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**Shri S. K. Singhal**

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Telecom Regulatory Authority of India

Mahanagar Door Sanchar Bhawan,

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New Delhi-110002

Ref: **ACTO Response to TRAI's Consultation Paper dated May 30, 2019 on Review of the Regulatory Framework for Interconnection**

Dear Sir,

With reference to the *Consultation Paper on Review of the Regulatory Framework for Interconnection* issued by Hon'ble Authority, Association of Competitive Telecom Operators (ACTO), is pleased to provide its comments.

We hope that our comments (enclosed as Annexure - I) will merit consideration of the Hon'ble Authority.

Thanking you,  
Respectfully submitted

Yours sincerely,  
for **Association of Competitive Telecom Operators**

**Tapan K. Patra**

**Director**

Encl: As above

## Annexure-I

### **ACTO's comments on TRAI Consultation Paper on Review of the Regulator Framework for Interconnection**

The Association of Competitive Telecom Operators (ACTO) is pleased to submit the following comments to the Telecom Regulatory Authority of India (TRAI) in response to TRAI Consultation Paper on Review of the Regulatory Framework for Interconnection dated 30th May, 2019.

ACTO respectfully submits that the interconnection regime should be service agnostic and technology neutral, allowing the provision of any telecom service on non-exclusive basis, anytime, anywhere, using any technology within the license area. The interconnection regime should recognize and provide flexibility to embrace future evolving technologies like Cloud Computing, and Machine to Machine (M2M) which represent tremendous opportunities, especially as their roll-out becomes more widespread, as noted in NDCP-2018.

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. NDCP-18 also mentions about the benefits of convergence in areas such as IP-PSTN switching. 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.

However, we are of the firm view that the matter of Interconnection requires a holistic approach covering all the issues related to interconnections instead of piece meal one. This should not be limited to level of interconnection only. Instead this should cover the other constituents including the exiting regulatory/ licensing restrictions on interconnections. To our view the exercise will be incomplete if those restrictions are not reviewed and addressed.

We request TRAI to recommend DOT to remove the current regulatory interconnection restrictions to facilitate implementation of convergence. It will increase competition level for the benefit of the growth of BPO/KPO sector in our country. In most of the countries, regulatory restrictions on interconnections do not exists since long time without any implication to the policy makers/ regulators.

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

**Q.1 Whether the flexibility be provided to interconnecting operators for interconnecting PSTN to PSTN networks at SDCC/ Level II TAX (SSA)/ Level I TAX (LSA) levels as per their mutual agreements? If no, then justify your comments with reasons.**

ACTO's response:

We have no comments.

**Q.2 In case of no mutual agreement between the operators, what should be the level of interconnection for interconnecting PSTN to PSTN networks be mandated in the Regulations.**

ACTO's response:

We have no comments.

**Q3. Any other issue you would like to bring to the attention of the Authority.**

**ACTO's response:**

With the technological development, it is essential to have seamless interconnections to provide innovative services to the customers by making more it affordable by the way of avoiding duplicity of infrastructure. Thus Seamless interconnection is need of the hour. Regulatory restriction should not impede the growth of the sector and deprive the technological benefit to the end users/customers. The restrictions on interconnections are not in sync with the NDCP-2018. In support of this, we request authority's attention to the clauses of NDCP-2018:

***"E. Strategies:***

***(i) (d) By restructuring of legal, licensing and regulatory frameworks for reaping the benefits of convergence;***

***E (iii) (w) **By reviewing the policy of IP- PSTN connectivity;*****

***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."***

4. *"The convergence of voice, video and data services has also become reality now. In the converged world, while the traditional telecommunication networks are being extensively used to deliver video services, after digitization, the cable TV networks are being increasingly used to provide fixed line broadband services. In order to meet the growing demand for the video, it would be necessary to encourage development of converged broadband and broadcast networks, development of cloud infrastructure for Video on Demand (VoD) services, and*

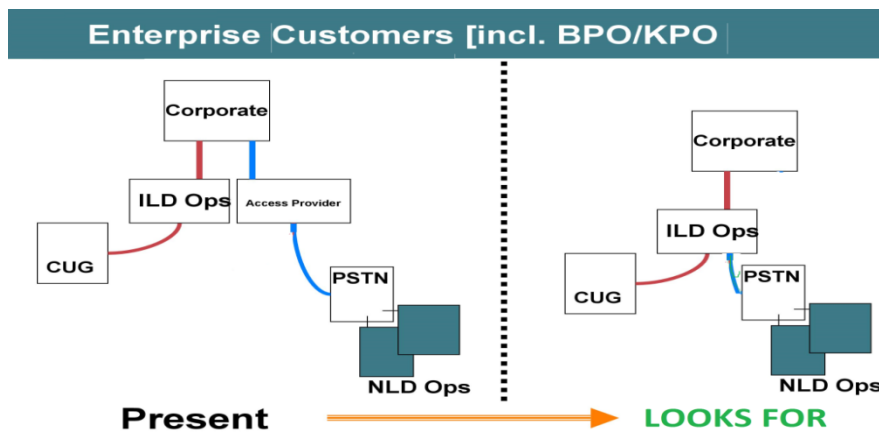
increase in high-speed broadband subscriptions. While video distribution in broadcast mode can fulfil the need of masses, the video on demand can meet the specific requirements of the consumers. Convergence of the networks can ensure efficient utilization of the available resources. The convergence of information, communication, and broadcasting services is creating vast new capabilities that are benefiting individual, businesses, and society as a whole.

5. The digital transformation is emerging as a key driver of sweeping change in the world around us. The telecommunication industry is at the forefront of this transformation. 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). It represents a transition to a new set of systems that bring together digital, biological, and physical technologies in new and powerful combinations. Industry 4.0 is being built around the IoT/M2M infrastructure and services for which the availability of ubiquitous digital communication services; low-cost processing and high-density data storage; and an increasingly connected population of active users of digital technologies are pre-requisite. Therefore, just like physical form of connectivity like Roadways, Railways, Airlines, and Waterways, telecommunication networks i.e. I-ways are also becoming essential infrastructure for economic development in the country.”

**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.**”



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

The current restriction on ILDOs to PSTN poses a major barrier in achieving interconnection of traffic, services and devices.

## **Interconnection of IP-IP, IP-PSTN has been allowed in access license**

DoT has allowed Interconnection over IP Networks allowed vide its amendment dated 19<sup>th</sup> 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.*

With the implementation of the above amendment, now, it is evident that the probable security concerns or technological issues are no longer the reasons to restrict PSTN connectivity for ILDOs. Any security related 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. Any concern related to by 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. Moreover IUC regime in India has gone through drastic change and from 2020 onwards IUC will be nil as recommended by TRAI.

Therefore, we suggest TRAI to recommend DOT to allow the TSPs like ILDOs to have PSTN connectivity by removing the current regulatory restriction as mentioned above, in order to increase the level of competition for the benefit of the growth of BPO/KPO sector in our country.

### **Benefits of CUG-PSTN Interconnection:**

- Reduction of operational costs by enabling the most direct routing possible, avoiding unnecessary costs from transit carriers and hops.
- Increased quality of voice calls and features through minimizing all unnecessary trans coding and unnecessary hops from transit carriers.
- Full end-to-end cross-network interconnect for new IP multimedia services.
- Flexible commercial models, including traditional bilateral settlement, cascade payment and settlement-free (also known as “bill and keep”) models.
- Creation, management and negotiation of interconnection agreements, ranging from very simple to extremely complex, among multiple operators.

In order to realize the full potential of the convergence of services, network and devices pursuant to clause 4 &5 of NDCP-2018, the existing restrictions and barriers on linking different PSTN, IP, Virtual Private Network (VPN) and Closed User group (CUG) networks should also be removed to ensure seamless interconnection. In particular, facilitating CUG/VPN-PSTN interconnection and the interconnection of IP and TDM networks is vitally important for the continued growth of the Business Process Outsourcing (BPO) and Enterprise Data Services sectors. Without such interconnection, these sectors must continue to undertake unnecessary investment in duplicating facilities separately on voice and data networks. Convergence will enable a much advanced and open IP platform for these important sectors of the Indian economy which will enhance the end-user experience and will efficiently address the growing needs of these businesses by enhancing the benefits of both CUGs and the PSTN.

The removal of existing restrictions on CUG-PSTN interconnection is a critical requirement to address the growing business needs. Removing the existing restriction between IP and PSTN will go a long way in supporting the objectives of prestigious Digital India Program. Such restrictions are required to be removed in order to ensure wider connectivity both from voice and data perspective.

ACTO requests TRAI to recommend DOT to remove the existing restrictions on linking different PSTN, IP, Virtual Private Network (VPN) and Closed User group (CUG) networks in order to ensure seamless interconnection in line with the objectives of NDCP-18. This step would will also provide important benefits to BPOs and other enterprises in India and stimulate the further growth of this very important economic sector.

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