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Sub: ACTO's suggestions on TRAI Consultation Paper (01/2018) on Inputs for Formulation of National Telecom Policy-2018

Dear Sir,

At the outset, Association of Competitive Telecom Operators (ACTO) would like to thank TRAI for providing the opportunity to submit inputs on the captioned consultation from TRAI.

ACTO would also like to thank TRAI for having the workshop held on 23rd November, 2017 and subsequent written submission on NTP-2018 prior to this consultation paper.

At the outset, we thank TRAI for incorporating some of our inputs given during the workshop and subsequent submission in the current consultation. However based on our review of the consultation paper, it seems some additional issues need to be incorporated as inputs to DoT to have a more holistic view of the policy framework.

We urge TRAI to incorporate our inputs to the current consultation (as attached). These will be helpful to usher in the next wave of digital revolution which is future proof, technology neutral, fosters innovation & Investments.

We trust you will find our suggestions as attached in annexure are in order. If required, our members would be happy to meet and discuss the suggestions and offer clarifications as may be required.

Thanking you,
Respectfully submitted,

Yours sincerely,
for Association of Competitive Telecom Operators

Tapan K. Patra
Director

Encl: As above

ANNEXURE-I

ACTO's suggestions to TRAI for the inclusion in the recommendation on NTP'2018

Introduction

The consultation paper is very important. The recommendations which will follow will surely help in formulating a Telecom Policy which will primarily hinge on next generation technology and innovation that will usher into data and digital revolution.

Almost every sector (including telecom) is witnessing a wave of digital and technological transformation. Past 10 years have witnessed more technological advancements than ever. In the next five years, we'll be witnessing more technological advancements. Presently nearly 50% of the world is connected to the internet, enabling it to communicate and conduct business halfway across the globe. Today the internet and technology have taken the center stage and is integrated into every aspect of our lives. Now emerging technologies have started drastically altering the landscape in which we live. Widening gap between policy and pace of technological innovation calls for actions both short and long term to meet the "always on" technological innovations.

Emerging technology trends – Cloud Computing, Internet of Things (IoT), Transition of Brick and Mortar networks to Software -Defined Networks (SDNs) and Network Function Virtualisation (NFVs), Machine to Machine (M2M), Augmented and Virtual Reality, all have necessitated need for a robust, enabling and supportive policy and regulatory framework. What is needed are big ticket reforms for bridging the ever increasing gap between technology and policy in the data space for the growth of Indian economy.

Last 25 years in the Indian telecommunication space has witnessed remarkable growth in the voice segment. Accordingly the regulatory policies were drafted with a focus on voice and more importantly consumer /retail markets which did not fully served the unique needs and requirements of enterprise data customers. Evolving enterprise networks are becoming very flexible on the use of available access types –blurring lines between public and private networks, even adoption of wireless access, VSAT access as needed to fulfill the growing requirements for a scalable, highly resilient and flexible network solution for the customers.

The current licenses are service specific wherein, technology has followed services instead of services following emerging technologies. Technology and services are evolving at a rapid pace and service providers are going to be forced to move to a cloud based SDN architecture to remain competitive. Movement from brick and mortar networks to virtualization and software defined is inevitable.

Consequently, the idea of managing networks from "a" physical location, hitherto designated as a Network Operation Centre (NOC), will also become impossible outdated. Management of advanced virtual data network infrastructure cannot be tied to a physical NOC location. The deployment of SDN/NFV enabled advanced networks will require flexibility on deployment of a distributed or virtual NOC architecture that have automated remote management systems not tied to a physical location.

The new policy should consider these emerging technology trends while deliberating on policies with end goal, rather than technology / protocol specific regulations that would allow service

providers to comply without being burdened to use a specific solution. Policy framework needs to be flexible to accommodate rapid changes in technologies and services.

Policy framework should consider following principles:

- Policy should achieve its objective in the most efficient way regardless of the technologies, industry structures or legacy regimes.
- Policy should be innovation driven, technology neutral and service-agnostic: it should consider all technological means for achieving the desired objective.
- Policy needs to be realistic based on market conditions to support technological innovation rather than a prescriptive set of rules oblivious to market dynamics.
- Policy reforms to follow a bottom-up approach that takes entirely new approaches into consideration, and is willing – where appropriate – to reject old ones.
- Policy framework needs to be flexible to accommodate rapid changes in markets, technologies and business models, while ensuring certainty and confidence for stakeholders to take risk.
- Recognition to Global Standards and International Best Practices is key.

The existing largely voice centric licensing frameworks requires a major reform as the next wave of growth is poised for data which holds immense growth potential. The policies that have helped steered the growth of voice may not be helpful for proliferation of data services.

The NTP – 2012 also recognized the emergence of enterprise and data services for formulating appropriate policies to fuel further growth of India's ICTE sector and attract investments. The introduction of innovative data services through enabling policy, regulatory and licensing framework, will bring a paradigm shift in the manner networks will be created, operated and maintained. ***The entire ICT ecosystem, has or is witnessing major transformation, from voice centric to data centric, from fixed line to wireless/mobile broadband, from minimal internet to internet dominance, no applications to the emergence of millions of applications, no social media to social media prevalence etc.*** All this will require revolutionary reforms in the current licensing framework to move towards a regime of "permission-less innovation". In order to keep pace with the emerging technologies, attempts were made in the past through license amendments to embrace and keep pace with the emergence of technology and innovation in an effort to bridge the gap between policy and technology. However, the approach may not have yielded the desired result as they were introduced along with parallel obligations in view of security requirements.

The reforms need to be introduced which should be based on the premise that services which technologies are able to deliver should be provided without restriction unless these are specifically prohibited.

Next phase of growth is of Data or digital economy, fuelled by emerging technologies and services like SDN, NFV, M2M/IoT/Cloud etc. NTP-18 should focus to move from voice centric to Data/digital Services to embrace technology and innovation. In general, licensing framework in the NTP-18 should consider for:

- Promote and facilitate for very high capacity data connectivity
- Promotion and facilitate for further competition to make services more affordable.

- Promote full fledged infrastructure sharing for optimum usage of resources.
- Promote and facilitate for pro investment policy.
- Licensing framework should support hybrid mode of operation to use public internet network and private lease line depending on criticality of services, so as customer gets a better choice in terms of affordability and criticality of services.
- Addressing the following key challenges in the existing licensing framework:
 - Migrate from voice telephony and mandatory infrastructure creation to virtualization and cloud platforms.
 - Steer movement to SDN networks instead of hardware.
 - SDN and NFV are network agnostic software solutions. They can be deployed irrespective of the access technology be it through the Ethernet, MPLS, internet, 4G, 5G or future technologies and combine all the available access technologies to create one or several virtual networks on the top of it.
 - Standardization: Standardization and interoperability play an essential role in development of SDN and NFV. We believe that market driven standardization, through industry and user collaboration, which characterizes SDN and NFV development would be the right policy approach. With services becoming increasingly global in nature any situation where regional standards are mandated or even prevail over international standards must be avoided for the technology to achieve its purpose.
 - The License terms and conditions need to be suitably modified to enable such access agnostic SDN/NFV services.
 - Engage with technological complexities with light touch as against explicit prohibition.
 - Light touch regulatory framework as against licensing for emerging services like IoT, M2M and Cloud.

This will help in achieving the objective “*To leapfrog India amongst top-50 nations in international rankings in terms of network readiness, communication systems, and services*”.

International best practices to be followed for these services thereby preserving the global nature of such services with no restriction on cross border data flow, no mandate on data localization and seamless roaming across globe for economic and trade development.

There is a need to recognize that the requirements of enterprise customers are distinct from that of mass market consumers. Enterprise customers want robust network, converged networks to avoid duplication of infrastructure, virtual / cloud based set up and application which is agile and resilient. Therefore policies should be formulated and tailored in a manner that recognizes the need and requirements of enterprise users as against adopting a one size fits all approach. In this regard, TRAI in its paper has rightfully noted: “*To fulfill the communication needs of the people, enterprises and industries at affordable prices*”.

KEY AREAS FOR NTP 2018

1. Facilitate Convergences of services, networks and devices for a seamless interconnection:

We are in the era of convergence. Technology is forcing us to go for convergence as it enables to offer delivery of services more efficient, effective and affordable. In a way, technological innovation is creating affectively additional resources to make the service more efficient, effective and affordable. On the contrary, existing policy is working against the technological force of convergence. For example there are several regulatory /policy restrictions who can provide which services, under which license, which ministry/departments will decide etc. Important point here is that with the technological innovation making it possible to use the same infrastructure for providing multiple types services which are restricted by licenses/regulation. This benefit will reach to the end users once the regulatory/policy bottlenecks are removed. The convergence had played an important role in all developed countries. Therefore, convergences with clear cut statement for removal of regulatory/policy bottlenecks should be stated in the NTP- 2018.

The convergence of network, services and devices is inevitable and is being adopted globally. It is important that the policy should recognize and implement full convergence including removal between IP and PSTN across all current and future licenses. This has been long due calling for unshackling of restrictions.

TRAI has rightfully noted in its consultation paper that:

- “*The convergence of voice, video and data services has also become a reality now*”.
- “*Convergence of networks can ensure efficient utilization of the available resources. The convergence of information, communication and broadcasting services are creating vast new capabilities that are benefiting individual, businesses and society as a whole.*”
- “*The convergence of the digital and physical products through M2M and IoT services and applications is paving the way for Fourth Industrial Revolution (Industry 4.0).*”
- “*Regulatory policies and their governing institutions are striving to keep pace with technological developments happening in the sector to address complex issues that include convergence of ICT and media, coordination with other sectors for IOT, and ensuring privacy and security*”.
- “*By restructuring of legal, licensing and regulatory frameworks for reaping the benefits of convergence*”.

2. Policy for Seamless interconnection of networks, services & devices.

Although NTP-2012 had mentioned for convergence of services, networks and devices but emphasis on seamless interconnection was missed out and resulted in creating bottleneck for more affordable, efficient and new services to customers. The premise of proliferation of data services is seamless interconnection and convergence of services, networks and devices. Convergence leads to increased efficiencies, lower costs and improved experience for customers. The new policy should address the needs to further aid the digital transformation and avoid fragmentation. Key benefit of the convergence is the ability for the users to communicate and

collaborate across the enterprise, with quick and easy access to the information and resources they need thereby creating a more agile, collaborative enterprise.

With the technological development, seamless interconnection be it Circuit-IP, unrestricted internet telephony, IP-IP or CUG –PSTN etc are essential to provide innovative and affordable services to the customers. Regulatory restriction should not be the reason for impeding the growth of the sector and deprive the technological benefit to the end users/customers. Allow ILDOs to have PSTN connectivity by removing the current regulatory restriction, in order to increase competition level for the benefit of the growth of BPO/KPO sector in our country. Similarly allow ISPs to offer unrestricted internet telephony as allowed to Access service providers.

*Request to refer attached **annexure- A** for more details.*

3. Need to broad base the scope of services from a unified platform through a technology neutral and service agnostic policy framework

Need to rework with policy framework to realize the full benefits of the innovative products such as Unified Communication Services (UCS), Cloud and internet telephony etc. UCS is the integration of real-time enterprise communication services such as instant messaging, presence information, voice, mobility features audio, web & video conferencing, fixed-mobile convergence (FMC), desktop sharing, data sharing, call control and speech recognition with non-real-time communication services such as unified messaging. Digital and technological ecosystem is dynamic and complex. Policy framework needs to be flexible to accommodate rapid changes in markets, technologies and business models, while ensuring certainty and confidence for stakeholders to take risk. Allow ISPs to provide internet telephony as allowed in case of Access service providers in order to reach the technological innovation to the end users. There should not be a mandate for localization of platforms/servers in era of cloud technologies.

4. Policy towards facilitation of Emerging Technologies and promote virtualization.

NTP-2018 should emphasize early and substantial support for technological innovation. Virtualization looks to be a way forward for the emerging technologies like Software Defined Network(SDN), Network Function Virtualisation(NFV), Software Defined WAN(SD-WAN) and Cloud. SDN/NFV, SD WAN technology is in its nascent stages and governing standards are still in a state of influx. Policy framework should avoid mandating regulations which could stifle the natural growth of these new technologies. Deployment of SDN/NFV will open the competition for more actors such as equipment manufacturers, software companies, application service providers etc. This will result towards making services more affordable and will support government's initiative for inclusive growth in the country. Pro-investment approach that reflects in the revised telecommunications regulatory framework can be considered a driver for SDN and NFV deployment. Policy perspective, for Software Defined WAN (SD-WAN, it should allow hybrid mode of operation (use of public internet and private lease line) for the roll out of SD-WAN. This will increase customer choice.

5. Required policy to address the regulatory imbalance between TSPs as well as OTTs

Regulatory imbalance exists not only between TSPs and OTTs but also between TSPs. The Access Service Providers have been permitted to offer unrestricted internet telephony but not for the ISP license in spite of being a natural choice for VOIP. With the technological innovations, now

electronic communication services can be provided over various platforms/ or applications and mode of service delivery has also changed from the traditional means. It is also going to be changed in the future. Keeping in mind the growth of OTT services, TSPs should also be allowed to business as OTT players in order to have same label playing field with the concept of same service same rule. We suggest for removal of all licensing/regulatory restrictions in terms of scope of services, interconnections etc keeping the required conditions related to security only.

6. Reform Other Service Provider (OSP) Registration Framework

Other Service Providers (OSPs) were formally recognised as an important constituent of the New Policy Framework for the telecom service sector under the National Telecom Policy – 1999 (NTP-1999). OSPs were entities providing applications like tele-banking, tele-medicine, tele-education, tele-trading, e-commerce by using infrastructure provided by various access providers. These service providers will not infringe on the jurisdiction of other access providers and they will not provide switched telephony. Initially it was introduced to promote BPO industry by giving tariff concession and allowing International Off-Net calling, due to which the BPO segment made rapid progress in India. OSP registration comes with a host of compliances. The regulatory requirements are often inflexible, stringent and also open to different interpretations that meeting compliance of the OSP registration becomes a challenge of its own. The guidelines were amended from time to time to provide certain flexibility but with added compliance requirements. Lately, it has been seen that this industry is slowly moving towards other countries like Philippines and Indonesia where the policies are not so stringent and are in fact, conducive to the industry. The current regulatory system needs to be reviewed for moving towards self regulation. Need to come out with simplified OSP policy, thereby encouraging further investment in this sector.

Detailed analysis is given in Annexure B.

7. Ensure growth of Enterprise data market in a sustainable manner via a favourable Regulatory & Policy framework.

The Indian enterprise data services market is on a growth trajectory and is set to see a CAGR of about 11% between 2015 and 2021 (As per various industry estimates). The enterprise data services market is a major contributor to the growth of the telecom with its innovative and technology centric service offerings bringing about digital transformation. Enterprise data services are a key enabler for the overall growth of the telecom sector in India including the digital India.

There is an urgent need for robust policy framework and policy thrust in the form of big ticket policy reforms from Government of India for bringing next generation telecom revolution in the form of data for the growth of the Indian economy. The NTP 2012 had also recognised this vide clause “*11.1. To formulate appropriate policies in the area of enterprise and data services to fuel further growth of India’s ICTE sector and attract investments.*”

Enterprise business is driven by strong SLA and ensured for high quality services in compare to retail market. Therefore policy should not mandate for pricing on enterprise data market in order to keep it sustainable and keep ensure high quality services.

8. Need to relook Unified license regime in the new telecom policy

Current Unified License is just chapter by chapter addition of several existing licenses. True unification in terms of services, restrictions, obligations etc among the various licenses are completely missing. With the rapid innovation and emergence of new services/service delivery, effective unification among licenses is required. Current UL license has option to add subsequent licenses in latter stage but Validity period of any authorization of additional service(s) under UL shall be co-terminus with the validity period of the first license. It means shorter license validity period will be available in spite of paying full entry fees.

9. Urgent need for policy on Data Encryption

The telecommunications industry is a prime target for hackers due to the vast and increasing amount of personal data being managed on cell phones, satellites, and the internet. A strong and Robust Data encryption policy has been key industry demand especially for the telecom service providers as Current 40 bit encryption in ISP License is outdated in the present situation. In the digital age the need for data security is of key importance. Enterprise-class data encryption is essential for securing critical customer information anytime, anywhere. Advanced encryption technology offers the security to nullify cyber attacks. New Telecom policy should envisage a flexible, future proof data protection powered by strong encryption policy. Consumer based network policies don't necessarily apply to enterprise networks as most enterprise networks have high level encryption protecting their communications and overall traffic. In line with international best practices available, the existing security infrastructure of the Government including for LEAs should be upgraded to keep pace with technology and innovations. Encryption framework should support technological innovations and supports new technologies.

Annexure-A

Detailed analysis to enhance competition level and to facilitate job creation in BPO/KPO sector by removing existing restriction on PSTN connectivity to ILDOs

1. Seamless interconnection is need of the hour

With the technological development, seamless interconnection be it Circuit-IP, IP-IP or CUG – PSTN etc are essential to provide innovative services to the customers by making it more affordable by the way of avoiding duplicity of infrastructure. Regulatory and Policy should not impede the growth of the sector and deprive the technological benefit to the end users/customers. In India, BPO sector is under stiff completion from other countries like Philippines, Mauritius, Indonesia, and Malaysia to name some of the prominent countries catering to the ever growing Call Center/BPO industry. The whole motivating factor for these developing Nations to outsource these activity to India is that of **cost**. Thus, it is necessary that the sector remains cost effective. The two essential components in this are the economical skilled manpower and with desired infrastructure, where telecom plays a major component in terms of availability, seamless converged connectivity and innovative offerings by ILD operators who mainly cater to this segment.

Our Hon'ble Minister of Communication has stated many times to spread BPO sector in smaller cities. In order to achieve that goal, regulators /policy makers in telecom have an important role to review the bottlenecks for the growth of BPO sector. By removing the regulatory restriction of IP-PSTN connectivity within India for ILDOs, it will firstly enhance competition among TSPs and secondly bring more affordable by using technology innovation to use the existing infrastructure to provide data and voice service to BPO sector, will make it possible for the growth of BPO sector in urban and smaller cities across India.

NTP-12 also states about Convergence:

3. LICENSING, CONVERGENCE AND VALUE ADDED SERVICES

3.1. To orient, review and harmonise the legal, regulatory and licensing framework in a time bound manner to enable seamless delivery of converged services in a technology and service neutral environment. Convergence would cover:

3.1.1. Convergence of services i.e. convergence of voice, data, video, Internet telephony (VoIP), value added services and broadcasting services.

3.1.2. Convergence of networks i.e. convergence of access network, carriage network (NLD/ ILD) and broadcast network.

3.1.3. Convergence of devices i.e. telephone, Personal Computer, Television, Radio, set top boxes and other connected devices.

2. Benefits of allowing interconnection between Public Networks with leased circuits/CUGs

In order to compete effectively, BPOs must be able to take full advantage of operational efficiencies and cost optimizations. However, because of the existing restrictions on linking different PSTN, IP, VPN and CUG networks, most international call centers in India today either maintain separate telecommunications systems for their domestic and international call centers or must technically separate a single EPABX or a call manager to address PSTN and IP traffic. The OSP regulation has many restrictive clauses, which hinder the innovation. These options entail investment in two independent call center infrastructures, and increase operation and maintenance costs. They also cause other inefficiencies such as preventing the use of excess capacity on one system by the other and require expensive and time consuming business processes to accommodate the different systems. Without such interconnection, these sectors must continue to undertake unnecessary investment in duplicating facilities separately on voice and data networks. Removing the existing restriction between IP and PSTN will go a long way in

supporting the objectives of prestigious Digital India Programme. These inefficiencies impede the effective integration of BPOs' domestic and international operations, which adversely impacts their competitiveness.

Enterprises in other sectors are similarly seeking higher levels of employee collaboration and productivity and are investing in unified communication solutions to help achieve this objective. However, because of the restrictions on linking different PSTN, IP, VPN and CUG networks, every customer site with IP telephony requires separate voice gateways & PSTN lines, which results in increased installation and maintenance cost. Other limitations resulting from these restrictions that similarly impede their business operations are that conference participants from CUG and PSTN cannot be on the same conference bridge, soft-phone users cannot call the India PSTN from their laptops; a CUG call cannot be forwarded to a local PSTN number; a CUG user cannot receive calls from Indian PSTN due to lack of number allocation and facilitating Interconnect regime and customers must maintain separate voice mail systems for their CUG and PSTN phones. The removal of existing restrictions on linking different PSTN, IP, VPN and CUG networks would better allow the communications and technology services provided by ACTO's member companies to facilitate these enterprises to achieve their business objectives and thus assist the continued growth of India's economy.

3. Global trends on Interconnection between Public Networks with leased circuits/CUGs

Interconnection between Public Network with leased circuits/CUGs is allowed in most of the countries in the world. In Asia it is allowed in Hongkong, Indonesia, Malaysia, Singapore, Philippines, Vietnam, and Japan etc. In Europe it is allowed in Austria, Belgium, Bulgaria, Denmark, Estonia, Finland, France, Germany, Hungary, and Italy etc. It is also allowed in North America in Canada, Mexico & in South America in Argentina, Brazil, and Colombia. Moreover it is also allowed in New Zealand, Australia.

4. Interconnection of IP-IP, IP-PSTN allowed in access license

DoT has allowed Interconnection over IP Networks allowed vide its amendment dated 19th April 2016 in UL vide license clause 27.3.

27.3 Interconnection between the networks of different licensees for carrying circuit switch traffic shall be as per national standards of CCS No. 7 and for carrying IP based traffic as per Telecom Engineering Centre (TEC) standards as amended from time to time by Telecom Engineering Centre (TEC) and also subject to technical feasibility and technical integrity of the Networks and shall be within the overall framework of interconnection regulations/directions/orders issued by TRAI/Licensor from time to time. For inter-networking between circuit switch and IP based network, the Licensee shall install Media Gateway Switch. Further the Licensor may direct the Licensee to adopt any other technical standards issued by TEC on interconnection related issues.

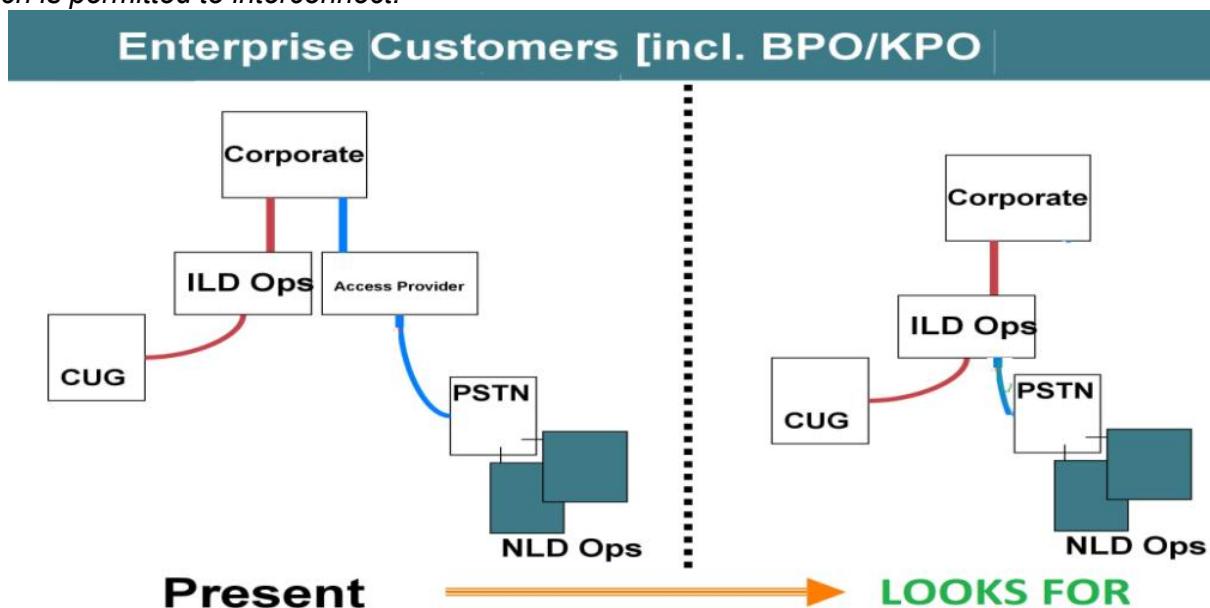
Now, it is evident that the security concerns or technological issues are no longer the reasons to restrict PSTN connectivity for ILDOs. Security concerns are same as it is for access service providers and ILDOs. All required security concerns and other requirement for the interconnection like IUC/Numbering etc will be applicable to ILDOs as it is in case of access service providers. Moreover any concern that the Department may have in terms of security, can be mutually discussed with ILDOs and sorted out. Concern related to passing of international traffic does not apply as ILDOs are the only operators responsible for carrying the same and all other rules like IUC will also be similarly applicable. More over most of the countries already have adopted this interconnection.

Moreover the restrictions also make the playing field uneven as operators have to compete with OTTs who provide such services without any authorization. So are operators rewarded or penalized for taking a license – while others continue to earn revenues.

5. Current restriction on PSTN connectivity:

Current license condition restricts the PSTN interconnection for ILD operators vide license clause no. 2.2(b)

"2.2 (b) ILD service provider can enter into an arrangement for leased lines with the Access Providers/NLD service provider. Further, ILD Service Providers can access the subscribers directly only for provision of international Leased Circuits/Close User Groups (CUGs). Leased circuit is defined as virtual private network (VPN) using circuit or packet switched (IP Protocol) technology apart from point to point non-switched physical connections/transmission bandwidth. Public network is not to be connected with leased circuits/CUGs." ILDOs offer voice as well which is permitted to interconnect."



The above diagram illustrates the current restriction and what we are looking for in the case of enterprise customers like BPO/KPOs.

Conclusion:

The current restriction on IP to PSTN for ILDOs poses a major barrier as service restriction making services less competitive and not reaching the benefits of technological innovations of convergence to the customers. In the larger interest for the growth of the telecom sector to create more jobs and investment, it is important to have new telecom policy should focus for interconnection regime to be technology neutral and service agnostic. In order to enhance competition among TSPs to provide benefits of innovative services at more affordable price, current restriction in the license condition should be reviewed keeping in mind the current consolidation in the telecom sector in India which will likely to reduce the level of competition in the near future.

Annexure -B
Analysis on Other Services Providers (OSPs)

The concept of registering with DOT was introduced to facilitate Call Center business, which in early 1990s required calling via IPLC/IP based calling, as making calls using conventional PSTN calling were considered very expensive. Thus in order to give this special exemption to call centers, the calling from IPLC was allowed for Companies having OSP registration. The initial requirement was also more from a statistical perspective.

Registration of OSP is required essentially for the purpose of

- (i) Statistical information
- (ii) Ensuring that their activities do not infringe upon the jurisdiction of other access providers.
- (iii) **Providing special dispensation to boost the BPO sector**

Table containing major directives on OSP Customers Viz regular enterprise customer

Date of Amendment	Chapter	Particulars	Issues	Remark/ Suggestion
05-08-2008	III (1)-5	OSP is permitted to share the Telecom bandwidth with other activities of the same Company or group of companies . However, the OSP shall ensure that there will be a logical separation between the Telecom Resources for OSP and the Telecom Resources for their other activities. There shall be no voice / non voice traffic flow between them.	International / Domestic OSPs are not belonging to same company / group company are not allowed to connect to each other network within India for voice / non-voice traffic (data) connectivity. Outsourcing by bigger entities to smaller entities (third party) is restricted.	To permit to share the Telecom bandwidth with other legal entities (between any international OSPs and Domestic OSPs networks within India without any restriction.)
	IV (4) (A-1)	Interconnectivity of the International OSP with Domestic OSP is not permitted.	Currently International OSP network is not allowed to interconnect with Domestic OSP which is resulting the high expenses and not proper utilization of network too. While an non OSP can do the same without any restriction.	To permit interconnection between any international OSPs and Domestic OSPs networks within India without any restriction and Bank Guarantee.
	IV (4) (A-2)	The Domestic OSP centre and international OSP centre shall have non-sharing separate and independent EPABX but may have the common operator position.		
	IV (4) (A-4)	No voice traffic shall flow between the Domestic and international OSP centres and/or cause bypass of the network of the Authorised Telecom Service Providers.	Having agents supporting both domestic and international call center not possible. Why should company have 2 separate agent, 1 for India and 1for rest of the world.	This restriction should be removed.
07-10-2011	IV (4) (B-1)	Interconnectivity of the International OSP with Domestic OSP / PSTN is not permitted.	International OSP is required to spend high capital investment on infrastructure (IP Bandwidth, EPABX, phones etc.), when compare with Domestic OSP and where Domestic OSP can use the normal PSTN. This restricts OSPs to chose the best telecom resources to meet their business requirement , unlike any other non OSP customer.	To permit sharing of infrastructure and single EPABX between International OSP and Domestic OSP, and also allowed PSTN connectivity to the International OSP at the Indian end as well.

Date of Amendment	Chapter	Particulars	Issues	Remark/ Suggestion
23-08-2007	Registration Guidelines Point No. 5	International OSP Centre No PSTN connectivity is permitted to the International OSP at the Indian end. However PSTN connectivity on foreign end is permitted having facility of both inbound and outbound calls.	We don't see any rational for restricting PSTN connectivity for International OSPs. The restriction should be only on interconnect between PSTN & IP within India.	Restriction should be removed. OSPs should be given choice to choose what resources best suit their business.
21-11-2012	IV (5-b)	OSP would be required to <u>preserve the CDRs for all the Voice traffic carried using the EPABX</u> . The CDRs should be segregated for each media gateway. The CDRs should be preserved <u>for at least ONE year</u> . It shall be possible to view the CDR data along with details of the agent manning the position by remote login to CDR machine / server. The time -stamp in the CDRs in the system(s) of the OSP should be synchronized with the IST.	For the Non OSP customer, there is no prescribed time line to maintain their CDR (they are generally asked by TSPs to store CDR for 2 - 3 months). However, OSPs are forced to maintain their CDR at least for one year. Considering the nature of business the volume of CDRs will be far greater than Non-OSP customer, thus the volume of storage gets many folds. Also Bank Guarantee of Rs. 1 Crore for each Media Gateway.	The timelines be reduced to 3 months. Removal of Bank Guarantee for each Media Gateway
	IV (5-f)	The OSP should get network diagram approved by Telecom Service Provider(s) from whom the resource are taken.	Its been also observed OSPs are not always aware of any manner in which the network diagram is required to be submitted with DOT/TSPs. This results in many different variants being submitted and TERM cell not accepting the same.	As long as the telecom resources are taken form Authorised TSPs, there should not be any requirement for submitting Network Diagram for any subsequent changes.
07-10-2011	IV (5) -(ii)	The agents at home shall be treated as Extended Agent Position of the call centre and interconnection is permitted through authorised service Providers Provisioned (secured) VPN (PPVPN) which have pre-defined locations i.e. home of the agents and OSP centre as VPN sites. Over and above PPVPN, the OSP may use their own security mechanism like Authentication, Authorization and Accounting at the same call-centre from which the connectivity has been extended to the home agent.	Current policy only allowed to Work From Home (WFH) if agent interconnected through VPN, which again restrict the service offerings. Pre-Defined location of WFH In addition requirement of submission of Bank Guarantee of Rs. 1 Crore	The OSP should be allowed to choose the telecom resource best suited to them, as long as it does not violate any existing regulation. Allow employee to work from any location of his choice Requirement of Bank Guarantee should be removed.
07-10-2011	III (1) -4	OSP may have Internet connectivity from the Authorized Internet Service Provider. For the purpose of internet connectivity in India, the OSPs are permitted to use IP address that is registered in the name of an Indian entity that shall be traceable to a physical address (location) in India.	As per current policy, only IP address provided / taken in India should be used.	At times IP addressed are procured in bulk at central place and not always be registered with Indian entity but group company outside of India, but the TSP can always share any details required by LEAs/ DOT for security purpose.

Other Generic Issues

#	Issues	Remark
1	Registration centers Multiple registrations are required at each state level if the same OSP offer services in multiple states and each state different interpret the OSP guideline differently which resulting in delaying the approval. In addition to that multiple registration are required to run domestic and international business.	There should be a centralized registration at central level instead of in each state for OSPs having multi state registration. The rational was for facilitating the call center, thus, it should be as simple as possible.
2	Registration Requirement Registration is required for each location. Many TERM cell insist that even if there are multiple office in same complex, different registration are required. At times if the 2 office are at different floors of the same building, then too they insist on different OSP registration. Also required to submit Bank Guarantee, as different office in same complex will not have separate telecom infrastructure	One OSP registration per city should be sufficient.
3	Single EBAPX Use of single PBX has been allowed in 2011, however the modalities of flow of calls and signal may be explained.	Separate paper has been submitted on Unified Communication.
4	Telecom Infrastructure in the cloud The OSPs not being telecom experts may want to focus on their mail business offering rather than the telecom infrastructure. Thus, this activity can be best address by TSPs. Thus, TSPs be allowed to set up data centers where multiple OSPs can be hosted and they be logically partitioned to ensure that each customer is segregated.	The TSPs can ensure that requisite directives are complied and offer state of art Unified Communication Center which can provide customer with many value added features, which typical smaller PBX lack The data center can be anywhere in India and can demonstrate requirement DOT may prescribe.
5	OSP registration threshold It is not very clear when an enterprise is required to apply for an registration. <ul style="list-style-type: none">• Is it applicable for captive call centers• Is it applicable for a 5 -10 seater call center• What aspects do IT enable service cover	Companies exempt from OSP should be clarified
6	Bank Guarantee Though DOT has been reducing this amount, we feel the need for Bank Guarantee (BG) should be done away with. Non OSPs customer aren't required to submit any Bank Guarantee, then why should OSP be mandated. <ul style="list-style-type: none">▪ BG for sharing operator position- Rs. 50 Lakh▪ BG for Infra sharing (PBX,CUG,VPN) – Rs.1 crore.▪ BG for Work From Home – Rs. 1 crore.▪ BG for each Media Gateway – Rs. 1 crore.	No Bank Guarantee required to be deposited and if at all Bank Guarantee is required just one single Bank Guarantee max of Rs. 50 lacs should be sufficient for the Company as a whole for all location and all scenarios.
	Redressal Mechanisms Since enterprise customer are spread across the country and they are not always conversant with the regulation of OSP, thus some central redressal mechanisms should be set up to address their concern	

Summary

There is a serious need to relook at the requirement for companies to register themselves with DOT for taking an OSP registration. This requirement has outlived its purpose and its time we allow free play to the enterprise customer who have set up their BPO / call center operations in India. Large chunk of business is shifting to other countries like Philippines, China, Americas due to these restrictive nature of service offering. India does posses the technical edge in the form of skilled manpower and other real estate infrastructure, but with these Telecom restrictions in place we are losing out on new opportunities that are likely to be shifted to other countries without there being sufficient Ease of Doing Business in India. We strongly urge TRAI to recommend DoT to remove the requirement of OSP registration or bring in clear and significant advantage to OSP customer. Alternatively **come out with a very simple customer friendly regulation for OSP.**