



## TTL Response to TRAI Consultation Paper On Internet Telephony

### INTRODUCTION

Authority, in the consultation Paper under consideration, has stated that one of the objectives of initiating this consultation is that, in future, IP networks will play an important role and may ultimately encourage migration of conventional networks towards Next Generation Networks (NGN) or All IP network.

Since, rapid changes are taking place in the world with respect to business models, the service delivery platforms and regulatory frameworks, have to overcome the challenges posed by the convergence which supports the required work flow and level playing field as well as facilitating the growth.

It is very apt to mention, that Internet Telephony is an IP based network technology system, for transmission of voice (real time service) over IP by the existing and the so called 'would be' licensed access service providers, having capability of providing ACCESS under any of the UL component of the license.

Internet Telephony surely requires, Access Network (Last Mile) of UL/UASL and ISP Licenses under Licensing Framework.

Only service providers Licensee with Access Authorization, may thus be allowed to provide unrestricted Internet Telephony.

All the rules related to FBGs and PBG should be similar to UL (Access authorization).

Any new entrant should be asked to take UL with Access authorization.

In any case the technical compatibility and effective inter-connection between different licensed service providers comes through mutual agreement with existing provisions.

An Internet Telephony session, like a data session, has to originate from device held by the Subscriber (s) of a UASL/UL/ISP licensee (s), who provide Internet Telephony as the routing the calls is through their access networks

Even a licensee which, is not giving such access network to its subscriber (last mile), cannot provide internet services/internet telephony.

For Internet Telephony Service, IP Address is given by the internet service provider to its customers, conforming to and conforming to IP addressing Scheme of Internet Assigned Numbers Authority (IANA).



Also, TRAI dealing with interconnection issues and other Internet Telephony issues, may only deal with those amongst ISP/UASL/CMTS/UL (with Access provision) who, only have access networks to provide internet/internet telephony service to their subscribers

To make the internet telephony (VOIP) further affordable and also having the right QoS, can only be controlled by the licensed service provider by suitable and innovative affordable packages and QoS systemically controlled by the network technology and applications parameters

The security requirements can also be suitably met by the licensed service providers who are in any case offering VOIP services with their normal and new underlying technologies as well. LTE in any case is an end to end IP based real time voice technology example

### **TTL Response on the Questionnaire**

**Q1. What should be the additional entry fee, Performance Bank Guarantee (PBG) and Financial Bank Guarantee (FBG) for Internet Service providers if they are also allowed to provide unrestricted Internet Telephony?**

TTL response: The rules should be applied as in the case of licensed access service providers in light of the notes above in the introduction paragraph.

**Q2. Point of Interconnection for Circuit switched Network for various types of calls is well defined. Should same be continued for Internet Telephony calls or is there a need to change Point of Interconnection for Internet Telephony calls?**

TTL response: In light of the notes above in the introduction section, the questions on point of interconnect does not apply between the internet service and the access licensee.

In any case the POI even otherwise is well defined between two licensed network players.

Otherwise also, IP has the inherent characteristics that the routing information is part of the IP packet itself and that it uses the shortest path between the packet origination point and the packet termination point as its first choice for reaching the destination. Imposition of the circuit switched network's interconnection system on the IP network would add to complexities and suboptimal network exploitation.

Therefore, Point of Interconnection for circuit switched network for various types of calls cannot be templated for Point of Interconnection for IP Telephony calls.

The Point of Interconnection agreement for Voice traffic, while they are being handled in the IP domain, should be continued as per the mutual arrangement of operators.



- Q3. Whether accessing of telecom services of the TSP by the subscriber through public Internet (internet access of any other TSP) can be construed as extension of fixed line or mobile services of the TSP? Please provide full justification in support of your answer.**

TTL Response: Public Internet is a delivery service channel service in a separate format, and it could somehow be considered that Public Internet cannot from that angle be construed as extension of fixed or mobile services. This should be seen in light of the following.

The point that actually needs to be stressed here, is that the accessing of telecom services of TSPs by the subscriber through public Internet (Internet access of any other TSP) could be construed as extension of Fixed Line or Mobile Services of the TSP and hence should not be permitted as it would facilitate bypassing of the ISD / STD calling mechanism.

Access of the native telephony resources through the internet, from anywhere other than a customer's parent TSP's network, is akin to remote access of the services of the parent TSP.

Once a subscriber has remote access to his parent TSP's services, he could be in a position to make local calls / send local SMSs from any location across the globe.

Therefore, access to the telecom services of TSPs by the subscriber through public Internet (Internet access of any other TSP) would facilitate bypassing of the STD / ISD calling mechanism and tariffs as each and every call would be initiated as a local call is akin to the customer bypassing the STD / ISD calling mechanism.

- Q4. Whether present ceiling of transit charge needs to be reviewed or it can be continued at the same level? In case it is to be reviewed, please provide cost details and method to calculate transit charge.**

TTL Response: TTL believes that, as only UL (Access) licensee can provide the Internet Telephony calls hence no need to review the transit Charges.

- Q5. What should be the termination charge when call is terminating into Internet telephony network?**
- Q6. What should be the termination charge for the calls originated from Internet Telephony Network and terminated into the wireline and wireless Network?**
- Q7. How to ensure that users of International Internet Telephony calls pay applicable International termination charges?**

TTL response: Not Relevant in light of the notes above as also the other comments and arguments contained in different responses to other various questions



- Q8. Should an Internet telephony subscriber be able to initiate or receive calls from outside the SDCA, or service area, or the country through the public Internet thus providing limited or full mobility to such subscriber?**

TTL Response: Initiating and receiving the calls from outside the SDCA or service area or the country, should to be based on current licensing regime.

- Q9. Should the last mile for an Internet telephony subscriber be the public Internet irrespective of where the subscriber is currently located as long as the PSTN leg abides by all the interconnection rules and regulations concerning NLDO and ILDO?**

TTL Response: Unrestricted Internet Telephony anyway requires Access Network (Last Mile) of UL/UASL and ISP Licenses under Licensing Framework.

However, our various answers to different questions above as well as otherwise make the matter clear, that only Licensee with Access Authorization may be allowed to provide 'unrestricted Internet Telephony'. The other matters get settled accordingly

- Q10. What should be the framework for allocation of numbering resource for Internet Telephony services?**

TTL response: Because, UL/UASL and ISP (with last Mile network) can provide Internet Telephony, we believe E.164 numbering scheme should be continued.

Also, in order to handle large number of connections if there is case for a higher digit numbering scheme for the Internet Telephony service, the same could be discussed separately through a dedicated study on the topic with complete SWOT analysis

- Q11. Whether Number portability should be allowed for Internet Telephony numbers? If yes, what should be the framework?**

TTL Response: As suggested earlier as well, Internet telephony can only be provided by the UL (Access Service) or ISP (as per current connectivity norms and as per UL (access!), number portability also should be allowed as per current licensing conditions.

- Q12. Is it possible to provide location information to the police station when the subscriber is making Internet Telephony call to Emergency number? If yes, how?**

- Q13. In case it is not possible to provide Emergency services through Internet Telephony, whether informing limitation of Internet Telephony calls in advance to the consumers will be sufficient?**

TTL Response: All UL (Access) /UASL – whether existing or new – could provide this unrestricted service. All the Access providers have invested significant amounts to provide toll free emergency services to their subscribers.



The point to be noted is that in the PSTN/PLMN network, the circuit path between origination and destination location of the voice call is determined before the actual call and hence it is possible to get the location of the subscriber.

IP telephony is a connections less service and also has the ability to be accessed from anywhere across the globe. Therefore, it is difficult to decisively map the location information in case a subscriber uses IP telephony for calling any emergency number.

Despite this limitation of the VoIP, many countries have adopted specific regulations for Emergency calling through VoIP.

Mobile subscriber's utilizing IP telephony service should be mandated to provide and allow enabling technology / processes provision that their location information is taken / accepted.

This could be perhaps a condition for activation of their service where users cannot deny location information, to their TSPs. TSPs can also consider using well designed Apps.

TSPs thus should facilitate for subscribers to be able to update their location with the TSP so that emergency calls could be routed based on that registered location information. Such, provisions should be tested / experimented to make these to be possible.

Best possibility is to bring a further culture of mandating location information by the devices.

**Q14. Is there a need to prescribe QoS parameters for Internet telephony at present? If yes, what parameter has to be prescribed? Please give your suggestions with justifications.**

TTL Response: QoS for Internet Telephony should be mandated on the same lines as have already been prescribed and are being applied to QoS Services which have certain defined parameters, like end-to-end delay, jitter, packet loss.

To protect the interests of subscribers in regard to Quality of Service, particularly a minimum level of voice quality, which is expected, while making a call, one is paying for. Hence there is No reason for not mandating separate QoS for the Internet Telephony.

**Q15. Any other issue related to the matter of Consultation.**

Most points have already been covered above