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Subject: Tata Communications Limited's response to TRAI Pre-Consultation Paper on Review of existing TRAI Regulations on Interconnection matters

Dear Sir,

This is with reference to the TRAI Pre-consultation Paper No. 02/2025 dated 03-04-2025 on '**Review of existing TRAI Regulations on Interconnection matters**'.

In this regard, please find enclosed herewith Tata Communication Limited's inputs for your kind consideration as Annexure.

We request you to kindly consider our submissions while finalizing the consultation paper and would be happy to provide any additional information, if required.

Thanking You,

Yours Sincerely,

Alka Selot Asthana
Global Head - Regulatory
Tata Communications Limited

Enclosed: As above

TATA COMMUNICATIONS

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**Tata Communications Limited's response to TRAI Pre-Consultation Paper on
Review of existing TRAI Regulations on Interconnection matters**

At the outset, we thank TRAI for providing us an opportunity to share our comments/inputs on this very important subject of Interconnection. This is a timely and important step taken by TRAI, especially in light of rapidly evolving technologies and the transformation in global service delivery models. There is an immense need to review the existing interconnection frameworks and regulations for bringing more efficacy and clarity.

We further understand that this paper will also deal with the impact assessment of emerging technologies on interconnection requirements, role of interconnection in improving consumer experience and network efficiency and study the best practices from global interconnection frameworks for possible adoption in India. While TRAI has periodically updated interconnection regulations, it is observed that some provisions are either no longer applicable or have diverged from their intended direction due to subsequent developments or global practice.

We are of the strong view that considering telecom market dynamics, evolving technologies and service requirements to cater to the Enterprises, Interconnection framework is closely dependent on the business goals and volume of traffic exchanges hence the interconnection between operators should be left to the market forces and on mutual terms & conditions with a light touch regulatory framework irrespective of voice or data. TRAI may intervene only in exceptional cases, wherein operators are unable to close the interconnection agreements on mutual basis, impacting the customers. It is a stable matured market, and we do not see reason for price fixation. Therefore, it is requested TRAI to have a holistic approach while finalising the issues related to this subject for the consultation.

We also recommend that TRAI, while preparing the consultation paper, should take into consideration the need to promote the growth and competitiveness of the ISP industry in India, especially in comparison with global markets. The Indian ISP ecosystem plays a critical role in delivering digital services across the country, and it is essential that regulatory frameworks support ease of doing business, foster innovation, and reduce unnecessary compliance burdens. At the same time, given the increasing volume and sensitivity of internet traffic, TRAI must ensure that security of ISP networks is not compromised. A balanced approach that encourages investment in infrastructure, facilitates adoption of modern technologies, and ensures regulatory predictability will be key to strengthening India's position as a digital leader globally.

With the above backdrop, we wish to bring the following aspects for TRAI consideration for inclusion in the forthcoming consultation paper:

- **Interconnection:**
 - Point of Interconnection simplification- allowance for IP interconnections and ILD termination on ILDO-Access and ILDO-NLDO licensees.
 - ILD Point of Interconnection at LII Tax for parented codes (on-net or off-net) under that LII Tax without carriage or transit charge

- For Mobile Termination – incidence of cost of transit if handed over within the same circles should be removed
- Definition of Interconnection for International Toll-Free Services between ILDOs and Access Operators should be determined to be in line with ILD Termination traffic interconnection points.
- **IUC:**
 - Implication of TAX transit being levied by Access Operators to ILDOs should be addressed.
 - Additional components of interconnection cost like Port Charges, cost of termination of POIs being levied should be reviewed
 - International Termination & Originating Charges: To support International Long Distance (ILD) operators, TRAI must reassess the international carriage charge regime. Infrastructure-related costs are high and undermine competitiveness. A balanced, globally aligned model for international settlement is critical to support the growth of cross-border communications in a digital-first ecosystem.
 - ILDO transit charges should be in line with NLD Carriage charges
 - Determination of termination charges for International Toll-Free services along with interconnection point determination as above in line with IUC applicable for ILD termination traffic i.e. 65 paisa.
 - Access Service provider are offering discriminatory rate of ITC (international termination charge) between its own associated ILDO and standalone ILDOs. There is a need to ensure parity between Stand-alone ILDOs and integrated operators to ensure level playing field.
 - The Interconnect Usage Charges (IUC) currently in place are based on agreements framed in the early 2003. We recommend that considering the maturity of market, regulations should keep away from specifying any charges.
- **POI, Port and Bank Guarantee:**
 - Simplification of POI Establishment: Presently, Points of Interconnection (POIs) are established at the SDCA level which introduces operational complexity. In our view, the establishment of Points of Interconnection (POIs) should be driven by the practical needs of an operator's network design and service delivery objectives, rather than being governed by prescriptive regulatory requirements. In today's digital ecosystem and landscape, especially for enterprise-focused ISPs, flexibility in determining POI locations. Approach should reflect how networks are actually built and operated, reduces unnecessary duplication of infrastructure, and significantly lowers deployment costs and timelines. The core objective of POI provisioning is to ensure reliable, seamless, high-quality connectivity to end users. Allowing such flexibility will help achieve this goal while aligning with international best practices that emphasize efficiency, scalability, and the broader goal of accelerating digital transformation. Thus, POI should be decided basis network design and not be specified by the Regulation and left to the mutual agreement among the interconnection seeker and provider.
 - IP-Based POIs for Improved QoS: We recommend transitioning to IP-based interconnection at POIs, replacing traditional TDM-based systems. This shift will enhance Quality of Service (QoS), improve POI uptime, and better align India with global best practices.
 - Modernization of POI Establishment Process: The process for establishing new POIs is outdated and slow, often requiring months. TRAI should give direction for a faster,

technology-driven, and time-bound POI establishment process to accelerate interconnect rollouts.

- Review of Port & Infrastructure Charges: Current port and infrastructure charges paid to BSNL (₹55,000 per port and ~₹10 lakhs for infrastructure) are outdated and significantly higher than market rates. TRAI may consider a rational review in line with industry benchmarks to facilitate affordable interconnectivity.
- Bank Guarantees for Ports & IUC: We suggest TRAI to review the requirement of bank guarantees for interconnection-related payments made to BSNL. These guarantees could be calibrated based on operator risk profiles and prevailing industry norms. BSNL should be treated at par with other market players.
- Emergency Call Handling Charges: These charges have been paid to BSNL for handling of the emergency call which are substantially high and often exceed ₹25 lakhs p.a. This represents a disproportionate cost burden on one party. We request TRAI to remove these charges to bring parity among players.
- **SMS and messaging:**
 - All international SMS traffic (including A2P messages) must be routed through ILDO gateways for ensuring regulatory oversight and prevention of bypassing the ILDO networks. Considering the fact that the interconnection framework serves as the backbone, ensuring all stakeholders involved (MNOs, aggregators, ILDOs) adhere to standardized routing and reporting processes, therefore, TRAI should ensure enforcement of SMS Aggregation directions for routing of all international SMS through ILDOs with definitive cost of SMS termination in line with the SMS termination charges defined for inter access operator handover.
- **IN (Intelligent Network) interconnection and direct access to subscribers**
 - The IN-interconnection regulation while it allows direct access to subscribers for ILDO/NLDOs through calling cards has not ever come into actual implementation by any of the service providers due to the forbearance of revenue share to be agreed between ILDO/NLDO and the Access operators. Therefore, there is a need to review the same and provision for IUC for such interconnection for the NLDOs/ILDOs should be made to facilitate better call quality experience for long distance calls and further competition for ease of consumers.
- **Interconnection through Internet Exchange Points (IXPs):**
 - There is no need for separate regulatory framework for operating IXPs in India and only valid Licensed Service Providers having UL-ISP / Standalone ISP/UL-AS Licenses should be allowed to establish and operate Internet Exchanges in India. Since, IXPs main purpose is to exchange traffic locally at the exchange point rather than building their own backbones as it would otherwise be setting up ISP operations and competing directly with Tier-1 ISPs at the expense of Tier-1 ISPs by providing provide domestic internet transit service akin to other ISP operations. Such interconnection of IXPs and having their own backbone would be having impact on the Wholesale Internet Leased Line (ILL Service) provided by licensed Service Providers to various other ISPs, Mobile Operators/Telecom Operators, CDNs, OTTs, various Cloud and Application providers etc.
 - Further, there is need to ensure level playing field between the ISPs/UL ISPs who are establishing and operating Internet Exchanges in India and other ISPs/UL-ISPs providing only internet service in India. Hence, ISPs/UL-ISPs providing Internet Exchange Services should be subjected to same license obligations to provide the

Internet Exchange Services in India as other ISPs/UL-ISPs are obligated under the ISP/UL-ISP terms and conditions for ensuring a level playing.

- In the absence of a very strong regulatory framework for operations of IXPs in India, there is also a potential of a lot of cross-border connectivity with Internet Exchanges in India – foreign carriers with self-arranged connectivity participating as a member at IXPs in India. TRAI should work towards bringing about clear rules and framework especially with respect to Internet Exchanges and such cross-border connectivity, given that most of them do not have any capabilities for meeting national security compliances, as ensured by the ISPs under their licensing framework.
 - TRAI should clarify the distinction between it makes between role of ISP and IXP within the telecom network. Since the role of IXP is a subset of role of ISP, hence there is no need for separate licensing framework. Instead, an effort should be made for simplification of the overall ISP licensing regime simplified considering ease of doing business and such light regulated framework should be available for all ISPs.
- **Ensuring Neutrality and Fairness in Interconnection:** To prevent anti-competitive behaviour especially at IXPs, TRAI should establish an independent oversight mechanism to ensure neutrality and handle grievances. This would foster a balanced interconnection environment, benefiting both large and regional ISPs.
 - **Promoting Next-Generation Network Technologies (NFV & SDN):** India's interconnection regulations must support the adoption of Network Function Virtualization (NFV) and Software-Defined Networking (SDN). The current interconnection regulations do not account for the rapid evolution of network architectures, particularly the adoption of SDN, NFV, cloud-native infrastructure, and edge computing. We propose:
 - Incentivizing industry adoption and skill development.
 - Promoting public-private-academic collaboration.
 - Introducing cybersecurity standards for interconnection infrastructure.
 - Establishes interoperability standards
 - Encouraging diversity in internet routing to enhance resilience.

Further, India should establish regional interconnection corridors to become a digital hub for South Asia.

- **NSO-VNO interconnection framework:** As per the existing licensing framework, NSO has not been mandated to provide time bound access to its VNO and same has been left to the mutual agreement between an NSO and a VNO. However, this present framework of VNO-NSO arrangement has not taken off especially in the access services segment. Therefore, there is need for TRAI to play a role in the NSO-VNO interconnection framework by defining time bound access, to enable VNO ecosystem so that VNOs can bring more innovative products and services to the consumers and contribute further in market expansion.
- **M2M Interconnection:** M2M and IOT being an evolving sector, needs light tough regulatory interconnection framework to streamline the underlying connectivity which is being used as input service to provide the M2M/ IoT services to M2M customers. The framework should ensure timebound availability and reasonable tariffs for SIMs / network connectivity to M2M Service Providers from TSPs.