VIL/LT/15-16/392
21st September 2015

Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan
Jawahar Lal Nehru Marg (Old Minto Road)
New Delhi 110002

Kind attention : **Smt. Vinod Kotwal, Advisor (F&EA)**
Subject : **Response to Consultation Paper on Compensation to the Consumers in the Event of Dropped Calls**

Respected Madam,

At the outset we would like to emphasize that **Vodafone India has always been committed to its customers** for the following:

- Understanding their needs
- Creating innovative services
- Consistently delivering on what we promise
- Being transparent and trustworthy in our interactions
- Providing a secure and reliable network
- Offering affordable products and services

We submit that we have long term plans and have made substantial investments in our networks to provide seamless quality of services. In last 7 years we have committed investments of about Rs.80,000 Crore in networks and spectrum.

We are taking all possible steps to address call drop issue, wherever noticed. It may be noted that there are select pockets in some cities where call drops are higher and this needs improvement. However, the call drop issue is not generic across the city or across the country. A set of actions taken by us, as filed with DoT in mid-July/beginning August 2015, is attached as **Annexure A** to this paper.

We respectfully submit that the constraints and challenges being faced by the service providers in such areas need to be comprehensively considered before deliberating the queries in the consultation paper. Most of such constraints and challenges have not been considered.

We look forward for a comprehensive consideration of all influencing factors which have been duly acknowledged by TRAI over a period of time. Ignoring critical aspects relevant for good quality telecom ecosystem would only lead to delayed resolution of the challenge at hand.

We submit that in an environment where serious investments in networks and spectrum having been made and committed by us, where the market structure is totally fragmented depriving efficiencies and increasing operational costs and complexities and where the multiple-level approvals hinder efficient and faster roll outs, we need support from TRAI.

We would like to reiterate that Vodafone stands committed to making all the necessary investments for good quality customer experience. We respectfully request the TRAI to extend help in addressing the challenges at hand and facilitate good quality telecom ecosystem. We believe that the approach of refund or compensation to subscribers is not a sustainable model and neither tenable nor required and also will not further the cause of achieving the end objective. We apprehend that the consultation will lead to various long term implications and forced structural changes which will further stifle the sector.

Our response to the questions in the said consultation paper is annexed.

Thanking you

Yours sincerely,
For **Vodafone India Limited**

Sundeep Kathuria
EVP - Policy & Regulation, Corporate Regulatory

Enclosed:

- Detailed response along with necessary Annexures (Kindly note that Annexure A & D are Confidential)

Vodafone's Response to the Consultation paper on Compensation to the Consumers in the Event of Dropped Calls dated 04th September 2015

Q1: Do you agree that calling consumers should not be charged for a call that got dropped within five seconds? In addition, if the call gets dropped any time after five seconds, the last pulse of the call (minute/second) which got dropped, should not be charged. Please support your viewpoint with reasons along with the methodologies for implementation.

In this regard, we submit as follows:

A. Call Drop increase confined to only few pockets within some service areas

1. It is respectfully submitted that call drops is not a pan India or even a pan service area issue. TRAI consultation paper is based on drive test reports on particular and limited routes in Delhi and Mumbai service area.

2. We are constrained to say that we are compliant with the QOS parameters laid down by the Authority (i.e. <2%) at a service area level as well as city level, as can be seen from the following table :

Vodafone - Drop Call Performance
Circle-wise Report

LSA	Apr'14	May'14	Jun'14	Jul'14	Aug'14	Sep'14	Oct'14	Nov'14	Dec'14	Jan'15	Feb'15	Mar'15	Apr'15	May'15	Jun'15	Jul'15		Avg
AP	0.48	0.48	0.52	0.60	0.58	0.57	0.57	0.57	0.55	0.53	0.51	0.46	0.45	0.46	0.51	0.52		0.52
Assam	0.54	0.62	0.68	0.70	0.74	0.71	0.62	0.59	0.58	0.54	0.56	0.54	0.57	0.63	0.66	0.62		0.62
Bihar	0.65	0.70	0.85	1.00	1.01	0.97	0.95	0.89	0.90	0.86	0.81	0.80	0.82	0.80	0.85	1.02		0.87
Chennai	0.51	0.49	0.53	0.58	0.55	0.59	0.59	0.65	0.58	0.53	0.53	0.48	0.48	0.45	0.48	0.50		0.53
Delhi	0.66	0.69	0.74	0.88	0.88	0.94	0.84	0.95	1.29	1.35	1.08	1.17	1.06	1.00	1.06	1.32		0.99
Gujarat	0.74	0.70	0.68	0.80	0.89	0.98	1.04	0.91	0.79	0.74	0.83	0.77	0.77	0.73	0.74	0.78		0.81
HP	0.60	0.62	0.59	0.62	0.65	0.58	0.52	0.79	0.57	0.58	0.58	0.64	0.64	0.57	0.58	0.71		0.62
Haryana	0.65	0.63	0.64	0.74	0.75	0.79	0.68	0.68	0.75	0.76	0.77	0.82	0.66	0.60	0.61	0.69		0.70
J&K	0.56	0.51	0.50	0.64	0.56	0.73	0.96	0.69	0.84	0.77	0.82	0.91	0.91	0.71	0.71	0.78		0.73
Kolkata	0.75	0.72	0.83	0.91	0.93	0.94	0.91	1.01	0.93	0.81	0.76	0.78	0.75	0.71	0.79	0.72		0.83
Kerala	0.50	0.63	0.67	0.72	0.72	0.61	0.60	0.60	0.58	0.56	0.56	0.58	0.55	0.58	0.64	0.60		0.61
Karnataka	0.53	0.56	0.59	0.61	0.61	0.59	0.60	0.57	0.56	0.54	0.54	0.54	0.55	0.54	0.56	0.56		0.57
Mumbai	0.82	0.78	0.86	0.98	0.94	0.96	0.91	0.91	0.87	0.92	1.06	1.16	1.22	1.08	1.11	1.10		0.98
Maharashtra	0.66	0.69	0.76	0.83	0.83	0.79	0.77	0.79	0.75	0.73	0.72	0.74	0.65	0.64	0.68	0.68		0.73
MP	0.61	0.63	0.68	0.80	0.83	0.78	0.73	0.71	0.73	0.74	0.72	0.75	0.70	0.65	0.75	0.85		0.73
NE	0.74	0.71	0.74	0.77	0.84	0.77	0.69	0.68	0.66	0.66	0.63	0.63	0.68	0.71	0.68	0.71		0.71
Odisha	0.62	0.60	0.70	0.76	0.78	0.77	0.71	0.69	0.67	0.70	0.62	0.57	0.58	0.60	0.65	0.80		0.68
Punjab	0.52	0.51	0.52	0.59	0.63	0.67	0.60	0.55	0.57	0.58	0.56	0.58	0.54	0.49	0.50	0.56		0.56
Rajasthan	0.68	0.64	0.64	0.74	0.84	0.83	0.74	0.72	0.72	0.71	0.71	0.73	0.68	0.67	0.74	0.81		0.73
TN	0.63	0.68	0.67	0.65	0.72	0.71	0.80	0.82	0.73	0.69	0.67	0.64	0.59	0.60	0.57	0.54		0.67
UP (East)	0.88	0.90	0.99	1.46	1.56	1.30	1.59	1.24	1.10	1.09	1.05	0.95	0.72	0.78	0.76	0.94		1.08
UP (West)	0.71	0.71	0.82	0.84	0.91	0.89	0.82	0.77	0.80	0.79	0.87	0.89	0.73	0.66	0.69	0.75		0.79
WB	0.82	0.75	0.83	0.87	0.85	0.90	0.91	0.89	0.80	0.75	0.70	0.65	0.67	0.68	0.68	0.75		0.78
Average	0.65	0.65	0.70	0.79	0.81	0.80	0.79	0.77	0.75	0.74	0.72	0.73	0.69	0.67	0.70	0.75		0.73

Vodafone - Dropped Call Performance
City-wise Report

St	City	Circle	Apr'14	May'14	Jun'14	Jul'14	Aug'14	Sep'14	Oct'14	Nov'14	Dec'14	Jan'15	Feb'15	Mar'15	Apr'15	May'15	Jun'15	Jul'15	Avg
1	Hyderabad	AP	0.61	0.59	0.65	0.74	0.73	0.64	0.60	0.62	0.62	0.62	0.62	0.51	0.52	0.51	0.54	0.57	0.61
2	Visakhapatnam	AP	0.52	0.51	0.59	0.64	0.63	0.61	0.91	0.60	0.59	0.59	0.57	0.53	0.52	0.46	0.55	0.56	0.59
3	Patna	Bihar	0.41	0.43	0.51	0.63	0.69	0.72	0.58	0.57	0.55	0.59	0.57	0.48	0.46	0.49	0.51	0.64	0.55
4	Ranchi	Bihar	0.35	0.40	0.40	0.59	0.57	0.55	0.52	0.43	0.38	0.41	0.36	0.37	0.44	0.55	0.47	0.49	0.45
5	Faridabad	Delhi	0.72	0.74	0.80	0.86	0.87	0.89	0.88	0.93	1.32	1.36	1.06	1.13	1.05	1.01	1.07	0.93	0.98
6	Ghaziabad	Delhi	0.68	0.69	0.76	0.83	0.85	0.88	0.86	0.92	1.27	1.42	1.12	1.15	1.05	1.02	1.09	1.18	0.99
7	Ahmedabad	Gujarat	0.47	0.48	0.49	0.62	0.69	0.77	0.56	0.54	0.51	0.53	0.55	0.54	0.57	0.55	0.61	0.64	0.57
8	Rajkot	Gujarat	0.46	0.52	0.57	0.68	0.70	0.72	0.60	0.55	0.51	0.57	0.56	0.50	0.60	0.57	0.68	0.61	0.59
9	Surat	Gujarat	0.59	0.59	0.65	0.78	0.83	0.85	0.74	0.62	0.62	0.67	0.68	0.69	0.74	0.75	0.82	0.76	0.71
10	Vadodara	Gujarat	0.54	0.56	0.64	0.80	0.79	0.83	0.70	0.65	0.64	0.70	0.79	0.65	0.77	0.77	0.81	0.79	0.71
11	Srinagar	J&K	0.42	0.35	0.40	0.41	0.35	0.97	0.64	0.36	0.66	0.64	0.67	0.73	0.74	0.53	0.56	0.56	0.56
12	Bangalore	Karnataka	0.53	0.58	0.64	0.65	0.61	0.61	0.58	0.58	0.56	0.55	0.57	0.57	0.57	0.50	0.52	0.54	0.57
13	Mysore	Karnataka	0.34	0.37	0.37	0.42	0.44	0.43	0.47	0.42	0.39	0.40	0.42	0.41	0.38	0.41	0.37	0.35	0.40
14	Howrah	Kolkata	0.75	0.72	0.83	0.91	0.93	0.94	0.91	1.01	0.93	0.81	0.76	0.78	0.75	0.71	0.79	0.72	0.83
15	Bhopal	MP	0.38	0.35	0.38	0.61	0.62	0.52	0.45	0.47	0.47	0.48	0.44	0.44	0.41	0.40	0.48	0.53	0.46
16	Indore	MP	0.38	0.37	0.35	0.53	0.53	0.54	0.45	0.47	0.46	0.44	0.44	0.46	0.41	0.36	0.45	0.48	0.45
17	Jabalpur	MP	0.39	0.38	0.43	0.57	0.59	0.61	0.50	0.50	0.48	0.16	0.50	0.50	0.50	0.47	0.50	0.60	0.48
18	Aurangabad	Maharashtra	0.54	0.53	0.59	0.67	0.70	0.71	0.63	0.65	0.63	0.62	0.67	0.78	0.71	0.64	0.72	0.60	0.65
19	Nagpur	Maharashtra	0.47	0.44	0.50	0.57	0.58	0.53	0.53	0.52	0.51	0.50	0.51	0.55	0.51	0.46	0.52	0.51	0.51
20	Nashik	Maharashtra	0.60	0.56	0.69	0.63	0.64	0.57	0.55	0.59	0.58	0.60	0.61	0.64	0.56	0.65	0.62	0.63	0.61
21	Pimpri Chinchwad	Maharashtra	0.64	0.66	0.75	0.83	0.93	0.90	0.81	0.85	0.85	0.77	0.82	0.82	0.75	0.67	0.72	0.79	0.79
22	Pune	Maharashtra	0.64	0.66	0.75	0.83	0.93	0.90	0.81	0.85	0.85	0.77	0.82	0.82	0.75	0.67	0.72	0.79	0.79
23	Sholapur	Maharashtra	0.43	0.47	0.63	0.61	0.58	0.62	0.53	0.60	0.60	0.56	0.50	0.52	0.49	0.52	0.51	0.47	0.54
24	KalyanDombivli	Mumbai	0.63	0.65	0.71	0.82	0.76	0.75	0.70	0.77	0.75	0.71	0.69	0.73	0.96	0.94	1.02	1.02	0.79
25	NaviMumbai	Mumbai	0.70	0.69	0.72	0.81	0.80	0.80	0.76	0.80	0.72	0.70	0.68	0.92	1.09	1.03	1.04	1.05	0.83
26	Thane	Mumbai	0.70	0.67	0.79	0.88	0.87	0.84	0.86	0.86	0.79	0.85	0.92	1.15	1.30	1.03	1.12	1.16	0.92
27	Amritsar	Punjab	0.47	0.44	0.45	0.59	0.59	0.78	0.59	0.49	0.51	0.52	0.56	0.53	0.49	0.44	0.47	0.59	0.53
28	Chandigarh	Punjab	0.50	0.52	0.50	0.55	0.59	0.58	0.51	0.51	0.58	0.59	0.54	0.55	0.50	0.48	0.47	0.55	0.53
29	Ludhiana	Punjab	0.41	0.40	0.45	0.48	0.55	0.54	0.49	0.45	0.43	0.47	0.45	0.47	0.41	0.39	0.38	0.50	0.45
30	Jaipur	Rajasthan	0.51	0.49	0.46	0.58	0.66	0.67	0.56	0.57	0.55	0.59	0.60	0.61	0.56	0.55	0.60	0.70	0.58
31	Jodhpur	Rajasthan	0.34	0.36	0.36	0.45	0.51	0.51	0.45	0.43	0.42	0.39	0.39	0.38	0.38	0.39	0.50	0.57	0.43
32	Coimbatore	Tamil Nadu	0.44	0.44	0.47	0.49	0.61	0.60	0.60	0.61	0.51	0.42	0.51	0.44	0.44	0.41	0.40	0.48	0.49
33	Allahabad	UP (East)	0.49	0.50	0.55	0.75	0.77	0.72	0.62	0.56	0.47	0.61	0.52	0.44	0.41	0.42	0.47	0.52	0.55
34	Kanpur	UP (East)	0.42	0.46	0.44	0.58	0.60	0.56	0.50	0.44	0.41	0.43	0.45	0.45	0.41	0.38	0.37	0.49	0.46
35	Lucknow	UP (East)	0.53	0.54	0.55	0.73	0.71	0.74	0.64	0.67	0.52	0.51	0.51	0.50	0.45	0.47	0.44	0.48	0.56
36	Varanasi	UP (East)	0.62	0.66	0.60	0.78	0.85	0.85	0.70	0.68	0.52	0.56	0.50	0.40	0.39	0.40	0.44	0.55	0.59
37	Agra	UP (West)	0.44	0.48	0.56	0.54	0.56	0.51	0.50	0.51	0.51	0.54	0.53	0.57	0.45	0.45	0.50	0.50	0.51
38	Meerut	UP (West)	0.49	0.47	0.53	0.55	0.43	0.43	0.43	0.48	0.42	0.47	0.43	0.49	0.47	0.47	0.45	0.49	0.47
	Average		0.51	0.52	0.57	0.66	0.67	0.69	0.62	0.61	0.61	0.61	0.60	0.61	0.60	0.58	0.61	0.64	0.61

The drop call ratio on average for Vodafone on a pan India basis is 0.73% which is far less than many leading operators in developed countries

3. It is further submitted that even the said drive test by TRAI covered only 2G performance. It is submitted that a substantial quantum of voice traffic in a circle is being serviced by 3G spectrum. In the month of August 38% of total voice traffic of Mumbai & 27% of total voice traffic of Delhi was carried by the 3G network. The table below indicates the call drop performance of voice traffic in 3G network where Vodafone is maintaining a call drop ratio of 0.36%.

VODAFONE - 3G - DROP CALL PERFORMANCE

Circle	Apr'14	May'14	Jun'14	Jul'14	Aug'14	Sep'14	Oct'14	Nov'14	Dec'14	Jan'15	Feb'15	Mar'15	Apr'14	May'14	Avg
Chennai	0.33	0.34	0.35	0.32	0.30	0.32	0.32	0.36	0.32	0.30	0.31	0.29	0.30	0.28	0.32
Delhi	0.65	0.72	0.66	0.72	0.73	0.80	0.70	0.64	0.68	0.60	0.59	0.56	0.49	0.48	0.64
Gujarat	0.20	0.20	0.21	0.19	0.22	0.23	0.23	0.22	0.17	0.18	0.20	0.19	0.19	0.19	0.20
Haryana	0.36	0.34	0.38	0.30	0.33	0.57	0.29	0.27	0.85	0.44	0.42	0.44	0.35	0.33	0.40
Kolkata	0.29	0.29	0.28	0.30	0.30	0.32	0.28	0.30	0.31	0.31	0.33	0.32	0.30	0.30	0.30
Maharashtra	0.34	0.31	0.32	0.28	0.28	0.33	0.34	0.35	0.28	0.23	0.28	0.29	0.28	0.26	0.30
Mumbai	0.49	0.45	0.44	0.45	0.45	0.46	0.46	1.50	0.52	0.48	0.48	0.48	0.42	0.39	0.53
Tamilnadu	0.32	0.34	0.31	0.32	0.27	0.29	0.28	0.27	0.25	0.25	0.24	0.29	0.28	0.28	0.28
UP-East	0.22	0.25	0.23	0.25	0.23	0.22	0.22	0.23	0.20	0.22	0.22	0.28	0.30	0.27	0.24
West Bengal	0.30	0.34	0.26	0.27	0.26	0.30	0.33	0.33	0.32	0.34	0.42	0.47	0.44	0.38	0.34
Average	0.35	0.36	0.34	0.34	0.34	0.38	0.34	0.45	0.39	0.34	0.35	0.36	0.33	0.32	0.36

4. We have approximately 400000 cells all over India out of which only 3000 cells i.e. 0.75% are not meeting the specified quality norms. We are duty bound to improve quality of service for these 3000 cells , however, we respectfully submit that call drops /congestions cannot be brought to zero despite best effort because of many influencing factors like local body issues hampering site acquisition in neighbouring area, sites getting sealed due to actions by local bodies, fibre cutting, erratic electricity supply, etc.

5. We, therefore, respectfully submit that it is important to assess the geographical extent of issue based on the evidences that are available so as to arrive at a fair and proportionate redressal. In last few months, specific information has been sought by Authority and Government on the network quality for pan India. Further, Authority gets information on monthly basis from service providers and also directly from its auditors. At no stage, such issue has been beyond limited areas.

6. In the context of 3G services, it may not be out of place to point out that we have been facing severe interference in 2.1GHz spectrum allocated to us in service areas of Haryana and Gujarat. The Authority is aware of the concern and had also highlighted to DoT, the urgent need to address the same. However, the problem has not been resolved till date. This has caused an additional load on 2G networks, which also affects the network performance.

7. Further, the 2.1GHz spectrum sold in the recent auctions, is on an 'As is, where is' basis, with no assurance of interference free operations. We respectfully submit that if such highly priced licensed spectrum allocated for commercial use is not backed by commitment from WPC to be interference free then it is not reasonable to expect that networks performance will meet desired quality of service. We request TRAI to represent to WPC to ensure interference free allocation of spectrum.

8. Drive Test

    The QoS Benchmark for Call Drop is 2%. As per TRAI's 'performance indicator report' for quarter ending March' 2015 of the 167 GSM Licensees, 164 have met the Call Drop benchmark. The average Call Drop across the licensees is 0.84%. (Against this average of 0.84%, Vodafone has achieved a pan-India benchmark of 0.73%).

Call Drop Performance - Quarter ending March' 2015 (GSM Networks)

LSA	Aircel	Airtel	BSNL	Idea	MTNL	RCOM	TATA	Uninor	Video	VIL	Avg
AP	1.12	0.35	0.77	0.68		0.35	0.67	0.66		0.50	0.64
Assam	1.58	0.95	1.84	1.29		0.67				0.55	1.15
Bihar	1.41	1.85	2.85	0.94		0.47	0.50	0.46	0.47	0.82	1.09
Chennai		0.16	0.70	0.27						0.51	0.41
Delhi	0.81	0.60		0.60	1.87	0.42				1.20	0.92
Gujarat	0.39	0.65	0.92	1.03		0.35	0.71	0.57	0.69	0.78	0.68
Haryana	4.04	0.29	1.31	0.62		0.22	0.80		0.70	0.78	1.10
HP	1.23	0.49	1.54	1.36		0.67	1.44			0.60	1.05
J&K	1.32	0.47	1.64	1.58		0.42				0.83	1.04
Karnataka	1.35	0.59	0.88	0.54		0.32	0.72			0.54	0.71
Kerala	0.62	0.23	0.59	0.63		0.23	0.60			0.57	0.50
Kolkata	0.74	0.97	0.48	0.22		0.41	0.69			0.78	0.61
Maharashtra	0.86	0.45	1.37	0.98		0.29	0.63	0.54		0.73	0.73
MP	0.73	0.75	1.67	0.86		0.55	0.57		0.70	0.74	0.82
Mumbai	1.11	0.27		1.24	1.27	0.41	0.22			1.05	0.80
NE	1.81	0.94	3.98	1.68		0.63				0.64	1.61
Orissa	1.30	0.76	1.92	0.48		0.56	0.43			0.63	0.87
Punjab	0.69	0.35	1.73	0.47		0.28	0.65		0.95	0.57	0.71
Rajasthan	0.80	0.83	1.35	0.98		0.34	0.72			0.72	0.82
TN	1.06	0.18	0.91	0.20		0.31	0.62			0.67	0.56
UP (East)	0.53	0.64	1.46	1.13		0.24	0.92	0.58	1.16	1.03	0.85
UP (West)	0.30	1.21	1.28	1.03		0.22	0.87	0.48	0.69	0.85	0.77
WB	1.34	1.01	1.45	0.39		0.59	0.59			0.70	0.87
Average	**1.14**	**0.65**	**1.46**	**0.83**	**1.57**	**0.41**	**0.69**	**0.55**	**0.77**	**0.73**	**0.84**

*Source: TRAI Performance Indicator Report

The Drive Tests is an additional activity conducted to identify the troubled hot-spots across the city which would help in the optimization activity and identifying areas which require site acquisition for extending coverage. The Consultation paper has referred to the special drive tests undertaken in Mumbai (Jun'15) & Delhi (Jul'15) and the results of these drive tests have been used to establish that the TSPs are non-compliant to the QoS benchmarks. We would like to respectfully submit that Drive Test is not an indicator of QoS compliance levels.

Additionally, for these special drive tests, it has been stated that the route selection was based on customer complaints and areas commonly identified for call drops. For eg. we conduct a 1500KM Drive Test for Mumbai circle (as compared to the 300KM covered by the TRAI auditors). Clearly an element of bias has crept into the routing plan. The route selection should be representatively selected for each geography and should be agnostic to any operator specific input. Infact the results of the Delhi & Mumbai special Drive Test and the coverage plots have only corroborated the fact that several government/ defense areas are not available for site acquisition thus causing higher load and congestion on the neighbouring cell-sites.

B. Vodafone has made Significant investments in its Networks

1. At present Vodafone India has 185 million subscribers. Further, it carries more than 55 billion voice minutes (incoming + outgoing) per day*, 5.7 Peta-bytes of data per day* and more than 115 million SMSs per day* and its networks having overall coverage 85%.

*Source: Monthly & Quarterly reports submitted with TRAI

2. Such high traffic volumes are only due to significant investments having been made in the networks in past. The overall committed investments in last 7 years have been more than Rs. 80,000 Crore.

3. It is respectfully submitted that investments in networks to increase capacity and improve quality happens on many fronts and any generalisation that there is insufficient investments in (BTSs/Node B) and inadequate optimized radio network is unfair and unjustified.

4. The allegation of lack of investments made in last two years compared to growth in voice and data traffic does not depict a correct picture, as it disregards:
   (a) the huge investments that have already been made by us prior to that period considered by the authority. It is submitted that we have invested over Rs. 53,000 crores till date only for setting up over 142,000 sites and establishing our networks.
   (b) The heavy investments made by us to acquire /re-acquire spectrum, which the Authority itself has recognized as a capital expenditure. It is submitted that we have paid /committed over Rs. 46,000 crores in the last 3 years alone on account of spectrum acquired through auctions.

5. It must be appreciated that increase in spectrum holding and deployment has resulted in addition of capacity at existing sites. This has substituted roll-out of additional sites in some urban areas. Thus, overall investments should be considered.

6. Further, where an operator has set up a sufficient network of sites and with site sharing, the incremental investments will mainly be in active equipment and in optimization.

7. It is submitted that in the context of reducing call drops, the investments made by a service provider, will be mostly in the congested areas or to cover expanding geographical city boundaries.

8. It may also be noted that the telecom operators get sites from Infrastructure Providers and respective investments also need to be considered.

9. In case of 3G , we have now reached 100% overlay of 3G sites at every 2G site, which adds to voice and data capacity. Further, on 3G we have added 4th, 5th and 6th sectors at number of sites to add capacity and improve experience.

10. We respectfully submit that both in 2G layer and in 3G layer of our networks we have sufficient capacity to cater to voice and data traffic. We confirm that we are committed to take any steps for quality, wherever required.

C. Industry wide problem in some common areas

1. The Authority is aware that some areas of poor coverage in cities are generally common for all service providers since all service providers face the common challenges. TRAI itself in its studies for Delhi and Mumbai in past has recognised these challenges and has stated that all stakeholders have to jointly address the same.

2. In 2005, TRAI had concluded in its Report on "Quality of Service of Cellular Mobile In Lutyens' and NDMC Areas of Delhi – A Study" dated September 2005 and "Quality of Service of Cellular Mobile Service in Mumbai Metro Circle – A Study" dated November 2005 as follows:

   (a) In respect of Delhi –

   "The issue of Expansion of coverage in the LBZ areas is not yet resolved and as per the service providers, the NDMC is presently not entertaining any request for setting up cell sites in these areas. As regards requests for new sites in NDMC areas, these are pending with the NDMC for approval. The multiplicity of authorities in Delhi for giving clearances in this area is also contributing to delays."

   "Until and unless the issues relating to settling up of additional cell sites in LBZ areas is resolved and a way out is made and also the permission of new cell sites in NDMC areas is expedited, the problems relating to poor coverage in LBZ and NDMC area are not going to addressed. The issues have been taken up with the concerned authorities."

   (b) In respect of Mumbai –

   "Addressing the problem relating to coverage in certain areas of Mumbai, urgent action is needed for expediting the clearances for setting up cell sites in these areas. The issue is being taken up with the Civic Agencies, Government Department and Defence Authorities for expediting clearances for setting up cell sites."

3. It is therefore submitted that in such areas of common constraints, we look to the Licensor and the Regulator to intervene and support in order to address and overcome such constraints.

4. We are gratified that recently some initiatives have been taken by the Central Government to make available sites on Central Government Buildings to TSPs and the Hon'ble MoC has written to the Chief Minister pointing out that
   - With the advancement of technology, quantum surge in data consumption, increasing tele-density and robust growth in the number of consumers with smart phones, the need to establish many more towers has become necessary.

8

- Mobile towers in required numbers are essential for any mobile network and the absence of these is bound to result in gaps in the mobile signal coverage, leading to degradation of services, slow internet speeds and call drops
- Non availability of tower sites is affecting the quality of service
- State Governments of Kerala, Andhra Pradesh and Assam have issued guidelines sanctioning installation of towers on government land and buildings including public sector undertakings

Hon'ble MoC has requested the Chief Ministers to consider issuing guidelines in line with those issued by of Kerala, Andhra Pradesh and Assam for installation of towers on government land and buildings. Copy of letter dated 3 August 2015 is enclosed as **Annexure B**

5. However, these initiatives are yet at a nascent stage as while discussions have commenced in a few cities / service areas, the fruits of these are yet to be achieved.

D. Constraints in 'Major Changeover of Spectrum' in Delhi in end 2014 & beginning 2105 was key trigger of call drops

1. We submit that one of the key factors that contributed to a quality issues in the networks in the last 8-10 months, is the changeover of spectrum that took place in the metro service areas, where spectrum had to be re-acquired by the licensees at extension.

2. This resulted in a change in the spectrum mix as also the frequency spots, in most cases and was an extremely challenging exercise for the service providers.

3. It is submitted that the changeover exercise required major network changes including additions of TRXs, swapping of antennas, installation of new sites, multiple optimizations and dimensioning, repetitive drive tests, etc.

4. The problem was further aggravated by the fact that the changeover had to be carried out over a very short period of time, giving the licensees very limited time to be able to optimize their network and ensure consistent coverage and quality of service.

5. The Authority was well aware of these challenges and had noted [in 2010] that Spectrum refarming poses significant challenges for operators such as the need for guard band and transitional zones, management of voice and data traffic loads. Issues of site optimization would also require to be studied.

6. The Authority had, in fact recommended that a decision on extension/renewal should be taken such that at least two years are available to the licensee to readjust to the resultant situation.

However, that did not happen. It is an admitted fact that not only were the required spectrum allocations delayed but there was no formal plan put in place to oversee and ensure a smooth changeover.

7. However, an exercise which required at least 4-5 months (as per TRAI 18 months) had to be done in 45 days.

8. The enormity of the challenge was also acknowledged by the Authority, which itself wrote on 17 October 2014 to the Department of Telecommunications stating as follows:

   "*The above changes will be a huge challenge as all these changes are to be carried out on a live network catering to millions of subscribers and any lapse may result in service interruption and serious deterioration in quality of service.*"

   Copy of TRAI Letter dated 17 October 2014 is enclosed as **Annexure C**

9. The consultation paper has made out a case that the number of BTSs added have not kept pace with the traffic added and thus has been quoted as one of the evidence for prima facie lack of investment. We wish to highlight that assumptions of network investment based purely on BTS count is incorrect. There are several other investments done in the network related to other network elements related to not just coverage but also for capacity addition by way of adding TRXs and other channel elements including filters and repeaters. In Delhi & Mumbai alone, we have made the following investments in moneys, network elements and man hour efforts :

   • Rs. 15,000 Cr. in Spectrum & Rs. 1,750 crores in Network Capex in last 1 year
   • Over 4,100 3G Base Stations & 550 2G Base Station added
   • Over 11,000 TRXs of 1800 MHz band have been added
   • 1000 CDMA filters deployed to counter CDMA interference
   • 2,400 repeaters deployed
   • Multiple rounds of frequency planning done throughout and post spectrum changeover activity to improve network quality

10. It may however be noted that such a situation will again arise in some other cities and service areas at end of this year when the licenses are coming up for extension in 17 service areas [six service areas for Vodafone] and there will be a similar changeover and swapping of frequencies and /or frequency spots. In fact it is apprehended that as the spectrum swaps are to take place over entire Circles, rather than the previous case where only the Metro cities were involved, the task could be even more challenging.

11. It is submitted that the licensees will require continued and affirmative support from both the Government and the Regulator to minimize the impact of the changeover. We have already

written to the DoT highlighting the expected challenges in a few of our service areas, where we have requested their intervention and support. We hereby also request the Authority for its support in the matter so that the 2015 changeover can be carried out in a smooth manner.

E. **Sealing of sites by local bodies in Delhi & Mumbai**

1. While we were struggling to carry out the spectrum changeover in a seamless manner, our challenges were further aggravated, especially in Delhi and Mumbai by the arbitrary actions on the grounds by local civic authorities.

2. In Delhi, we have being facing particular difficulties by the arbitrary sealing drives that are being carried out by the Municipal Corporation of Delhi on a periodic basis.

   In October 2014, the MCD illegally started sealing towers in East Delhi. Then once again, in February 2015 MCD started issuing Notices / Orders and sealing Cellular Sites. In July 2015 the problem surfaced again in July 2015, when the MCD again embarked on a sealing drive. At each instance, the operators have had to rush to Court to obtain reliefs, but even the directions of the High Court to de-seal sites are not being complied with by MCD in many cases, despite requisite permissions having been procured by the telecom service providers for such Cellular Sites.

   Each time any site is sealed, the services in the area being served by that site is severely affected. The problem is further aggravated in case the sealed site is a hub site catering to a number of linked sites.

3. In case of Mumbai, the reasons are attributable more to the EMF concerns that are being spread amongst the public by certain vested interests that have led to societies, citizens refusing to give permission to set up towers and also insisting that even existing towers be removed. The large scale panic that has been caused amongst the citizenry about the alleged ill affects of EMF have made it extremely difficult and challenging for the service providers to offer their services in a seamless manner.

4. The Authority has also noted as a part of its Drive test report published on 21ˢᵗ July 2015 that during the last six months **523 sites** in Delhi and around **801 sites** in Mumbai were shut-down due to various reasons (sealing of sites by municipal authorities, RWA, EMF related issues, owner issues).The closure of each site impacts three to four neighbouring sites which could result in increased call drops at such locations.

5. However, despite the above recognition, the problem, instead of improving, has further deteriorated. For example, in Delhi, further 25 sites have been shut down by the municipal authorities, further aggravating the problem.

S No	Site Owner	SITE NAME & Address	Date of sealing
1	Indus	SD_Badarpur_P_57 J. Om Prakash, Laxmi Bai Market, Badarpur, Near Radiator Shop.	28-Jul
2	Indus	SD_Sarita_Vihar_BSC_59 Plot No. 3, LSC, Pocket H & J, Sarita Vihar, New Delhi	28-Jul
3	Indus	Dharampura Plot No 168-169,Must No 34,Killa No 10,Roshanpura,Najafgarh, Delhi-43	28-Jul
4	Indus	Sultanpur Khasra No 556,Plot No 195,Sultanpur Extn,Mehrauli,Delhi-30	28-Jul
5	Indus	Chatterpur JD Farm, 20A, Satbari, Chatterpur, New Delhi.	28-Jul
6	Vodafone	Mahavir Enclave WZ-45, Nasirpur Road, Harijan Basti Part-II, Palam Gaon	28-Jul
7	Vodafone	Saket 187 A, Hauz Rani Mkt , Opp Max Hospital ,	28-Jul
8	Indus	SDM1NFC24432A A-4, Taimur Nagar, Opposite Gurudwara, New Delhi	28-Jul
9	Vodafone	SDM1Malviya5060 B-1/14, 3rd Floor, Malviya Nagar New Delhi	28-Jul
10	Indus	DAEX1BIN5764IAI 63A + 63C,Khasra No 257,Binda Pur Extn,N.Delhi-18	07-Aug
11	Indus	SDOKHLAINDSAREA Kashmiri Lal Batra, Neeraj Batra, Ritu Batra 9312833518, Z-35,Okhla Industrial Area,PH-II,N.Delhi	07-Aug
12	Indus	Ladpur 119, POLY WALA PANA, Village-Ladpura, Delhi	07-Aug
13	Vodafone	Rajnagar Extn Raj Nagar Extension, West Delhi	07-Aug
14	Indus	WD_ODM_Dwarka_Fover_1770 RZ 437, Raj Nagar, 1 Palam, New Delhi	17-Aug
15	Reliance	Dwarka Palam Dwarka sec-7, New Delhi	17-Aug
16	Indus	RAJU PARK EXTN PLOT NO 1A,SHIV PARK,KAKROLA EXTN,N.DELHI	18-Aug
17	VIOM	PATEL GARDEN /DWARKA-4 PLOT NO. 1 KHASRA NOS. 7/21 AND 4/12 VILLAGE KAKROLA NEW DELHI-110 043.	18-Aug
18	Indus	KONDLI Raj Dairy", Old Kondli Main Road,Near GK TVS Showroom, Delhi-96	18-Aug
19	Indus	KONDLI B-135, Gharodi Dairky Colony Delhi	18-Aug
20	Indus	ED_GandhiNgr_2607 9/702, Kh. No. 625/620/388/59, Kishan Dutt Gali, Subhash Road, Gandhi Nagar, Delhi	18-Aug
21	Indus	GHAZIPUR_DAIRY_FARM D-21,ROAD NO 05,GHAZIPUR DAIRY FARM,SHAHDRA,DELHI-96	19-Aug

22	Indus	Geeta Colony 7/28,Geeta Colony, Jheel Khureja Delhi-110031	19-Aug
23	VIOM	BLOCK-12 GEETA COLONY H.NO.12/26,GEETA COLONY DELHI-31	19-Aug
24	Indus	WD_Dwarka_Sec2_2084 Plot No.4, Vardhman Market CSC, Sector-2, Dwarka, New Delhi	
25	Indus	Kalyanpuri House No. 19/3-4, Kalyanpuri, J J Colony,Delhi-110091	21-Aug

F. Interference in networks by Illegally deployed wide band repeaters and jammers

1. Another ongoing issue that is being faced by the operators is the widespread use of illegal jammers and wide band repeaters.

2. As the Authority is aware, all radio equipment has to be installed with prior permission of WPC, Department of Telecommunications. Since the spectrum given is licensed and earmarked to specific parties for specific areas, it is imperative on part of WPC to ensure that equipment like repeaters and jammers are not installed by non-licensees. Such illegal installation causes interference in the networks and adversely affects quality of service.

3. We have informed WPC about such installations that are affecting the QOS in our networks. A copy of our letter for Mumbai service area submitted to DoT in this regard is attached at **Annexure D**.

4. In a recent study carried out through Ericsson for Mumbai Service area, 16 Sites attempted for source identification for UL RSSI using spectrum analyzer and source identified/suspected at 10 sites. Details of this are given below:

S.No	Site ID	SCFT Status	Site Name	Zone	Source Identified/Suspected (Y/N)	Source Status	Source Description
1	UM4354	Issue	Shivalaya	South	Y	Confirmed Source (Repeater Antenna)	From UM4345 at 180 degree at around 100 mtrs and from UM4289 at 60 degree at around 180 mtrs Repeater Antenna
2	UM4289	issue	Sai Seva mandal	South	Y		
3	UM625	Issue	Fatwat Anjuman	South	Y	Access Required	Suspected source in the 220 degrees at around 60 mtrs, repeater Antenna on self site
4	UM1645	Issue	Rogey Apt	West	Y	Access Required	Repeater Antenna
5	UM282	Issue	Hashemia	South	Y	Access Required	Suspected source in the 330 degrees at around 50 mtrs
6	UM207	Issue	CVOD Jain School	South	Y	Access Required	Source identified in 280 Degree, at around 150mtrs
7	UM2981	Issue	Surya Mahal	South	Y	Access Required	Repeater Identified in 150 Degree on Commerce House at around 50 mtrs
8	UM678	Issue	Azad House	South	Y	Access Required	Source identified in 290 Degree, at around 60mtrs
9	UM3241	Done	Barar House	South	Y	Confirmed Source (Switched off)	Repeater Antenna
10	UM2830	Issue	Mazda Mansion	South	Y	Confirmed Source (Access Required)	Repeater Antenna (Poonawala House)
11	UM116	Issue	Gokuldham	South	N		
12	UM2761	Issue	jai hind theater	South	Y	Access Required	Suspected source in the 60 degrees at around 100 mtrs
13	UM2080	Issue	Shivshankar	South	N		
14	UM5001	Issue	Gokul Bhuleshwar	South	N		
15	UM3448	Done	Hub Town Skybay	South	Y	Confirmed Source (Switched off)	Repeater Antenna
16	UM197	Issue	Singhal Swaroop	West	N		

5. We request that it is imperative that necessary action should be taken in this respect by DoT for proper conduct of telegraph and reduction of call drops.

G. Allegation that operators drop calls for revenues generation is absolutely incorrect

1. We note that the Authority has shared the perception of some stakeholders that calls are being deliberately dropped by operators to generate revenues and respectfully submit that it is absolutely incorrect and most unfair and unjustified.

2. It is first submitted that it is not technologically possible to create call drops; further, there is absolutely no reason or logic for any service provider to undermine its own brand by indulging in any such action that is so blatantly against the interests of its consumers. With the hyper intensive competition in the market and the availability of MNP, any such action will be against the service providers own interests as well.

3. Service providers earn more revenues only if they generate more successful calls, which results in customer satisfaction and more conversations. If a customer faces call drops on regular basis on a service provider's network then the customer starts calling from other service provider or landline which will result in loss of revenue to his original service provider.

4. It is submitted that call drops incidents are mainly reported from pockets where there are invariably extraneous factors involved – such as Lutyen's Zone, key routes from airport to Central Delhi, prime localities, key government buildings where the service provider will like to provide service with good quality but is constrained to do so due to factors beyond its control and thus suffers consequentially on account of revenues, its brand image and increase in customer dissatisfaction.

H. No case to refund /compensate consumers for call drops

1. The Authority's proposal to compensate consumers for call drops effectively brings down the call drop benchmark to 'zero', which is tantamount to enforcing impossibility especially in a mobile environment, where operators are faced with a host of constraints and challenges that are beyond their control.

There cannot be any telecom network designed for having Nil call drops. This is simply not possible because of the dynamic nature of traffic being generated by human behavior. For eg. a traffic snarl on a highway would immediately lead to call drop experience because the coverage in that area is not designed for a sudden spike in the traffic being generated. Same is the case with any emergency, calamity situations.

On similar lines, it is not possible to ensure drop-free calling in basements, high rise buildings, houses with thick walls, elevators etc.

Also there will be call drops under the following common circumstances:
- While travelling from one circle to another
- Interference from neighbouring countries (eg. Gujarat, Haryana etc. for which we have sought legal remedy)
- Interference caused by legal or illegal jammers deployed by various prison administrations, security agencies etc.
- Interference caused by usage of illegal wide-band repeaters by private individuals
- Poor quality hand-sets being

This is precisely why the benchmarking is done on averages for a Circle and the 2% benchmark has been arrived at after considering all the call drop reasons beyond the normal network controls. Needless to mention, Vodafone has been well within the benchmark throughout this period during which there has been a negative public perception.

We also wish to highlight a very important aspect of customer expectation and grievance handling in case the Authority does mandate a compensatory mechanism. Irrespective of whether the call has been made or received and irrespective of whether the call has dropped in the calling party's network or the call may have dropped in the receiving party's network, the customer will experience a call drop and will call up our call centre and would demand for the compensation (even if not on our account). We envisage an increased calling at our call centres due to a difference in the customer's expectation as against the actual benefit passed on.

2. There is almost no international precedent where compensation to consumers for call drops in a matter of regulatory mandate. In almost all the examples cites by the authority, the compensation is by virtue of an "offer" made by the TSP.

3. Even in the case of Columbia, which is the only example cited by the Authority of a regulatory mandate of compensation to the consumer in case of call drops, we understand that the rule laid down by the Columbian Regulator for MNOs to compensate users directly and automatically when exceeding the dropped calls QoS indicator.

4. The Authority has also, with effect from 1 January 2013 introduced financial dis-incentives, in case of non-compliance with QOS parameters so as to further enforce compliance with its QOS parameters.

5. In view of the above, we respectfully submit that there is no call or justification to propose compensation to consumers in case of call drops, when service providers are complying with the benchmarks laid down by the authority under its QOS Regulations

6. The call drops have no nexus with the duration of the call.

7. We respectfully submit that for the reasons mentioned above and with the intense competition in the market any mandate of giving refunds and/or compensation for call drops will be arbitrary and will lead to far larger adverse consequences.

Q2: Do you agree that calling consumer should also be compensated for call drops by the access service providers? If yes, which of the following methods would be appropriate for compensating the consumers upon call drop:
(i) Credit of talk-time in minutes/ seconds
(ii) Credit of talk-time in monetary terms
(iii) Any other method you may like to suggest

Please support your viewpoint with reasons along with the methodologies for implementation.

1. Not applicable in view of the answer to Q1 above.

Q3: If the answer to the Q2 is in the affirmative, suggest conditions/limits, if any, which should be imposed upon the provision of crediting talk-time upon call drop and usage thereof.

1. Not applicable in view of answer to Q1 the above.

Q4: Is there any other relevant issue which should be considered in the present consultation on the issue of call drops?

1. We submit that in an environment where serious investments in networks and spectrum having been made and committed by us, where the market structure is highly fragmented depriving efficiencies and increasing operational costs and complexities and where the multiple-level government approvals hinder efficient and faster roll outs, we need support from TRAI who is the expert body and it understands the situation of the industry and service providers. We look forward for such support more so because all the factors have been acknowledged by TRAI in the past and request that they should not be ignored now.

2. We submit that the solution lies in addressing call drop issue for which we reassure that we are committed. However, the approach like refund or compensation to subscribers is neither tenable nor required.

3. We respectfully submit that TRAI should not take any steps which will lead to larger implications and forced structural changes which will further stifle the sector.

4. The Government has auctioned 'Liberalized Spectrum' which allows the operators to use any technology. The Government has put a higher price for such 'Liberalized Spectrum'. Thus, the successful bidders have a choice to adopt any technology. Any regulatory / policy action now directly or indirectly restraining one set of operators to a particular technology and therefore changing the market structure and stifling competition will not be reasonable. There are obligations under the license which are applicable to all the licensees.

5. TRAI has time and again stated that there is hyper competition in Indian market. Further, it has acknowledged that there is a dire need of consolidation more so because spectrum and market is fragmented. We respectfully submit that a service provider like us, who is continuously investing in networks and technologies for last 20 years and who is one of the efficient utilizer of resources, including spectrum, and one of the highest contributor to Government's exchequer, should not be made to pay the price of such efficiencies in such a fragmented market. We submit that the service providers who carry more traffic will logically have more call drops but that does not mean that such service providers are worse than those service providers who have equal or more spectrum but who carry far less traffic, which may be due to many factors, including lesser investments in the networks.

6. The Authority may kindly consider the following aspects as well
   (a) Rationale of prescribing a Nil tolerance for call drops in a mobile environment, especially one that is as challenging as India
   (b) Cost of Implementation, monitoring and Enforcement
   (c) Rise in disputes

XXXXXX

वि शंकर प्रसाद
RAVI SHANKAR PRASAD

मंत्री
संचार एवं सूचना प्रौद्योगिकी
भारत सरकार
MINISTER
COMMUNICATIONS & IT
GOVERNMENT OF INDIA

D.O. No. 2-6/2014-Policy-1 (Pt.II)

सत्यमेव जयते

0 3 AUG 2015

Digital India is a key to deliver good governance to the citizens using the power of Information Technology. Digital connectivity is also important for the delivery of e-education, e-health and host of other socially useful initiatives.
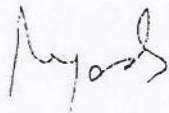
With the advancement of technology, quantum surge in data consumption, increasing teledensity and robust growth in the number of consumers with smart phones, the need to establish many more towers has become necessary. Mobile towers in required numbers are essential for any mobile network and the absence of these is bound to result in gaps in the mobile signal coverage, leading to degradation of services, slow internet speeds and call drops. Non-availability of tower sites is affecting the quality of service. The apprehension that radiation emitted by mobile towers causes cancer has not been proven. WHO guidelines and various High Court decisions dismiss these charges. Towers are needed for smooth connectivity. In the absence of mobile tower sites, there would be degradation of quality of services. Recently State Governments of Kerala, Andhra Pradesh and Assam have issued guidelines sanctioning installation of Telecom Towers on Government land and buildings including Public Sector Undertakings in their States paving the way for achieving the national connectivity objectives and Digital India vision. I am enclosing the guidelines issued by these States for your perusal (Annexure I-III).

A large proportion of mobile traffic is generated indoors and the strength of cellular signals has to be enhanced to enable it to penetrate walls of buildings. This is specifically true to large Government buildings frequented by public where the mobile signals are significantly attenuated due to multiple walls leading to poor connectivity and voice quality. World over, recourse has been taken to in-building solutions that aggregate mobile traffic within a building and transmit it through a shared, common antenna. In-building solutions (IBS) enable greater coverage and aid better quality of service. The Telecom Regulatory Authority of India (TRAI) in its recommendations on Telecommunications Infrastructure Policy had recommended that all State Government buildings, hospitals and closed public spaces frequented by people should provide IBS. This can be first attempted in capital cities and large metropolitan cities.
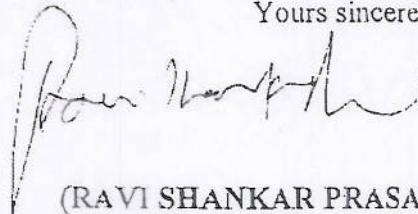
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There is also an urgent need to simplify the Right of Way permissions and provide these through a single window clearance system. Moreover, it is necessary to rethink on high Right of Way charges being levied by few local bodies/State Governments. To give fillip to digital penetration and ensure high bandwidth to the common man, it is necessary to comply with the provisions of Section-12 of the Indian Telegraph Act, 1885, which lay the principles for such charges.

I request you to consider issuing guidelines/instructions in line with the State Governments of Kerala, Andhra Pradesh and Assam, for installation of telecom towers on Government land and buildings. I would also request you to explore the possibility of providing in building solutions in large office buildings, establishment of a single window clearance system for Right of Way along with simplified guidelines complying with the provisions of the Indian Telegraph Act on Right of Way charges. The State can work out appropriate modalities/arrangements vis-à-vis the terms & conditions issued by other State Governments for the purpose. Guidelines issued by Ministry of Road Transport & Highways in this regard are also enclosed (Annexure IV) for your reference.

Yours sincerely,

(RAVI SHANKAR PRASAD)

Encls. As above

To Chief Ministers of all States except Kerala, Andhra Pradesh and Assam

Dr. Rahul Khullar

अध्यक्ष
भारतीय दूरसंचार
विनियामक प्राधिकरण
CHAIRMAN
TELECOM REGULATORY
AUTHORITY OF INDIA

D.O.No.123-2/2014-NSL-II
October 17, 2014

Dear Rakesh,

In the three metros of Delhi, Mumbai and Kolkata, the first two CMTS/UAS licences given in 1994 are due to expire on 29th/30th November 2014. These "expiry" licensees were holding spectrum in the 900 MHz and 1800 MHz band which was put to auction in the February 2014 auctions. Except M/s Loop, which did not participate in the auctions, other "expiry" licensees, viz. M/s Airtel and M/s Vodafone were successful in re-acquiring spectrum in these LSAs. In the Delhi LSA, Airtel and Vodafone, which were both having 8 MHz in 900 MHz, could re-acquire only 6 and 5 MHz of 900 MHz band respectively in the auctions. Moreover, the spot frequencies now assigned to them are almost entirely different from the earlier assignment. To make up for the shortfall in the 900 MHz band, these TSPs have acquired additional spectrum in the 1800 MHz band; but it will require sufficient time to build a new network in the 1800 MHz spectrum. In addition, in the Delhi LSA, M/s Idea has acquired 5 MHz in the 900 MHz band, which has to be assigned to it <u>after</u> getting it vacated from these two TSPs.

2.   As reported by these TSPs, this whole exercise of change over of frequencies will need to be carried out in two stages. First, these TSPs will have to build a new network of 1800 MHz spectrum by putting new BTSs and augmenting the capacity of the existing ones. In the second stage, they will have to reduce their holding in the 900 MHz band in steps and carry out swapping of spectrum and releasing spectrum to the new entrant (Idea). Both of them will be required to do rigorous planning and work in tandem. The above change over will be a huge challenge as all these changes are to be carried out on a live network catering to millions of subscribers and any lapse may result in service interruption and serious deterioration in quality of service.

3.   Anticipating the above challenges in mind, the Authority, in its recommendations on 'Auction of Spectrum' dated 23rd April 2012 had recommended that the 900 MHz spectrum be auctioned at least 18 months in advance so as to enable the winning bidders to be ready with the deployment plans. As per the NIA dated 12th December 2013, for the auctions of February 2014, in case of bidders whose licenses were about to expire in 2014, the effective date of spectrum assignment in 1800 MHz band, will be the preferred date of allotment of spectrum <u>indicated by the successful bidders</u>, which in no case shall be later than date of expiry of existing licenses in the respective Service Area.

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4.   As has been published in media reports and also reported to the Authority by Vodafone and Airtel, there has been inordinate delay in the assignment of spectrum in the 1800 MHz band. As reported by Vodafone, it has been assigned spectrum only on 10th October 2014, i.e. after almost 8 months from the February 2014 auctions despite a number of representations to the WPC.

5.   In its representation dated 16th October 2014, Vodafone has indicated that it would require at least 1 week for the deployment of new frequencies assigned in the 1800 MHz band and 9 weeks for freeing up the excess 3 MHz in the 900 MHz band in a progressive manner. Subsequently, it would require another 3 weeks' time for swapping of its frequencies in the 900 MHz band with Airtel. However, only 7 weeks are left before the expiry of licences.
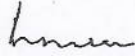
6.   The Authority is unable to understand the reasons for this inordinate delay in the assignment of spectrum despite the clear provision in the NIA for the assignment of spectrum and after the payment has been made by the licensees. Moreover, the Authority is seriously concerned that this delay on the part of WPC in assigning spectrum in the 1800 MHz band may lead to a partial breakdown of services offered by these two operators especially in Delhi, the national capital. This will inconvenience consumers greatly. Both these operators have around 20 million subscribers in Delhi which constitute around 45% of the total subscriber base of Delhi LSA. It is apprehended that in December 2014, there will be a serious deterioration in the quality of service to these subscribers because of call drops, network congestions etc.

7.   The Authority suggests that the DoT should immediately call a meeting of both TSPs and arrive at a feasible solution so that consumers' inconvenience can be avoided.

8.   A copy of this letter is being placed on the website of TRAI www.trai.gov.in.

Regards

Yours sincerely,

(Rahul Khullar)

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