the traditional NLDO by

converting into TDM call, rather may be handed over to the Internet Cloud of the IP-NLDO in IP format.

4. Interconnect Exchanges and clearing houses will not be required once NLDOs are permitted to carry IP calls and convert to TDM format at destination, if needed. Setting up IP cloud will not be an uphill task for NLDOs because Transmission network / OFC / Backhaul is already in place, only end equipment need to be installed.
5. Some ISPs may not be capable today, but once the enabling regulations are put in place then they may see the business opportunity and invest for acquiring the capability before providing the service.

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? (para 3.12)

1. Commercial settlement of charges (IUC) should also be in line with the existing settlement process. Since, the purpose of Internet Telephony is to reduce the cost, the settlement charges should be reduced to half for IP format calls.
2. The carriage charge for IP format calls may be limited to Rs. 0.30 and the termination charge for IP format call may be Rs. 0.15.
3. However, the charges for TDM format calls may be retained as in force.
4. Thus for e.g. when a call is originated from IP device, carried through IP-NLDO and terminated into PSTN / PLMN, then the call will consist of both the formats. In this scenario, IP-NLDO may be given carriage charge of IP format; however the terminating PSTN / PLMN may be given terminating charge for TDM format.

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? Please give your suggestions with justifications. (para 3.13)

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? (Para 3.4)

4.7 If ISPs are allowed to receive Internet telephony calls on IP devices/ Adopters, what numbering resources should they be allocated? (para 3.13)

1. In view of 3.13.3 the Numbering plan for Internet Telephony needs to be considered in view of Number Portability and E.164 recommendations.
2. Unless incoming calls are received by adopter / IP devices, Internet Telephony would not bring its full benefits to the customers. Thus Adopter / IP devices need to be allocated E.164 number resource to receive incoming calls also.
3. The number resources for Internet Telephony should be discretely identifiable as Internet Telephony numbering scheme and also should be different from what is allocated to existing operators.
4. While devising the National Numbering plan following points need to be considered:-
 - a. Number of existing subscribers should not be changed. At all, if it needs to be changed, then the change should be across the nation and same for all.
 - b. India should move from 10 digit numbers to 11 digit numbers (excluding '0'), because existing numbering scheme doesn't have much scope for additional numbers. (As per E.164 it is possible to move up to 13 digits in India as India's ISD code is 2 digit and E.164 allows 15 digits in all)
 - c. As per E.164, the numbering scheme for "Networks" is different from the "Geographical" (Landline) numbering scheme. For "Networks" E.164 envisages 3 digit Country Code (CC), 1 to 4 digit Identification Code (IC) and 12-X Subscriber Number (SN) (X is number of digits in IC).
 - d. Internet Telephony is Network Service, accordingly, in India for 11 digit numbering, we may use 4 digit IC code (starting with '7') and 7 digit SN.
 - e. Thus the 11 digit numbers starting with '7' or '07' shall belong to internet telephony.

- f. All the STD codes should be prefixed with one digit say '6'. Local numbering would remain as usual. Thus '06' would become identifier for Landline, only while dialling STD. Local dialling will remain unchanged.
- g. For Local dialling '1', '2', '3', '4', '5' & '6' are already in use, and '7' and '8' are free.
- h. For STD dialling all the digits are used (none are free).
- i. All the Mobile numbers should be prefixed with '9'. This would increase the capacity of Mobile-numbering by 10 times. '9' and '09' would remain the identifier for Mobile.
- j. '8' and '08' may be reserved for future requirement of Mobile or Internet Telephony whichever becomes more popular.
- k. ENUM may not be used for the time being.

4.8 Is it desirable to mandate Emergency number dialling 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 dialling scheme be left to ISPs providing Internet telephony? Please give your suggestions with justifications. (para 3.14)

- 1. Emergency services with location correspondence can be provided as being provided in Japan, however, the subscribers may be told that the services shall be available subject to technological limitations.

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? Please give your suggestions with justifications. (para 3.15)

- 1. Though costly, but Technology does provide the ways for Lawful Interception and Monitoring. Cost of installing the technology can be passed on to the service provider (actually the cost is borne by the customers collectively as none of service provider will pay from is pocket).

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. (para 3.16)

1. At present there is not need to regulate and mandate the interoperability between IP networks and traditional TDM networks while permitting Internet telephony to PSTN / PLMN.
2. Existing practice that new player is required to put equipment / interface compatible to incumbents, is sufficient to ensure interoperability.

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. (para 3.17)

1. “ISP with Public Telephony” should be required to setup well-defined subscriber grievance redressal mechanism as mandated by TRAI and to ensure QoS in line with BSO, CMTS and UASL.

4.12 Additional points.

1. Regulations should be framed with the view of upcoming technology trends. Today the technology is heading towards wireless and IP. So, regulations framed today should not be an impediment for tomorrow’s “Wireless Internet Telephony”.
2. While cheaper calls using Internet telephony is of concern to subscribers and ISPs both, it is related to business model of ISPs. TRAI as regulator should at the most create an enabling environment and leave the matter for the industry to compete. It is up to service providers to find out best business model and survive. This will ultimately benefit the subscribers.