



RJIL/TRAI/2016-17/1278 A
26th December 2016

To,
Shri Arvind Kumar,
Advisor (BB&PA),
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawahar Lal Nehru Marg,
New Delhi 110002

Subject: Counter Comments on TRAI's Consultation Paper on 'Review of the Regulatory Framework for Interconnection' dated 21.10.2016

Dear Sir,

Please find enclosed herewith Counter Comments of Reliance Jio Infocomm Limited (RJIL) on the submissions made by other service providers on TRAI's Consultation Paper on 'Review of the Regulatory Framework for Interconnection (Consultation Paper No. 22/2016 dated 21st October 2016)'.

Thanking you,
For **Reliance Jio Infocomm Limited,**

A handwritten signature in black ink, appearing to read "Mahipal Singh", is written over a circular stamp.

Mahipal Singh
Authorised Signatory



Enclosure: as above.

RELIANCE JIO INFOCOMM COUNTER COMMENTS ON TRAI'S CONSULTATION PAPER ON
'REVIEW OF THE REGULATORY FRAMEWORK FOR INTERCONNECTION'
(Consultation Paper No. 22/2016 Dated 21st October 2016)

1. At the outset, Reliance Jio Infocomm Ltd ("RJIL") wishes to thank TRAI for initiating this consultation process for revamping the interconnection regulations framework which is essential to keep pace with the evolving technologies and also in the interest of customers and telecom service providers.
2. RJIL has submitted its views and comments on the questions raised by TRAI in the consultation paper vide its letter dated 13.12.2016. RJIL's key comments are summarised below:
 - a) A modern, effective and efficient regulatory framework for interconnection is the need of the hour;
 - b) Interconnect Agreement must be non-discriminatory and must be based on FRAND principles;
 - c) A default Standard Interconnection Agreement must be prescribed, which must be adopted by both parties post a negotiation deadline;
 - d) Timelines and penalties must be well defined for each step in establishing interconnections;
 - e) There is a need to remove archaic concepts like seeker-provider, port and set-up charges, one-way E1s, SDCA based POIs;
 - f) The regulatory framework for interconnection must promote adoption of newer technologies and provision of converged services; and
 - g) Any failure in providing interconnection must be dealt with severely through strict provisions in the TRAI regulatory framework.
3. RJIL has had the opportunity to review the comments made by other stakeholders on the subject. In this regard, we submit that we do not agree with certain comments, assertions and rationale put forward by some of the incumbent operators' viz. Bharti Airtel Limited, Vodafone India Limited and Idea Cellular limited. These operators have only sought to protect their individual interests through their comments, which are also self-contradictory at very basic levels. Further, the submissions of Airtel, Vodafone and Idea completely bypass the larger issues raised by the Authority in the current consultation (which have emanated based on inputs from industry stake holders through an earlier pre-consultation study carried out by the Authority dated 14.10.2015).
4. Due to multiplicity of the service providers in the Indian Telecom Sector, none of the single operator is having 30% market share in the wireless market, which is one of the criteria for a service provider to be termed as Significant Market Power (SMP). As per the information available on TRAI's website, the highest share of subscriber base as on 30th September 2016 is 24.76% of M/s Bharti. However, these three operators Airtel,



Vodafone and Idea are having combined market share of 60.91% in the wireless market. By putting forward similar comments, the cartelisation of these three incumbent operators is clearly visible to thwart the competition.

5. Airtel, Vodafone and Idea have recommended creating two distinct categories of regulatory frameworks for interconnection. The first category is interconnection with the PSU operators, i.e. BSNL and MTNL. These operators have stressed that the coercive mode of interconnection with PSU operators should be addressed and TRAI should provide mandatory provisions on many aspects. However, for the second category, i.e. interconnection between private operators, they seek to perpetuate the status quo, as any change in status quo has the possibility of having a corrective influence on their hegemonies. Disparate set of regulations for the two categories is arbitrary and does not address the issue of anti-competitive behaviour by private operators.
6. The three operators state that under the current regime there has been no case of market failure and therefore not much needs to be changed, conveniently ignoring the market failure perpetrated by them, by not providing sufficient interconnection capacities to every new operator who has entered into market in the last few years, which has led to hardships for millions of Indian subscribers and a clear censure of their activities by the Authority.
7. We respectfully submit that as these three operators have a vested interest in wielding the provision of sufficient interconnection capacities as an anti-competition tool and they have recently given a demonstration of such intentions, their submissions that there is hardly anything that needs to be changed as far as bilateral interconnection agreements are considered, may be summarily rejected and the Authority should focus on framing an equitable framework for interconnection.
8. These operators have also indirectly referred to the interconnection capacities demanded by RJIL based on projections and the subsequent revision in the projected capacities demanded, in order to bring out vague concepts like 'due diligence' by the interconnection provider of the capacities demanded by the interconnection seeker. We submit that this is nothing but a ruse to deflect attention from their own mechanisms to create induced POI congestion for subscribers so as to thwart competition. It is not possible for a new operator to assess network traffic on a steady state when the interconnection capacity is choked and as a result customers are facing very high incidence of call failures (often exceeding 75%-80% of all call attempts).
9. These operators have also attempted to create the bogey of unutilized interconnection capacities by mentioning the cases of several 2008 licensees, whose licenses were cancelled by the Hon'ble Supreme Court, without ever quantifying the capacities that were wasted. We submit that the said reference in fact has no relation to the current scenario and we understand that as most of the mentioned service providers had not acquired many customers, the loss of unutilized facilities could at most have been minimal which would have anyways been offset by the growth in the telecom market.



10. Further, given the above baseless and irrelevant statements in response to the consultation paper and the recent anti-competitive behaviour, ostensible action of holding a new entrant to ransom by refusing to extend sufficient point of interconnections with utter disregard to license conditions, existing regulations and the Authority's direction, this review assumes significant role. These violations and misdemeanours by the erring operators collectively abusing their dominant position has already been duly noted by the Authority.
11. We also request the Authority not to take into consideration COAI's comments as a representation of the Indian telecom operator's views, as all the member operators have individually submitted their comments with divergent views and COAI's view point as operator's representative body for separate consideration has no relevance. COAI's comments anyway do not reflect views of all the member operators and therefore are misrepresentative.

Specific point wise counter comments are as below:

A. There is a need for a Standard Interconnect agreement

- i) RJIL reiterates that Standard Interconnection Agreement (SIA) must be prescribed by TRAI for all licensed service providers. RJIL is not principally against the mutually accepted agreements, however the assertions by some of the operators that all agreements between the private operators are non-coercive is in fact misleading, self-serving and not borne from facts.
- ii) The interconnection seeker in the present scenario has no option but to agree to the Agreement prescribed by the interconnection provider, as the new entrant as a seeker has no bargaining power and has to inevitably accept the agreements mandated by the provider. Further, absence of prescribed timelines results in protracted negotiations of the so called mutual agreement.
- iii) After prescribing the specific terms and conditions, such conditions are wrongly interpreted by some of the service providers. One example of such wrong interpretation is that the ICA provides that utilisation of POI is to be maintained @70%, which clearly requires augmentation to be done such that utilisation is kept below 70% at all times. However, by wrongly interpreting the ICA clauses, some service providers are interpreting that augmentation needs to start only after utilisation reaches 70%. To avoid any such wrong interpretation, unambiguous terms and conditions should be prescribed by the Authority in the form of SIA.
- iv) We reiterate that all the major terms and conditions of interconnection must be prescribed by TRAI and other operational issues, if any, may be negotiated between the parties within a reasonable period of thirty days. In case the parties fail to mutually enter into an Interconnect Agreement (ICA) within this period, SIA must



be adopted by both TSPs. While the operators may negotiate mutually agreed terms, however in case either party is not agreeable to a particular clause, it should have the option for demanding the SIA clause in the agreement.

- v) Further, in case of the current interconnect agreements, either party should be able to demand a review of the existing ICA and demand moving to the SIA. This will not only ensure equitable agreements in true sense, but also help address the continuous lament of some of the private operators that the PSU operators dictate ICA terms without even having significant market power (SMP).

B. Seeker Provider concept is not relevant

- i) RJIL reiterates its assertions that the seeker-provider concept has no relevance in the current scenario. This concept has lost its relevance in the face of changing telecom market and evolving technologies. Almost same amount of work has to be done by both the erstwhile seeker and providers in interconnecting their networks, customers of both the operators benefit equally through the interconnection capacity, and further there are no capacity constraints in the new technology exchanges, and so the seeker/ provider concept is archaic.
- ii) One of the operators has made a highly impractical suggestion that since the port charges are low therefore the new entrants can demand much higher ports than required. The irrelevance of this suggestion is evident from the fact that these very operators have been strong advocates of the cost based charging for many other aspects of interconnection, which is not consistent with the prevalent regulations and will only inconvenience new entrants and create entry barriers.
- iii) We submit that such statements amply justify RJIL's recommendations that the seeker - provider concept may be abolished and all interconnection related charges be done away with and the cost of media etc. be borne by the service providers based on the ratio of their outgoing traffic.

C. There is a need to move towards IP based interconnection

- i) Airtel, Vodafone and Idea have commented that there is no need to mandate IP based interconnection citing various reasons like sunken costs in current infrastructure, no significant changes in voice telephony traffic etc. We submit that these are all unjustified claims, designed to defer the shift towards better technology and meanwhile creating another barrier for new entrants.
- ii) These service providers first insisted that IP based interconnection is not allowed under the license, then they may create a perception that this is not suitable for their networks and at the end they may propose that new entrant installs media



gateways and other equipment at their own cost, thereby transferring the cost of upgrading their facilities to the new entrant.

- iii) Contrary to their own stance, these operators have, self admittedly, moved to IP based networks as far as their own transport network is concerned. Most of the core switching equipment of these operators is also NGN based which has the capability of supporting IP Interconnection and MGW is an additional equipment installed just to convert IP connectivity to TDM connectivity at their end for POI purposes. All the fallacious justifications that are presented against IP based interconnection, are in fact mere tools to stall the movement towards IP based interconnection, and thereby creating an entry barrier for a new entrant with the latest technology.
- iv) We reiterate that IP-based networks and IP-based interconnection is the future of telecom. It has been adopted world over and India is lagging in the adoption only due to the lack of intent from the incumbent service providers. We further submit that IP-based interconnection will lead to a substantial reduction in the cost of interconnection. We have carried out an exercise of calculating the port charges with same assumptions as adopted by the Authority in 2012 regulations, only replacing the relevant network elements in the TDM network with the same in IP networks. The results indicate that the capital cost of the network elements can be brought down by two-third as demonstrated in **Annexure-A**. Notwithstanding the various merits for abolition of port charges discussed in our submission, the movement to IP-based interconnection could reduce relevant port charges by two-third from the current Rs. 4,000 per port, as demonstrated in **Annexure-B**, based on the same principles for computing costs as adopted by the Authority.

D. Capacities for initial interconnection

- i) Airtel, Vodafone and Idea are unanimous in their suggestion that provision of initial interconnection to a new operator should be only at 1-2 E1s per circle. They have also proposed vague and impractical steps such as in the testing phase a new entrant shall confine the testing to its own network. The purpose of testing for a new operator is to test all the functionalities of its network and the ability to interconnect with other operators is an important element of such testing. Restricting it to own network is impractical and defeats the purpose of testing.
- ii) We also submit that the contentions of providing only 1-2 E1s per circle is not only outdated but also intended to thwart competition. It is also against moving towards better technologies. Even 20 years ago, when the tele-density was only about 2% and Fixed Network was predominant, minimum 2 E1s were mandated to be provided at LDCA level for Mobile to Fixed POIs, which in effect meant actually 35 to 40 E1s at a circle level for an operator to start with. Today, tele-density has crossed 82%, the mobile subscriber base has crossed one billion and there is huge inter operator traffic. Further, now there are no constraints in ports capacity in the



NGN based core mobile networks. To cater to this high POI traffic even during initial stages of network, instead of E1 ports bare minimum STM-1 links are required to start with.

- iii) The suggestion that the interconnection provider may due diligence the requirement of an interconnection seeker before allocating capacities is unheard of and implies supremacy of incumbent operators. This is the very distortion that is being attempted to be corrected to ensure that incumbent operators do not have superior rights when it comes to providing interconnection capacities. Such suggestions reflect the biased mind-set of these few incumbent operators and will only provide more ammunition to these incumbent operators for furthering their anti-competitive behaviour.
- iv) One of the three operators has sought to appropriate for itself a role, which goes beyond even the scope of activities carried out by of the Licensor and Regulator by appointing itself as the decision maker on a new entrants's business projections, its requirement of interconnection capacities and so on and so forth. It wants to decide how a potential competition should plan its business under the garb of its vague 'due diligence'.

E. Dire need for timeframe for various activities involved in Interconnection

- i) Airtel, Vodafone and Idea have tried to portray a very good picture about all the activities required for an interconnection and augmentation of Points of Interconnection (POI), however the facts are far from the fiction these operators are trying to portray.
- ii) It has often been observed that there are long delays in providing augmentation even when there are no constraints at the end of the interconnection provider. Even post communicating decision of augmentation, interconnection providers often end up taking days, if not weeks, in providing details of augmentation and then in the physical augmentation process. These activities should be possible to be accomplished in a matter of 3-5 days and therefore such delays should not be condoned.

F. Service agnostic interconnection

- i) We reiterate our submissions that a service specific interconnection is drain on resources and not envisioned under the current licensing regime. Interconnection and ICA should be service agnostic. Further, we submit that some of the operators are trying to raise the bogey of unauthorised traffic and wrong routing of calls being terminated at the POIs.
- ii) We submit that all services which are permitted under the scope of license are authorised services and no interconnected partner has the locus to question any



traffic permitted under the license and in case they have any issues with the routing of certain traffic they can always raise the issue with the Licensor and Regulator.

- iii) We submit that RJIL is against wilful toll-bypass and request the Authority that such actions may be suitably punished. Further, we submit that simplification, wherever possible should be mandated, for instance there is no requirement for separate interconnection for Local and STD traffic any longer as the interconnect charges are the same. Any service where IUC is same, the traffic can be terminated on the same port.



Annexure-A

Cost comparison -- IP vs TDM interconnectivity

TDM network element costs for interconnection:

Element	Capacity (E1s)	Cost (INR)	Cost per E1 (INR)
Port Terminals	256	10,00,000	4,000
Signalling	1280	12,00,000	900
Processor	4096	23,00,000	600
Switching Matrix	4096	1,96,00,000	4,800
Mechanical - Racks, etc.	256	8,00,000	3,100
Cable Connector	256	3,00,000	1,300
Software	256	9,00,000	3,500
Miscellaneous	256	2,00,000	900
Total Costs		2,63,00,000	19,100

IP network element costs for interconnection:

Element	Capacity (Sessions)	Costs (INR)	Costs per session	Cost for 30 sessions (Equivalent E1 port)
Session Boarder Controller (SBC) - in session (equivalent to DS0)	30,000	63,00,000	210	6,510
- Signalling				
- Processor				
- Software				
Mechanical - Racks, Installation Material	1,80,000	12,00,000	6.67	207
Miscellaneous	30,000	2,00,000	6.67	207
Total Costs		77,00,000	223	6,924**

* The above cost comparison does not consider potential saving in power and space due to implementation of IP interconnection and other operational efficiencies.

** Excludes cost of router (estimated at Rs. 198 for equivalent E1 port)



Annexure-B

Calculation of Ceiling of Port Charges for IP Based Interconnection

Item	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8	Year-9	Year-10
CAPEX cost of an E1 port equivalent (in Rs.) = Gross Block	7,122									
Opening Balance (in Rs.)	7,122	6,410	5,698	4,985	4,273	3,561	2,849	2,137	1,424	712
Depreciation @ 10% per annum based on straight line method of depreciation (in Rs.)	712	712	712	712	712	712	712	712	712	712
Reasonable return (Pre-tax weighted average cost of capital) @15% on Opening Balance (in Rs.)	1,068	961	855	748	641	534	427	320	214	107
CAPEX Recovery (in Rs.) = Depreciation + Reasonable Return	1,781	1,674	1,567	1,460	1,353	1,246	1,140	1,033	926	819
Overhead @10% on CAPEX Recovery (in Rs.) =10% of CAPEX Recovery	178	167	157	146	135	125	114	103	93	82
Cost per E1 (in Rs.) = CAPEX Recovery + Overhead	1959	1841	1724	1606	1488	1371	1253	1136	1018	901
Average cost (averaged over ten years) (in Rs.)	1,430									

