



DEC 15, 2025

To: Shri Sameer Gupta, Principal Advisor NSL, TRAI
Email: adv-ns11@traf.gov.in, Telephone No. +91- 11-20907752.

Sub: Our response to TRAI CP on Interconnection No 11/2025 Dt 10NOV25

Reference A: Authorisation for Provision of Main Telecommunication Services Rules, 2025 (Draft). Clause 70 (1) **A NSO may interconnect** its telecommunication network with the telecommunication network of any other NSO for handing or taking over the telecommunication traffic **at any mutually agreed location**, failing which, the interconnection shall take place at the point of interconnection, as specified in TRAI's regulations on interconnection

Dear Sir,

Zoom India has obtained All India Unified Access License **for all 22 circles with NLD & ILD** to offer Cloud based PBX (IP-Centrex, Call Center & Contact Center) services to its global customers present in India and to Indian Businesses. This new technology will immensely benefit the Software, Call Center & BPO Business Industry by reducing their cost of communications and increasing productivity. Since signing our first Access License Agreement, **it has taken between 1 ½ year to 2 ½ years to establish IP Pol's at 6 Circles.**

Our recent decision to add 3 more circles by establishing IP Interconnections with other operators will take 1 full year to execute. At these high costs for low traffic, our desire to expand to the remaining 13 circles is very limited.

1. **National/Regional Interconnections:** In the spirit of One Nation/National Authorisation for Access Service in the above Referenced draft Rules Authority should make enabling provision **to allow National/Regional Interconnections on IP reducing to 4 from the 22 LSA** based Interconnections being practiced.

In this regard we would like to **welcome a view taken by one of the largest telecom operators in India Reliance JIO Infocomm Ltd**, in response to TRAI's Pre-Consultation Paper on Interconnection Dt 23rd April 2025, Page Num 7 (Physical Page 8) Attached as Annexure 1, extract below:

JIO: it would be prudent to upgrade the interconnection levels beyond LSA level and consider centralized and unified POIs.

JIO: Multi Path resiliency -4 regional Interconnect POP locations for IP Based Interconnection. Each POP location will have primary and secondary media path. This will enable multi path resiliency like data traffic interconnects

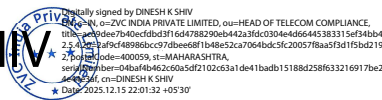
2. **SMS (P2P Messaging) On IP:** While we are thankful to all operators to offer IP Based Voice Interconnection, we are unable to make any progress on IP Based Interconnection for P2P Messages. SMS seems to have strong ties to SS7 and as a new operator we prefer IP Based Interconnection. Worldwide the accepted trend is RCS for IP based messaging for Interoperator P2P messages. We request Authority to support a time bound implementation by all operators or preferably through a NLD operator.
3. **NLD _NLD IP Interconnections:** We are thankful to all operators to offer IP Based Voice Interconnection for Access Services. However, we have established NLD-NLD/ILD IP Interconnection with One Operator only. Other operators do not seem to be ready for NLD _NLD IP Interconnections.

4. **India Toll Free Numbers (IN Services 1800/860):** While India IN Services are Access services in nature due to historic reasons are viewed as NLD services for Interconnection purpose. While we have no issues with operators in the **6 Circles**, where we have established Access Interconnections, we are facing challenges in receiving calls from other operators **from the other 16 circles where we are not present**. The issue can be addressed by having a regulation prescribing an additional settlement fee for calls from other circles to cover carriage cost. The current settlement rates are outdated, and Authority need to analyse this in a separate consultation paper or through an engagement with all operators.
5. **International Toll Free Numbers (000 800-CIC-ABCD):** We are unable to complete calls when our customers dial 000 800 numbers. Our attempts to resolve this issue in the last 6 months with all operators has produced limited results. There seems to be lack of Information of codes (3 digit CIC/IIC) allocated/used, process & procedure from all quarters. This is essentially an Access service which is viewed as ILD service. Request Authority to analyse this in a separate consultation paper or through an engagement with all operators and Licensor.
6. **ITC/ITF: International Termination Charges (ITC) for international incoming calls to India.** As this is an International issue covering relationship with many countries request that this topic to be taken in a separate consultation paper. Request Authority to close out on domestic Indian Operator Interconnection issues and ITC can be taken up later.

We respectfully request the Authority to help with expedited rollouts for new small operators. This accommodation will neither cause any financial loss to any operator nor compromise on security requirements. **Being a small operator our capacity in the existing 6 Pol's is more than sufficient to service remaining 16 circles for next 3-5 years.** This strategic expansion will allow us to deliver services across the remaining 16 circles ahead of schedule, primarily creating value for Indian **businesses**.

Thanking You,
For and on behalf of ZVC INDIA PRIVATE LIMITED (Licensee)

DINESH K SHIV



(Authorised Signatory)
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Our Question Wise Response to TRAI CP on Interconnection

Q1. 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.

Q2. 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.

Zoom Response to Q1: YES, it would be prudent to upgrade the interconnection levels beyond LSA level and consider centralized and unified POIs (courtesy JIO). A unified single interconnection should suffice for all call types, by creating Trunk Groups if necessary for different call types.

Zoom Response to Q2:

Reference A: Authorisation for Provision of Main Telecommunication Services Rules, 2025 (Draft). Clause 70 (1) **A NSO may interconnect** its telecommunication network with the telecommunication network of any other NSO for handing or taking over the telecommunication traffic **at any mutually agreed location**, failing which, the interconnection shall take place at the point of interconnection, as specified in TRAI's regulations on interconnection.

National/Regional Interconnections: In the spirit of One Nation/National Authorisation for Access Service in the above Referenced draft Rules Authority should make enabling provision **to allow National/Regional Interconnections on IP reducing to 4 from the 22 LSA** based Interconnections being practiced.

In this regard we would like to **welcome a view taken by one of the largest telecom operators in India Reliance JIO Infocomm Ltd**, in response to TRAI's Pre-Consultation Paper on Review of existing TRAI Regulations on Interconnection Dt 23rd April 2025, Page Num 7 (Physical Page 8) Attached as Annexure 1, extract below:

JIO: it would be prudent to upgrade the interconnection levels beyond LSA level and consider centralized and unified POIs.

While new operators may migrate to new Authorization and take advantage of the above provision, some incumbent operators may not migrate due to other reasons. Request Authority to allow as envisioned in draft rules 70 (1) between operators under Authorization and operators old License regime as long as the operator seeking Interconnection is under the new Authorisation regime. National/Regional Interconnection should not be left to Mutual Agreement but mandated.

Multi Path resiliency -4 regional Interconnect POP locations for IP Based Interconnection. Each POP location will have primary and secondary media path. This will enable multi path resiliency like data traffic interconnects (Courtesy JIO).



Requirement of number of Interconnections should be viewed as function of traffic not circle based:

- A. PSU Operators: who had dominant market share at the time of deregulation and market share has reduced.
- B. SMR Operators (SMR-Significant Market Reach).
- C. Old LMR Operators (LMR-Limited Market Reach).
- D. NEW LMR Operators (Emerging Operators with limited Market Reach).

As referenced above by Reliance JIO Infocomm Ltd, in Page numbered 7 FOUR regional Interconnects are sufficient for IP Based Interconnection.

Q3. 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? Kindly justify your response.*

National/Regional Interconnections: In the spirit of One Nation/National Authorisation for Access Service in the above Referenced draft Rules Authority should make enabling provision **to allow National/Regional Interconnections on IP reducing to 4 from the 22 LSA** based Interconnections being practiced.

Q4. 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.

ZooM Response to Q4:

Multi Path resiliency -4 regional Interconnect POP locations for IP Based Interconnection. Each POP location will have primary and secondary media path. This will enable multi path resiliency like data traffic interconnects (Courtesy JIO).

A unified single interconnection should suffice for all call types, by creating Trunk Groups if necessary for different call types.

Q5. 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.

ZooM Response to Q5: IP Interconnections are expected to be secure, and both operators must make necessary investments (even security loopholes exists in SS7). During earlier years of IP Interconnections (CY2010 to CY2020) operators used an intermediate SBC as Voice firewall which has largely been discontinued.

Pol On Public Internet: Also in many parts of the world IP Based Interconnections are done over Public Internet (P2P Circuits/MPLS being the current accepted practice in India). This will remove the lead time in establishing Pol's as circuits outing/ordering can be avoided. This should be allowed based on Mutual agreement between operators.

Q6. (a) Should IP-based interconnection be mandated for new interconnections in the regulatory framework? Kindly justify your response.

Reference B Extract from Draft Rules: 35 (3) (b). *that interconnection and peering, as required, with the telecommunication networks of another NSO, is established on IP interface for carrying IP based traffic, as per the standards, including those notified under section 19 of the Act: **Provided that a NSO shall convert circuit switched traffic to IP based traffic before sending circuit switched traffic to the telecommunication networks of another NSO.***

ZooM Response to Q6(a): YES. For new operators SS7 suppliers are limited and even if available are not being approved by Trusted Authorities, leaving **IP based Interconnection as the only viable option. New framework should mandate IP Interconnections only as proposed in draft rules.**

(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.

ZooM Response to Q6(b): YES within a window of 3 years. PSU operator may be provided CAPEX support from Govt/DBN to accelerate to migration.

Q7. Should the existing processes of 'provisioning and augmentation of ports at POIs' under Chapter IV of the TIR 2018 in respect of following need revision:

- i. Seeking of ports at POIs,*
- ii. Request for initial provisioning of ports, and*
- iii. Request for augmentation of POIs? Kindly provide your response with justification.*

ZooM Response to Q7: To be continued as before

Q8. 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.

ZooM Response to Q8: To be continued as before



Kindly indicate challenges, if any, currently being faced in the implementation of the framework by the TSPs and their possible remedies. Kindly provide your response with detailed justifications.

Zoom Response: Since signing our first Access License Agreement, **it has taken between 1 ½ year to 2 ½ years to establish IP Pol's at 6 Circles. Our recent decision to add 3 more circles by establishing IP Interconnections with other operators will take 1 full year to execute.**

Remedy Proactive Monitoring by TRAI to Support New Operators: Annexure 2: (Courtesy RingCentral Pre Consultation Response Dt 23 APRIL 2025 Page 2) Extract Quoted Below:

The Authority had foreseen the likely resistance towards a new entrant and thus, issued the regulations to counter such resistance by prescribing the timelines within which an interconnection agreement must be executed. However, in practice, the regulations on the interconnection timelines have been and continued to be flouted gravely. It is not practical for a new entrant to raise these complaints before the Authority as it not only affects the long-term relationship between the TSPs but also because providers' actions to delay interconnection appears to be an industry norm.

We, therefore, are of the view that Authority may consider instituting a mechanism for ongoing monitoring of interconnection requests made between service providers and adherence to the mandate that agreements be executed within 30 days of request submission. Further, Authority may also consider prescribing timelines for on ground implementation of interconnection and monitor it as well.

It is suggested that Authority may:

- i develop a reporting system for logging all interconnection requests along with their status updates.*
- ii regularly monitor timelines for interconnection compliances.*
- iii publish periodic compliance reports highlighting adherence by different operators.*
- iv impose appropriate deterrents in cases of unjustified delay.*
- v This proactive approach will help in timely resolution of interconnection issues, foster a more cooperative telecom ecosystem in line with the TRAI's objectives, and I ensure greater transparency, accountability, and compliance with the existing interconnection regulations and guidelines issued by TRAI*

Q9. 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. **NO RESPONSE**

Q10. 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.

ZooM Response to Q10: Once there is an alternate path for calls based on new regulations there is no need to maintain these idle PIs should be shutdown without costs to either party.

Q11. 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.

ZooM Response to Q11: One operator is misinterpreting TRAI guideline of Eight Lakh calls per E1 by applying the highest call rate (All 8 lakh calls were assumed to be 1860 under International Roaming). Demands have been made at 34 Lakhs per E1 which is not intent of TRAI, which has been reduced to a reasonable level after many rounds of negotiations. We repeatedly face this issue at every circle and delays PI commissioning.

Q12. 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.

ZooM Response to Q12: NO RESPONSE

Q13. 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.

ZooM Response to Q13:

Operators who delay Interconnections beyond TRAI stipulated times should be mandated to transit calls through other operators at their cost until PI is established.

A.2. The Short Message Services (SMS) Termination Charges Regulations, 2013

Q14. 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.

ZooM Response to Q14: P2P SMS If voice calls are under 0 IUC for 5 last years, similarly 0 IUC should be extended to P2P SMS going forward. **For A2P SMS NO CHANGE.**

Q15. 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.



ZooM Response to Q15: YES the lack of any guideline has prevented NLD operators from offering SMS carriage as a NLD service which will enable new operators to use for quick roll out of messaging services. The current SMS rate of 2 Paise may be considered as tariff for NLD carriage.

SMS (P2P Messaging) On IP: While we are thankful to all operators to offer IP Based Voice Interconnection, we are unable to make any progress on IP Based Interconnection for P2P Messages. SMS seems to have strong ties to SS7 and as a new operator we prefer IP Based Interconnection. Worldwide the accepted trend is RCS for IP based messaging for Interoperator messages P2P messages. We request Authority to support a time bound implementation by all operators or preferably through a NLD operator.

A.3. Intelligent Network Services in Multi-Operator and Multi-Network Scenario Regulations, 2006

Q16. 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.

ZooM Response to Q16: The current settlement rates are outdated, and Authority need to analyse this in a separate consultation paper or through an engagement with all operators. The settlement rates are in the range of 50 to 76 paise. Some operators offer international calls to few popular countries at these rates.

Q17. 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.

ZooM Response to Q17:

India Toll Free Numbers (IN Services 1800/860) While India IN Services are Access services in nature due to historic reasons are viewed as NLD services for Interconnection purpose. While we have no issues with operators in the **6 Circles**, where we have established Access Interconnections, we are facing challenges in receiving calls from other operators **from the other 16 circles where we are not present**. The issue can be addressed by having a regulation prescribing an additional settlement fee for calls from other circles to cover carriage cost. The current settlement rates are outdated, and Authority need to analyse this in a separate consultation paper or through an engagement with all operators. **1860 call types & SMRs split billing** should be relooked as it is outdated.

International Toll Free Numbers (000 800): We are unable to complete calls when our customers dial 000 800 numbers. Our attempts to resolve this issue in the last 6 months with all operators has produced limited results. There seems to be lack of Information of codes allocated/used, process & procedure from all quarters. This is essentially an Access service which is viewed as ILD service. Request Authority to



analyse this in a separate consultation paper or through an engagement with all operators and Licensor.

A.4. TRAI (Transit Charges for BSNL's Cell One Terminating Traffic) Regulations, 2005

Q18. 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.

Zoom Response to Q18: It has outlived its purpose. Current BSNL architecture does not justify levying of these charges.

A.5. The Telecommunication Interconnection Usage Charges Regulations, 2003

Q19. 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.

Zoom Response to Q19: All 3 categories of calls are under 0 IUC regime. Carriage charges need to be revised downward based on current rates when using NLD operators. In the spirit of One Nation when handing off calls using Regional/National Interconnects between Access Operators, even carriage should be considered to be 0 for bi directional traffic (IUC is currently 0).

Q20. 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?

Zoom Response to Q20: While MTNL has adopted a fair and transparent methodology by charging for emergency services on a per call basis, BSNL impose excessive annual charges for these services, in addition to per-call charges. The annual fees should be dropped, and per-call charges should be adjusted.

Q21. 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.

Zoom Response to Q21: As this is an International issue covering relationship with many countries request that this topic to be taken in a separate consultation paper. Request Authority to close out on domestic Indian Operator Interconnection issues and ITC can be taken up later.

Q22. 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.

ZooM Response to Q22: As IUC is 0 it allows one operator give aggressive discount and gain business and pump calls into another network. A regime like A2P SMS can be considered to prevent misuse.

A.6. The Telecommunication Interconnection (Reference Interconnect Offer) Regulations, 2002

Q23. 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.

ZooM Response to Q23: A fresh document incorporating outcome of this consultation should be made and discontinue references to old regulations.

Q24. 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.

Requirement of number of Interconnections should be viewed as function of traffic not circle based:

- A. PSU Operators: who had dominant market share at the time of deregulation and market share has reduced.
- B. SMR Operators (SMR-Significant Market Reach).
- C. Old LMR Operators (LMR-Limited Market Reach).
- D. NEW LMR Operators (Emerging Operators with limited Market Reach).

Q25. Should the publication of Reference Interconnect Offers (RIOs) on the websites of Telecom Service Providers (TSPs) be mandated? Kindly justify your response.

ZooM Response to Q25: YES, it will increase transparency.

A.7. The Telecommunication Interconnection (Charges and Revenue Sharing) Regulations, 2001

Q26. 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.



Q27. 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.

A.8. Telecommunication Interconnection (Port Charges) Regulations, 2001 and Its Amendments

Q28. 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.

Zoom Response to Q28: It should be made technology neutral using concurrent calls as metric.

Q29. 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.

Zoom Response to Q29: YES it can be made uniform. The differentiation between types of calls is artificial and not relevant in current architectures & technology.

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.

Q30. 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.*

ZooM Response to Q30: Erlang remains a relevant metric even in IP based Voice Interconnections based. G711 bandwidth requirements should be used when calculating concurrent calls for IP Interconnections.

A.9. The Register of Interconnect Agreements Regulations, 1999

Q31. 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.*

ZooM Response to Q31: Submitting by Email should be sufficient. Also as agreements are wet signed it is delaying the signing process making the scanned copy bulky to send by email and are not text readable or searchable. Digitally signed agreements are small in size and text readable/searchable.

B. Generic Questions pertaining to all existing interconnection regulations

Q32. 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.

ZooM Response to Q32: YES financial disincentives for interconnection should be imposed Suo Motto by Authority by seeking quarterly reports from operators.

Q33. 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.

ZooM Response to Q33:

- a. **New agreement formats should be made available by operators within 90 days of publishing new framework.**
- b. **Additional 60 days for signing.**
- c. **New Interconnections can be built based on new framework thereafter.**

- d. Existing working Interconnections can continue to work for 1-3 years and migrated to new framework/technology in the intervening 1-3 year period.

Q34. 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

ZooM Response to Q34: UL GMPCS 4.1 for Voice calls: *Direct interconnectivity between licensed GMPCS Operator and any other Telecom service provider is permitted for the purpose of only terminating traffic of each other. (This may be interpreted as a National, Single Interconnection with each TSP in the country is sufficient). As Internet Telephony Service also has National coverage and less traffic, we request parity with GMPCS i.e, Single National Interconnection with each TSP.*

Q35. 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.

ZooM Response to Q34: NO RESPONSE

Q36. Kindly mention any other challenges or concerns related to the regulations being reviewed in this consultation paper.

ZooM Response to Q36:

- A. International Toll Free Numbers (000 800):** We are unable to complete calls when our customers dial 000 800 numbers. Our attempts to resolve this issue in the last 6 months with all operators has produced limited results. There seems to be lack of Information of codes allocated/used, process & procedure from all quarters. This is essentially an Access service which is viewed as ILD service. Request Authority to analyse this in a separate consultation paper or through an engagement with all operators and Licensor.
- B. Digitally Signed Agreements:** Current process practiced is wet signed agreement. This is delaying the signing the process and the scanned copy are not readable or searchable. Digitally signed agreements are small in size and text readable/searchable. **Digitally Signed Agreements should be mandated on the new framework (which can be easily shared over email to TRAI).**
- C. Circuit Pricing For Interconnection:** Being a small operator using low bandwidth we place order with the respective operators.

- i. Two operators have offered reasonable fair price for circuits
- ii. Two operators start at high price for circuits and reduce prices after multiple rounds of negotiations which delays Pol's.
- iii. One Operator is using a decade old list price. This operator offers 50% to their smallest customers but insists on 100% list price from us as we are considered competitors as in their view we don't deserve discounts/market rates offered to their other small customers whose annual billing is less than our annual billing.

Request Authority to have some form of regulation for circuit pricing for Pol/Interconnections.

D. Pol On Public Internet: In many parts of the world IP Based Interconnections are done over Public Internet (P2P Circuits/MPLS being the current accepted practice in India). This will remove the lead time in establishing Pol's as circuits outing/ordering can be avoided. This should be allowed based on Mutual agreement between operators.

Thanking You,
For and on behalf of ZVC INDIA PRIVATE LIMITED (Licensee)

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Annexure 1 Page 15: RJIL's JIO comments on TRAI's Pre-Consultation Paper Dt 23APR2025, Page Numbered 7 (Physical Page 8)

Annexure 2 Page 16: RingCentral Pre Consultation Response Dt 23APR2025
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recommendation of the Authority to introduce a national level Unified Service authorisation has been accepted by the DoT, as per TRAI response to back reference to Recommendations on the Framework for Service Authorisations to be Granted Under the Telecommunications Act, 2023 dated 28th February 2025. With this impending implementation along with the fact that domestic IUC charge has already moved to Bill and Keep (BAK), **it would be prudent to upgrade the interconnection levels beyond LSA level and consider centralized and unified POIs.**

28. Our proposal for a model centralized IP based interconnection framework is provided in following paras.

- a) **Centralized POI** – The interconnection will be migrated to flat architecture with one centralized connectivity supporting all type of traffic with following features.
 - (i) POI will be established only once and there is no need for re-ATP with capacity addition at either side.
 - (ii) No LSA based restriction for Offnet traffic handover between operators.
 - (iii) Optimal capacity utilization and capacity addition can be managed in near real time.
- b) **100 % IP based Interconnection** – This will remove all challenges linked with legacy TDM interconnect and facilitate to introduce enhanced new services between operators.
- c) **Multi Path resiliency** – 4 regional Interconnect POP locations for IP Based Interconnection. Each POP location will have primary and secondary media path. This will enable multi path resiliency like data traffic interconnects.
 - (i) All offnet outgoing traffic will be handed over to B Party operator at nearest IP POP location and further routing will be handled by terminating network. In case nearest path is down than remaining 3 paths can be used for traffic routing.
 - (ii) SBC will be in pool and traffic distribution along with resiliency will be managed by respective operator.
- d) **Emergency traffic handling** – All Emergency traffic in all states needs to migrate to PSAPs with redundant connectivity provided to all TSPs without any dependence on BSNL.
- e) **Charges** – The TSP will be responsible to bear the infrastructure cost of its outgoing traffic till the POP and its incoming traffic from the POP and there will no other charges levied by one operator on another.

RingCentral's Response to the Pre-Consultation Paper on Review of existing TRAI Regulations on Interconnection matters dated April 3, 2025
(Consultation Paper No. 2/2025)

1. Monitoring adherence to prescribed Timelines for Interconnection

RingCentral has faced significant delays in building out its Indian network due to an overall lack of adherence to prescribed timelines for interconnection. As TRAI is aware, RingCentral had immense difficulty in getting service providers to execute interconnection agreements since it received its Unified License in August 2021. Post issuance of additional authorisations in October 2024 to RingCentral, it once again faced and is continuing to face similar unexplainable delays with certain providers in attempting to secure amendments to the agreements for addition of new circles. Once agreements are signed, providers continue to delay in interconnecting their networks. This has led to an inordinate delay in the launch of RingCentral services with limited network coverage resulting in significantly hampering its business interest. These practices not only discourage foreign players stifling investment opportunities but also undermine India's standing in the international market.

The Authority had foreseen the likely resistance towards a new entrant and thus, issued the regulations to counter such resistance by prescribing the timelines within which an interconnection agreement must be executed. However, in practice, the regulations on the interconnection timelines have been and continued to be flouted gravely. It is not practical for a new entrant to raise these complaints before the Authority as it not only affects the long-term relationship between the TSPs but also because providers' actions to delay interconnection appears to be an industry norm.

We, therefore, are of the view that Authority may consider instituting a mechanism for ongoing monitoring of interconnection requests made between service providers and adherence to the mandate that agreements be executed within 30 days of request submission. Further, Authority may also consider prescribing timelines for on ground implementation of interconnection and monitor it as well.

It is suggested that Authority may:

- (i) develop a reporting system for logging all interconnection requests along with their status updates.
- (ii) regularly monitor timelines for interconnection compliances.
- (iii) publish periodic compliance reports highlighting adherence by different operators.
- (iv) impose appropriate deterrents in cases of unjustified delay.

This proactive approach will help in timely resolution of interconnection issues, foster a more cooperative telecom ecosystem in line with the TRAI's objectives, and ensure greater transparency, accountability, and compliance with the existing interconnection regulations and guidelines issued by TRAI.

2. Regulate IP Interconnection and related charges

At present, the interconnection regulations primarily cover TDM interconnection in its scope. However, over the period, the technology has significantly evolved, and most interconnections now are preferred over IP.