

**T**ELXESS  
Consulting Services Pvt. Ltd.

Dated: 16<sup>th</sup> June, 2008

Mr. S.K. Gupta  
Advisor (Converged Networks)  
Telecom Regulatory Authority of India  
New Delhi.

Dear Sir,

**SUB: Response to TRAI Consultation No 11 of May 2008 on Issues related to Internet Telephony**

We would like to compliment the Authority on the timely released of the consultation paper on issues related to the opening up unrestricted Internet Telephony by ISPs and we are certain that enough conditions exist to enable the Authority to consider recommending removal of one of the last remaining and blatantly unfair and artificial barrier to the growth of Internet, Broadband and Telecommunications in India.

In saying so, we would like to begin by reminding ourselves that the Key Regulatory Principles, which we cannot afford to loose sight of, while arriving at a decision on opening of this vital Internet Telephony services to ISPs.

These are:

1. The interests of consumers should be paramount for the Regulator;
2. Consumer Interest is best served through open and fair competition;
3. Open & Fair competition can be ensured by enabling new competitors and protecting their interests against established players.

With the above standpoint, we are pleased to make our formal and considered submission against all the issues raised. We begin by submitting a brief chronology of Internet's policy and regulatory history in India, to create a complete perspective.

We are certain that you'll find our submission interesting and complete in most respects and the Authority will arrive at a decision keeping the India's citizens interest in mind over anything else.

For the record, we also take this opportunity, to point out that we have noted the announcement of the Open House Consultation on the said subject at Kolkatta on 20<sup>th</sup> June, 08. Kindly consider that, with the last date of making written submissions being 16<sup>th</sup> June, 08, it hardly provides 3 working days for interested stakeholders to sufficiently acquaint themselves of all submissions made and go on to present their case at Kolkatta. Hopefully, the Authority will bear this constraint in mind and provide a more reasonable time for another consultation on this matter.

We'll be happy to provide further information/clarifications as if you so desire.

Thanking You

Sincerely

For TELXESS CONSULTING SERVICES (P) LTD  
AMITABH SINGHAL

***“Those who oppose Internet Telephony deny their fellow citizens the right to communicate affordably. The government and telecom industry have been guilty of depriving our mass of citizens of this basic human right”.***

### Evolution of Internet & Internet Telephony in India

15 <sup>th</sup> August 1995	Incumbent Monopoly VSNL starts offering Internet Access	Internet Telephony is not permitted
9 <sup>th</sup> Aug 2001	Delhi High Court warns VSNL against blocking telephony sites	VSNL has never appealed against the ruling of Justice Mukul Mudgal
May 13 1998	TRAI clarifies that it has no jurisdiction to regulate content, in response to question over VSNL blocking voice application sites	View supports High Court Direction, which are till date not vacated and in force
25 <sup>th</sup> July 1998	Prime Minister’s Task Force on IT & Software Development brings out 108 recommendations, notified vide a special resolution of Planning Commission	Recommendations on privatization of Internet services made, without any reference to restrictions on Internet Telephony
6 <sup>th</sup> Nov 1998	New ISP policy and guidelines announced	Scope of Services include all types of Access & content, except Telephony on Internet
March 1999	NTP 99 announced with the principle aim to Make available affordable and effective communications for the citizens through convergence of Media, IT & Telecom	Internet Telephony is still not allowed, but NTP promises for the Govt to keep reviewing the developments. DoT makes an internal recommendation on while seeking TRAI recommendation on 20 <sup>th</sup> July, to allow ILDs but not permit ISPs to

		offer Internet Telephony
20 <sup>th</sup> Feb 2002	TRAI recommends opening of Internet Telephony w.e.f. 1 <sup>st</sup> April, 2002, coinciding with ILDO opening, without permitting interconnection with E.164 numbering within India	Restriction on E.164 interconnection is to protect the USO obligations of Fixed Line Basic operators. VOIP is however, allowed to be used by Access and Long Distance operators in their networks, but telecom operators oppose Internet Telephony
1 <sup>st</sup> April 2002	DoT starts issuing Internet Telephony Addendum to the ISP applicants	Despite opposing Internet Telephony, Telecom and Long Distance operators start offering Internet Telephony almost immediately, through their upgraded ISP licenses
10 <sup>th</sup> November 2005	DoT amends the UASL license to include Internet, Broadband and Internet Telephony	Scope for Internet Telephony under UASL contains no restrictions on E.164 connectivity, but till date IP to PSTN service has not been provided to citizens
24 <sup>th</sup> August 2007	Based on TRAI recommendations earlier, DoT amends the ISP License	Use of SIP and H.323 devices is broad-based to include Standards based IP to IP device internet telephony, but E.164 connectivity still banned for ISPs

With the above chronology in perspective it is amply clear that:

1. Despite the advent of Internet in India in 1995, coinciding with worldwide introduction of Internet Telephony in the same year, the later has been forcibly restrained from benefiting the Indian citizens at large. In spite of avowed principles of providing the most affordable and latest services, the ban on IP to PTN/PLMN has been prejudicial and detrimental to the benefit of the common masses more than to the well off sections of Indian Society. This was done to presumably protect the telecom operators to establish their

own higher cost services at the expense of curbing technology development benefits at lower costs.

2. Erstwhile monopolies, Incumbents and Telecom Operators have been vehemently opposed to opening of Internet Telephony on various pretexts, including level playing field issues. However, in April 2002, they were among the first ones to start providing restricted Internet Telephony services, under their ISP licenses, within days of obtaining requisite permission.

3. Despite High Court ruling of 2001, which is presumably still valid, use of certain Internet telephony services/information by citizens of this country, via the Internet have been variously called illegal, a security threat, etc. without giving a thought to and understanding the very nature of how Internet functions and prevalent global practices.

4. The issues of level playing field will predictably be raised again, during the course of this consultation and justifications provided to not allow unrestricted internet telephony, without acknowledging the fact that the Government of India, under their undue pressure has been tilting the policy and regulations in the Operators favor and offering them protection from competitive technology and services all along, with total disregard to its own over arching and enshrined principles of making available latest services at affordable costs.

5. To buttress the point above, the Government has been amending the telecom UASL license to accommodate more and more services, which were under the domain of Service providers other than UASL. This has been done almost surreptitiously, without any open consultation and hearing process. Hence the level playing field has been always tilted in favor of the UASL licensees and therefore the question of Internet Telephony creating level playing issues against the UASL/Mobile operators is definitely untenable.

**The detailed reply to the Questions posed in the Consultation paper, our response is as under:**

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

Yes. The only regulatory impediment is the extant provision where ISPs are not recognized as Interconnection parities under the Interconnection Regime. ISPs should be brought under the Interconnection regime forthwith. Origination should continue to be under forbearance and Termination charges should be 33% of the prevailing charge which is Rs.0.30 as per the IUC regime. Carriage charge for Internet Telephony should be also prescribed at 33% of the current ceiling of Rs. 0.65 and ultimately the market forces will prevail. Hence max 10 paisa for terminating and 22 paisa for Internet Telephony to domestic PSTN/PLMN should be prescribed.

There are 4 types of Internet Telephony combinations that can be segmented and dealt with as such, as per their unique characteristics. These are mentioned below with suggested and appropriate regulatory application of IUC principles.

**a) Phone (E.164) to Phone (E.164) – Ring to Ring – Existing Regulations:**

It is basically an alternate to TDM and the obligations for interconnection charges should be similar to those prevailing under the IUC regime.

**b) IP to Phone (E.164) – Ping to Ring – Light Touch Regulation only:**

It is permitted for connectivity abroad. No TRAI intervention exists and none is required now. Here, the Service Providers pay termination to international aggregators and make their own arrangements to negotiate.

Logically it follows that termination charges domestically can be in line with existing principles of the IUC regime, where ceiling on termination charges and carriage charges are prescribed by TRAI. Further it is submitted that since IP to E.164 connectivity will generate Internet telephony traffic (presumably with lower grade & quality of services) as just an additional revenue stream for Terminating Access providers and Carriage Operators, without any heavy incremental costs or network upgrades, a max of 10 paisa for terminating and 22 paisa for carriage of IP to E.164 traffic is sufficiently reasonable, to maintain economic reasonableness of the services.

**c) IP to IP – Ping to Ping – No Regulatory Intervention:**

This is already permitted and no regulatory intervention from TRAI is warranted.

**d) Phone (E.164) to IP – Ring to Ping – Light touch Regulation only:**

From Ring to Ping – Origination from E.164 numbers is under Forbearance and hence the same should continue. TRAI can fix the carriage charges at 22 paisa and termination charges at 10 paisa.

**4.2 Whether allowing ISPs to provide Internet Telephony to PSTN/PLMN within the country will raise any Level Playing field issues? If so, how can they be addressed within current Regulatory regime?**

Non Level Playing field is always raised as a bogey by any incumbent in any service area. In 2002, ILD and internet telephony was opened up and same issue was raised by the then monopoly. However, the reverse has happened. It'll only help to expand the market further, while providing differentiated service options to customers based on best technologies as enshrined in the national telecom policy.

Secondly, in (1) above we have suggested allowing Internet telephony with PSTN/PLMN, under the current IUC framework, so as to benefit all players concerned in a most equitable manner. Additionally, ITSPs also pay 6% of AGR as License Fee.

Third, it must be remembered that UASL/Mobile operators have been provided with sufficient leeway, in terms of broadening their license scope to include services that were not in their original scope, without recourse to any consultation with the effected parties or members of the public. Despite, being also allowed to provide Internet Telephony to PSTN/PLMN in 2005 itself, the UASL/Mobile operators have failed to provide these services to the citizens. Therefore, it is high time that ISPs as the natural Internet service operators are allowed forthwith.

Last but not least, among the top 5 Internet Service Operators, 4 are facility based telecom service operators and it is expected that they are most likely to benefit from this service, carrying most of the traffic over their access and long distance networks and hence level playing field issue is still loaded in favor of telecom operators. Opening this service for ISPs will only spur and

motivate the Telecom operators to provide services that they have so far failed to initiate.

**4.3 ISPs would require interconnectivity with PSTN/PLMN network for Internet Telephony calls PSTN/PLMN. Kindly Suggest models/architecture/Point of Interconnection between ISPs and PSTN/PLMN.**

Phone to IP and IP to Phone, Point of Interconnection – The POI should be determined between the ISP / NLDO / Access Providers mutually and accordingly, the IUC charges could be settled, as per the guiding factors suggested at Question 1 and Question 2 above. Rather than limiting or pre-determining the physical POI either at origination or terminations locations only, TRAI should keep it flexible, so as to allow for optimal and cost effective utilization of respective Service Providers networks.

**4.4 Please give your comments on any change that will be required in the existing IUC regime to enable growth of Internet Telephony. Give suggestions with justification to provide affordable services to the masses.**

As already suggested above, Internet telephony is a way to provide a differentiated and lower tariff service to the masses. In order to facilitate and make it viable in a sustained manner the TRAI should consider the possibility of lower ceilings for interconnection charges due to inherent nature of cost effectiveness and technological efficiencies of IP technology. The model for the same has been suggested above at (1) and (2).

**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 Network? Give Views and suggestions.**

TRAI has elsewhere recognized that National Numbering Plan 2003 needs a holistic review and revision. The basic premise of this is to provide a robust framework for provision of affordable telecom services to the citizens India and hence it is inevitable and a pre-requisite to overhaul the E.164 Numbering plan to accommodate such services as Internet Telephony.



Despite the ongoing efforts by TRAI and TEC, there is still no clear roadmap for NGN in India. While migration to NGN is inevitable, the country and its common masses cannot afford to wait for reaping the benefits of Internet Telephony through the accustomed E.164 numbering system.

NNP 2003 should be revised at the every earliest and specifically include provision for geographic & non-geographic E.164 numbering space for internet telephony. There are numbering blocks, starting with '7' and '8' even within the current NNP 2003 framework, which are unallocated and kept for future use. Those should be used for internet telephony.

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

Yes, the number resources should be allocated, as mentioned above, to IP devices, for the reason that Internet telephony becomes a distinguishable service, distinct from TDM/PSTN. It'll help calibrate the customer expectation in terms of distinctive services, including but not limited to access to emergency services. At this point of time of allowing Internet Telephony, emergency number provisioning should not be mandated.

**4.7. If ISPs are allowed to receive calls on the IP devices/adaptors, what number resources should they be allocated?**

From April 2002, termination on IP has been permitted. Providing numbering resources for mapping these IP devices would be beneficial for higher adoption of these services among the masses. Specific number blocks, such as '7' and '8' available in the Numbering Plan, should be allocated.

**4.8 Is it desirable to mandate Emergency number dialing facilities to access emergency numbers if ISPs are permitted to provide Internet**

**Telephony with PSTN/PLMN within the country? If so, should the option of implementing such emergency number dialing scheme be left to the ISPs providing Internet Telephony?**

Globally access to Emergency numbers through Internet Telephony is not yet a mature function to the same level as possible in the TDM/PSTN system. However, considerable progress is being made through sincere endeavors in this direction. Hence clear communication from the Service Provider to customer regarding communication and education about emergency number access should be required under Regulatory oversight.

**4.9 Is there any concern or limitation to facilitate lawful interception and monitoring while providing Internet Telephony within the country? What will you suggest for effective monitoring of IP packets while encouraging Internet telephony? Give suggestions with justifications.**

The existing norms for monitoring and interception of the traffic on the Internet and Telecom infrastructure already exist, under the respective licensing frameworks and will suffice.

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

PSTN and IP networks already inter-operate through myriad standards and protocols. However, the concern of the Authority to ensure seamless implementation of future services and applications is appreciated and one believes that the same will be duly taken care of while developing and implementing the NGN framework for the country.

**4.11 Is there need to mandate QoS to ISPs providing Internet Telephony with PSTN/PLMN within the country? Give suggestions and justifications.**

The restricted Internet Telephony, permitted since April 2002, has grown and continues to thrive even without any QoS mandate. However, the very success of internet telephony can be attributed to the lack of specific mandate itself which allows enormous flexibility and wide choice to service providers and consumers. Hence, there is no need to mandate QoS for provisioning of Internet Telephony terminating at PSTN/PLMN within country, when such QoS has not been necessitated for similar termination to PSTN/CMTS abroad.

Above Paper is prepared and submitted by  
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