



12<sup>th</sup> December 2016

**Shri Arvind Kumar**  
**Advisor - (BB&PA)**  
Telecom Regulatory Authority of India  
Mahanagar Doorsanchar Bhawan  
Jawahar Lal Nehru Marg  
(Old Minto Road)  
New Delhi – 110002

**Subject: Consultation Paper on "Review of the Regulatory Framework for Interconnection"**

Dear Sir,

This is in reference to your Consultation Paper No. 22/2016 dated 21<sup>st</sup> October 2016 on "**Review of the Regulatory Framework for Interconnection**".

As desired, we hereby enclose our response to the questions raised in your above mentioned Consultation Paper. We hope our response will be given due consideration. We shall be obliged to address any further queries from your good office in this regard.

Thanking you and assuring you of our best attention always.

Yours sincerely,

  
**Satya Yadav**  
**Addl. Vice President – Corporate Regulatory Affairs**  
**Tata Teleservices Limited**  
**And**  
**Authorized Signatory**  
**For Tata Teleservices (Maharashtra) Limited**

Encl: As above

**TATA TELESERVICES LIMITED**

2-A, Old Ishwar Nagar, Main Mathura Road, New Delhi 110065

Tel: 91-11-66558666, 66558555 Fax: 91-11-66558908, 66558909 website: www.tatateleservices.com

Registered Office: 10th Floor, Tower 1, Jeevan Bharati, 124 Connaught Circus, New Delhi-110001

CIN - U74999DL1995PLC066685 E-mail: listen@tatadocomo.com



**TTL response to Consultation Paper on**  
**Review of the Regulatory Framework for Interconnection**

**Q1:** Which amongst the following is the best option to ensure fair, reasonable and non-discriminatory terms and conditions of interconnection agreement between telecom service providers (TSPs), in view of the technological, market, licensing, regulatory and legal developments in the telecommunication services sector in India since 2002?

(i) To amend the Telecommunication Interconnection (Reference Interconnection Offer) Regulation, 2002 taking into consideration the technological, market, licensing, regulatory and legal changes since the year 2002;

(ii) To prescribe a Standard Interconnection Agreement, which must be entered into between interconnecting TSPs, in case they are unable to mutually agree on terms and conditions of interconnection agreement between themselves in a specified time-frame;

(iii) To prescribe only the broad guidelines based on fair, reasonable and non-discriminatory principles and leave the details of the interconnection agreement to be mutually decided by the interconnecting TSPs in a time-bound manner; or

(iv) Any other method.

Please provide justification in support of your response.

**A1:** In the view of technological, market, licensing, regulatory and legal developments in the telecom sector in India since 2002, it is vital to have fair, reasonable and non discriminatory terms and conditions of interconnection agreement between telecom service providers to be in place. It is suggest that TSPs should mutually agree on the terms and conditions of the interconnection agreement within a pre-defined time frame.

In cases where the TSPs fail to mutually agree on the terms and condition of the interconnect agreement, TSPs should be mandated to sign-off the Interconnection agreement as per the standard template issued by the Authority, with some basic



minimum but feasible essentials and which do not otherwise impact the bilateral spirit of the mutual agreement.

Once techno-economically feasible, the agreement may be formally signed-off by the TSPs within the time frame as suggested by the Authority.

It is requested that the Authority to freeze the interconnection agreement / guidance in consultation with all TSPs & mutual agreement of all.

**Q2: Whether existing interconnection agreements should also be allowed to be migrated to the new framework which will come out as a result of this consultation process?**

**A2:** TTL is of the view that both - Interconnection Provider and Interconnection Seeker should mutually agree to the terms and conditions of Interconnect agreement. TTL does not recommend forced migration of existing interconnection agreements to the new frame work, hence, the migration to the new interconnect frame-work should be flexible and should be done with mutual consent of the involved TSPs.

**Q3: What should be the time-frame for entering into interconnection agreement when a new TSP with a valid telecom license places a request for interconnection to an existing TSP?**

**A3:** The Telecommunication Interconnection (Reference interconnection Offer) Regulation, 2002 does not specify any time frame for the interconnecting parties to enter into an agreement. TTL suggests that the maximum time frame for entering into an interconnection agreement between the TSPs should be 90 days after the Licence issued by Department of Telecommunication.

The time frame for the agreement sign-off should begin after producing necessary documents as prescribed in Q4 and also the Interconnection Seeker makes due payments to establish Interconnection with the Interconnection provider.

It is also suggested that window for entering into the Interconnection agreement through mutual consent and thereafter through the template prescribed by the Authority, within 90 days, as suggested in A1, can be decided by the Authority in consultation with all TSPs.



**Q4:** Which details should a new TSP furnish while placing request for entering into interconnection agreement? Please provide detailed justification in support of your response.

**A4:** A new TSP should furnish the following details while placing request for entering into an interconnection agreement:

- i. Traffic projections for at least 2 years which would be applicable only after the launch of commercial traffic
- ii. No. of E1 ports required
- iii. Anticipated date of commercial traffic
- iv. Minimum guaranteed requirement and progressive one as mentioned at (i) above
- v. NDA (Non Disclosure Agreement) to be signed off before entering into actual interconnection agreement.
- vi. Copy of licence agreement issued by the Competent Authority to be shared by seeker to provider.
- vii. Company registration along with power of attorney from board of directors authorizing any billing or legal disputes.
- viii. Proposed POP Locations, Point Code allocation letter from DoT, Numbering Plan/levels allocation letter.

**Q5:** Should an interconnection agreement between TSPs continue to operate if an interconnecting TSP acquires a new license upon expiry of an old license? Alternatively, should fresh agreements be entered into upon specific request of either party to the interconnection?

**A5:** TTL is of the view that, in case of interconnecting TSP acquires a new license on expiry of the old license, the interconnecting TSPs should enter into a fresh agreement upon request of either party of interconnection. This practice will help in maintaining fair play in the changing telecom market. This will also help the authorities to document & record agreements under fresh licence.

**Q6:** Whether it is appropriate to mandate only those TSPs who hold significant market power (SMP) in a licensed service area to publish their Reference Interconnect Offers (RIOs)? If yes, what should be the criteria for reckoning a TSP



as SMP? If no, what could be the other approaches to streamline the process of interconnection in a fair, reasonable and non discriminatory manner?

**A6:** According to the present definition of SMPs under the Telecommunication Interconnection (Reference Interconnection Offer) Regulation, 2002, a TSP shall be deemed to be an SMP, if it holds 30% of the total 'activity' in the licensed area. This definition of SMP does not hold practical and feasible in the current Indian Telecom market.

TTL has suggested in Q3, that the TSPs should enter into Interconnection agreements within the specified time frame of 90 days either through mutual consent OR through the Interconnection Agreement Template prescribed by the authority, the concept of SMP and RIO will be eliminated.

**Q7:** Whether there is a need to continue with the present concept of interconnection seeker/ interconnection provider? If yes, what should be the criteria?

**A7:** Interconnection Agreement between Private TSPs defines the TSP as Interconnection seeker only for the period of 2 years, after which all future costs of Interconnection, is shared between these TSPs. However, the Interconnection agreement between the Private TSP and Public Sector TSP are signed in perpetuity and a Private TSP always remains as a seeker, irrespective of the magnitude of the traffic.

In view of the above, it is suggested that the all Private and Public Sector TSPs should come under a common concept of interconnection seeker and interconnection provider. Current concept of Interconnection seeker and interconnection provider between the private TSPs should be replicated with the Public Sector TSPs as well, with an objective of bringing uniformity in the interconnection concept of provider and seeker.

**Q8:** Whether there is any need to review the level of interconnection as mentioned in the Guidelines annexed to the Telecommunication Interconnection (Reference Interconnection Offer) Regulation, 2002? If yes, please suggest changes along with justification.

**A8:** Currently Public Sector TSPs takes over calls from private TSP at the nearest point, after which they carry the call themselves and levy carriage charges on Private



TSP. It is recommended that the Private TSPs are allowed to carry to the call to the farthest point designated towards the Public Sector TSP.

**Q9:** In case interconnection for Inter-circle calls to fixed-line network continues to remain at Short Distance Charging Area (SDCA), should alternate level of interconnection be specified in cases of technical non-feasibility (TNF) at SDCA level?

**A9:** TTL suggests that interconnection choice at SDCA or LDCA, at the convenience of the seeker and no carriage charge within the circle call termination. The alternate PoI may be at LDCA with no carriage charge for terminating the call in any SDCA within the LDCA.

**Q10:** What should be the framework to ensure timely provisioning/ augmentation of E1 ports? Please provide full framework with timelines including the following aspects:

- (a) Minimum number of E1 ports for start of service;
- (b) Maximum time period for issuance of demand note by the interconnection provider;
- (c) Maximum time period for payment for demanded E1 ports by the interconnection seeker;
- (d) Intimation of provisioning of requested E1 ports by interconnection provider;
- (e) Space allocation for collocation of transmission equipment;
- (f) Maximum time period for establishment of transmission links by the interconnection seeker;
- (g) Maximum time period for acceptance testing;
- (h) Maximum time period for issuance of final commissioning letter by the interconnection provider; and
- (i) Maximum time period for start of traffic in the POI after provisioning/ augmentation of E1 ports for which payment has already been made.

**A10:** Considering that the total feasible time is 90 days, it may split as follows:

Point (a) to (f) - 60 Days

Point (g) to (i) - 30 Days

Roles and Responsibilities of the seeker and the provider must be clearly defined and agreed to.



**Q11: Whether augmentation of ports be allowed at higher levels such as STM-1 in place of E1?**

**A11:** Yes!! We would recommend augmentation of ports at higher levels such as STM-1 in place of E1. This would result in lowering down of hardware cost and would also reduce congestion levels.

However, the final decision of augmentation of ports at higher levels should be left on TSPs. Based on usage requirement and quantum both models may be chosen. This again may be lined to minimum traffic guaranteed. To summarise, STM-1 should be the preferred mode, subject to confirmed traffic demand. However for lower traffic requirements, E1s should be used.

**Q12: What should be the criteria to ensure that inflated demand for ports is not made by interconnection seeker?**

**A12:** Clubbed revert for Q12 & Q13

**Q13: In case the interconnection seeker agrees to bear the total cost of equipment required for augmentation in advance, should the interconnection provider give the requested ports irrespective of volume of traffic at POI?**

**A12 & A13:** Depending upon the technical feasibility at Interconnection provider, if the interconnection seeker agrees to bear the total cost of equipment required for augmentation in advance, the Interconnection provider should be able to give the requested ports irrespective of volume of traffic at Poi. However, this has to be time staggered based on the backend capabilities of the provider and related operational matters. The demand from the seeker should be validated by the Traffic Engineering on the assumptions made for forecasting traffic & number of subscribers.

**Q14: Should separate time periods for provisioning of ports be prescribed for – (i) fixed-line networks and (ii) mobile/ IP networks?**

**A14:** TTL is of the view that there is no need to prescribe separate time periods for provisioning of ports for both fixed-line networks and mobile networks. There must be uniformity in time-periods for both the networks, i.e. the wireless and the wire line network. The IP network may further be discussed mutually between the seeker and provider based on technical feasibility. However, all the time frames should be fair, transparent and reasonable.



**Q15: Whether financial disincentive should be imposed on TSPs for-**

- (a) not entering into interconnection agreement within a stipulated timeframe;
- (b) not providing initial POI;
- (c) not augmenting POI within stipulated timeframe;
- (d) for violation of any clause prescribed in the regulations.

If yes, what should be the amount of such financial disincentives?

**A15:** As per recommendation made in A1, A3 & A13, the both interconnection seeker and provider are bound to enter into an Interconnection agreement within a stipulated time and also the interconnection provider provides the required number of POIs to the interconnection seeker, the queries mentioned in Q14 are not applicable.

TTL don't recommend financial disincentives as the recommendations given in A1, A2 and A13 will lead to streamlining of the process of entering into interconnection agreement and augmentation of POI between TSPs.

**Q16: Whether there is a need to have bank guarantee in the interconnection agreement? If yes, what should be the basis for the determining the amount of the bank guarantee?**

**A16:** There is no need to have a bank guarantee in the interconnection agreement between the TSPs as the exposure is limited. However, BGs in case of ILDOs is highly recommended as TSPs are open to high financial exposure in case of ILDOs.

Alternatively, it may be suggested to have a BG for all interconnects be it a NLD, ILD or UASL as this would avoid risks of being exposed to Bad debts. The amount of BGs will be fixed for an initial period of 2 years after start of the service. However BGs after the completion of 2 years can be revoked with mutual consent of both the TSPs.

**Q17: What should be the method to settle Interconnection Usage Charges and how should the delayed payment between TSPs be handled?**

**A17:** The current settlement process is on Gross Settlement between TSPs, this is abided by the Principle agreement between the operators where the clause of interest on late payment is already present. However majorly the settlement





happens within the same month other than any disputed amount, which then gets in reconciliation mode for finally settling the amount.

**Q18:** Whether interconnection and interconnection agreement should be service-specific or service-agnostic (i.e. a TSP can send any type of traffic on a point of interconnection which is allowed under the terms and conditions of the license given to it)? What are the advantages/ disadvantages of having service specific POIs when the TSPs are equipped with call data record (CDR) based billing systems?

**A18:** Since the current Interconnect settlement between the TSPs is done on the basis of CDR, having service specific Poi is not required. However, it needs to be evaluated if separate indicators of wireless & wireline calls between TSPs are available in the CDRs used for doing interconnect settlement.

**Q19:** If POIs are merged together, what methods of discovery, prevention and penalization of any traffic manipulation by TSPs (whereby higher IUC traffic is recorded as lower IUC traffic in the CDR of the originating TSP) should be put in place?

**A19:** Currently billing logic level identification available for wire-line/wireless calls routed on the same POI with TSPs, but service specific identification is done through specific POIs for ILD/NLD/UASL calls. TTL is of the view that Service Identification in the CDR is required if merging of POIs is suggested.

If POIs are merged together, traffic can be reconciled with originating and terminating number level vis-à-vis type of traffic for which the POIs have been augmented for. Also any sudden abnormal variation in volume of traffic, depending on the pre-defined rules, can help identification of manipulation of traffic.

Merger of POIs should be done only after due testing between the involved TSPs and through a formal agreement. Prevention of manipulation of traffic on the merged POIs can be done by adoption of a standard protocol implementing number level controls, which can act as an Identifier of terminating traffic on the POIs.

TTL suggests that penalization of the manipulated traffic on the merged POIs should be at the highest rate of the call routed via the POI.



**Q20:** Which policy and regulatory measures are required to be taken to encourage TSPs to migrate to Interconnection at IP level? What should be the terms and conditions for inter-connection at IP level?

**A20:** TSPs are operating on legacy networks. Migration of Interconnection to IP level will lead to huge costs to the incumbents, hence decision migration to IP networks should be left with the operators and should not be mandated

**Q21:** Whether there is a need to establish a framework for Interconnect Exchange to eliminate bilateral interconnection issues?

**A21:** Recommendations made in A1, A3 and A13 eliminates the bilateral interconnection issues between the TSPs. A separate framework of setting up Interconnect Exchange is not required.

**Q22:** Is there any need for a separate framework for Interconnect Exchanges in view of the fact that the new NLDO authorization permits transit traffic to be carried over by NLDO?

**A22:** Same as above

**Q23:** Whether access providers should be allowed to transit intra-circle calls?

**A23:** The Access Service Provider could be allowed to transit intra-circle calls. However, this may have various pros and cons listed below besides some others.

**Pros:**

- 1) CAPEX/OPEX savings for low traffic interconnects
- 2) Better user experience for congested Pops
- 3) Alternate routing during emergencies

**Cons:**

- 1) Routing and Billing complexities

In light of above, this topic needs further study,

**Q24:** Under what circumstances, a TSP can disconnect POIs? What procedure should be followed before disconnection of POI?



**A24:** TTL suggests that the POIs can be disconnected under the following circumstances:

- Change of location of the MSS and other relevant Network equipments
- Based on under utilization of capacities and bandwidth
- Payment disputes not settled within stipulated time
- Violation of license conditions
- Mutual agreement
- Business reason(s)/closure

**Q25:** Is there a need to have a coordination committee to facilitate effective and expeditious interconnection between TSPs? If yes, who should be the members of the co-ordination committee? What should be the overall operating framework for the committee?

**A25:** The recommendations given in the CP would lead towards streamlining the process of entering into Interconnection Agreement and Augmentation of POIs. Considering this there is no requirement of setting up of a coordination committee to facilitate effective and expeditious interconnection between TSPs. However, further discussion can be done on the following:

**Regarding Technology:**

- 1) No penalties should be levied by Public Sector TSPs for wrong call routing.
- 2) No charges should be levied for surrendering/shifting of POIs with Public Sector TSPs.
- 3) Public Sector TSPs shall be considered at PAR with Private TSPs.

**Regarding Billing:**

- 1) In the current scenario, where legacy data is being requested for Invoice dispute reconciliations either by Operator or Legal Authorities, hence there should be mutually agreed time limit to be fixed between Operators. i.e., data availability with IT or respective departments to be fixed for a previous period of not greater than 5 years and should be made applicable for both Voice and SMS

**Regarding Revenue Assurance:**

- 2) There should be a clause in the interconnection agreement on how the standard protocols to be followed at NW signalling and traffic routing level. Penalisation clause on violation of the technical protocols also to be included.



**Q26: Is there any other relevant issue which should be considered in the present consultation on the review of regulatory framework for Interconnection?**

**A26: TTL suggests considering introduction of Standard Protocols in Interconnection Agreement which should be followed by all TSPs at network signalling and traffic routing level. Penalisation clause on violation of these standard protocols should also to be introduced.**