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Ref: **ACTO Response to TRAI's Consultation Paper [No. 02/2019] dated March 29, 2019 on Review of Terms and Conditions for registration of Other Service Providers (OSPs)**

Dear Sir,

At the outset, we express our sincere thanks to TRAI for issuing the much awaited consultation paper aimed at reviewing the terms & conditions for registration of Other Service Providers (OSPs).

On behalf of our members, ACTO is pleased to submit its detailed issue wise suggestions enclosed as **Annexure – I**. We sincerely hope that our comments will merit the consideration of the Hon'ble Authority.

Respectfully submitted,

Yours sincerely,

for Association of Competitive Telecom Operators

Tapan K. Patra
Director

Encl: As above

ANNEXURE-I

ACTO Response to TRAI Consultation Paper **on** **Review of Terms and Conditions for registration of Other Service Providers (OSPs)**

Introduction

The consultation paper has rightly recognized, the vast changes in technology that has happened in last two decades which has led to evolution of different network architectures, formats and solutions for setting up an OSP network. New user applications and service delivery scenarios have emerged in complete departure from what used to be a typical OSP service delivery network in the past. It would not be incorrect to state that technology has played a major role in blurring the boundaries between the role of OSP, its definition, service delivery platforms and the connectivity provider. Today the telecom service provider have gone beyond the role of providing mere telecom service and have started providing hosted / collaboration services which once used to be an exclusive domain of OSPs. TSPs have started outsourcing services to OSPs who in turn provide such services to their clients.

However, **the existing guidelines have failed to keep pace with the emerging technology trends** rightly necessitating review of the technical, financial and regulatory requirements, scope of operations and the terms and conditions of registration of OSPs in a comprehensive and holistic manner which was long overdue. Decentralization of the task of OSP registration to LSAs (formerly TERM Cells) was certainly a welcome step **but over the years this led to the issue of multiple and differing interpretation of the OSP guidelines**. This made the task of OSPs and TSPs comparatively difficult. There have been few efforts in the recent past to simplify the guidelines but did not meet with much success. We hope that recommendations from this consultation will go a long way in creation of a technology neutral framework that provides flexibility to OSPs and TSPs to embrace technology, promotes innovation and utilize the cost and technology efficient service delivery platforms for faster promotions of OSPs in the country. While there has been an unprecedented growth in the ITES/BPO sector ([USD 160 Billion industry] but with the right policy framework the sector has the potential to effectively contribute the objective of making India a five trillion dollar economy. The sector is a revenue and employment generator and has the potential to achieve the objectives stated under the skill India and start up India. So the need is not only to have finances but an enabling and supportive ecosystem that hinges on light touch, technology neutral, flexible policy framework. The continued gap between technology, innovation and policy needs to be bridged with an open mind rather than viewing it only from the perspective of security and infringement of domain of TSPs. The need of the hour is to embrace regulatory harmonization in order for the sector to grow.

Telecom sector has also witnessed blurring of boundaries when compared to application based economy also providing voice calling and SMS which has provided a choice to consumer with affordable cost. So in the current era which is driven by data and technology, the questions on infringement of TSPs domain seems archaic.

Firstly, it is important to understand that OSPs are not TSPs and they do not provide any competitive service offerings such as voice or messaging services. Infact OSPs are generally the outsourcing partners to their clients and provide services using the telecom resources provided by local authorized service providers. Unless connectivity is added to the platform, OSP will not be able to deliver services to their clients. The connectivity is and will always be provided by TSPs which in turn will underpin everything else from an OSP perspective. So the question of infringement of domain does not arise. The very reason the question on infringement has come to stage is due to the issue with the term “application service” which requires an OSP registration. The word itself is capable of differing interpretation and may be misleading in the present context and has the possibility of including all app based services which are also provided by OTTs. The definition requiring OSP registration has to be limited to the activities relating to outsourcing through inbound/outbound voice calling which has been the traditional way. Voice calling could be through PSTN/PLMN or use of Skype, Lync etc. Since OSP do not possess a telecom license under section 4 of Indian Telegraph Act, 1885, they should be permitted to provide outsourcing services to their clients in the most cost and technology efficient manner.

In such a situation OSPs do not require a lengthy registration document containing host of compliances relating to how to use connectivity, where to establish infrastructure, what partitioning is required in their set up etc.

One of the main purposes of recognizing OSPs was from statistical purposes – entities who monetize connectivity provided by TSPs to serve their clients in a commercial/technology neutral manner. Ideally there is no need to register OSPs under a detailed framework. For statistical purposes, a simple format of registration is sufficient. However, the current guidelines make the OSP registration framework akin to a telecom license only coupled with detailed terms and conditions. This only makes the ease of doing business difficult for OSPs by increasing cost of compliance and following various unwanted restrictions/compliances which are road block to their business requirements in the country. It would not be an understatement that the current OSP guidelines have made regulatory compliances more or less the same for OSPs as it is for licensed TSPs. What should have been a light touch recognition for registration as OSP has become a major compliance issue given the restrictions imposed through the guidelines. So far a company registers with DoT as an OSP that should be sufficient for Government statistical record purpose and OSP should be given full flexibility to provide services. Infact not registering as an OSP has of late started becoming a preferred approach since a non OSP entity has much more flexibility to operate than an OSP therefore unless there needs to be sufficient incentives for entities to register as an OSP , preferred approach would be to take a more narrow approach and now seek registration.

Further, OSP registration in recent past has proved to be a major bottleneck for the MNCs who want to serve their clients using their existing international infrastructure. However the restrictions, in terms of Infrastructure localization of EPABX, IP-PSTN interconnection restrictions and interpretation issues leading to delay in permissions, is forcing these MNCs to set up their outsourcing units outside India especially Philippines etc. which has more liberal policies and have similar resources like India. We believe that it is a wake up time for policy makers to revise the OSP policies in the most conducive

way else we will end up losing competition to the countries who are similarly placed as India and welcoming business with a light touch policy framework.

In summary:

1. **OSP guidelines need to be reformed to make them future proof, open, flexible and technology neutral.**
2. **OSP scope should be limited to outsourcing centre only which are primarily handling the voice calls to/from the customers irrespective of the telecom connectivity or architecture used and all other captive business usage should be kept out of OSP policy. Further it must not include services purely based on data or internet.**
3. **The detailed registration process and compliances need to be removed and replaced with a light touch single page registration with minimum details required for the real purpose i.e., statistical purposes.**
4. **The registration should cover the company and its locations. No need for re-registration every time for adding any new locations. This should encourage sharing of infrastructure between group companies.**
5. **With the advent of cloud based technologies, the requirement of on-premise EPABX is archaic. OSPs should be provided flexibility to deploy infrastructure anywhere in the world. This is important to keep cost pressures low at the same time leverage best in class technology tools to provide a consistent user experience.**

ACTO's response to the specific questions raised in the consultation paper:

Q.1 Please provide your views on the definition of the Application Service in context of OSP. Whether, the Application Services which are purely based on data/ internet should be covered under Application Service for the purpose of defining OSP.

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Q.2 Whether registration of OSP should be continued or any other regulatory framework should be adopted for OSPs so that the purpose of registration specified by government is met. Please furnish your views with justification

ACTO's comment:

The reference to the word "Application" itself is not appropriate. OSPs do not provide any so called application service. Instead, the way the OSP guidelines were conceived in 1999 was to cater to the companies into the outsourcing business (primarily voice calling – inbound and outbound). There is no concept of any application being provided and there should not be any reason why a provider of an application be registered as an OSP. Application Service itself is an exhaustive term and may include OTT applications as well. The definition of OSP under the guidelines dated August 5, 2008 of "Application Service" which itself is indicative and not exhaustive also does not mentions any service which is an application. Instead the OSP should apply to the activity and not mere application. Tele-banking application is a software enabled application. So there should not be a need for an OSP registration. So

mere reference to application itself needs to be removed and replaced with the word outsourcing. Services which are purely based on data / internet should not be covered under OSP activities. For example it includes IT/ITES services which mean everything in the IT domain has the potential to become OSP which is not serving any purpose. Therefore, first the word application needs to be replaced with business outsourcing, secondly only voice based calling services should be included in the definition, voice calling can be through PSTN and / or emerging unified collaboration tools like skype, lync, etc. **Captive (for calls from within the organization or technical helpdesk for Internal employees) business usage via data and voice calls should be kept out of OSP registration. Further it must not include services purely based on data or internet.**

We believe that the OSP definition shall be articulated to meet the Government objective of statistical purpose and to provide incentives to the BPO/outsourcing sector. Moreover, the OSP framework should be technology neutral and should include converged nature of the communications and cloud based technologies.

However, over the years and the level of enforcement and compliances like server localization, bank guarantees, inspection, agreement and more importantly different interpretations have made the guidelines more like a telecom license. Infact, the level of enforcement on OSPs is comparable to a TSP license.

The OSP registration is not granted under Section 4 of Indian Telegraph Act 1885. Another example of registration is IP-1. The same is a four page document with no comparable obligations and seems to be a real registration. However, the OSP registration process is detailed, lengthy and seeks numerous technical details and is always open for government inspection.

Therefore, in order to meet the Government requirement, a single page OSP registration similar to IP-1 should suffice. A light touch regulatory framework with simple compliances for the purposes of meeting three objectives i.e., (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, laid out by Government for OSP should be sufficient. The registration should accord right to operate OSP activity not how to operate.

Q.3 What should be the period of validity of OSP registration? Further, what should be validity period for the renewal of OSP registration?

ACTO's comment:

Since OSPs are required to be identified for statistical purposes, there should not be any validity of such identification which should be through a much simplified bare bones registration. In a similar registration accorded by DoT for IP-I, there is no validity of registration. So there is no case for OSPs to operate under limited period and seek renewal thereafter. It should be left to the OSP company to intimate to DoT if it wishes to stop undertaking OSP activities. Alternatively, there is also a process of deregistering OSPs in case of non-compliance relating to filing of Annual Returns.

Q.4 Do you agree that the documents listed above are adequate to meet the information requirements for OSP registration? If not, please state the documents which should be added or removed along with justification for the same.

ACTO's comment:

Instead of submitting documents, a single page intimation format may be prepared by DOT asking for information about ROC registration, MOA/AOA and DIN/CIN. All these information are also available in ROC website for verification purpose. A standard intimation format prepared by DOT will be helpful to have the required information. Minimum documentation specifically catering from statistical standpoint is needed keeping in mind that most players are likely to be small and medium enterprises and should be incentivized to enter and compete in the market.

As stated above, that despite being categorized as a registration, due to amount of compliances and documents sought, the same has become a license. Given the objective specified by the Government taking OSP should not be a liability as against a recognition for being OSP. Therefore, the amount of documents should be culled down to bare minimum. Any entity desirous of getting registered as OSP should simply file its incorporation documents such as MoA and AOA, Certificate of Incorporation, List of Directors, Details of authorized signatory, address of the proposed OSP localization, network diagram showing how service will be provided and connectivity details. The lengthy form 1 should also be reduced in line with above. We welcome the launch of saralsanchar.gov.in to streamline OSP registration process. However, the number of documents should be reduced. This will significantly reduce the documentation.

Q.5 Do you agree with the fee of Rs. 1000/-for registration of each OSP center. If not, please suggest suitable fee with justification.

ACTO's comment:

The processing fee of Rs. 1000 should be for each company registering as OSP who can then provide list of locations LSA wise/Circle wise/City wise/operating as OSP centers. Charging processing fee for each location even within same LSA/city adds no value as now the process of registration is online.

Q.6 Do you agree with the existing procedure of OSP registration for single/ multiple OSP centres? If not, please suggest suitable changes with justification.

ACTO's comment:

Now the process of registration has become comparatively easier with saralsanchar.gov.in. Single/Multiple OSPs in a given city/LSA may be registered with one application. Due to online nature of application filing, once a complete set of requisite documents are filed for the first application, further registrations should be automatic, if there is no change in status of the applicant.

Q.7 Do you agree with the existing provisions of determination of dormant OSPs and cancellation of their registration? If not, please suggest suitable changes with justification.

ACTO's comment:

The existing provisions for determination of dormant OSPs require the OSP to submit an annual return (“Annual Return”). This helps the DoT to keep track of Active OSP from statistical perspective. At the same time it provides an opportunity for OSPs to review decision whether to continue remaining as OSP or not and updating its activities. Given the main purpose is from statistical perspective, it is imperative to have a framework to capture correct information. While the procedure is effective for ascertaining whether the OSP is ‘active’ or ‘dormant’, it seeks certain details that are not commensurate with the purpose. For example, the revenue and profit / loss from the OSP centre is required to be provided as a part of the Annual Return. In our view, this is not relevant to meet the requirement of statistical purposes.

Q.8 Do you agree with the terms and conditions related to network diagram and network resources in the OSP guidelines? If not, please suggest suitable changes with justification.

ACTO’s comment:

OSPs are obligated to take network resources from authorized telecom service providers in India who are already obligated under their underlying telecom license to ensure that no misuse of telecom connectivity by their users happens and to ensure periodical site inspections etc. We suggest that the aim of the policy should not be to dictate how OSP will architect their equipment’s for the end users services, rather OSPs should be given free hands to utilize the best available technology/platforms for their cost benefits and world outsourcing services. Any regulatory intervention regarding do’s and don’t on placement of equipment or technology usage may be counter-productive for this industry.

Q.9 Do you agree with the provisions of internet connectivity to OSP mentioned in the OSP guidelines? If not, please suggest suitable changes with justification.

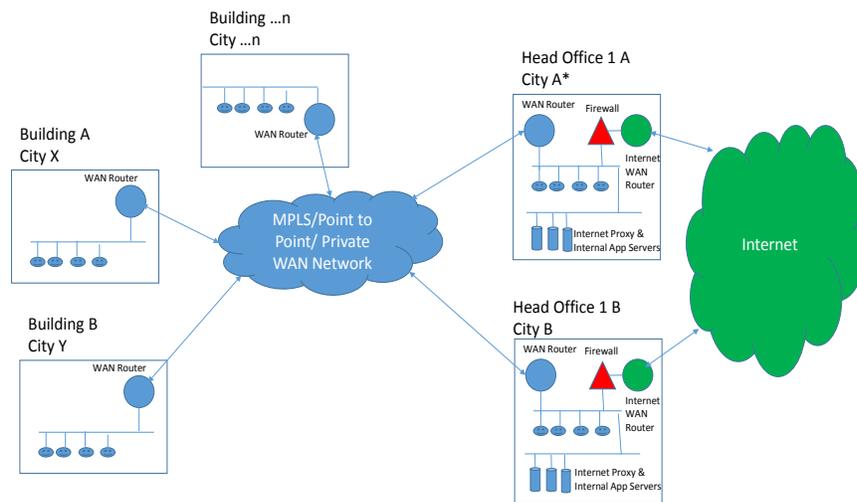
ACTO’s comment:

Current provisions of OSP guidelines mandate internet connectivity to be taken from authorised internet service provider. Also OSPs are permitted to use the IP address that is registered in the name of an Indian entity that shall be traceable to the physical location in India.

We believe that above key requirements of DOT are mainly from the background of security and the use of local authorised service provider only, but the ground enforcement of these requirements are not in-line with the DOT objective and **there are issues being raised by LSAs w.r.t mandatory local internet breakout at each site** i.e. a separate internet connection for each OSP site and also internet gateway at each OSP location. These enforcements are against the provisions in the ISP license which permits use of leased line to connect customers from any ISP pop in the country.

Therefore, local breakout of internet connection in each city is not required. To clarify there should not be any requirement to mandatory take internet connection from each city instead of from a centralized place in India or to set up ISP nodes in all the locations where the customer is located and then provide internet services.

Further, active infrastructure sharing has gained momentum across the globe due to inherent cost saving capabilities for the TSPs. New development like VRF (virtual routing and forwarding) – a technique which is being used globally to share active resources and at the same time separation is maintained by keeping technology based evidence under the same bandwidth pipe carrying different traffic. This helps in cost savings as a TSP can send different types of IP traffic under the same pipe with logical partitioning. You may please note that there are no such restrictions on active infra sharing for ISPs worldwide, which ultimately leads to higher operational burden. For the ease of understanding a network diagram illustrating the above active sharing scenarios is below:



*All city locations in India only.

As seen in the diagram, enterprise customers accessed the internet service via VPN tunnel. During this, public traffic is not getting connected with VPN/ MPLS as it is bifurcated via virtual routing and forwarding. Only backhaul bandwidth is shared for VPN traffic and internet traffic and front end routers, firewalls etc are separate. Therefore it is in compliance with NLD license.

While complying with the license conditions, it has some inherent benefit like reduction of cost by optimum utilization of telecom resource and also in line with DOT principle of promoting active infrastructure sharing.

We would therefore request for the issuance of the amendment in the ISP license for active and passive infrastructure sharing at the earliest as it would be very helpful for the industry, government and customers.

Additionally the provisions for OSP's to procure Internet connectivity from licensed ISP in India needs to be suitably aligned to enable IPv4 & IPv6 assignment & registration to be maintained at either or both APNIC and IRINN. As IPv4 has become sparse resource, OSP's those who want to own their IPv4 resources, should be permitted to purchase IPv4 from other IP registry and port it to either APNIC or IRINN at their own cost in order to comply maintaining records of IPv4 resources & traceability to

physical location address. The ownership of owning IPv4/IPv6 resources & maintaining records lies with OSP in case OSP has procured IP's at their own.

Therefore we recommend that the provisions of internet connectivity to OSP mentioned in OSP guidelines need to be reviews to align with IPv4 portability. Lastly, in the event of a disaster, OSPs should be allowed to leverage infrastructure located in the cloud from a recovery/business continuity purposes for a limited period. Once the steady state is attained the connectivity can restore to the Indian telecom service provider.

Q.10 Do you agree with the provisions related to Hot Sites for disaster management mentioned in the OSP guidelines? If not, please suggest suitable changes with justification.

ACTO's comment:

User expectation and level of quality of service is increasing day by day. Thus provision of hot sites (redundancy) is a very good arrangement. It is essential not only in case of disaster but also to achieve high grade of service or for providing critical services. Thus provision for hot sites should continue and be further facilitated.

Interconnection between hot sites of domestic OSP and international OSP may also be allowed with suitable safeguard.

The provisions/guidelines perhaps need to be reviewed in today's context. During disaster management, there must be automatic & seamless switch over to hot sites without any delay of any kind. It's quite possible that a particular business entity may have a domestic OSP & International OSP running parallel, catering to different customers and market segments. In case of disaster, they should be allowed to be interconnected so that needlessly additional resources are not wasted for creating standalone hot sites. However, in normal working, there should be a logical separation between the two. Also such hot site could be anywhere in the world so long as they belong to the OSP company / group company, this should be permitted to be connected for business continuity. Lastly, the provision relating to "always on" setup for hot site to take over the operations of impacted OSP is cost prohibitive. The same needs to be removed. OSP should switch over to a hot site as the situation demands.

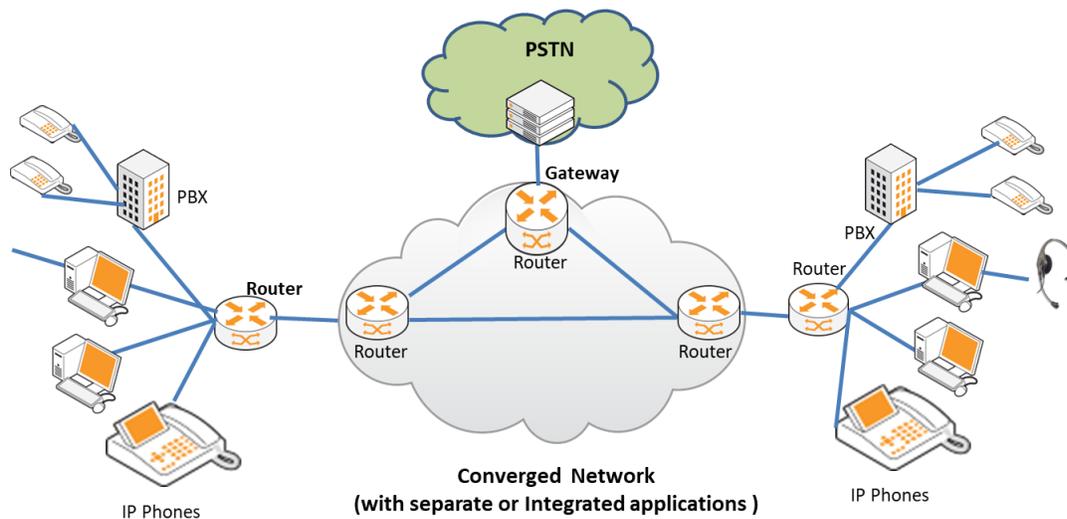
Q.11 Do you agree with the provisions of logical separation of PSTN and PLMN network resources with that of leased line/ VPN resources for domestic OSP mentioned in the OSP guidelines? If not, please suggest suitable changes with justification.

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Q.12 Do you agree with the provisions of PSTN connectivity/ interconnection of International OSP mentioned in the OSP guidelines? If not, please suggest suitable changes with justification.

ACTO's comment:

The requirement of logical separation of PSTN & PLMN arises due to the restriction to terminate the IP circuits into the PSTN network. A single EPABX is being used to host VoIP network (CUG/MPLS/VPN) along with PSTN connectivity, having logically partitioned to ensure there is no connectivity between PSTN and Leased Private Links. Many OEMs have provided this solution in India as per diagram below:



However 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. We suggest to remove the interconnection barriers as 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. One of the key drivers for India's success at the IT-BPM sector has been the cost and skill advantage. 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 telecom operators who mainly cater to this segment.

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 mentioned in the NDCP 2018. 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 the restriction around using collaboration tools such as conferring participants from CUG and PSTN 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 telecom licensed service providers to facilitate these enterprises to achieve their business objectives and thus assist the continued growth of India's economy.

As per 05.08.2008 Revised "Terms and Conditions - Other Service Provider (OSP) Category

Terms & Conditions specific to the Domestic OSP

- (1) *"Domestic OSP is permitted to terminate PSTN/PLMN connection with outgoing facility on the same EPABX provided that such PSTN/PLMN lines shall be used for making calls through normal NLD network only and in no way directly or indirectly cause bypass of licensed National Long Distance Operator (NLDO) jurisdiction. There shall be a logical partitioning to ensure the separation of these facilities. They may have other connectivity e.g. lease circuit and virtual private network (VPN) at the same centre, however, there shall not be any call flow between these PSTN lines and Leased lines.*

4. Terms & Conditions specific to the International OSP

- (1) *No PSTN connectivity shall be permitted to the International OSP at the Indian end. PSTN connectivity on foreign end is permitted having facility of both inbound and outbound calls.*
- (2) *Interconnection of two or more International OSP of the same Company or the group companies is permitted, with intimation to the registering authority within 15 days of such interconnection."*

On the contrary, NDCP -2018 states to remove the restriction on inter connectivity and allows for IP-PSTN switching as mentioned below:

"2.1 (c) Simplifying and facilitating Compliance Obligations by:

iv. Improving the Terms and Conditions for 'Other Service Providers', including definitions, compliance requirements and restrictions on interconnectivity"

"1.1 (g) Enabling Infrastructure Convergence of IT, telecom:

i Amending the Indian Telegraph Act, 1885 and other relevant acts for the purpose of convergence in coordination with respective ministries

iii Restructuring of legal, licensing and regulatory frameworks for reaping the benefits of convergence.

iv Allowing benefits of convergence in areas such as IP-PSTN switching."

We suggest that PSTN connectivity shall be permitted to the International OSP at the Indian end as PSTN connectivity on foreign end is permitted having facility of both inbound and outbound calls. This will remove the asymmetry on PSTN connectivity at the both end. Technology permits IP (VPN)-PSTN connectivity which has so far not been permitted despite NTP 2012 and now NDCP 2018 envisioning that as one of the objectives.

Q.13 Please provide your views as to how the compliance of terms and conditions may be ensured including security compliance in case the OSP centre and other resources (data centre, PABX, telecom resources) of OSP are at different locations.

ACTO's comment:

Maintenance and hosting of the equipment's is a major task today and with the roll out of cloud computing and virtualization companies are likely to outsource these services to the third party especially data centres which have more conducive environment and experts to host these equipment's. Moreover, most of the OSPs may not have the space and capability to maintain the devices used for their telecom needs.

With the advent of the technology, it is very easy to monitor and control the centrally hosted equipment's from any part of the world including OSP sites in India. Current provisions in the OSP guidelines like Remote login facility, CDRs, IPDRs, call flow checks and logs keeping are good enough to keep a tab on the OSP activities from these centralised equipments. Moreover, these security measures help the LSAs and service providers to inspect the OSP activities and compliances as and when required.

We therefore believe that current security measures as defined in the OSP guidelines are good enough to take care of any security requirements.

Further, Security does not depend on location and it is software driven and irrespective of location as all sites are connected. It can be monitored at central location. Most companies have security policy and the infrastructure is secured. Through IP addresses, it's not difficult to trace the originator or terminator of traffic. All OSP locations are duly registered and operate on connectivity provided by Indian TSPs who are themselves liable under their license to provide traceability. More so TSPs are obligated to inspect premises to their customers (who are also OSPs) to detect any misuse. LSAs are also authorized to inspect OSP locations for similar purpose.

Q.14 Please provide your views whether extended OSP of existing registered OSP may be allowed without any additional telecom resource. If yes, then what should be the geographical limitation for the extended OSP centre; same building/ same campus/ same city?

ACTO's comment:

In our view, there is no reason why it should not be allowed. There should not be any issue at all to extend it LSA wise/Circle wise/City wise. Same building, same campus and same city should be part of extended OSP. Since the same come under same LSA and same TSPs. Since the area of TSPs and LSA are defined, why OSPs should have different requirement. Any new location in the same LSA should be

treated as extension. OSP can at best provide information about the same to LSA and TSP for record keeping.

Q.15 Please provide your views as to how the compliance of terms and conditions may be ensured including security compliance in case of the extended OSP centre.

ACTO's comment:

In fact compliance will be more easy as it can be monitored from one location at the same time. No additional compliance is required for the extended OSP centre as long as requisite information is available for monitoring in any of the one place. Permitting such extension is according flexibility to both OSP and LSA from administrative perspective. The entire connectivity is provided by TSP who themselves are mandated under their telecom license to ensure compliance of license including security.

Q.16 Do you agree with the provisions of general conditions for sharing of infrastructure between International OSP and Domestic OSP mentioned in the OSP guidelines? If not, please suggest suitable changes with justification.

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Q.17 Do you agree with the provisions of Technical Conditions under option -1 & 2 for sharing of infrastructure between International OSP and Domestic OSP mentioned in the OSP guidelines? If not, please suggest suitable changes with justification.

ACTO's comment:

Sharing leads to optimum utilization of resources and drives cost saving and this concept is used in many other sectors as well. Saving of capex leads to further investment. Policy should encourage further to share resources for efficient/effective usage of resources.

As per current guidelines, 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. We suggest to allow the sharing of the Telecom resource between any international OSPs and Domestic OSPs networks within India without any restriction.

Currently International OSP network is not allowed to interconnect with Domestic OSP which is resulting in high cost and inefficient utilization of network too. A non OSP entity can operate without any such separation without any restriction. We suggest to allow interconnection between any international OSPs and Domestic OSPs networks within India without any restriction and Bank Guarantee.

We suggest to permit sharing of infrastructure and single EPABX between International OSP and Domestic OSP, and also allow PSTN connectivity to the International OSP at the Indian end as well.

Q.18 In case of distributed network of OSP, please comment about the geographical limit i.e. city, LSA, country, if any, should be imposed. In case, no geographical limit is imposed, the provisions required to be ensure compliance of security conditions and avoid infringement to scope of authorized TSPs.

ACTO's comment:

The geographical limit is not relevant in a connected world where OSPs rely more and more on the cloud based solutions to offer their various services. We recommend removal of these restrictions and simplification of current rules. The OSP locations operate basis the connectivity provided by licensed TSPs. Therefore even in case of distributed network, the geographical limit will be basis the service area of the concerned LSA.

Q.19 Do you agree with the provisions including of logical partitioning mentioned in the OSP guidelines for distributed architecture of EPABX? If not, please suggest suitable changes with justification.

ACTO's comment:

Concept of logical portioning is good but it will not be beneficial to OSPs if IP-PSTN connectivity is not allowed. It's the need of the hour to remove the interconnection barriers.

Q.20 Do you agree with the monitoring provisions of mentioned in the OSP guidelines for distributed architecture of EPABX? If not, please suggest suitable changes with justification.

ACTO's comment:

Liberalizing the OSP framework is unlikely to impact the security since the underlying network is provided by the TSPs who are always subject to security monitoring as per their underlying license conditions.

Further, in order to enable physical inspection which is otherwise required from a compliance enforcement perspective, centralized server configuration can be monitored from OSP centre through console capable of providing all the required information for a successful inspection or audit. Hence, physical inspection at the server locations may not be required instead, inspection at OSP centre should provide all the required information such as CDRs and other relevant information required for the inspection.

We also believe that current security measures in the OSP guidelines viz. remote login and maintenance of CDRS, call flow architecture, one year CDRs, logs etc. are adequate to take care of any requirements of LSA and service providers to check or audit the OSP related compliances.

Q.21 Please comment on the scope of services under CCSP/HCCSP, checks required / conditions imposed on the CCSP/ HCCSP including regulating under any license/ registration so that the full potential of the technology available could be exploited for both domestic and international OSP, and there is no infringement of the scope of services of authorized TSPs

ACTO's comment:

A hosted contact center offers all the utilities associated with running a customer service outfit with a pay-as-you-go plan. This means that OSP centre need not to buy expensive hardware/infrastructure setup, instead they can add software as needed and get deeper in their involvement as they grow.

Most hosted contact centers offer all the major tools of a call center, including automatic call distribution (ACD), work force management (WFM), IVR, and unified messaging as well as stats and analytics for agent quality assurance.

There are several advantages to hosted contact centers, namely minimal startup costs with virtually no equipment to buy, flexibility in usage and elimination of maintenance. Also the software is constantly upgraded and maintained on a provider's end, companies get the benefit of newer and more effective software without the need to rip and replace components. Call centers also enjoy worry free technical support that grants constant availability for customer service.

As we know that the technology and solutions have been changing every day, and now, most of the advanced countries have permitted Enterprises to use Cloud infrastructure as a new model of modern network & communication where an EPABX is being hosted in cloud (datacenter) and shared between several customers (logically partitioned for each customer) and accessed remotely by customer's. This is secured & safe and customer can access the PBX all times in complete secure manner. It's offered as a global packaged solution with multi-site converged IP telephony, securely integrating voice, video, and other data applications and providing a flexible state-of-the-art communications network to the customers. The solution is very flexible to meet the needs of the Regulator across different regions. The popular solutions available globally are Microsoft Lync solution, Skype for Business, Cisco Unified Communications, Cisco contact centre services etc.

In a virtualized world, providers need flexibility to move management capabilities to sites with available capacity to deal with congestion and equipment failures. NDCP 2018, also promotes adoption of cloud services and cloud platforms.

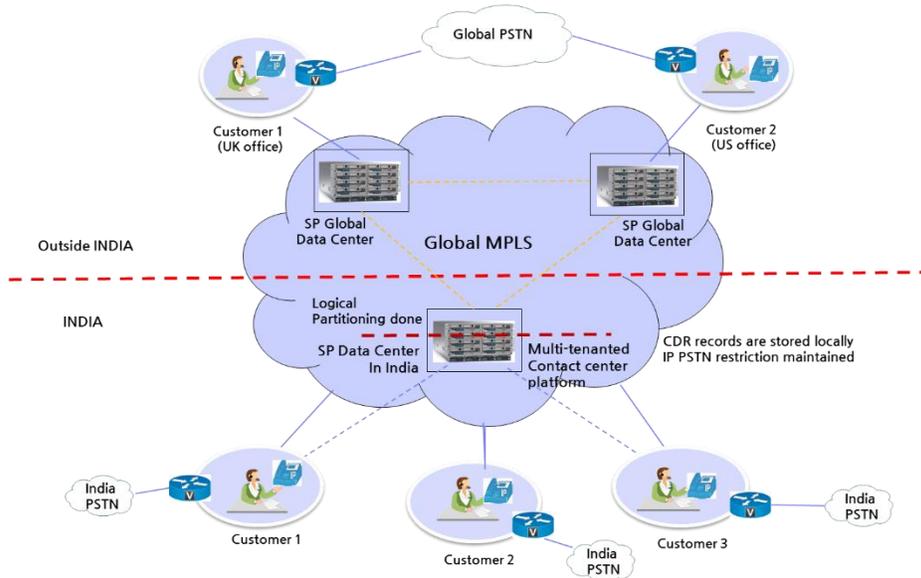
It has been witnessed that such providers are largely TSPs who are already licensed from DoT and want to play a bigger role rather than providing mere connectivity to OSP locations. So there is no reason why CCSP/HCCSP should be brought under any license or regulation. Such innovative models will see interest from startups / entrepreneurs so providing such services by CCSP/HCCSP should also not have any regulatory oversight as any type of regulation will be detrimental to their interest and growth.

OSPs will continue to focus on their main business offering, reducing cost and driving innovation and optimum use of available resources rather than investing in the telecom or hosting infrastructure. Thus, this activity can be best addressed by TSPs. The TSPs should be allowed to set up data centers or multi-tenanted node to host multiple OSPs and their set up 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 rack.

As schematic diagram showing the HCC solution in India is illustrated below.

Enterprise OSP customer – using SP cloud based Contact center platform



It is clear from above diagram that multiple OSPs can be hosted on a single India based HCC solution which will also cater to the regulatory requirement for each OSP, IP-PSTN restriction and Logs keeping. This solution will also ease out inspection agencies for audit purpose due to physical infrastructure in India and also a remote login facility can be provided from any OSP centre to monitor the CDRs, Logs, Call flow restrictions etc.

Further, we would like to clarify myth that HCC solution may infringe on local TSPs scope of services as it is mainly local TSPs who will be best benefitted and are likely to deploy these solutions for their enterprise customers under one shop stop model. In fact all connectivity to HCS are provided by Access, ISP, NLD and ILD licensees. As far as the call flow is concerned, we would like to illustrate below each scenario clearly for ease of TRAI reference:

i. Domestic Off-Net Call: A user at India OSP site, wishes to make/receive a domestic call using the office PSTN lines. In such scenario the call will at all time remain in India and only a signaling will transmit to HCC site. Thus, there is no revenue loss to the access operator. There will be voice gateway deployed at each site to cater to these PSTN call based requirements and all logical separation from IP lines and logs/CDRs will be kept at HCC.

ii. International Off-Net Call: A user at OSP India site, wishes to make an International Off-Net Call. The call will be generated over OSP VPN at India end and it would reach the far end (country where the call needs to terminate) and from there the call will be handed over to domestic operator for the final leg.

This is exactly how the call flow will be if PBX is hosted at customer site and no difference. Thus, there is no negative revenue impact on revenue of domestic players.

iii. On-Net Call: A user at India site, wishes to make between two office sites of theirs either within or outside of India. Call between customer sites would happen via IP VPN to/from another customer site (also connected IP VPN) without further break-out into/from PSTN network). There is no negative revenue impact, as the call flow is same as in tradition on site PBX set-up.

The CCSPs/HCCSP's should be seen as technology enablers and not conventional telephony service providers. The use of multi-tenanted IP-EPABX/EPABX hosted on public cloud or private cloud at non-Indian location should be permitted as long as CDR's are preserved by OSP's. Usually, CCSP's and HCCSP's provide full access to OSP's respective tenants and facility to store CDR's & other QoS reports on cloud or export to their premises based servers. For periodical inspection purposes, OSP get full access to platform and should be able to demonstrate access to CDR's stored on cloud or copy of it on their local servers.

Our Recommendations:

- 1. HCC/ CCSP solutions are the innovative multi-tenant technological solutions for better working of outsourcing sector in the country with minimal investment by OSPs.**
- 2. Considering HCC/CCSP solutions are at the nascent stage in India, thus any form of regulatory oversight could be detrimental to this Industry. There is no need for any additional regulatory oversight as such services are predominantly provided by licensed TSPs. For non-licensed entities not providing any switching or routing facilities, there should not be any license or regulation.**
- 3. There should be no registration or additional license to provide HCC/CCSP services in India and current TSPs including Access, NLD and ILD operators should continue be allowed to provide these solutions to their enterprise customers.**
- 4. OSPs should be free to outsource their equipment's and services to HCC/ CCSP and extent of hosting should be left to mutual agreement between OSPs and their CCSPs.**
- 5. Since OSPs would front end all the compliances thus there should be no regulatory intervention.**

Q22 Please provide your comments on monitoring of compliance in case interconnection of data and voice path is allowed for domestic operations.

ACTO's comment:

We suggest that OSPs should have special dispensation to connect IP-PSTN traffic locally and should be allowed to use the unified communication (UC) benefits for their business growth. It is worth mentioning here that internationally there are hardly any such restrictions and the world is moving towards UC and convergence.

NDCP-2018 has emphasized on convergence and states the following about convergence:

“(g) Enabling Infrastructure Convergence of IT, telecom:

- i Amending the Indian Telegraph Act, 1885 and other relevant acts for the purpose of convergence in coordination with respective ministries*
- iii Restructuring of legal, licensing and regulatory frameworks for reaping the benefits of convergence.*
- iv Allowing benefits of convergence in areas such as IP-PSTN switching.*

Interconnection of data and voice path must be permitted at the discretion of TSPs. This will ensure that the full potential of OSP services can be realized. We believe that monitoring of the underlying TSP network serves the purposes of security compliance. Other monitoring may not be necessary. More over most of the countries already have adopted this interconnection.

ACTO suggests to allow the interconnection of data and voice as it is need of hour. Moreover NDCP-2018 has envisioned convergence of networks apart from devices and services. It will reduce the cost of service and customers /end users will be the beneficiary.

Q23 Do you agree with the provisions for use of CUG for internal communications of OSP as mentioned in the OSP guidelines? If not, please suggest suitable changes with justification.

ACTO's comment:

Yes we agree. CUG is used for internal communication within the business. CUG facility should continue and may be facilitated further. However, tying this to the requirement to share infrastructure requiring signing of agreement and furnishing bank guarantee is not needed.

Q24 Do you agree with the monitoring provisions for use of CUG for internal communications of OSP mentioned in the OSP guidelines? If not, please suggest suitable changes with justification.

ACTO's comment:

Since primarily the purpose of CUG is for internal communication only using extension as against 10 digit or 8 digit dialing and requires no PSTN/PLMN connectivity, there should not be any requirement for the numerous accessibility and other tests enumerated under OSP guidelines. Such communication is internal to the company and should not be privy to anyone. Such communication can also be captive and / or non OSP in nature.

Q25 Do you agree with the provisions of 'Work from Home' mentioned in the OSP guidelines? If not, please suggest suitable changes with justification.

ACTO's comment:

As per OSP guidelines, the current requirement for work from Home -

"The OSP operator shall submit prescribed security deposit with an agreement envisaging to meet certain obligations like exclusive use of home agent. The security deposit shall be Rs 1 crore for each registered location of OSP Centre from which Work- from-Home is extended. Any misuse of Work- from-Home facility, beyond the terms of the agreement or otherwise, shall be treated as violation of the terms and conditions of the OSP registration.

The agents at home shall be treated as Extended Agent Position of the call centre and interconnection is permitted through authorized service providers Provisioned (secured) VPN (PPVPN) which have pre

Q26 Whether domestic operations by International OSPs for serving their customers in India may be allowed? If yes, please suggest suitable terms and conditions to ensure that the scope of authorized TSP is not infringed and security requirements are met.

ACTO's comment:

By allowing international OSP to serve the domestic customer will be a perfect example towards ease of doing business in India. From security point of view, all CDRs may be maintained and be available to Law Enforcement Authority and it will help to reduce the business cost.

ACTO members fully support domestic operation by international OSP. The consultation paper has highlighted the issue not from any security or infringement perspective. Instead cost and ease are the key drivers. In such a scenario it should be left for the OSP company how the resources are used. So long as resources are taken from licensed TSPs, this should be permitted.

Q27 Whether use of EPABX at foreign location in case of International OSPs may be allowed? If yes, please suggest suitable terms and conditions to ensure that the scope of authorized TSP is not infringed and security requirements are met.

&

Q28 Do you agree with the Security Conditions mentioned in the Chapter V of the OSP guidelines? If not, please suggest suitable changes with justification.

ACTO's comment:

As the global cloud market continues to grow at a steady pace, cloud contact center solutions likewise remain a robust tool for delivering superior customer experiences. Indeed, a Forrester report predicts that the global cloud market will reach \$236 billion by 2020. With the promise of greater scalability, improved efficiency, and lower costs to companies, cloud solutions are an ideal choice for businesses looking to optimize their customer service practices with maximum efficiency.

Further, on the OSP guidelines mandate of localization of centralized EPABX under the jurisdiction of India, we suggest that international OSPs should be allowed to serve their India based agents using their international nodes/call managers/EPABX which are mostly already being used to serve their international operations in various countries.

It is also very detrimental for the OSPs to create a separate infrastructure including call manager in India which is highly taxing on their business models and challenging for technical integration point of view. To clarify, international clusters/ call managers which are based on big multitenant platforms cannot easily sync with local on-site EPABX and customer may need to comprise on various functionality.

In today's world, location of physical box like EPABX is immaterial as far as security or monitoring is concerned. EPABX requires hardware but all functions are implemented in software. There is a drastic change in last two decades. Having physical entity in desired location will be not met the security concern but access to the data, record will serve the purpose. As long as data related calls etc as required by Law Enforcement Authority are provided by OSP/TSP, there should be any problem.

Keeping the physical infrastructure at one place based on scale and serving it to many place even different countries are the current business practice across the globe. It makes business more effective and efficient in super competitive market. As long as security concern is met, policy/regulation should not mandate to have equipment in preferred place but left it to the current business model.

EPABX / call managers are generally meant for signaling of traffic to direct the call / traffic to the correct destination and mode. Therefore since international OSP serve their overseas clients by having atleast one node outside India, the EPABX can be located outside India to ensure flexibility of operating the network of an OSP registered entity.

As per the OSP Regulation dated 21st November 2012, OSP are allowed distributed architecture with centralized a single EPBAX at a central location while the individual media gateways to be deployed for OSP having multi city presence within India. However the challenge with the above requirement is where the centralized EPABX is hosted in a cloud & multitenant data center environment outside India. The driver for such architecture may be for economies of scale, cost efficiency and business requirements perspective.

It is important to note that even where OSPs are deploying single PBX, then it is not clear how would the calls (signal) flow between various states for usage of single PBX, as the same is not clarified in the OSP regulations. A logical interpretation of this could even interpret it as an IP and PSTN interconnect (to limited extent), which is still restricted and needs to be reviewed.

Additionally there is a requirement for CDRs to be maintained in the jurisdiction of the TERM cell in whose jurisdiction the centralized EPABX is located. ACTO recommends that regulations be suitable modified to allow virtual storage / maintain CDR's from any location within/outside India. The each enterprise office location will be able to show the CDRs at his local office by connecting to the central Data Center, where the centralized EPBAX/IP PBX is located. The copy of the CDRs can be retrieved on regular intervals from the central Data Center as per the requirement of licensor and stored for the prescribed period for any audit purpose.

ACTO recommends that such requirements be suitable reviewed especially in case of global carriers, who mostly provide services to enterprise customers – which should further reduce concerns (if any) around cross-border transfer of CDRs for such enterprise IP Telephony services. Additionally we understand that regulations generally allows data transfers to other countries as long as the relevant data protection requirements of users are ensured – based on the laws of the respective countries and companies' internal policies ensuring such data protection & Integrity for their customers.

There may arise two major concerns like-

A. Perceived security challenges:

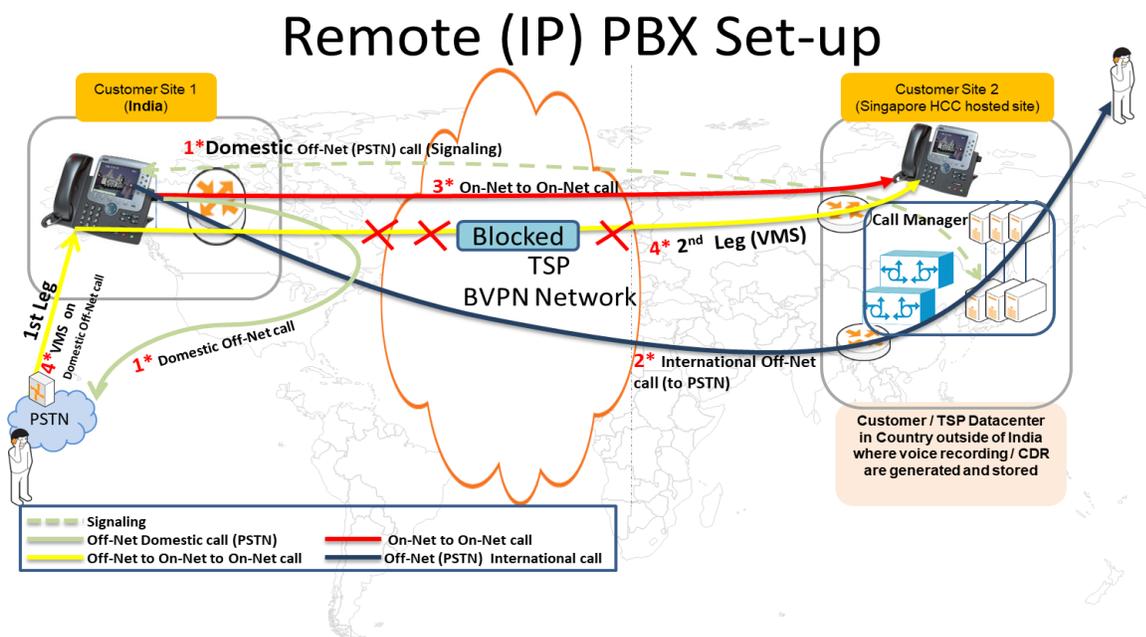
DOT can prescribe that all logs, Call Data Records (CDRs) should be made available at customer site as well. Thus, customer can show /share the system logs and also show CDRs over the laptop from customer premises itself at any point of time. Thus, all functionality can be shown to DOT at any point

of time for each of the OSP center in similar manner to a physically located localized PBX on a real time basis.

In addition customer can also be asked to keep CDRs at his location by retrieving CDRs on periodic intervals as stipulated by DOT and can also store the same for the stipulated period. Thus, even without going to HCC site, all requisite information can be seen on real time basis.

B. Potential Revenue Leakage:

It is not correct that allowing such sharing of infrastructure may result in revenue leakage to some operator which indirectly would result in revenue loss to exchequer. The actual position is quite the contrary; the revenue to the operators would increase due to this set-up.



Call Routing Scenario in case of cloud based Hosted Contact Center outside India:

i. Domestic Off-Net Call: A user at India site, wishes to make a domestic call using the office PSTN lines. In such scenario the call will at all time remain in India itself and at no point the actual call will be transmitted to an oversea location where the UC is hosted. However, signaling will transmit to Call Manager to the Country where the contact center solution is hosted (HCC site). Thus, the revenue will be generated in exact same matter as in the case of localized PBX. In addition an ILD operator will come in picture, which would be responsible to carry the signal from India site to HCC site, thereby generating additional revenue for an ILD player.

ii. International Off-Net Call: A user at India site, wishes to make an International Off-Net Call. The call will be generated over customer’s BVPN at India end and it would reach the far end (country where the call needs to terminate) and from there the call will be handed over to domestic operator for the final

leg. This is exactly how the call flow will be if PBX is hosted at customer site and no difference. Thus, there is no negative revenue impact on revenue of domestic players. Also there would be additional revenue to ILD operators for carriage of signaling.

iii. On-Net Call: A user at India site, wishes to make between two office sites of theirs either within or outside of India. Call between customer sites would happen via IP VPN to/from another customer site (also connected IP VPN) without further break-out into/from PSTN network). There is no negative revenue impact, as the call flow is same as in tradition localized PBX set-up.

iv. Voice mail System[VMS] (recording at Country B): Call Originate from PSTN/Mobile to an user in Customer site in India and is not answered, the call is further transmitted over ILD Operators VPN to VMS (Call Manager) at an oversea location where the UC is hosted. Under localized PBX, there would be no revenue generation for voice mail system, however in case of cloud based Hosted Contact Center, the recording will take place in HSS site, thereby an ILD operator will be required to carry the call and also subsequently to retrieve the voice mail. Thus, additional revenue will be generated by ILD operators.

It's important to note that under the HCC platform, the signaling will in "All Call Scenario" be sent from India to "Call Manager" in Country where HCC is hosted. Signaling will only carry basic information required to terminate the call and Call Data Record (CDR) to be generated at Call Manager.

Similarly in case of Voice Recording (VMS): when Voice Recording feature is permitted and is activated on un-answered calls, the real time voice will be carried from India to Voice Mail System (VMS) in Country where HCC is hosted over customer's VPN.

Thus, it can be clearly seen that if HCC is permitted to be offered to customer, there would be zero revenue loss either to the existing operator in the eco-system nor to the Department by way of license fees. There would be enhancement in revenue and license fees.

It is also important to note that all requirements of DOT with respect to local PBX like CDR storage, restriction of Domestic Off-Net calls, restriction on toll bypass, Voice Recording, Logical Partitioning etc. can be done in exact same manner with greater transparency. For example the CDR's are time stamped to avoid any tampering the CDR's by the user. The CDR's are exporting using secure tunnel deploying strong encryption to secure the communication.

ACTO members support use of EPABX at foreign location and it will meet all security related concerns. There is a need to allow to deployment of EPABX in Cloud datacenter (cloud infrastructure at location of choice of customer whether in India or outside India) whether it is for OSP or non OSP requirement, shared between several customers and accessed remotely by customer and for monitoring purpose.

ACTO recommends that the OSP regulations should be suitable amended to allow the user to be able to embrace the cloud based contact center solution to leverage best of the technology solution for its business needs while at the same time meeting the reasonable regulatory requirements.

As regards the security conditions under chapter V are concerned, we are of the view that majority of the conditions should not be applicable to OSPs as firstly these should be made applicable to TSPs, OSPs do not generate their own content and basically provide outsourcing service contracted to them.

OSP is required to take necessary measures to prevent objectionable, obscene, unauthorized or any other content, messages or communications infringing copyright, intellectual property etc., in any form, from being carried on the network, consistent with the established laws of the country. This is not an obligation that may be complied with very easily by OSPs as the OSP often has limited control over content transmitted by end users. Security conditions are specified under license as the TSP owns the right to establish, own and operate the telegraph and the infrastructure thus created. OSP is the mere user of that infrastructure. Additionally, TSP is mandated to inspect sites of OSP being customer as per its license terms and conditions. There is no reason for DoT to take it upon itself to do activities relating to a TSP.

The security conditions needs to be enforced based on some evidence of non compliance. Routine inspections are leading to bureaucratic controls are not an efficient way of operating.

Q29 Do you agree with the provisions of penalty mentioned in the OSP guidelines? If not, please suggest suitable changes with justification.

ACTO's comment:

Any breach of Indian Telegraph Act, criminal or civil proceedings are applicable to OSPs as well. No additional is required as it is same for all. Unlike TSP, there is no specific amount prescribed in case of OSP. Therefore any penalty provision should be proportionate and should allow OSP companies to explain their side.

Q30 Whether OSP to OSP interconnectivity (not belonging to same company/ LLP/ group of companies) providing similar services should be allowed? If yes, should it be allowed between domestic OSPs only or between international and domestic OSPs also.

ACTO's comment:

By allowing interconnectivity between OSPs, it will increase the productivity and will ensure optimum utilization of telecom resource. This will result in cost saving to the OSPs. It will make OSP industry more attractive. Thus we suggest to allow OSP to OSP interconnectivity not only for domestic OSP but also with international OSP.

Q31 In case OSP interconnectivity is allowed, what safeguards should be provisioned to prevent infringement upon the scope of licensed TSPs.

ACTO's comment:

Existing provisions are adequate to deal with the situation in case any OSP does provide telecom service to customers. No company/entity is allowed to provide telecom service without license and it is punishable by telegraph act. No additional safe guard is required. It will facilitate the BPO industry.

Q32 Do you agree with the miscellaneous provisions mentioned in the Chapter VI of the OSP guidelines? If not, please suggest suitable changes with justification.

ACTO's comment:

ACTO has suggested to do away with the detailed registration process and replace the same with bare bones intimation based registration framework. Any actions on OSPs towards violation of rule/law will be applicable as law applicable to other companies registered with ROC including Indian Telegraph Act.

Q33 What provisions in the terms and conditions of OSP registration may be made to ensure OSPs to adhere to the provisions of the TCCCPR, 2018.

ACTO's comment:

TCCCPR, 2018 provision-5.2.1 Reduction in time gap for complaint resolution:

ACTO members also believe that seven days of Turn Around Time (TAT) is required for proper validation of time considering involvement of both OSP & TSP. Reduction of TAT may not possible.

We request TRAI to make note of it while making recommendation for OSP.

Q34 Stakeholders may also provide their comments on any other issue relevant to the present consultation.

ACTO's comment:

No further comments
