



PB/VIL/94
12th December 2016

Shri Arvind Kumar,
Advisor (Broadband & Policy Analysis)
Telecom Regulatory Authority of India
Mahanagar Door Sanchar Bhawan
Jawahar Lal Nehru Marg (Old Minto Road)
New Delhi-110002

Dear Sir,

Sub: Vodafone Response to TRAI Consultation Paper on Review of the Regulatory Framework for Interconnection dated 21 October 2016

Please find attached Vodafone's response to the Authority's Consultation Paper on Review of the Regulatory Framework for Interconnection dated 21 October 2016.

We hope that our submissions will merit your kind consideration and support.

Warm Regards

A handwritten signature in black ink, appearing to read 'P. Balaji'.

P. Balaji
Director – Regulatory, External Affairs & CSR
Vodafone India Ltd

Encl:

Vodafone India Limited

7th Floor, DLF Center, Sansad Marg, New Delhi – 110 001, India. F +91 11 71710767
Regd. Off.: Peninsula Corporate Park, Ganpatrao Kadam Marg, Lower Parel, Mumbai – 400 013
T +91 22 7171 5000, F +91 22 2496 3645, Website: www.vodafone.in



Vodafone Response to TRAI Consultation Paper on Review of the Regulatory Framework for Interconnection dated 21 October 2016

A. PRELIMINARY SUBMISSIONS

1. We are pleased to provide our comments to Consultation Paper issued by Authority on Review of the Regulatory Framework for Interconnection dated 21 October 2016.
2. We acknowledge that availability of effective and expeditious interconnection plays an important role in the growth of the telecommunication services sector.
3. Interconnection agreements are required to be entered into between operators **for interconnection of their networks**. These enable smooth operation of telecommunication services in India. Such agreements need to be entered into between all types of operators such as basic, cellular mobile, national and international long-distance operators. **Interconnection essentially is of the networks to enable telecommunication services across the networks.** We respectfully submit that interconnection is neither connecting services nor equipment other than networks.

A licensee with no network of its own is not eligible to enter into an interconnection agreement. **As per license agreement too interconnection is amongst the networks of Licensees.**

4. We agree with the Authority's statements in the consultation paper that telecommunications networks are intrinsically different from other infrastructure like roads and power because of the network externalities involved. The value of the network to the existing subscribers increases as more subscribers join the network. Interconnection with other networks enhances this value as the number of people a subscriber of this network can call and the range of services it can access increases. Therefore, **interconnection is critical to the telecommunication services. The interconnection framework co-exists with the regulatory framework on other aspects of telecommunication services and the overall regulatory framework has to be adhered to. Interconnection framework cannot be seen in isolation.**
5. We submit that a sound regulatory framework for interconnection must ensure that fundamental principles like reciprocity, cost-based charging, fair and equal terms, network integrity etc. are clearly enunciated therein.



6. The terms of interconnection agreement, which should be pursuant to such framework, must be followed and respected by all parties. A pick and choose approach relying upon one provision but ignoring other provisions must not be allowed. Importantly, the role of regulator is not limited to the number of points of interconnect but is also to see if the type of traffic in such points of interconnection has been agreed to between the parties, if the routing is correct, etc.
7. We would like to highlight that in our expiry Circles, we have approached the TDSAT against the unilateral and one sided interconnection agreements with BSNL/MTNL and have sought reciprocal terms with them. Our submissions and response to this consultation are without prejudice to our pending legal challenge.
8. The present framework is under legal challenge on some of the aspects, which have been mentioned in the consultation paper. Thus, it is imperative that any review should not create another set of challenges or become ineffective due to existing sub-judice matters. A consensus of all stakeholders (including BSNL and MTNL) in this respect is a pre-requisite for any such discussion. Otherwise, our effort so far to achieve reciprocity and fair and equal terms through existing legal action against BSNL and MTNL may get affected. In this respect we draw attention to BSNL's and MTNL's views in the pre-consultation paper (which are also reproduced in the consultation paper by the Authority) which are against any such review. Thus, if BSNL and MTNL continue to hold such view, then we believe that the very objective of the exercise will be defeated. The Regulator must assess on balance, the effectiveness/outcome of its review given that several aspects of the interconnection framework, are under legal challenge. Given our legal challenge against BSNL/MTNL pending in TDSAT, we emphasize that the review should not result in a situation against us where BSNL continues to enjoy unilateral and one sided arrangements.
9. We also most respectfully submit that migration to IP networks and the interconnection related aspects of the same have already been raised in several earlier consultations, where we have maintained that migration to part or full IP networks must be left to choice of the operators, this being a business decision dependent on many factors like availability resources and their use, individual rollouts, investment potential, business model, etc. We have also responded to interconnection related aspects raised in the 2014 consultation on migration to IP based networks, which consultation is yet to be completed.
10. It is submitted that our Interconnection agreements with private operators are based on the Model-RIO issued by TRAI and that no issues have arisen till date on the provisions in the said agreements, which are based on the principles of reciprocity and transparency.



11. The TRAI has also noted in the present consultation that its model RIO is generic in nature, brings forth various principles and elements involved in proper and effective interconnection; the Schedules of the Model RIO Agreement could be modified as per service requirement; mutually agreed charges and other items in the Annexes could also be added as per requirements. This inbuilt flexibility has enabled us to enter into mutually agreed interconnection agreements with private operators based on service requirements, commercial agreements, etc., within the overall laid down framework. We believe that such flexibility needs to be continued with.
12. We believe that basing the requirement to publish an RIO on the concept of SMP may not be practical. The public sector operators are not SMP, but continue to impose unilateral one sided conditions on other operators. We believe that it may be more practical for every operator to publish a generic RIO in conformance with the principles and elements of the regulatory framework laid out by TRAI, with specific agreements on service requirements, commercials, etc., left to mutual agreement between both parties. Further, once agreements are signed, then the issues are governed by the terms and conditions contained therein. Provisions for dispute resolution are also a part of the agreement.

These points form the overall context and basis of our answers to the questions in the consultation paper and we, therefore, request that these points must be considered as part of our replies to the given questions.

B. ISSUEWISE RESPONSE

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.



- a) We believe that this question is confined to the interconnection agreements that may be entered into in future. Whichever method TRAI may decide to prescribe, we request that following principles must get enshrined:
- (i) Interconnection agreements are required to be established between operators for interconnection of their **networks**. A licensee with no network of its own is not eligible to enter into an interconnection agreement. **As per license agreement too, interconnection is amongst the networks of Licensees.**
 - (ii) Needless to say the interconnection agreement has to be pursuant to the terms of the License Agreement.
 - (iii) Lastly, it should be on fair, reasonable, non-discriminatory and reciprocal terms.
- b) Subject to the above, we submit that current framework of RIO Regulations can continue.
- c) **However, we must draw attention to BSNL's and MTNL's views in the pre-consultation paper (which are also reproduced in the consultation paper by the Authority) which are against any such review. Thus, if BSNL and MTNL continue to hold such view then we believe that the very objective of the exercise will be defeated. The Regulator must assess on balance, the effectiveness/outcome of its review given that several aspects of the interconnection framework, are under legal challenge. Given our legal challenge against BSNL/MTNL pending in TDSAT, we emphasize that the review should not result in a situation against us where BSNL continues to enjoy unilateral and one sided arrangements.**
- d) We respectfully submit that present review vis-à-vis reciprocity and fair and equal terms in interconnection agreements to be entered afresh under UL post expiry of the UAS licenses is too late in the day. We were subject to one-sided conditions favouring BSNL/MTNL for last so many years at the time of CMTS/UASL. Therefore, once our license agreements and interconnection agreement got expired, we pursued reciprocity with BSNL/MTNL and also took up the issue with TRAI till 2015. Having seen no outcome on this front, we were left with no choice but to take legal action. We believe that looking at the position taken by BSNL and MTNL position as highlighted in the consultation, it is our respectful view that the matter can be resolved only through the current legal proceedings. We reiterate that **given our legal challenge against BSNL/MTNL pending in TDSAT, the review should not result in a situation against us where BSNL continues to enjoy unilateral and one sided arrangements.**

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?

- a) Any review of the regulatory framework would be applicable on a prospective basis. Any migration, to the new framework will have to be mutually agreed between parties.



- b) Our agreements with private operators are based on mutual agreement and are in conformance with the current interconnection framework under license and regulation. These agreements have been stabilized over the years on a fair and reciprocal basis. In case of our agreements with private operators, where we have agreements in capacity of seeker and well as provider, we do not see that there is a need for migration to a new framework. Any migration, if required, has to be mutually agreed between both parties.
- c) Insofar as BSNL and MTNL are concerned, as submitted above, the fundamental issue lies not in the regulatory framework - but in its acceptance /implementation by BSNL and MTNL, which issue may be difficult to resolve given that various aspects pertaining to interconnection, including the RIO Regulation are under legal challenge. It is our view that it is highly unlikely that BSNL or MTNL will migrate to the new framework and the matters can be resolved only through legal process/proceedings.

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?

- a) We do not believe that this has been an area of concern till date as agreements have been routinely signed and interconnection established amongst operators, including new operators, for the services that are permissible under license.
- b) We reiterate that the establishment of a network by a new TSP should be a pre-condition to placing a request for interconnection with existing TSPs. This is so because interconnection is between networks.
- c) There is only one case, where a new licensee has approached us for signing an interconnection agreement without network being established the said licensee, for so called "internet telephony" where we have shared our views in detail with the Authority. Our written views in this regard are already with the Authority and the same may kindly be read as a part of our response. We reiterate that such new licensee is not eligible for interconnection agreement.
- d) Subject to the above, we have no objection if the Authority prescribes a suitable time to enter into agreement for an eligible new TSP.

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.



- a) We request TRAI to assess whether at all there is a need at this stage, to specify details of information for placing a request for entering into interconnection agreement when the private operators are routinely signing interconnection agreements and establishing interconnection with new TSPs.
- b) We reiterate that for establishment of interconnection, a requisite network has to be established by new TSP and necessary details of the same have to be furnished by new TSP for signing of interconnection agreements. Thus, a list of details for entering into interconnection agreements is not required to be mandated/ regulated and there is no need for any regulatory intervention in this regard.

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?

- a) Since, in our case, the matters (against BSNL and MTNL) are sub-judice, we reserve our comments on this issue and rely upon our submissions before TDSAT. A copy of our petition against BSNL and MTNL in TDSAT will be shared separately with TRAI.

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?

- a) As already submitted above, we believe that basing the requirement to publish an RIO on the concept of SMP may not be practical. The public sector operators are not SMP, but continue to impose unilateral one sided conditions on other operators.
- b) We believe that it may be more practical for every operator to publish a generic RIO in conformance with the principles and elements of the regulatory framework laid out by TRAI, with specific agreements on service requirements, commercials, etc., left to mutual agreement between both parties.
- c) Typically, either party (seeker/provider) seeks/provides a draft of the interconnection agreement to the other party for review. If there are any disagreements, these are discussed between the parties and if such disagreements are not mutually resolved, the aggrieved party can approach either the Regulator or the TDSAT for intervention/resolution. The fact that there have been hardly any escalations inter se private operators to the TRAI or to the TDSAT in the last 10 years or more is evidence of the fact that interconnection agreements are being executed amongst the private TSPs in a fair manner



- d) However, once an agreement has been entered into between parties, then interconnection is governed by the terms of their agreement. Provisions for dispute resolution are also a part of the agreement.

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

- a) Considering the work to be done by existing TSP and to ensure commitment of seriousness from a new entrant, the two year period for which new entrant has to pay for the resources for interconnection is reasonable. Post that the seeker-provider differentiation is not relevant.
- b) We believe the current regulatory approach already takes the above into consideration and should be continued with.

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 alongwith justification.

- a) It is submitted that here again, it is the public sector operators BSNL and MTNL that insist on a multi layered and hierarchical connectivity.
- b) In respect of location of network elements, the Unified License provides as under:

4.5 Location of switches and other network elements

(i) The licensee shall install applicable system within its service area. However, for IP based Next Generation Network, Media Gateway Controller (MGC)/ Soft Switch can be deployed within geographical boundaries of any one of the authorized service area for Access Services or anywhere in the country if the Licensee has authorization for NLD/ILD service also. However, the Media Gateways shall be installed in each service area to perform the function of switching subscriber traffic under the control of MGC for call control.



(ii) The MGC/ Soft Switch and common service support systems such as Intelligent Networks (IN), Billing, Network Operations Center (NOC) or any other equipment specifically permitted by the Licensor, shall be located in a service area where the licensee has Access service authorization or anywhere in the country if the Licensee has authorization for NLD/ILD service also. Location of MGC/ soft switch and common service support systems shall be intimated to Licensor as and when commissioned. In respect of Short Message Service Center (SMSC), it can be installed in any of the service areas where Licensee has authorization of access service.

- c) In any case, the interconnections between access service providers in a service area have to be established within that service area.

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?

- a) We believe that such cases of technical non feasibility would be by way of exception only and may be dealt within the framework of the interconnect agreement only.

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.**

- a) It is first submitted that it is not desirable to adopt an over prescriptive regulatory approach unless the TRAI sees an evident case of market failure.



- b) TRAI may appreciate that any **augmentation is a complex process involving multiple domains like core and transmission**. Capacity augmentation requirements can be in terms of switch ports, a single card in the transmission box or cover an entire ring/network in transmission. The procurement of core and transmission equipment typically takes 6-8 weeks for the order to delivery process and another 2-4 weeks for the justification, ordering, installation and commissioning process depending on whether it's a card level upgrade or a network level upgrade. **Hence the 90 day period provided is reasonable and justified.**
- c) There have been **some demands placed on us recently by a new entrant which have been based on incorrect and inconsistent subscriber and traffic projections**. As the service being offered free for an extended period, the said entrant is not able to forecast/estimate augmentation requirements and thus is making unreasonable and arbitrary demands for augmentation [of about 2.5times number of E1s over and above its earlier forecast for one year, which has still not expired] without any basis or justification. In such cases, **augmentation becomes an even more complex process** since the traffic and subscriber behavior is highly unpredictable and **even the existing 90 days period becomes very tight and puts undue strain on resources, including on the interconnection seeker**. In fact, the TRAI is aware of **instances where augmentation was offered, but could not be timely implemented by the seeker at its end leading to delays by the seeker at its end**.
- d) As submitted above, in the case of the new entrant, we have seen that the forecast of E1 over a full year by the TSP turned out be lesser than the actual requirement due to surge in incoming calls on our networks. We have, **in overall public interest** made all efforts and **E1 augmentation is being carried out by us before the projected time in an expeditious manner disregarding the procedure** laid down in the interconnect agreement. However, it must be appreciated that in such situations, it cannot be the case that the forecast is faulty and the expectation is that the augmentation will continue to be done without following the terms of the agreement.
- e) We believe that the **TRAI should look at the issue in totality and not take regulatory positions/decisions based on exceptional circumstances**.

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

- a) The interconnection at STM-1 cannot be mandated and should be left to mutual agreement between interconnecting parties since the interconnection capacity is done in phases and is need based. Besides, TSPs have made significant investments over a period of time and the market dynamics shall drive the right interface.



- b) Technically, the Switches have either E1 or STM-1 interfaces (and multiples thereof – One card may have 4 or 8 STM-1 Interfaces in Nokia MGW) and higher order Mux is not required / provisioned. The connectivity at STM-1 interface of Switch via the transmission media (which either aggregates or de-multiplexes the capacity into E1s basis the need) is the most prevalent.



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

- a) Even if an inflated demand for ports is made by an interconnection seeker, **the interconnection provider is required to assess the demand as per license provisions, interconnect agreement and prevailing TRAI directions/regulations** on timely provisioning of interconnection **to assess that the demand made is reasonable or not.**

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?

- a) No, **we do not believe that this is a desirable approach.**
- b) Interconnection has to be optimal and efficient and cannot be given carte blanche at the behest of one of the parties. It may be noted that the License states that *"...The Interconnection Agreements will, inter-alia, provide the following: (a) To meet all reasonable demand for the transmission and reception of messages between the interconnected systems*
- c) Hence reasonableness of the demand for interconnection is sine qua non of the license and the interconnection agreements. Accordingly, our interconnection agreements provide for measure traffic on agreed routes busy hours to assess future capacity requirements. Hence, there can be no case for the interconnection provider giving /augmenting ports irrespective of volume of traffic at POI.
- d) We would like to submit that **the interconnection provider is responsible for its own network. As mentioned earlier, there are various dependencies at core and transmission level which also need to be addressed.** Therefore, **interconnection seeker, simply agreeing to bear the cost of augmentation in advance will not address the issue.** The networks are dimensioned on traffic projections and that approach cannot be compromised.
- e) TRAI, if it is prescribing a framework, **must look into all the aspects of overall regulations and cannot see interconnection only in isolation.** We have already written to TRAI about the abnormally high demand of E1s by one TSP, where TRAI has been requested to look into other aspects of overall regulatory framework.

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



- a) As submitted above, any augmentation is a complex process involving multiple domains like core and transmission. Capacity augmentation requirements can be in terms of switch ports, a single card in the transmission box or cover an entire ring/network in transmission. The procurement of core and transmission equipment typically takes 6-8 weeks for the order to delivery process and another 2-4 weeks for the justification, ordering, installation and commissioning process depending on whether it's a card level upgrade or a network level upgrade. **Hence the 90 day period provided is reasonable and justified for mobile networks.**

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?

a) We would first like to submit that :

(i) There is no stipulated time frame for entering into interconnection agreements, nor are we aware of any delay on our part in interconnecting with a new operator.

(ii) Further both initial and additional augmentation is done as per the timelines laid down by TRAI and mutual agreement between the parties.

Further, our interconnection agreements are filed with TRAI and no violation of any regulation has ever been highlighted by TRAI till date. Rather, we are scrupulously following the provisions of our license and the directions, regulations and orders issued by TRAI from time to time.

b) Hence, we are unable to appreciate the basis on which such an issue related to imposition of financial disincentives is being raised in the consultation.

c) As submitted above, the establishment of a network by a new TSP should be a pre-condition to placing a request for interconnection with existing TSPs. This is because interconnection is between networks. Subject to the above, TRAI may prescribe a suitable time to enter into agreement for an eligible new TSP.

d) Once an agreement is signed, then the interconnection will be governed by the provisions of the agreement between parties, which will also include provisions for dispute resolution.

e) In view of the above, there is no need for any regulatory intervention on either time period for provisioning of ports or financial disincentives.



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?

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

- a) There are already detailed payment and settlement provisions in our interconnection agreements with private operators, including for delayed payments on a fair and reciprocal basis. We do not see any need for any regulatory intervention in this regard.
- b) In respect of BSNL and MTNL, due to the inability of the TRAI to apply and enforce reciprocal terms and conditions, we have now approached the TDSAT to address our concerns.

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?

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?

- a) We submit that interconnection and interconnection agreements have always been service specific and should continue to be so.
- b) Interconnection is about commercial and technical arrangements amongst operators and as long as these commercial and technical conditions are based on the type of service, they cannot be a case of service agnostic interconnection.
- c) The routing, numbering, IUC charges, etc are also all service specific and any attempt to have service agnostic interconnection would result in misuse and arbitrage. Some of the examples of recently seen mis-use for which we have informed TRAI time and again are as follows:
 - (i) The TRAI is aware of an operator's attempt in April 2016 to pass off international roaming call as a fixed line local call – under its so called Fixed Mobile Telephony service;
 - (ii) The TRAI is aware that a new entrant is attempting to offer so called internet telephony using its fixed line numbering series to take advantage of nil termination charges to/from fixed line; and



(iii) The TRAI is aware that another operator is stating that it can offer internet telephony using its mobile numbering series and the bearer of another access provider as part of Cellular Mobile Telephony Services. We have also informed TRAI about wrong routing by such operator.

Thus, service-agnostic cannot mean that services which are not permitted or which are illegal, can be given and such traffic can be sent to other operators through interconnection. We would like to rely upon all the correspondence on the above issues we have shared with TRAI [which may be read as a part of our response] and would request that in the interest of transparency TRAI should address the issues raised by us.

d) We note that TRAI itself recognizes the possibility of manipulation and hence it is not desirable to create a problem and then introduce measures to resolve the same.

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?

a) As submitted above, we reiterate that migration to IP networks and the interconnection related aspects of the same have already been raised by TRAI in several earlier consultations, where we have maintained that migration to part or full IP networks must be left to choice of the operators, this being a business decision dependent on many factors like spectrum availability and use, individual rollouts, investment potential, business model, etc.

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

a) It is first submitted that historically, regulation and license has required operators to interconnect on a peer-to-peer basis for voice and SMS. We believe that this approach is also desirable/preferable because on the interconnect links, the primary application/service is voice which is highly sensitive to latency on network and non-direct interconnects will not permit an operator to guarantee and maintain end-to-end QoS.

b) Public peering/exchange will mean a common point of exchange for traffic which will require high redundancy to prevent the significant risk of complete telecom network paralysis in case of collapse/failure. Such an exchange will have to be set up by a neutral third party as otherwise, it could lead to competition issues. There will also be several other issues that will arise in such a scenario such as cost of connectivity and payouts to the exchange, guaranteed QoS with the exchange, use of the exchange for pure traffic routing or additionally as settlement clearing house, etc and will lead to wastage of existing investments undertaken by TSPs



- c) Direct inter-operator interconnection facilitates controls with respect to calls allowed and dis-allowed – whereas through interconnect exchanges these controls will be lost.
- d) Further, extensive hierarchy of interconnection at huge costs, has been established on this basis. We believe that this legacy and investments cannot be disregarded to introduce any de novo arrangements that will only impose a further additional cost burden on operators.
- e) We therefore recommend private peering i.e. direct interconnection amongst operators and there is no need to establish a framework for Interconnect Exchange. License agreement provisions (incl. UL) also provide for direct interconnection as de-facto arrangement.

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?

- a) It is submitted that **carrying transit traffic was also permissible under the earlier NLD license and no new dispensation is available under the new NLD authorization.** Relevant extracts from 2005 license and the authorization under UL are extracted below for ready reference.

NLD-2005	NLD 2013
<p>2.2 (a) The NLD Service refers to the carriage of switched bearer telecommunications service over a long distance and NLD Service Licensee will have a right to carry inter circle traffic excluding intra -circle traffic except where such carriage is with mutual agreement with originating service provider.</p> <p>(b) The LICENCEE can also make mutually agreed arrangements with Basic Service Providers for picking up, carriage and delivery of the traffic from different legs between Long Distance Charging Center (LDCC) and Short Distance Charging Centers (SDCCs).</p>	<p>2.1 (a) The NLD Service Licensee shall have the right to carry inter-circle switched bearer telecommunication traffic over its national long distance network. The Licensee may also carry intra-circle switched traffic where such carriage is with mutual agreement with originating access service provider.</p> <p>(b) The Licensee can also, in respect of Basic Service, make mutually agreed arrangements with the concerned Service Providers for picking up, carriage and delivery of the traffic from different legs between Long Distance Charging Center (LDCC) and Short Distance Charging Centers (SDCCs).</p>

- b) In view of the above and also our submissions in response to Issue 21, we again reiterate that there is no need for any Interconnect Exchanges.

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

- a) We do not understand the context in which this issue has been raised.



- b) The TRAI, in 2003 has stipulated that Direct interconnection between Access Providers is mandatory. For exceptional cases of Intra-SDCA transit, operators may decide the charges through mutual negotiation.
- c) Thus, transit by access providers, has been permitted by TRAI only as an exception and not a rule and we believe that the same should be continued with.
- d) Further, in any event, even for such exceptional cases, such transit should be in agreement and arrangement with both the originating and terminating access provider.

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

- a) TRAI has already prescribed by direction, the process that any TSP needs to adhere to for disconnection of POIs. Vide direction dated 31.12.2003, TRAI has mandated that all TSPs must send POI disconnection notice to the other party at least 10 days in advance, with a copy marked to TRAI. This process is being adhered to by all TSPs (except BSNL and MTNL).
- b) Moreover, interconnect agreements mutually executed amongst TSPs provide for circumstances that may lead to suspension/disconnection of POI.
- c) Some of the reasons warranting disconnection of POI would include Non-payment of dues; wrong routing of calls; tampering of CLI; sending traffic of services not covered under the Interconnect Agreement, etc.

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 coordination committee? What should be the overall operating framework for the committee?

- a) It is first submitted that interconnection agreements are already in place for all the existing operators; further even when there was an onslaught of new entrants in the sector in 2008, interconnection agreements were signed in a timely manner without the presence of any Coordination Committee.

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

- a) The terms of interconnection agreement, which should be pursuant to such framework, must be followed and respected by all parties.



- b) A pick and choose approach relying upon one provision but ignoring other provisions must not be allowed. Importantly, the role of regulator is not limited to the number of points of interconnect but is also to see if the traffic requirements in such points of interconnection has been agreed to between the parties, if the routing is correct etc.

New Delhi
12 December 2016