



# Reliance Jio

Infocomm Limited

RJIL/TRAI/2016-17/230

14<sup>th</sup> July 2016

To  
The Chairman  
Telecom Regulatory Authority of India,  
Mahanagar Doorsanchar Bhawan  
J.L. Nehru Marg, Old Minto Road  
New Delhi – 110002

Subject: Denial of Interconnection and augmentation of POIs

Dear Sir,

1. Reliance Jio Infocomm Limited ("RJIL") is currently conducting test trials of its services before full-fledged commercial launch. As you are aware, RJIL is deploying the largest integrated IP-based network. The network is planned with an initial capacity to support over 200 million subscribers.
2. There are 230 million smartphones available in the Indian market today, all of which are capable of using services offered by RJIL. Furthermore, there are already over 350 million data users in the country, who would benefit from a superior new-age technology for accessing high end data services. Considering the potential scale of the market and likely demand, RJIL has provisioned its network with adequate capacity for all the potential users. It would not be unreasonable to expect over 100 million subscribers in the first year post commercial launch. This combined with the initial demand for services would result in upwards of 25 million subscribers coming on the network within the first quarter post commercial launch.
3. In order to help provide seamless connectivity to the targeted subscribers, RJIL will require sufficient interconnect capacity for inter-operator traffic at the Points of Interconnection ("POIs"). In compliance with TRAI regulations, RJIL has executed Interconnection Agreements with all service providers. The Interconnection regime as laid down by TRAI regulations foresees a possibility of POI capacity augmentation basis the forecast by one of the two interconnecting operators. The POIs have been established after protracted follow-ups with the leading service providers, however the E1s allocated at these POIs are grossly inadequate in capacity when compared with the projections by RJIL.
4. RJIL has carried out an exercise to forecast the E1 requirements on the commercial launch of services. This forecast is arrived at based on the following assumptions:

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- i) 0.03 Erl traffic per subscriber and 2 BHCA calls per subscriber with an average call duration of 54 seconds leading to 187 minutes of usage per month;
- ii) Initial scenario of 22 million RJIL subscribers, spread across circles based on relative subscriber potential of the respective circles;
- iii) For other operators, subscriber base is considered as per data published by TRAI as on 31<sup>st</sup> March 2016;
- iv) In the traffic forecasting, 80% of the traffic considered as inter-operator traffic (given relatively small size of RJIL subscriber base)

As per this model, E1s provisioned at POIs with 5 leading operators viz. Airtel, Vodafone, Idea, Tata and Aircel are substantially inadequate as reflected in the following table:

Sr. No.	Operator	Projected E1s		Existing E1s		Gap%	
		UASL E1s	NLD E1s	UASL E1s	NLD E1s	UASL E1s	NLD E1s
1	Airtel	4,252	994	88	30	97.93%	96.98%
2	Vodafone	3,175	784	197	55	93.80%	92.98%
3	Idea	2,586	695	86	25	96.67%	96.40%
4	Aircel	1,780	353	168	57	90.56%	83.85%
5	Tata	934	242	70	30	92.51%	87.60%
	<b>Total</b>	<b>12,727</b>	<b>3,068</b>	<b>609</b>	<b>197</b>	<b>95.21%</b>	<b>93.58%</b>

The detailed assumptions and calculations are enclosed in Annexure A.

5. The above shortfall is already causing inter-connect congestion issues for RJIL with the three leading operators in all circles during the testing phase of our network with around a million active users.
6. RJIL, having foreseen the capacity constraints, has been requesting these operators to augment the POIs as per the terms of Interconnection Agreements. However, repeated request during last 4-6 months for augmentation with these operators have failed to get necessary co-operation from them.
7. RJIL has already shared firm demand with all operators vide its letters dated 21.06.2016 and expressed its willingness to pay all demand notes issues by operators for augmentation. As a follow-up of the same RJIL has started sharing daily details of call failure due to congestion with all operators. **In the last week, total of 4.37 crore calls have failed due to POI congestion. On an average, daily 62.5 lakh calls fail due to POI congestion.**
8. However, these operators are denying the augmentation of existing POIs based on the RJIL forecast and firm demand. Although some of these operators are stating that they will augment POIs as per process, however, these assurances are being made at a superficial level and despite clear and unambiguous demonstration of the gravity of situation, the demand notes are not being raised with respect to RJIL firm demand. Such non-cooperation is being supported by various unreasonable grounds including the coercive and one-sided clauses in the Interconnect Agreement despite the firm demand by RJIL. One of the arguments provided by these operators is that




capacity can be enhanced when the traffic picks up. However, this defeats the whole purpose of RJIL forecast and firm demand so that the capacities be augmented before the traffic increases to avoid consumer inconvenience. As mentioned above, we are sharing the alarming levels of POI congestion and call overflow details on daily basis with these operators, still they refuse to accept the gravity of the situation and refuse to issue demand notes for augmenting POIs as per RJIL projections. Given it is possible to estimate the potential traffic there appears to be no rationale for delaying augmentation of capacity.

9. In view of the above, we request the Authority to immediately intervene and instruct these service providers, namely Airtel, Idea Vodafone, Aircel and Tata to augment the POI E1 capacities as per the firm demands made by RJIL.

Thanking you,

Yours sincerely,

For Reliance Jio Infocomm Limited,



**Mahipal Singh**  
Authorized Signatory



Enclosure: As above

Copy: Secretary (T), Department of Telecommunication, Sanchar Bhawan, 20, Ashoka Road, New Delhi- 110001.

## Annexure A: Workings for POI Requirement

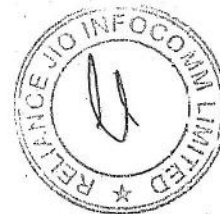
### Assumptions

Off-net calling (%)	20%
Local calling (%)	80%
NLD calling (%)	20%
Erlang per sub	0.03
BHCA per sub	2.00
Average call duration (sec)	54
MOU per month (with 4 BH per day & 26 days/month)	187

Subs.Base	22 Mn	
	%	Erlang
Jio to Jio calling	20%	0.006
Jio to other Opearator calling	80%	0.024
Within circle (to be handled through Access POI)	64%	0.019
NLD/ILD calling (to be handled through NLD POI)	16%	0.005

Jio Subs Base (mn)	22
Total off-net Erlang (K)	528
Access POI Erlang (K)	422
NLD POI Erlang (K)	106
<b>Number of POI E1s Required</b>	
Total POI E1s	21,120
Access POI E1 (K)	16,896
NLD POI E1 (K)	4,224

Erlang per E1 (@ GOS: 0.2%)	25	Erl
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Operator wise E1 Requirement

Circle	Jio Requirement		Bharti Airtel		Vodafone		Idea		Tata		Aircel		Total - Top 5	
	Access	NLD	Access	NLD	Access	NLD	Access	NLD	Access	NLD	Access	NLD	Access	NLD
Andhra Pradesh	768	192	243	93	73	28	159	61	52	20	29	11	556	213
Assam	768	192	247	24	152	15	49	5	-	-	212	20	660	64
Bihar	768	192	294	111	98	38	116	44	18	7	73	28	599	228
Delhi	768	192	183	44	164	40	100	74	36	9	103	25	586	142
Gujarat	768	192	106	34	239	76	150	48	36	12	1	1	532	171
Haryana	768	192	97	12	181	22	154	19	92	11	1	1	525	65
Himachal Pradesh	768	192	238	11	63	3	70	4	7	1	95	5	473	24
Jammu & Kashmir	768	192	262	14	84	5	50	3	-	-	200	10	596	32
Karnataka	768	192	262	82	97	30	106	33	92	29	39	13	596	187
Kerala	768	192	99	18	168	30	233	41	36	7	7	2	543	98
Kolkata	768	192	144	19	166	21	66	9	86	11	126	16	588	76
Madhya Pradesh	768	192	148	50	81	27	250	84	56	19	1	1	536	181
Maharashtra	768	192	123	53	169	73	214	92	61	26	24	11	591	255
Mumbai	768	192	140	23	209	34	102	17	80	13	70	12	601	99
North East	768	192	273	16	108	6	36	2	-	-	220	13	637	37
Odisha	768	192	273	41	109	17	47	7	60	9	123	19	612	93
Punjab	768	192	194	32	124	20	157	26	66	11	26	5	567	94
Rajasthan	768	192	248	76	156	48	100	31	20	6	83	26	607	187
Tamil Nadu	768	192	163	68	147	61	56	23	46	19	204	85	616	256
Uttar Pradesh (East)	768	192	174	82	159	75	91	43	35	16	58	27	517	243
Uttar Pradesh (West)	768	192	112	33	155	46	194	57	47	14	10	3	518	153
West Bengal	768	192	229	58	273	69	86	22	8	2	75	19	671	170
<b>Total</b>	<b>16,896</b>	<b>4,224</b>	<b>4,252</b>	<b>994</b>	<b>3,175</b>	<b>784</b>	<b>2,586</b>	<b>695</b>	<b>934</b>	<b>242</b>	<b>1,780</b>	<b>353</b>	<b>12,727</b>	<b>3,068</b>



Existing Operator wise E1

Circle	Bharti Airtel		Vodafone		Idea		Tata		Aircel		Total	
	Access	NLD	Access	NLD	Access	NLD	Access	NLD	Access	NLD	Access	NLD
Andhra Pradesh	7	1	7	1	4	1	4	1	2	2	24	6
Assam	2	1	12	1	2	1	-	-	12	5	28	8
Bihar	5	2	9	2	4	2	2	2	4	3	24	9
Delhi	7	3	12	8	2	2	2	1	12	4	35	18
Gujarat	4	1	10	3	3	1	2	1	2	1	21	7
Haryana	2	1	6	3	2	1	12	5	-	-	22	10
Himachal Pradesh	2	1	7	1	12	1	2	1	12	6	35	10
Jammu & Kashmir	2	1	5	1	12	1	2	1	17	6	38	10
Karnataka	3	2	7	3	2	1	2	1	12	3	26	10
Kerala	8	1	7	1	3	1	2	1	2	2	22	6
Kolkata	4	2	7	2	2	1	2	1	4	2	19	8
Madhya Pradesh	4	2	23	6	4	1	18	7	-	-	49	16
Maharashtra	3	1	7	1	3	1	2	1	2	1	17	5
Mumbai	9	1	9	3	3	1	3	1	13	5	37	11
North East	2	1	7	1	12	1	-	-	12	5	33	8
Odisha	4	1	7	1	2	1	2	1	3	1	18	5
Punjab	3	1	18	5	3	1	2	1	12	2	38	10
Rajasthan	4	3	7	4	3	2	2	2	11	2	27	13
Tamil Nadu	3	1	11	2	2	1	2	1	15	2	33	7
Uttar Pradesh (East)	4	1	5	4	2	1	2	1	2	1	15	8
Uttar Pradesh (West)	3	1	7	1	2	1	2	1	12	2	26	6
West Bengal	3	1	7	1	2	1	3	1	7	2	22	6
<b>Total</b>	<b>88</b>	<b>30</b>	<b>197</b>	<b>55</b>	<b>86</b>	<b>25</b>	<b>70</b>	<b>30</b>	<b>168</b>	<b>57</b>	<b>609</b>	<b>197</b>

