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15 December 2025

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Subject: **COAI comments on the TRAI Consultation Paper on "Review of existing TRAI Regulations on Interconnection matters".**

Dear Sir,

This is with reference to the TRAI Consultation Paper on "Review of existing TRAI Regulations on Interconnection matters" issued on 10 November 2025.

In this regard, please find enclosed COAI's comments on the subject.

We request your kind consideration and support on the above.

Thanking you,

Sincere regards,

Signed on: 15-12-2025 22:52:20
Digitally Signed by:
Lt Gen Dr SP Kochhar
DG
COAI
Signature Valid From: 2025-02-22 10:45:32
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Consultation Paper on "Review of existing TRAI Regulations on Interconnection matters".

Preamble

1. We thank the Authority for providing us with the opportunity to submit our inputs on this important subject concerning the existing TRAI Regulations on Interconnection.

2. The telecom sector in India has witnessed several key developments which necessitate a re-look in interconnection Regulations. A few of the developments are given below:

    a. Emergence of pan-India IP based networks.
    b. Major customer shift to data based 4G and 5G technologies.
    c. Shrinking of fixed line telephony with mobile becoming primary mode of communication.
    d. Substantial increase in Application to Person (A2P) SMS as compared to P2P SMS.
    e. Increase in SPAM and fraud emanating from foreign countries exploiting the low International Termination Charge (ITC).

3. The move to IP-based interconnection will transform interconnection from a hardware provisioning requirement (managed by the 2018 regulations) into a bandwidth requirement. Once the IP based interconnection is fully adopted by all TSPs in India, **Many of the interconnection regulations designed for a previous era will become redundant.** Thus, driven by these considerations, a complete overhaul of interconnection regime is required.

4. Central to the new regime should be the principles of **fairness, reciprocity**, and consumer **protection**. These principles ensure that all telecom service providers contribute equitably to interconnection costs, preventing free-riding and safeguarding against network abuse.

5. In light of the above, we submit that the following best practices should guide the regulatory framework for interconnection:

    a. The principles of **fairness, reasonableness, reciprocity, and non-discrimination** must be adopted.
    b. The interconnection framework should be based on **cost-based charging**.
    c. **Reciprocity** in agreements must be ensured with fair and equal terms for all operators, including technical, operational and financial conditions.
    d. An approach of **transparency** should be followed by all operators.
    e. Interconnection should be permitted only with licensed entities having their own access networks.
    f. The **principle of Equivalence of Inputs (EOI)** should be adopted to ensure uniform and non-discriminatory access to interconnection resources for all operators.

6. Further, while private TSPs consistently adhere to these guiding principles, it is observed that **these frameworks are not being implemented uniformly by Public Sector Undertakings (PSUs) i.e.** BSNL and MTNL, leading to non-reciprocal practices, delays in interconnection processes, one-sided financial conditions and operational challenges for other service providers.

7. Another important issue which requires attention is parity with regard to international operators. Indian telecom operators currently receive a maximum of ₹0.65 per minute for terminating international calls. Meanwhile, Indian operators pay a far higher amount per

minute to foreign carriers for outgoing calls. There is no reciprocity in this arrangement. This needs to be resolved in order **to bridge the gap between Indian and global rates and to ensure fair share of revenue for the national exchequer.**

8. Thus, since interconnection is absolutely essential for an operator wishing to provide seamless services, the regime should be such that it maintains **parity – between domestic and foreign operators, and between private and PSU operators**.

9. Further we submit that since a complete overhaul of Interconnection regime is required, **TRAI should consider consolidating the multiple Interconnection Regulations into a single, streamlined compendium which is easy to understand and implement. The old and redundant Regulations should be repealed and replaced with the new consolidated Regulation.** This will enhance clarity, simplify compliance for operators, and foster a more efficient and transparent regulatory environment.

10. Lastly, we submit that if the sector has to mandatorily and smoothly migrate to new LSA based IP interconnection regime in a time bound manner, the TRAI should establish a **centralized coordination committee comprising senior representatives from all major TSPs from Corporate office / Headquarters, to facilitate this transition**. This committee would serve as a dedicated forum to address implementation challenges, and monitor the progress of the migration and ensure achieving transition timeline for each milestone.

Our question wise response is as follows:

Q 1.	**For PSTN to PSTN, PLMN to PSTN and PSTN to PLMN, should the interconnection level be specified at LSA level? If yes, should the existing POIs at the LDCA/SDCA level also be migrated to the LSA level? Kindly justify your response.**
	COAI Response
	a) TRAI, in its recommendations on the National Numbering Plan (NNP) has highlighted the need to review the Telecommunication Interconnection Regulations (Second Amendment) 2020 (TIRs) to address the numbering resources constraint and assist implementation of the LSA based fixed line numbering series. The proposal suggests shifting POIs from the LDCA level to the LSA level. b) Shifting of interconnection to LSA level is also technologically imperative because modern IP-based core networks are designed to handle traffic centrally for an entire LSA, making the legacy hierarchical SDCA/LDCA structure redundant and inefficient. Continuing to mandate decentralized POIs forces operators to maintain outdated TDM infrastructure for which equipment is no longer readily available, hindering technological progress. c) Moreover, with the rapid shift towards 5G and next-generation technologies, the availability of technical personnel capable of supporting legacy TDM systems is steadily declining. d) It is pertinent to note that wireless services already interconnect at the LSA level, and aligning fixed-line services to the same standard will not only result in a consistent regulatory framework but will also enhance operational efficiency by reducing the number of physical POIs required, simplifying network architecture, lowering long-term operational costs.

	e) Hence, we **submit that for PSTN-to-PSTN, PLMN-to-PSTN, and PSTN-to-PLMN interconnections, the interconnection level should be specified at the Licensed Service Area (LSA) level, through unified POIs irrespective of PSTN or PLMN traffic. Migration of existing POIs from the LDCA/SDCA level to the LSA level should be mandated** within a specified timeline.
Q 2.	**For PSTN to PSTN, PLMN to PSTN, PSTN to PLMN and PLMN to PLMN, should interconnection be allowed at a level other than the LSA level, based on mutual agreement? Kindly justify your response.**
	COAI Response
	a) We are of the view that mandating a single, uniform standard at the LSA level is critical for achieving the core objectives of regulatory consistency and technological modernization. Allowing mutually agreed alternatives, such as interconnecting at SDCA level or LDCA level, would lead to fragmentation and also prone to coercion from PSUs. b) Furthermore, it could lead to anti-competitive outcomes, where PSU operators with extensive legacy infrastructure might resist migrating to LSA-level IP interconnection with other operators, citing "mutual agreement" as a pretext to maintain legacy TDM interconnections. c) The reliance on "mutual agreement" creates a significant risk of exploitation, particularly by the large Public Sector Undertaking (PSU) operator. Given its vast legacy infrastructure and dominant market position due to one-sided interconnect agreements, the PSU operator will have a natural incentive to leverage this clause to resist migrating to modern LSA-level IP interconnections. It could strategically use the requirement for "mutual agreement" to delay or impose onerous conditions on other operators. This would effectively force other operators to maintain costly and inefficient legacy TDM interconnections, thereby stifling their ability to innovate and compete on a level playing field. d) Therefore, to ensure a clear, consistent, and future-proof regulatory framework that compels the entire sector to modernize in unison, **the LSA level must be specified as the mandatory and only level of interconnection for all types of traffic.**
Q 3.	**Based on your response to Question 1 and 2 above, what changes, if any, are required in the level of interconnection / point of traffic handover as provided in the following:** **a) Telecommunication Interconnection Regulations (TIR), 2018, and** **b) Guidelines annexed to the Telecommunication Interconnection (Reference Interconnection Offer) Regulations, 2002?**
	COAI Response
	a) The following changes are required in the specified regulations to align them with current technological and market realities: i. **Telecommunication Interconnection Regulations (TIR), 2018:** Regulation 9A needs to be amended. The default level of

	interconnection should be changed from the Long-Distance Charging Centre (LDCC) to the Licensed Service Area (LSA) level. The amended regulation should state that the location of the POI shall be at the LSA level. The provisos that protect existing SDCA-level POIs for five years as well as provisions protecting ports provisioned prior to 01.02.2018, should be deleted. ii. **Guidelines annexed to the Telecommunication Interconnection (Reference Interconnection Offer) Regulations, 2002:** The traffic routing tables (Tables 1.1, 1.2, 2.1, and 2.2) as per the RIO require a comprehensive revision. These tables are built on the legacy hierarchy of SDCA, LDCA, and TAX levels. They should be updated to reflect LSA-level interconnection as the standard handover point. The scenarios for local, intra-circle, and inter-circle calls must be redefined around the LSA as the primary anchor, simplifying the routing logic to reflect centralized IP-based core networks.
Q 4.	**Is there a need to mandate multi-path resiliency and redundancy in the Point of Interconnection (POI) framework to mitigate link failure at the primary POI in the case of:** **i. PSTN-PSTN interconnection,** **ii. PLMN-PLMN interconnection, and** **iii. PLMN-PSTN interconnection?** **If yes, kindly provide an appropriate architectural framework with diagram. Kindly justify your response.**
	COAI Response
	a) TSPs in India are established players providing services at a pan-India level to over 1,229 million subscribers. As established players, TSPs have the required technical expertise to build resilient networks tailored to their specific traffic profiles and infrastructure. An overly prescriptive mandate, such as a primary-secondary POI model, would be overly prescriptive, be inefficient, will impose costs and stifle innovation. b) TSPs in India have already implemented robust multi-path resilience across their networks. Redundancy mechanisms are well-established, ensuring continuity of services. There is no evidence of any market failure that would necessitate further regulatory intervention. These existing frameworks effectively address reliability requirements, making additional prescriptive measures unnecessary. c) Thus, **there should not be a regulatory mandate for multi-path resiliency and redundancy in interconnection.** The architectural design to achieve the required redundancy should be left to the discretion of Telecom Service Providers (TSPs).
Q 5.	**Is there a need to incorporate security provisions in the interconnection framework to ensure network security? If yes, kindly provide details along with an appropriate architectural diagram. Kindly justify your response.**

	COAI Response
	a) TSPs in India are well-established players with decades of operational experience and robust internal capabilities, enabling them to effectively anticipate, manage and mitigate a wide range of security and cybersecurity threats. b) TSPs have already incorporated comprehensive security provisions across their networks, including advanced monitoring and threat detection. These established safeguards ensure robust protection against evolving threats, reducing the need for any further prescriptive regulatory measures. c) TSPs manage security risks, including cybersecurity risks, in full compliance with the DoT's licensing/ authorization requirements, thereby ensuring a secure and resilient national telecom infrastructure. d) Hence, there is no need to **mandate or incorporate additional security provisions in the interconnection framework, as doing so would create unnecessary overlap** and should be avoided.
Q 6.	**(a) Should IP-based interconnection be mandated for new interconnections in the regulatory framework? Kindly justify your response.** **(b) Should TSPs be mandated to migrate existing TDM based E1 interconnection to IP-based interconnection within a specified period? If yes, suggest timelines. Kindly justify your response.**
	COAI Response
	a) The telecom industry is undergoing a significant structural shift toward all-IP networks to support high-quality services such as VoLTE, video calls, rich communication features, and other real-time digital applications. As IP technologies evolve, traditional TDM-based circuit-switched networks are steadily giving way to modern IP-based packet-switched core networks, which offer greater efficiency, scalability, and the flexibility required to meet today's rapidly growing data connectivity demands. b) In case of IP based packet switched core networks, a single soft switch along with the required number of Access/Line Media Gateway ("LMG") and Trunk Media Gateway ("TMG") can replace large number of standalone TDM based switches. In fact, one soft switch may be sufficient to cater to the requirement of one or more than one LSAs. As many LMGs and TMGs can be parented to a single Soft Switch, the requirement of a large number of standalone TDM switches can be done away with. c) A distributed architecture which is not LSA based is inefficient as it uses outdated TDM switches deployed at multiple locations. This setup requires separate power, space, and maintenance for each switch, making the network costly and complex. As a result, all TSPs which interconnect with PSU, incur higher operational costs, experience slower service rollout, and face reduced overall efficiency, highlighting the urgency of migrating to IP-based networks. d) All major private operators have already migrated a substantial portion of their PoIs to IP and are gradually migrating others as well. The PSU operator has also

	deployed IP-TAX trunk media gateways and NGN infrastructure, yet it continues to maintain legacy TDM-based interconnection with private operators. e) This dual structure results in interoperability challenges, degraded call quality—particularly for VoLTE-to-VoLTE calls across networks—inefficient capacity utilization, and higher operational costs. Further, the PSU operator's fragmented PoI provisioning for fixed-line services, despite its centralized switching architecture, continues to cause delays and complicates network planning. **The absence of uniform IP-based interconnection further hampers seamless service delivery, optimal network performance, and the industry's ability to meet rising data connectivity demands.** f) Thus, it is essential for India to establish uniform IP-based interconnection across all operators to fully realize the benefits of next-generation networks. A consistent IP interconnection framework will also enable the industry to meet growing data connectivity demands and align with national objectives of digital transformation, innovation, and improved consumer experience. g) Therefore, we submit that **TRAI must mandate migration to IP-based interconnection with centralized POIs at the LSA level, in a phase-wise manner. Further, the PSU operators, should not charge other TSPs for IP interconnect cost.** h) Since the PSUs continue to rely on legacy TDM networks, they should transition to IP-based networks in a phased manner, for which mandatory timeframe should be prescribed by the Authority.
Q 7.	**Should the existing processes of 'provisioning and augmentation of ports at POIs' under Chapter IV of the TIR 2OI8 in respect of following need revision:** **a. Seeking of ports at POIs,** **b. Request for initial provisioning of ports, and** **c. Request for augmentation of POIs?** **Kindly provide your response with justification.**
	AND
Q 8.	**Should the existing framework for Interconnection process and timelines, as provided in the existing TRAI regulations including, The Telecommunication Interconnection Regulations (TIR) 2018, The Telecommunication Interconnection (RIO) Regulations, 2002, and The Telecommunication Interconnection (Charges and Revenue Sharing) Regulation 2001 be revised or continued.** **Kindly indicate challenges, if any, currently being faced in the implementation of the framework by the TSPs and their possible remedies.**
	COAI Response
	1. IP based interconnection a) The move to IP interconnection will transform interconnection from a **hardware provisioning** requirement (managed by the 2018 regulations) into a **bandwidth**

requirement. Once the IP based interconnection is fully adopted by all TSPs in India, TIR 2018 and other interconnection regulations designed for a previous era will become redundant.

b) Thus, the interconnection Regulations for telecom will require a comprehensive review to reflect this reality, eliminating the obsolete concept of "ports" and creating a new, efficient framework for managing virtualized, IP-based interconnections. This would automatically resolve many of the "perpetual seeker" and reciprocity issues, as the relationship becomes a peer-to-peer data connection rather than a client-server hardware requests.

c) Till IP-based interconnection is implemented, the TDM Port chargers and allied infrastructure charges for TDM ports, should be made NIL to encourage all TSPs especially PSUs to migrate to IP based interconnection within a phase-wise timeline mandated by TRAI.

2. **<u>Flaws in TIR 2018</u> –** However, till the time the sector transitions to a fully IP based interconnection, the aim of the regulator should be to simplify TIR 2018. Further, the existing problems emanating from TIR 2018, as listed below will require attention and resolution:

a) **BSNL's Classification of Other TSPs as Perpetual Seekers**

i. As per the 2018 TIR regulation, the seeker is responsible for the interconnection cost for both incoming and outgoing traffic during the first two years. Beyond this period, each TSP must cover the cost for its outgoing traffic, including transmission media.

ii. However, under the existing interconnection agreements with BSNL (except in Delhi and Mumbai), other TSPs continue to be classified as seekers and are still paying POI infrastructure costs beyond the two-year period, as BSNL treats them as perpetual seekers. Besides, the Regulation also allows to maintain the ports provisioned before 01.02.2018, which is unfair and seeks to enrich the PSU at the cost of TSPs. There is thus **an urgent need to end this Perpetual Seeker Status.**

iii. We request TRAI to issue clear provisions in the Regulations **that no TSP should be treated as a perpetual seeker.** After the mandatory two-year period, each TSP should be responsible for covering interconnection costs for its outgoing traffic, including transmission media, POI infrastructure costs and port charges.

b) **TRAI to review the regulation (amendment dated July 5, 2018) for payment of POI infrastructure and port charges prior to February 01, 2018**

i. According to TRAI's amended regulation (August 2018), TSPs are required to continue paying for POI infrastructure and port charges for interconnections established before 01.02.2018.

ii. However, TRAI's own regulation states that after the initial two-year period, all ports should be converted to one-way basis outgoing traffic ratio of past 2 months and each TSP should bear the cost of its outgoing traffic.

iii. The purpose of converting the ports to one-way is to allow each operator to manage its own outgoing traffic independently, thereby reducing dependency on others and minimizing cost burdens. Considering that most of the ports commissioned with BSNL were established before 2018 and are 2-way ports, this objective is undermined if private operators are required to continuously pay for both their own and BSNL's outgoing traffic indefinitely.

iv. **Hence, we submit that the TSPs should not be required to pay port and infrastructure charges following the conversion of ports to one-way traffic, as these facilities are being maintained by the TSPs at their own expense, and suitable amendments to this effect is carried out in the TIR regulation.**

c) **Traffic Capacity Bifurcation:**

i. The 2018 regulation of TRAI mandated the bifurcation of existing POIs based on utilization of incoming and outgoing traffic.

ii. All private TSPs have bifurcated existing POI's basis utilization and is responsible to incur cost for its outgoing traffic only. However, despite this directive, BSNL failed to implement the regulation in a timely manner.

iii. Hence, we urge TRAI to ensure that BSNL takes immediate steps to adhere to the regulation by properly bifurcating traffic as mandated.

iv. BSNL should work closely with our member TSPs to resolve existing billing disputes and streamline settlement processes, ensuring that future interconnection agreements are processed efficiently and in line with regulatory expectations.

d) **POI Infrastructure Charges:**

i. According to TRAI's 2018 regulations (para 10), infrastructure charges should be mutually negotiated between service providers, ensuring they remain reasonable, transparent, and non-discriminatory.

ii. However, BSNL unilaterally determines these charges, setting them at exorbitant rates with an annual increase of 10%.

iii. One of the major interconnection costs with BSNL is the POI infrastructure service charges (covering space and power). These charges are categorized based on city classifications (X, Y, and Z) and have escalated by approximately 500% between 2010 and 2025 due to the yearly 10% increment, as illustrated below:

Year	City Type X (in Lac ₹)	City Type Y (in Lac ₹)	City Type Z (in Lac ₹)
2010	3.14	2.76	2.26
2025	16.42	14.4	10.4

iv. Given the excessive and unreasonable nature of these charges, we urge TRAI to regulate them at the earliest.

e) **Delays in POI Commissioning:**

i. As per the 2018 Regulations, Points of Interconnection (POIs) must be established within 42 days. All private TSPs are adhering to the above TRAI timelines while BSNL consistently fails to meet this deadline in most circles, affecting service quality, network expansion and the rollout of voice services, as interconnection with BSNL is mandatory.

ii. The delays in interconnection create significant challenges in network expansion planning, leading to uncertainty in business operations and disruptions in service rollout schedules. This delay has resulted in roll out delays of voice services along with broadband services.

iii. Therefore, we propose that establishing a BSNL POI should not be a mandatory prerequisite for launching voice services and BSNL should be held accountable for ensuring POI commissioning within the stipulated 42-day timeframe.

f) **Abolition of Transit Carriage Charges:**

i. The Indian telecommunications sector has successfully transitioned to a Bill and Keep (BAK) regime for domestic Interconnection Usage Charges (IUC), effectively eliminating termination charges between operators. This shift has simplified inter-operator settlements and removed a key source of disputes among service providers.

ii. BSNL's continued imposition of transit carriage charges is an outdated practice within an otherwise modernized interconnection framework. These charges no longer have economic justification, as network architectures and traffic dynamics have evolved significantly.

iii. The imposition of these charges creates an unjustified financial burden on other service providers, as the rates often appear arbitrary and disconnected from actual network costs. This contradicts the regulatory push towards simplifying and rationalizing the interconnection charges.

iv. To align with modern network structures and traffic flows, the regulatory framework should eliminate transit carriage charges. Their removal would reflect actual cost structures, promote fairer interconnection practices and simplify inter-operator settlements without impacting network performance. Since transit charges no longer correspond to real costs or investments, abolishing them would enhance transparency and encourage efficient network investments.

v. We urge the Authority to take decisive action to eliminate transit carriage charges and modernize India's interconnection regime for a fair and efficient telecom ecosystem.

Q 9.	**Whether there is a need to revise the existing process of disconnection of POIs as provided in the regulation 11 of the Telecommunication Interconnection Regulations (TIR) 2018? If yes, what specific changes should be done in the disconnection procedure?** **Kindly justify your response.**
	COAI Response
	a) As stated above, we reiterate that once the IP based interconnection is fully adopted by all TSPs in India, TIR 2018 and other interconnection regulations designed for a previous era will need suitable updations. The interconnection Regulations for telecom will require a comprehensive review to create a new, efficient framework for managing IP-based interconnections. b) As per the existing TIR 2018, a TSP intending to disconnect a POI must first issue a show-cause notice of fifteen working days to the other party, clearly stating the reasons for the proposed disconnection. If the response is unsatisfactory or absent, the initiating TSP is then required to provide a subsequent fifteen working days' notice specifying the date of disconnection. This two-tiered notice system aims to ensure transparency and provide adequate time for dispute resolution, thereby safeguarding the interests. c) As we move toward IP based interconnection TSPs will progressively disconnect and surrender POIs. The same should be allowed and PSU operator should not continue to levy charges for surrendered/ disconnected POIs.
Q 10.	**Is there a need to introduce a process for the surrender or closure of POIs in the regulatory framework? If yes, what should be the criteria, procedure, charges, and timelines, including the minimum retention period for POIs before a surrender or closure request can be made? Kindly justify your response.**
	COAI Response
	a) At present the private TSPs follow reciprocal rights for surrender of POI capacity but this is not there when TSPs surrender POI/Port with PSUs. Our member TSPs encounter difficulties when attempting to surrender POIs, Port/POI infrastructure with PSUs. The right to surrender PoIs or ports should be reciprocal, aligning with the principle that each party bears the cost of its outgoing traffic. b) There should be a provision to surrender either specific capacity at a PoI or the entire PoI. This right should be available to both parties, and any surrender request initiated by one party should be processed and approved by the other within four weeks of receipt. c) However, in reality, most of the time surrender requests are not addressed or responded to by BSNL within the stipulated timeline and our member TSPs are left chasing BSNL for the entire year at times with no success. d) This gives financial advantage to BSNL, who continues to then bill annual charges to TSPs even for the pending surrender ports and unfairly compels them to make payment for the underutilized, non-operational ports, even though they have been put up for surrender.

	e) The process of surrender as well as disconnection of POI will assume significant importance, even from migration to LSA and/or mandatory IP based interconnection. For such migration, the TSPs would have to surrender / disconnect certain TDM Ports/POIs, which have to be facilitated in time-bound manner through strict provisions of the Regulation. Otherwise, it would become double jeopardy for the TSPs if they have to migrate to LSA level and/or mandatory IP interconnection but, their existing TDM POIs continue without any mandated surrender/disconnection timelines from application date. f) **Therefore, to ensure that the process and timelines for surrender of POIs is simplified and mandated, we strongly urge TRAI to regulate the process, formats, timeline, and costs of surrender of POIs through suitable provisions incorporated in the TIR, along with deemed approval after a certain time period. If BSNL does not respond in a defined period, then there should be no charges applicable for the said POI/ports and the private TSP should be free to remove its related equipment.**
Q 11.	**In order to safeguard the interest of TSPs arising due to financial obligations of interconnection, is there a requirement for furnishing bank guarantee by one TSP to the other TSP? If yes, please provide the process and methodology for determining the initial bank guarantee amount and any subsequent bank guarantee amount, if required.** **Kindly justify your response.**
	COAI Response
	Members will provide inputs individually.
Q 12.	**Should a procedure be established for addressing delays in the payment of interconnection-related charges? If yes, what should be the procedure to address such delays? Kindly provide your response with justification.**
	COAI Response
	a) With regard to the payment of interconnection-related charges, **we submit that first and most importantly there should be an equitable, transparent and reciprocal settlement mechanism.** b) Making reciprocity a fundamental principle would enhance fairness in the interconnection framework, while minimizing financial disputes. Hence, TRAI should mandate that all interconnection agreements, including the payment terms, should **adhere to reciprocal terms across all operators including PSUs**. This would establish a level playing field, ensuring symmetrical financial obligations and rights, in proportion to interconnection relationships. c) While the TSPs have adopted reasonableness/fairness and reciprocity as basic principle for interconnection, but these are not part of the interconnection regime with PSUs. The terms of the agreement with PSUs are unilateral as the agreement was framed at the time when these PSUs had monopoly and TSPs were constrained to accept these terms for the sake of mandatory interconnection for launch of services. Therefore the existing agreement of TSPs with PSU needs to

	be modified with underlying features of fairness/reciprocity and aligned with the regulations. d) The terms and conditions related to billing, payments, reconciliation and dispute resolution are currently one-sided due to which there is an imbalanced, unfair financial relationship between the PSU operator and private service providers. e) **Thus, while addressing delays in the payment of interconnection-related charges** reciprocity in all terms and conditions including on the rate of interest on delayed payments, should be ensured.
Q 13.	**Is there a need to revise the financial disincentive framework as provided in these regulations. If yes, what specific changes should be done? Kindly justify your response.**
	COAI Response
	a) The TIR 2018 already contains provisions for Financial disincentives (FDs); however, the need of the hour is to ensure the enforceability of applicable provisions in a transparent and coordinated manner. b) As the interconnection relates to inter-operator rights, efforts and costs therefore, to ensure all TSPs are bound to fulfill the regulated obligations towards each other, a suitable deterrent mechanism in the shape of financial deterrent is very much required. Thus, the financial disincentive should be there to enforce inter-operator rights and obligations. It should not be imposed in case of any administrative reporting towards TRAI.
Q 14.	**Is there a need to revise the existing SMS termination charge? If yes, what are the considerations necessitating such a revision? If not, kindly provide justification.**
	COAI Response
	a) The TRAI SMS Termination Charges Regulations, 2013, standardized SMS termination fees to prevent anti-competitive pricing and ensure fair access across networks. This regulation prescribed the cost-based charges at 2 paise per SMS. b) The SMS market has been running smoothly under this Regulation. There is **no market failure which would justify a review of SMS termination charge.** Thus, we submit that there is no need for an intervention or change in SMS termination charges. c) However, there is a pending related reform i.e. increase in commercial communication termination charges for A2P messages due to the huge financial and human investment being made in the massive blockchain based DLT under TCCCPR, 2018 and to reinforce anti-spam safeguards. Therefore, we recommend that the same should be fixed at Rs 0.10/SMS (which cumulatively translate to Rs 0.12/SMS after including Rs 0.02/ SMS termination charge) which shall act as a deterrent to the ongoing misuse of A2P channel.
Q 15.	**Is there a need to prescribe SMS carriage charges when an NLDO carries SMS between the LSAs? If yes, what principles and methodology should apply? If not, kindly provide justification.**

	COAI Response
	Members will provide inputs individually.
Q 16.	**Is there a need to revise the existing access charge to be paid by the service provider to the originating provider for IN services? If yes, kindly provide detailed explanation; if not, kindly provide justification.**
	AND
Q 17.	**Are there any difficulties that service providers encounter in complying with existing IN Regulations, 2006 in Multi-Operator and Multi-Network Scenario? Kindly describe these challenges in detail and suggest possible regulatory remedial measures to overcome these challenges.**
	COAI Response
	Members will provide inputs individually.
Q 18.	**Is there a need to revise the Telecom Regulatory Authority of India (Transit Charges for Bharat Sanchar Nigam Limited's CellOne Terminating Traffic) Regulation, 2005?** **Kindly provide your response with justification.**
	COAI Response
	a) The Hon'ble TDSAT vide its judgment dated May 3, 2005, had directed that : *"……On considerations of level playing field, we direct that BSNL should stop charging 0.19 paise from cellular operators by way of transit charges for accessing BSNL CellOne subscribers, wherever the MSCs of both BSNL CellOne and Private CMSOs are connected to the same BSNL switch. We are of the view that our direction will take effect from the date of this judgment. We authorize TRAI to make this part of the regulatory regime."* b) Pursuant to the above Order of the Hon'ble Tribunal, TRAI, on June 8, 2005, issued Regulation No. 10 of 2005 whereby the above directions of the TDSAT were made part of the interconnect / regulatory regime. Para 2 of the Regulation states as below: *"No transit charge shall be levied by BSNL (Bharat Sanchar Nigam Limited) on Cellular Operators for accessing BSNL's CellOne subscribers, wherever the MSCs of both BSNL's CellOne and Private CMSOs' are connected to the same BSNL switch."* c) **In light of the above, we submit that BSNL should not charge for Cell One Termination traffic irrespective of the location of MSC. Wherever, BSNL has provided direct connectivity with Cellone, it has already stopped charging for transit charge for Cellone terminating traffic routed through its network.** d) Hence, all such intra-network charges (including Transit Charges) for carrying a call within a TSP's network should be abolished.

Q 19.	**The existing interconnection regulatory framework provides for application of origination, carriage, transit, transit carriage and termination charges for various levels of interconnections for PSTN- PSTN, PLMN-PLMN, PLMN-PSTN. Based on the interconnection regulatory framework suggested in your response in Questions 1, 2 and 3 above, should there be a review of these charges? Kindly justify your response.**
	COAI Response
	a) The Indian telecommunications sector has transitioned to a Bill and Keep (BAK) regime for domestic Interconnection Usage Charges (IUC), effectively eliminating termination charges between operators. This shift has simplified inter-operator settlements and removed a key source of disputes among service providers. b) Thus, the Origination, carriage and termination charges do not require any review for various levels of interconnections, as the market is mature enough.. c) **BSNL's continued imposition of transit / transit carriage charges is an outdated practice** within an otherwise modernized interconnection framework. These charges no longer have economic justification, as network architectures and traffic dynamics have evolved significantly. d) The imposition of these charges creates an unjustified financial burden on other service providers, as the rates often appear arbitrary and disconnected from actual network costs. This contradicts the regulatory push towards simplifying and rationalizing the interconnection charges. e) To align with modern network structures and traffic flows, the regulatory framework should eliminate transit carriage charges. This removal would reflect actual cost structures, promote fairer interconnection practices and simplify inter-operator settlements without impacting network performance. Since transit charges no longer correspond to real costs or investments, abolishing them would enhance transparency and encourage efficient network investments. **Hence, we request TRAI to abolish /eliminate transit / transit carriage charges.**
Q 20.	**For termination of emergency calls/SMSs from one TSP's network to another TSP's network, should there be a provision of any additional charges other than applicable IUC? If so, what should be the charges and the basis thereof?**
	COAI Response
	a) Emergency services are a cornerstone of public safety and a critical public utility, making universal access a fundamental obligation for all telecom service providers. In this context, **TRAI's intervention is essential to ensure that operators are not burdened with significant costs for provisioning these services.** b) Historically, essential services such as the Police, Ambulance and Fire Departments relied on telecom resources provided by the incumbent operator, the erstwhile DoT, which was the sole service provider at the time. Due to this, BSNL/MTNL has inherited this responsibility, continuing to facilitate emergency services, including 100 (Police), 101 (Fire), 102 (Ambulance) and 108 (Emergency Disaster Management), among others.

	c) Over time, centralized Emergency Response Support System (ERSS) centers have been established and most Telecom Service Providers (TSPs), including BSNL, now route emergency service calls through their own networks. However, some emergency services, such as 102 and 108, remain decentralized. Many emergency service providers prefer not to manage multiple telecom resources across various operators, making it necessary for other TSPs to route these calls via BSNL/MTNL. d) Since connectivity to emergency services are a regulatory mandate of national importance, they are made accessible to consumers free of charge. It is also important to note that the lump sum charge imposed by PSU for these services has risen significantly, from ₹10 lakh per LSA per year in 2010 to ~49 lakhs per LSA per year by for FY 2025-26. e) Given that connectivity to emergency services is a license requirement, TSPs are left with no alternative but to comply with BSNLs excessive charges. This places an undue financial burden on operators, compelling them to route emergency calls through BSNL at unjustified and unreasonably high costs. Considering global precedence and importance of these calls from national perspective, there should be no inter-operator charges for the emergency services. As most of the traffic is expected to be carried through PSAPs and only overflow would go through BSNL, the charges should be waived off. Also, there should be a recommendation to the Government that overflow traffic should be allowed to be transited through any other TSPs based on mutual agreements and without applicability of any cost. This will go in a long way to address areas related to public emergency. f) Therefore, we request **TRAI to prescribe NIL emergency charges to be applicable. In case it does not find merit with TRAI, cost-based IUC charges for emergency services on a per minute voice call basis may be prescribed. TRAI should also eliminate all other lump sum fees and charges levied by the PSU operator.**
Q 21.	**Should the International Termination Charges (ITC) for international incoming calls to India be revised? If yes, what are the considerations necessitating such a revision.** **Kindly provide your response with justification.**
	COAI Response
	a) Spam calls and fraudulent messages have become a serious nuisance for Indian consumers, with fraudsters increasingly exploiting weaknesses in the international telecom ecosystem. b) While Telecom Service Providers (TSPs) and regulators have taken several measures such as caller ID authentication and AI-based spam detection, the menace of international spam persists. The Department of Telecommunications (DoT) and TRAI have also strengthened consumer safeguards through the DLT framework, stricter KYC norms, and AI/ML-based monitoring. Despite these efforts, international spam and phishing attempts continue to rise, indicating that existing measures alone are insufficient. c) One of the **most critical factors enabling such misuse of the telecom network of India for pumping spam from other countries**, **is the current level of low**

International Termination Charges (ITC) in India. Presently capped between ₹0.35 and ₹0.65 per minute, India's ITC is among the lowest in the world.

d) This creates a financially attractive opportunity for fraudsters to route spam and phishing calls into India at very low cost. A comparative analysis of ITC rates demonstrates this disparity—while India charges ₹0.65, **countries such as Myanmar, the Philippines, Dubai, and Europe have rates ranging from ₹13 to ₹22 per minute, making India's ITC only 3%–5% of global benchmarks**. Even in countries with relatively moderate charges such as Vietnam or China, India's ITC remains far lower.

e) A comparative analysis of ITC rates across various countries provided by our member TSPs, highlight India's significantly lower charge:

Countries/Region	ITC (INR)	ITC in India as a %age of ITC in Other countries
India	0.65	
Myanmar	22	3.0 %
Philippines	13	5.0 %
Dubai	13	5.0 %
Vietnam	5.5	11.8 %
Cambodia	5.5	11.8 %
Laos	6	10.8 %
Brazil	2	32.5 %
China	5	13.0 %
Russia	15	4.3 %
US continent (Non US / Canada)	19	3.4 %
Europe (Average)	17	3.8 %
Middle East (Average)	12	5.4 %
SAARC (Average)	14	4.6 %

Source: Member TSPs

f) This artificially low ITC regime has multiple adverse implications. It facilitates large volumes of fraudulent calls targeting Indian consumers, increases the risk of financial scams, and undermines consumer trust in telecom services. It also results in revenue loss for Indian TSPs and reduces contributions to the Government Exchequer, placing India at an economic disadvantage compared to its peers.

g) To address this, we respectfully urge TRAI to revise the International Termination Charge (ITC) upwards to align with global benchmarks. India's ITC, currently among the lowest worldwide, creates an economic incentive for fraudsters to exploit international call termination routes and target Indian consumers with spam and phishing attempts. By increasing ITC, TRAI can establish a strong entry barrier against such fraudulent traffic, thereby reducing consumer harm while enhancing trust in telecom services.

h) Beyond the direct revenue loss to TSPs, the artificially low ITC precipitates a significant and often **overlooked loss of foreign exchange (forex) earnings for the nation.** At its current abysmal rate of ITC, India is effectively forgoing substantial forex inflows that it is rightfully owed for providing termination services to the world.

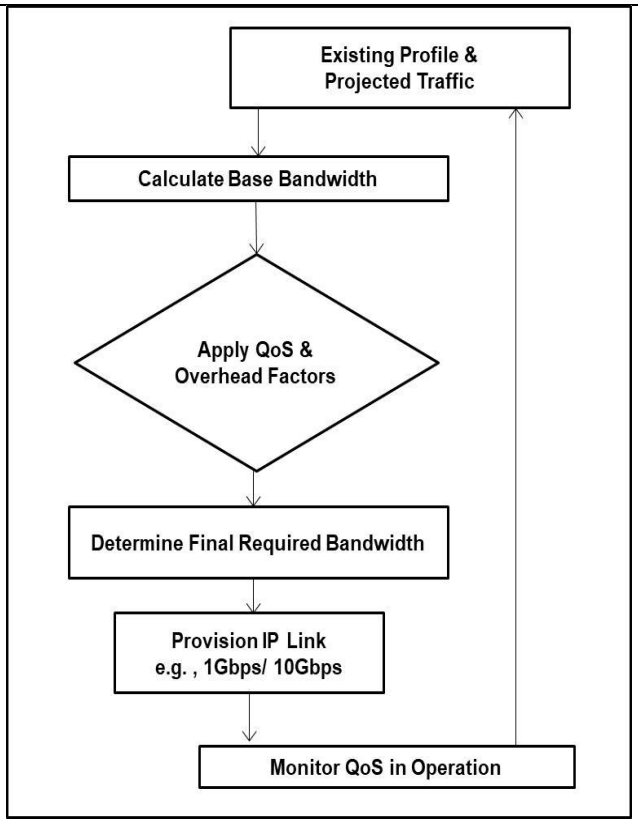
	The **net outflow in global interconnection settlements caused by India paying more for outbound calls than it earns for inbound traffic negatively affects the country's balance of payments in the telecom domain.** i) Thus by maintaining a rate that is far lower than global standards, India is subsidizing international carriers and fraudsters at the direct expense of its own foreign exchange reserve; **depriving the national exchequer of a legitimate and sizable revenue stream that could support broader digital infrastructure development.** j) It is important to emphasize that **increasing ITC will not have any adverse impact on Indian customers. Inbound international calls are not billed to the recipient.** The responsibility for payment lies entirely with the originating carrier or its intermediary. A revised ITC regime would therefore place the cost burden only on foreign carriers – many of whom currently benefit from India's under-priced termination regime without offering reciprocal benefits. k) In light of the submissions above, we submit that **there is a need for a significant upward revision in International Termination Charges (ITC) to Rs. 4.5/min.** l) Furthermore, to ensure that the ITC regime remains aligned with global market realities and continues to serve India's strategic interests, it is imperative that these charges are not treated as a static, one-time fix. We strongly recommend that the Authority institutionalizes **puts in place a mechanism for regular review and revision of the ITC, preferably on an annual basis**. This proactive approach would prevent the regime from becoming obsolete, allow for timely corrections based on evolving international traffic patterns and cost structures, and ensure that India consistently receives fair and non-discriminatory value for terminating international traffic onto its networks.
Q 22.	**Is there a need to address the issue of telemarketing and robo-calls within the interconnection framework? If yes, kindly provide your inputs on the possible approaches.** **Kindly justify your response.**
	COAI Response
	Members will provide inputs individually.
Q 23.	**Is there a need to revise 'The Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002'? If yes, kindly provide the specific revisions.** **Kindly provide your response with justification.**
	COAI Response
	a) It should be borne in mind that these Regulations were important when private service providers were just entering the market and there were issues with interconnection with incumbent Government players and these Regulations played a significant role in increasing the competition in mobile and basic telephony and provide access to all TSPs to interconnected networks.

	b) However, subsequent to the issuance of Telecommunication Interconnection Regulations, 2018, that provides for interconnection requirements and provided timelines for all associated activities, this Regulation has lost its relevance and accordingly this Regulation should be repealed. c) If the Authority feels that some of the guiding principles of this Regulation have a relevance in current market scenario, then at most broad guidelines based on fair, reasonable, and non-discriminatory principles for offering interconnection should be included in the TIR 2018 and rest of the activities should be left to mutual negotiations.
Q 24.	**For the purpose of interconnection, is there a need to revise the current categories of 'Services' and 'Activities' to determine Significant Market Power (SMP)?** **Kindly provide your response with justification.**
	COAI Response
	Members will provide inputs individually.
Q 25.	**Should the publication of Reference Interconnect Offers (RIOs) on the websites of Telecom Service Providers (TSPs) be mandated?** **Kindly justify your response.**
	COAI Response
	a) Since, interconnection arrangements are already governed by a competitive framework and are reciprocal in nature, we submit that publishing RIOs on the websites of TSPs should not be mandated. b) In case any concern or issue arises, the Authority can always call for the relevant interconnect agreements to examine reciprocity etc., without requiring publishing of RIOs on the website.
Q 26.	**Should there be any interconnection charges? If yes, kindly provide details about the following:** **a. the types of infrastructure charges to be levied,** **b. the guiding principles for determining such charges along with ceiling, if required, and** **c. determination of time-based escalation methodology, if required.** **Kindly provide your response with justification.**
	COAI Response
	a) TRAI in its paper has noted that incumbent operators have introduced a range of infrastructure-related charges such as tower rental, space rental, duct sharing, passive cabling, POI setup, power supply, air conditioning, technology-specific charges, escalation charges, signalling point code change charges, emergency charges, late payment fees, etc..

	b) We submit that these charges should not be levied unilaterally. c) We submit that **these charges should be cost-based, reciprocal, and non-discriminatory,** thereby eliminating ambiguity and fostering a more predictable and fairer interconnection regime.
Q 27.	**Whether following sections of The Telecommunication Interconnection (Charges and Revenue Sharing) Regulations, 2001:** **a) Section IV which contains 'Revenue sharing Arrangements' i.e. interconnection usage charges.** **b) Schedule I and II which contains rates of interconnection usage charges.** **Still hold relevance, in view of the subsequent issuance of the Regulation 4 under Section IV which specifies rates of 'Interconnection Usage Charges IUC under 'The Telecommunication Interconnection Usage Charges Regulations, 2003'.** **Additionally, is there an alternative way to organize these two regulations to enhance clarity and ease of understanding?** **Kindly provide your response with justification.**
	COAI Response
	a) Various interconnection regulations have been issued by TRAI in the last decades. The newer regulations have effectively superseded the previous regulations. Hence many of the previous regulations have become redundant and need to be repealed. The continued presence of old regulations and the need for cross reference which arises creates unnecessary complexity. b) For example, most parts of the Telecommunication Interconnection (Charges and Revenue Sharing) Regulation, 2001 have been repealed or amended by the Telecommunication Interconnection Usage Charges Regulation, 2003 and TIR 2018. Thus, this Regulation of 2001 should be repealed. c) To enhance transparency and predictability, we humbly request TRAI to consider merging various Interconnection Regulations, including the Interconnection (Charges and Revenue Sharing) Regulations into a single updated Regulation which is easy to understand and implement. This will enhance clarity, simplify compliance for operators, and foster a more efficient and transparent regulatory environment.
Q 28.	**Is there a need for change, if any, required in respect of following:** **i. Port Technology** **ii. Port Size (Capacity)** **iii. Port Charges** **iv. Any other related aspect** **Kindly provide a detailed response with justification.**

	COAI Response
	a) Yes, a comprehensive change is required in the existing interconnection port framework. The current regulations, based on legacy E1/TDM technology, are obsolete and misaligned with modern telecom networks. b) The specific need for change is as follows: i. **Port Technology** - The definition of a "port" must be expanded beyond the legacy E1/TDM interface to include modern **IP-based technologies** such as Ethernet links, SDH connections etc., as specified in the TEC standard for IP Interconnection. ii. **Port Size (Capacity) -** The current measure of port size in multiples of 2.048 Mbps E1 links is irrelevant. The new framework must recognize and standardize capacities that reflect modern network requirements, scaling from **1 Gbps to 100 Gbps and beyond**. iii. **Port Charges** - The existing port charge structure is not cost-reflective as the network costs for provision of ports has reduced drastically because of economies of scale. Hence the charges must be revised to align with the significantly lower cost-per-bit of modern electronic and optical IP equipment, ensuring they are **fair, competitive, and cost based.**
Q 29.	**Should port charges be uniform across all services and technologies? Kindly provide detailed response for the following categories specifically:** **a. Fixed Line Service/ Mobile Service/ NLD service/ ILD service, and** **b. E1 (TDM) based interconnection and IP based interconnection.** **In case non-uniform charges are suggested, what methodology should be followed for calculation of port charges for above mentioned categories of services and technologies.** **Kindly provide a detailed response with justification.**
	COAI Response
	a) At the outset we submit that there should be uniform Port Charges across technologies and the **TRAI should aim to simplify and rationalise the Port Charges based on present efficient IP interconnection.** b) At present, the Port Charges are governed by the Telecommunication Interconnection (Port Charges) (Second Amendment) Regulations, 2012 dated 18th September 2012. c) We submit that these E1 port charges were determined based on the market conditions in 2012. Given that 13 years have passed since then, a revision is necessary to reflect the current telecom landscape. d) **Hence, given the changes in the market dynamics over the past 13 years, we submit that the E1 port charges for both mobile and fixed line should be**

	adjusted to align with the current market scenario, ensuring that they are fair, competitive and reflective of modern infrastructure and technology costs. e) Most importantly, the uniform Port charges (for both TDM and IP ports) should be fixed on the basis of IP ports cost structure. This measure eliminates the cost arbitrage created by the historical inefficiencies of legacy networks and provides a clear incentive for service providers to migrate to IP interconnection at the earliest possible.
Q 30.	**Whether use of 'Erlang' as a unit of traffic in various interconnection regulations is sufficient and are the current procedures for demand estimation as provided in the Telecommunication Interconnection (Port Charges) Regulation 2001 and the TIR 2018 still effective and practical, in view of adoption of IP based interconnection?** **a. If yes, kindly provide justification in support of your response.** **b. If no, kindly provide alternate metrics and demand estimation methods for IP-based interconnection along with detailed explanation.** **In either case, kindly provide suitable diagrammatic representation.**
	COAI Response
	a) We submit that the existing methodology of demand estimation using *Erlang-based models*—as prescribed in the Telecommunication Interconnection (Port Charges) Regulation, 2001 and TIR, 2018—was suitable for traditional circuit-switched (TDM/E1) networks. b) However, with the industry's transition towards **IP-based interconnection**, this approach has become less relevant. IP traffic is **packet-switched, dynamic** and resources are shared among multiple users rather than dedicated per call. Hence, using Erlang as a unit for demand estimation does not accurately reflect real-time traffic behaviour in IP environments. **IP interconnection demand may be measured using peak and average throughput (Gbps)**. c) A diagrammatic representation of the proposed approach which may be adopted is given below:



d) In view of the above submit that the existing Erlang-based procedures should be **reviewed and updated** to reflect the realities of **IP-based interconnection frameworks**.

Q 31.	**Should the current provisions for submission, inspection and getting copies of interconnection agreements under 'The Register of Interconnect Agreements Regulations, 1999' using floppy disks and print copies be dispensed with and be made online?** **a. If yes, what changes do you suggest for the online process, timelines, related charges and any other aspect?** **b. If not, kindly provide justification.**
	COAI Response
	a) The current provisions under "The Register of Interconnect Agreements Regulations, 1999", requiring submission, inspection, and **access to interconnection agreements through floppy disks and printed copies should be replaced with a fully digital, online and end to end digital process .** b) Instead of physical submissions, the interconnect agreements can be uploaded on a portal provided by TRAI. This online portal should enable TSPs to securely upload agreements in standard digital formats, receive acknowledgements, and track submissions. This end to end digital process should also allow accessing the interconnect register online and also obtain copies of agreement through the said digital mode only.

	c) We submit that TRAI has already taken major steps in creating a paperless environment by accepting digital/online submissions of reports, compliances, and various other correspondence and accepting of Interconnect Agreements would further support the environment friendly practices. d) Therefore, we request the Authority to amend the above-mentioned regulatory provisions suitably and do away with paper-based submissions and facilitate the TSPs in meeting these compliance requirements through online and end to end digital processes.
Q 32.	**Is there a need to incorporate provisions for financial disincentives in interconnection regulations to deter non-compliance? If yes, kindly provide specific scenarios and mention the concerned regulations, where financial disincentives would be applicable, along with their quantification.** **Kindly justify your response.**
	COAI Response
	a) **Financial disincentives should be imposed where reciprocity is NOT adopted/ implemented in interconnection,** as non-reciprocal terms can create imbalance and unfair obligations between service providers. b) Such financial disincentives would promote equitable arrangements, ensure non-discriminatory treatment, and support a fair and transparent interconnection framework.
Q 33.	**What should be the mechanism and timelines for transition of existing interconnection agreements between the service providers to the new regulatory framework that will emerge from this consultation process?** **Kindly provide detailed response with justification.**
	COAI Response
	a) As stated above, we reiterate a complete overhaul of Interconnection regime is required. we therefore recommend consolidating the multiple Interconnection Regulations into a single, streamlined compendium. b) TRAI has itself noted in the Consultation Paper, that timelines for transition to the new interconnection regime which emerges from this consultation should be realistic and implementable, striking a balance between the urgency for regulatory modernization and the industry's practical capability to implement changes. c) We reiterate that **in order to facilitate the transition to the new interconnect regime we recommend that the TRAI should establish a centralized coordination committee comprising representatives from all major TSPs**. This committee would serve as a dedicated forum to address implementation challenges, develop mutually agreeable timelines, and monitor the progress of the migration.

Q 34.	**What should be the interconnection framework for satellite-based telecommunications networks with other telecom networks? Further, whether the interconnection frameworks for MSS and FSS satellite-based telecommunications networks should be distinct? Please provide your response along with end-to-end diagrammatic representation and justification in respect of the following:** **a. Satellite - Satellite network interconnection** **b. Satellite - PLMN interconnection** **c. Satellite - PSTN interconnection**
	COAI Response
	Member will provide inputs individually.
Q 35.	**Are there any specific regulatory models from other countries that have successfully addressed interconnection related issues and challenges which can be adapted in the Indian telecom sector? If yes, kindly provide details of such international best practices.**
	COAI Response
	a) International experience shows that migration from legacy TDM interconnection to IP-based interconnection is now the standard regulatory approach worldwide. Regulators in major markets have actively mandated or formally supervised this transition to ensure interoperability, QoS improvement, cost efficiency, and long-term network evolution. b) WORLD TELECOMMUNICATION STANDARDIZATION ASSEMBLY (WTSA-24) explicitly **recognizes that "*most of the telecommunication operators in the world are migrating from circuit-switched networks to packet-switched networks*"** and that they have already established "*Internet protocol (IP)-based networks for delivering most of their services using a new concept 'all over IP'*." c) In light of these developments, WTSA-24[1] **resolved that ITU-T must rapidly progress new Recommendations addressing "*network architectures, roaming principles, numbering issues, charging, quality of service, network performance and security mechanisms*" to support global IP-based interconnection of IMT/4G/5G networks.** d) Further, **GSMA[2] has developed a tool to facilitate the creation of IP-interconnection between parties;** this template; assisted in the successful establishment of IP-interconnection between network operator in Denmark, Kuwait, Mexico & Russia.

[1] https://www.itu.int/dms_pub/itu-t/opb/res/T-RES-T.93-2024-PDF-E.pdf

2https://www.gsma.com/solutions-and-impact/technologies/networks/ip_services/interconnection/

	e) In the United Kingdom, **Ofcom's *Future of Interconnection* programme [3]sets a clear roadmap for moving POIs from TDM to native IP/SIP-based interfaces.** Operators such as Openreach publish regulated migration plans and are required to provide structured notifications to interconnecting partners. f) At the European level, **BEREC[4] advises NRAs to ensure clear IP interconnection frameworks, defined migration timelines, partner notifications, and protection of emergency services.** g) Germany's regulator, **BNetzA, has issued "Key Elements for Interconnection of IP-Based Networks[5]," which establishes IP-NNI as the long-term interconnect standard** and provides guidance on POI redefinition and use of transitional gateways. h) This demonstrates a clear international consensus that seamless, high-quality mobile services require a full transition to IP-based interconnection. i) Hence, we submit that a **clearly defined, time-bound, phase-wise, and regulator-led migration to IP-based interconnection be implemented**. Such a roadmap will ensure interoperability, enhance QoS, reduce operational complexity, and align telecom networks with global best practices and future technological evolution.
Q 36.	**Kindly mention any other challenges or concerns related to the regulations being reviewed in this consultation paper.**
	COAI Response
	N.A.

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3https://www.ofcom.org.uk/consultations-and-statements/category-2/future-of-interconnection-and-call-termination www.ofcom.org.uk

4https://www.berec.europa.eu/en/all-documents/berec/reports/draft-berec-progress-report-on-managing-copper-network-switch-off BEREC

5https://www.bundesnetzagentur.de/SharedDocs/Downloads/EN/Areas/Telecommunications/Companies/TelecomRegulation/IPinterconnection/KeyElementsId14810pdf.pdf?__blob=publicationFile&v=2&utm_source=chatgpt.com