

**IAMAI Submission on the  
TRAI Consultation Paper on  
Internet Telephony (VOIP)**



**July 2016**

## I. Introduction

At the outset we welcome this Consultation Paper (“CP”) which seeks to address some long standing issues with Internet Telephony in India in a holistic manner. The association also commends the recent move of the Government of India for removing a major policy hurdle to allow interplay between packet-switched and circuit-switched networks. All this will give a major push to more innovative VOIP offerings throughout India, thus driving demand for internet, greater data speeds and Smartphones.

The regulator in this consultation paper seeks to address various key issues, which are:

- *VOIP calls to terminate or originate on PSTN [ SIP → PSTN and PSTN → SIP ]<sup>1</sup>*
- *Regulation of unrestricted VOIP*
- *ISPs migration to Unified License for Unrestricted VOIP services*
- *Allocation of Numbers resource for VOIP calls*
- *Tracking of VOIP location for Emergency Services*
- *QoS parameters for VOIP services*

When considering the regulation of VoIP around the world, it is important to start by identifying the various types of VoIP commonly available today across the globe. First, there is VoIP-to-VoIP calling, which is all IP and does not connect to the PSTN. This type of VoIP service is wholly unregulated in nearly every country in the world.

Second, there is VoIP-to-PSTN calling that is outbound only (or inbound only). Such VoIP allows calls to or from traditional voice services via dialling an E.164 phone number. These types of VoIP services may be regulated in some countries/regions, but such regulation is quite limited.

Finally, there is VoIP-to-PSTN calling that is intended to replace traditional E.164 telephone services by enabling calls both to and from the PSTN. Such replacement PSTN calling services, enabled using VoIP technologies, are typically regulated. However, in most countries, regulators have recognized that these network-independent services are different from traditional network-tethered voice services and must, therefore, be subject to different sets of regulations.

Most of the countries in the Americas and Europe viz., USA, UK, Argentina, France, Canada, Ireland etc. have adopted a liberalized approach to encourage and facilitate VoIP in their country. VoIP-to-VoIP calling, for example, is wholly unregulated. Asia, Japan and Australia also have liberal VOIP policies that do not in any way regulate VoIP-to-VoIP communications.

Accordingly, the association strongly asserts that any regulatory approaches and burdens applied to VOIP-to-PSTN services will kill the advantage of technology advancement and therefore should be withheld. In any event, if the regulator were to apply some form of regulation designed to address a very specific issue with sufficient policy justification, the regulation should be “light touch and well targeted to resolve the specific policy consideration.

In this paper, we set out our comments in the following sections by stating the Issues and suggestions. This part demonstrates that the current approach in many countries where VoIP-to-PSTN is allowed, the regulation is light-touch through “soft law”.

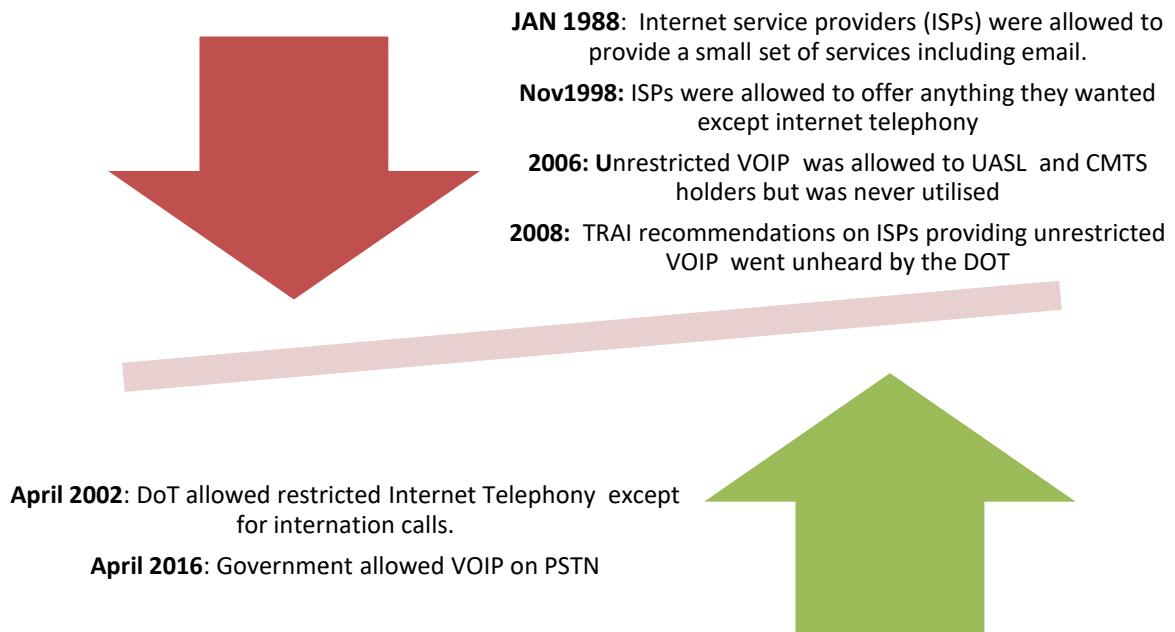
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<sup>1</sup> SIP=Session Initiation Protocol

## II. Preliminary Submission

VoIP technology as the paper has rightly identified can unleash its full potential to help drive additional broadband investment, connect the next 1 billion citizens and create significant benefits for the Indian economy. In India however many restrictions have put unnecessary technical and regulatory overload that prevented and discouraged such services.

### VOIP Regulations in India since 1998



VOIP in India was always confined to regulations and restrictions. Blocking of a VOIP website happened way back in 1998, perhaps the first instance of blocking of internet in India.<sup>2</sup> [Arun Mehta Vs VSNL ]This was much before the enactment of the IT Act. This showed how the Internet was not only 'regulable' by nation states but was being regulated even by liberal democratic nation states which have constitutional limitations on the powers of their governments to direct and enforce such restrictions.

As seen in the illustration, VOIP services have been under debate almost for two decades and there have been very few positives for the sector. In February 2002, TRAI has released its recommendation on the consultation paper<sup>3</sup>, to permit VOIP services in India. DOT accepted the recommendations and within a month allowed Internet Telephony in India for the first time. Even then the services were restricted to PC to PC. TRAI did not allow people to make calls from an IP network to circuit switched networks within India but allowed for international calls.

The DoT's licensing rules<sup>4</sup> restricted calls from VoIP to a PSTN and were prohibited since, although in a recent Telecom Commission action, PSTN/ISDN interconnection within India will be allowed.<sup>5</sup>

<sup>2</sup> [http://delhihighcourt.nic.in/dhcqrydisp\\_o.asp?pn=149657&yr=2010](http://delhihighcourt.nic.in/dhcqrydisp_o.asp?pn=149657&yr=2010)

<sup>3</sup> <http://www.trai.gov.in/WriteReaddata/ConsultationPaper/Document/IP%20TELEPHONY%20VERSION-final.pdf>

<sup>4</sup> In 2006, unrestricted VOIP<sup>4</sup> – meaning PC-to-PC, PC-to-international PSTN, and PC-to-India PSTN -- was allowed for the Unified Access Service Providers [UAS] and Cellular Mobile Service Providers. Clause 2.2 (a) (i) of UASL "... Access Service Provider can also provide Internet Telephony, Internet Services and Broadband Services. If required, access service provider can use the network of NLD/ILD service licensee." Clause 2.1 (a) of CMTS License "... The Licensee can also provide Internet Telephony, Internet Services and Broadband Services. If required, the Licensee can use the network of NLD/ILD service licensee ...".

In 2008, TRAI had recommended that even the ISPs could provide unrestricted VOIP services to bring down the NLD and ILD call rates but were not accepted by the DOT.

In its August 2015 report on Net Neutrality,<sup>6</sup> the DOT Committee recommended regulating VOIP [National and Local], including both PC-to-PC VoIP and PC-to-PSTN VoIP.

The prime reason for such restrictions on VOIP in India has been due to the Telcos belied intentions behind the revenue issues. Even after the VOIP services were allowed as per the UASL license the TSPs never used this opportunity to develop their own VOIP services. India is one of the very few countries where the unrestricted Internet Telephony service is not widely available to users<sup>7</sup> and with licensing it will further stymie the growth.

### III. IAMAI Submission

In order for VOIP technology to unleash its full potential to help drive additional broadband investment, connect the next 1 billion citizens and create significant benefits for the Indian economy, it needs to be without much regulatory barriers. Any form of regulatory overload when such servicers are at a very nascent stage will prevent and discourage such services and harm consumer interest.

The TRAI paper suggests that the unrestricted VOIP services are same as traditional telephony. *“With the advancement of technology, Internet Telephony has now become similar to conventional telephony and these providers compete directly with the existing PLMN/PSTN TSPs”*. This is a fallacious argument. VOIP services are very different from the Traditional PSTN or Mobile Telephony and the TSPs and content providers do not *“compete for the same service provision”* r the following reasons:

- a) **Technical Difference in the Functionality:** IP networks are characterised by different functional levels (access level, transport level, control level, service level) at which providers can secure value. In the PSTN, functionality typically has to be configured by the network operator and is often implemented in network nodes, whereas IP-based services can be configured at low cost by users or third parties, thus providing many opportunities for innovative services in a highly competitive environment that is spread around the globe  
Our study of treatment of VOIP services in various jurisdictions suggests that Governments across the world treat internet services and telecommunications as different class of service as the conditions faced by these services are fundamentally very different, and most countries have acknowledged this in their regulatory frameworks. In many countries, VoIP-to-PSTN calling is permitted without a license, although the services are subjected to certain regulatory obligations which are light touch.
- b) **Difference in Markets:** Traditional telecommunication providers typically own and control the underlying bottleneck access infrastructure and operate in a market with high barriers to entry and lower levels of competition between TSPs. It is also more difficult and costly for consumers to switch between traditional telecommunication services. As a result, many traditional telecommunication regulations are necessary to prevent TSPs from leveraging their control over the underlying access infrastructure to disadvantage consumers or other service providers.

In contrast, providers of VOIP and other online services typically do not own or control the underlying access infrastructure, and operate in a highly competitive market with low

<sup>5</sup> <http://timesofindia.indiatimes.com/city/chennai/Calls-from-WhatsApp-to-landlines-soon/articleshow/51591271.cms>

<sup>6</sup> [http://dot.gov.in/sites/default/files/u10/Net\\_Neutrality\\_Committee\\_report%20\(1\).pdf](http://dot.gov.in/sites/default/files/u10/Net_Neutrality_Committee_report%20(1).pdf)

<sup>7</sup> [http://articles.economictimes.indiatimes.com/2009-03-04/news/27654846\\_1\\_internet-telephony-voip-pstn](http://articles.economictimes.indiatimes.com/2009-03-04/news/27654846_1_internet-telephony-voip-pstn)

barriers to entry. Consumers are typically able to switch between different VOIP services quickly and with little or no cost. As a result, traditional telecommunication regulations do not need to be applied to VOIP providers in order to protect consumers or competition.

- c) **VOIP services do not Bypass the existing Licensing Regime:** There is no question of VOIP services “bypassing the existing licensing and regulatory regime”, as that regime was never applicable to Internet apps and services in the first place, but only to the physical networks over which they operate. A VOIP license would therefore double the TSP/ISP permit and will inevitably push up costs for end users, as licensing will involve hefty fees for VoIP providers based on revenue sharing.

The “existing licensing and regulatory regime”, namely the Central Government’s power to issue licenses under section 4 of the Indian Telegraph Act, 1885 and the regulatory apparatus built on top of that power, is explicitly intended to apply to telecommunications infrastructure rather than content or services using that infrastructure.

- d) **The telecom infrastructure that delivers VoIP is already under Surveillance and Blocking Regulations:** All online service providers viz., Internet Applications and Platforms, use existing telecom infrastructure which follow norms prescribed by the DOT/TEC/DIT and that are within the oversight of the existing surveillance and blocking regulations. TRAI in its recommendation has acknowledged this factor and therefore exempted these services from licensing. No separate license or regulation is necessary since these Services originate and terminate on networks which are already licensed. Internet services are governed by the existing laws in India. These include Intellectual Property Rights laws, Copyright and the Information Technology Act, 2000 etc. Any licensing regime will only likely to impair growth in the sector.
- e) **Applying misguided and misconstrued Regulations to VOIP services or any other communication OTT platforms would stifle innovation:** Much of the indigenous digital start-ups rely on such platforms to build their products. If the platforms are restricted by stifling regulations, the development of the start-ups based on these platforms in turn will be adversely affected. This in turn will lead to less investment in India and fewer innovative online services being offered to consumers in India relative to the rest of the world.
- f) **VOIP Is not cannibalizing the TSPs Revenue:** The paper claims that VOIP services affect TSPs revenue and seen as one of the primary reasons why VOIP services terminating on PSTN networks should be licensed. This is an erroneous argument and the association has put forth its arguments stating just the opposite in its earlier submissions to TRAI on ‘OTT Regulation’.

It is well known that data consumption is growing by leaps and bounds and most TSPs are running profitable businesses based on revenue rise from data consumption. Thus, the argument of loss of revenue does not hold ground in this context. Further, unlike in the traditional voice services, in VOIP, consumers at both ends of the call pay because both are paying their ISP for the internet access necessary to use the VoIP application.

The reality is that both services remain in a fundamentally symbiotic relationship. There are numerous studies that demonstrate this symbiotic relationship between the use of online services (including VoIP-to-VoIP calling as well as VoIP-to-PSTN calling) and the resulting investment in broadband networks.<sup>8</sup> The internet enables “a virtuous [cycle] of innovation

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<sup>8</sup> See WIK-Consult, “Applications and Networks: the Chicken or the Egg, the Role of Digital Applications in Supporting investment and the European Economy,” March 2, 2015 at 3, available at [http://www.wik.org/index.php?id=studiedetails&L=1&tx\\_ttnews%5BbackPid%5D=85&tx\\_ttnews%5Btt\\_news%5D=1702&cHash=6a5a758243c9018024f69050a5c75299](http://www.wik.org/index.php?id=studiedetails&L=1&tx_ttnews%5BbackPid%5D=85&tx_ttnews%5Btt_news%5D=1702&cHash=6a5a758243c9018024f69050a5c75299)

in which new uses of the network – including new content, applications, services, and devices – lead to increased end-user demand for broadband, which drives network improvements, which in turn lead to further innovative network uses.”<sup>9</sup>

### III. Conclusion

The proposed VOIP Regulations will affect the consumers’ interest, broadband penetration, and the startup ecosystem. India’s software prowess is recognized the world over and Indian entrepreneurs need the right policy ecosystem in place to compete and dominate this space. Therefore, regulation should not be applied without substantial public policy justification, and moreover, it should not ever be applied in a way that dampens innovation and the creativity that Indian entrepreneurs can bring to the market.

The VOIP market, unlike in most of the digitally advanced countries, is still in its nascent stages in India, and the country is running years behind some of its peers in the race for providing innovative VOIP services to consumers and businesses. Adding interconnected VOIP regulations will hinder India’s ability to realize the significant potential benefits from the VOIP market. Especially when the country has about 63% people facing quality and reliability issues; like call drops, connection breaks, inconsistent speed, and no availability of 3G.

Thus, recommendations to license interconnected VOIP effectively amounts to penalizing both Indian consumers and developers of interconnected VoIP applications, who have successfully created low-cost, data-efficient communications tools. This directly militates against the Government’s pro-innovation, pro-access “Digital India” policy. The Digital India campaign can succeed only if regulatory bottlenecks are removed, and adding unnecessary regulations will serve only to delay the promise of realizing a true Digital India.

Thus, recommendations to license VOIP effectively amounts to establishing a price floor and penalizing both Indian consumers and developers of VoIP applications, who have successfully created low-cost, data-efficient communications tools. This directly militates against the Government’s pro-innovation, pro-access “Digital India” policy. The Digital India campaign can succeed only if regulatory bottlenecks are removed and value of technology is leveraged.

### IV. Issues for Consultation

**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?**

**Answer:** should be no additional fee/PBG/FBG for ISPs if they are to provide unrestricted Internet telephony. A license for interconnected VOIP will involve hefty fees for VoIP providers based on revenue sharing and will inevitably push up costs for the end user.

**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?**

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<sup>9</sup> US FCC Open Internet Order at para. 77

**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.**

**Answer:**

Accessing internet telephony services through the public internet should not be seen as an extension of fixed line or mobile services of the telecom provider. This move is also likely to impact the cost of such services for consumers, and lead to regulatory uncertainty.

**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.**

**Q5: What should be the termination charge when call is terminating into Internet telephony network?**

**Answer:**

There should be no termination charges for a call terminating into internet telephony network. The VoIP consumers at both ends of the call pay because both are paying their ISP for the internet access necessary to use the VoIP application.

**Q6: What should be the termination charge for the calls originated from Internet Telephony Network and terminated into the wireline and wireless Network?**

Please see response to Q5 above

**Q7: How to ensure that users of International Internet Telephony calls pay applicable International termination charges?**

**Answer:**

The users, whether domestic or international, use data and pay for the services/data to their respective ISPs. Any extra charges would be seen as unjustified and will seriously hamper growth of multiple types of communication tools for the citizens.

**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?**

**Answer:**

To promote internet telephony services, subscribers should be allowed the flexibility and freedom to initiate or receive calls from anywhere, and on any protocol, including outside the service area, or the country through the public internet, even at the last mile. Any technical barriers in this context may be reviewed, and any regulatory hurdles that prevent freedom in interconnectivity may be removed.

**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?**

**Answer:**

So long as industry continues to abide by the existing law, such as the Information Technology Act, 2000, and other applicable local laws on privacy, content and security, service providers should be allowed to innovate in a stable and predictable regulatory regime.

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

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

**Answer:**

To promote the leveraging and efficiency derived from internet telephony services offered alongside traditional voice services, allowing number portability is essential, and this move will benefit users

**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?**

**Answer:**

Because of the technical infeasibility of deriving real-time location information from the use of internet telephony/VoIP services, there should be no regulation mandating emergency service connectivity.

**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?**

**Answer:**

In the interest of consumer safety, it will be prudent for such services to inform their users about their inability to provide emergency services through internet telephony.

**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.**

**Answer:**

As noted in the consultation paper, since internet telephony transmissions occur through packet switched networks without any fixed and reliable path, it is challenging to consistently ensure a high QoS for such services.

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