GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS
DEPARTMENT OF TELECOMMUNICATIONS

LOK SABHA
UNSTARRED QUESTION NO.3500
TO BE ANSWERED ON 2ND JANUARY, 2019

EXTENT OF CALL DROP

†3500. SHRI SADASHIV LOKHANDE:

Will the Minister of COMMUNICATIONS be pleased to state:

(a) whether TRAI has expressed concerns over increasing rate of call drops across networks of various Telecom Service Providers (TSPs) and if so, the details thereof; and

(b) the extent to which the rate of call drop has been higher than prescribed limit in rural and urban areas separately during each of the last three years and the current year, State/UT-wise and the steps taken/ proposed to be taken by the Government and the TSPs to maintain the said rate within the prescribed limit?

ANSWER

THE MINISTER OF STATE (IC) OF THE MINISTRY OF COMMUNICATIONS & MINISTER OF STATE IN THE MINISTRY OF RAILWAYS
(SHRI MANOJ SINHA)

(a) In order to address the issue of call drop, Telecom Regulatory Authority of India (TRAI) held public consultation with all the stakeholders and reviewed the framework for assessing call drop and financial disincentives for non-compliance with the Quality of Service benchmarks.

Based on this review, TRAI has prescribed the revised parameters viz Drop Call Rate (DCR) Spatial Distribution Measure (benchmark <2%) and DCR Temporal Distribution Measure (benchmark <3%), effective from 1st October 2017. The parameters prevailing earlier assessed the performance of mobile network for the License Service Area (LSA) as a whole. However, the revised parameters are more stringent as they give better insight into the network performance of Telecom Service Provider (TSP) at each Base Transceiver Station (BTS) level.

As per report of Telecom Regulatory Authority of India (TRAI) for the quarter ending September 2018, significant improvement has been observed in terms of compliance towards TRAI's Quality of Services benchmarks on DCR. All TSPs are complying to these benchmarks despite rapid-increase in traffic volume and more stringent benchmarks, except M/s Idea in four License Service Areas (LSAs) i.e. Assam, Jammu & Kashmir, Himachal Pradesh & North East and M/s Bharat Sanchar Nigam Limited (BSNL) in one LSA i.e. West Bengal.

(b) As per TRAI, the Quality of Services benchmarks on Drop Call Rate are assessed for LSA as a whole and data is not available separately for urban and rural areas. LSA-wise details of non-compliance by TSPs to the earlier parameters for the years 2015 to 2017, in case of 2G & 3G services, are given at **Annexure-I& II** respectively. LSA-wise details of non-compliance as per the revised parameters for December, 2017 and year 2018 is given at **Annexure-III**.

In order to address call drops, following steps have been taken:

(i) DoT has taken several policy initiatives to facilitate infrastructure growth for delivery of quality services. These include permitting trading/sharing/liberalisation of spectrum, permitting passive & active infrastructure sharing, notification of Right of Way Rules 2016, making available government land/buildings for installations of towers etc.

(ii) About 9.74 lakh additional Base Transceiver Stations (BTSs) for 2G/3G/4G-LTE services have been added by TSPs since July 2015 taking the total BTS count in the country to about 20.07 lakh in November 2018. Moreover, about 9.59 lakh 2G/3G Cells have been rectified/optimised by TSPs during July 2016 to October 2018.

(iii) In order to obtain direct feedback from subscribers, DoT has launched an Interactive Voice Response System (IVRS) wherein, around 2.15 Crore subscribers have been individually contacted since December 2016, of which 30.1 lakh subscribers have participated in the survey. The feedback is shared with the TSPs every week for taking corrective actions in a time bound manner. As a result, about 85,000 individual cases of call drops have been resolved so far.

(iv) Independent Drive Tests of mobile networks in select cities, highways, railway routes to assess the quality of service.

(v) Revised graded Financial Disincentives (FD) structure, based on the extent to which a TSP's performance deviates from the specified call-drop benchmark, has been introduced since 1st October 2017. LSA-wise details of disincentives imposed on TSPs are given at **Annexure-IV.**

Annexure-I

(2G Services)

The details of instances of non-compliance in the benchmarks for call drop parameters reported by TSPs on quarterly basis (in %age)													
Parameter with Benchmark	***Telecom Service Provider***	***License Service Area***	***2015***				***2016***				***2017***		
			March	***June***	***Sept***	***Dec.***	***March***	***June***	***Sept***	***Dec.***	***March***	***June***	***Sept***
Call Drop Rate (Benchmark ≤2%)	Aircel	Haryana	4.04	6.37	2.53								
	BSNL	Bihar	2.85	2.84	2.46								
		Himachal Pradesh			2.26								
		North East (NE)	3.98	3.52	3.79	2.92	2.56						
Worst affected cells having more than 3% Traffic Channel (TCH) drop (call drop) rate (Benchmark ≤3%)	Aircel	Andhra Pradesh(AP)	6.36	6.11	4.48								
		Assam	13.26	15.46	14.05	12.61	12.42	17.22	19.05	15.98	13.66	16.47	15.97
		Bihar	9.75	10.59	14.03	12.02	14.66	13.66	15.08	12.49	8.76	6.63	6.22
		Delhi	7.33	6.87	6.29	4.87		4.18	5.13	4.15	4.13	4.19	5.01
		Haryana	3.92	4.31	3.89								
		Himachal Pradesh (HP)	11.04	11.77	16.09	11.96	10.21	10.16	11.47	8.63	8.58	8.72	10.18
		Jammu & Kashmir (J&K)	10.60	9.53	13.76	12.45	10.87	10.99	12.28	8.58	8.80	8.09	7.83
		Kolkata			3.14								
		Kerala		3.29					4.71	3.58	3.63	3.60	3.78
		Karnataka	8.80	7.92	7.67	7.56	8.22	4.57					
		Mumbai	6.75	5.85	5.69	5.23	4.40	4.44	5.56	3.91	3.95	3.94	4.15
		Maharashtra	4.25	4.22	4.49	5.47	3.04						

Worst affected cells having more than 3% TCH drop (call drop) rate (Benchmark <3%)	Aircel	NE	17.99	16.78	17.08	15.7	16.31	18.76	17.63	15.02	14.23	17.82	19.73
		Orissa	11.65	11.28	12.86	7.00	4.54	5.78	10.08	9.62	4.45	3.71	5.75
		Punjab	3.55		3.67								
		Rajasthan		3.24	3.46			3.16	4.22				3.34
		Tamil Nadu	6.16	5.93	5.53	5.87	5.60	5.88	5.17	4.14	4.05	4.01	4.38
		West Bengal(WB)	10.16	8.74	13.43	12.01	10.26	9.14	10.65	9.31	8.14	11.46	9.84
	Airtel	Chennai				4.36	3.40						
		Tamil Nadu				5.03							
	BSNL	AP				4.65							
		Assam	3.45										
		Bihar	8.98	8.13	6.40	4.80	5.11						
		HP			3.94								
		NE	11.46	8.30	7.07	5.16	5.25						
		Punjab	18.91	19.17	3.37								
		WB	7.74	7.34	9.57	12.14	11.57	12.56	14.76	14.61	13.13	11.46	3.21
	MTS	Gujarat	3.63										
	Tata CDMA	Bihar		4.22	4.35								
		Gujarat		5.34	7.70	6.50	3.02						
		Haryana		4.36	7.22	6.01	4.95						
		HP		3.20	3.57								
		Kolkata			3.63				3.79	4.12			
		Kerala		6.61	7.27	4.34							
		MP		5.23	7.70	6.20							
		Maharashtra		4.91	8.48	7.32							
		Mumbai		3.32	4.40	3.63							
		Orissa		3.47	4.96								
		Punjab		4.36	6.97	4.74	3.25					3.04	3.12
		Rajasthan		5.78	7.14	3.99							3.90
		Tamil Nadu			4.01	3.66							
		Uttar Pradesh		5.54	8.80	8.28	4.43						

Worst affected cells having more than 3% TCH drop (call drop) rate (Benchmark <3%)		- East											
		Uttar Pradesh - West		3.52	6.05	5.19							
		WB		4.95									
	Tata GSM	AP		3.19	3.35								
		Bihar			3.20								3.07
		Gujarat		3.87	5.30	4.27							
		Haryana		3.93	4.04								
		HP		11.68	9.02	4.30	3.64						
		Karnataka		4.81	3.82	3.32							
		MP			3.63								
		Maharashtra		4.92	5.91	5.67							
		Mumbai		3.05	3.48	3.62							
		Punjab		3.58	4.11	3.28	3.06						
		Rajasthan		4.11	4.67	3.37							
		Tamil Nadu			3.34								
		UP - East		5.46	8.79	6.34	4.05	3.25					
		UP - West		4.20	6.27	5.22	3.48						
		WB			3.14								
	Telenor	Bihar					4.22	6.12	6.05	3.97			3.27
		Gujarat					3.14		3.75				
		Maharashtra					4.12	3.82	3.67				3.22
		UP - East					3.07	8.24	8.71	5.18	3.29	3.46	4.10
		UP - West						5.22	4.62				
	Vodafone	AP							3.07				
		Delhi	4.15										
		MP			4.30	3.73		3.24	5.59	4.44	3.25		3.72
		Mumbai							3.73				
		UP - East			3.89				4.18				

Annexure-II

(3G Services)

The details of instances of non-compliance in the benchmarks for call drop parameters reported by TSPs on quarterly basis (in %age)

Parameter with Benchmark	*Service Provider*	*Service Area*	*2015*				*2016*				*2017*		
			March	*June*	*Sept*	*Dec.*	*March*	*June*	*Sept*	*Dec.*	*March*	*June*	*Sept*
Call Drop and Circuit Switched Voice Drop Rate: (%age) (Benchmark ≤2%)	Aircel	J&K				2.36	2.35						
		NE		2.09									
	BSNL	Bihar		2.25	2.45								
		Kolkata					2.23						
		NE		2.35	2.18	2.38	2.20						
Worst affected cells having more than 3% Traffic Channel (TCH) drop (call drop) and Circuit Switched Voice Drop Rate:-CBBH (Benchmark ≤3%)	Aircel	AP	7.88	7.00	6.84	4.71	3.61	3.01					
		Assam	13.71	13.66	12.33	8.13	9.25	8.24	7.36	5.24	4.62	5.28	6.43
		Bihar	13.87	13.04	13.60	11.79	9.33	8.72	7.97	7.03	5.49	5.41	4.90
		J&K	14.61	15.33	15.89	21.22	23.60	16.12	10.78	7.95	9.96	9.56	12.42
		Kerala										3.07	
		Karnataka	11.46	10.21	7.08	4.02	4.16	4.60	4.13	3.56	3.62	3.32	
		NE	17.16	21.31	18.91	14.67	12.87	14.68	16.32	11.15	12.52	12.36	11.68
		Orissa	14.71	15.06	18.63	8.13	5.36	7.14	11.12	8.86	5.28	7.14	7.98
		Punjab	12.22	8.41	7.43	6.14	5.98	3.91	3.81	3.65	3.78	3.05	
		Tamil Nadu	6.88	8.68	6.36	5.46	4.99	5.43	5.33	6.11	6.80	5.80	4.84
		UP - East	8.06	7.68	8.59	6.17	6.54	5.03	3.26				
		WB	4.29			3.79	5.67	3.60	3.80	3.84	3.35	4.00	4.94

Worst affected cells having more than 3% TCH drop (call drop) and Circuit Switched Voice Drop Rate:-CBBH (Benchmark <3%)	Airtel	J&K							3.26				
	BSNL	AP	4.97			3.57							
		Bihar	6.37	5.90	10.63	6.07	3.55						
		Kolkata				3.40							
		MP	3.03	3.23									
		NE	7.25	4.87	3.48								
		WB		5.23	4.81	7.27	7.60	8.35	7.42	7.62	7.42	6.27	3.92
	RCOM GSM	Delhi											3.52
	Tata	Gujarat			3.58	3.34							
		kerala			3.99								
		MP			3.08								
		Maharashtra		3.57	3.93	3.56							
		UP - West			3.25	3.14							
	Vodafone	Assam						3.56					
		Harayana			3.12		3.17						
		NE						4.60					
		UP - East			3.14		4.48						

Annexure-III

(For 2G/3G/4G-LTE Services)

The details of instances of non-compliance in the benchmarks for call drop parameters reported by TSPs on quarterly basis (in %age)							
Parameter	***Benchmark***	***Service Provider***	***Service Area***	***2017***	***2018***		
				Dec.	***March***	***June***	***Sept***
Network QoS DCR Spatial Distribution Measure [Network_ QSD(90,90)]	≤ 2%	Aircel	Assam	5.59			
			Bihar	3.43			
			Delhi	3.16			
			Himachal Pradesh	5.99			
			Jammu & Kashmir	4.79			
			Karnataka	2.11			
			Kolkata	2.49			
			Mumbai	2.96			
			North East	7.77			
			Orissa	4.87			
			Punjab	2.35			
			Rajasthan	2.79			
			Tamil Nadu	3.36			
			UP-East	2.50			
			UP-West	2.17			
			West Bengal	5.36			
Network QoS DCR Temporal Distribution Measure [Network_ QTD(97,90)]	≤ 3%		Assam	7.35			
			Bihar	4.48			
			Delhi	3.77			
			Gujarat	3.57			
			Himachal Pradesh	7.64			
			Jammu & Kashmir	7.39			

Network QoS DCR Temporal Distribution Measure [Network_ QTD(97,90)]	≤ 3%	Aircel	Kerala	3.70			
			Kolkata	3.16			
			Mumbai	3.84			
			North East	10.50			
			Orissa	5.88			
			Punjab	3.22			
			Rajasthan	3.23			
			Tamil Nadu	3.96			
			UP-West	3.33			
			West Bengal	6.25			
Network QoS DCR Spatial Distribution Measure [Network_ QSD(90,90)]	≤ 2%	BSNL	Bihar	4.08			
			West Bengal	2.94	2.96	2.88	3.09
Network QoS DCR Temporal Distribution Measure [Network_ QTD(97,90)]	≤ 3%		Bihar	5.19			
			West Bengal	3.72	3.81	3.83	3.67
Network QoS DCR Spatial Distribution Measure [Network_ QSD(90,90)]	≤ 2%	IDEA	Andhra Pradesh	2.48			
			Assam	2.27	2.77	2.53	2.16
			Bihar	2.79	2.63		
			Himachal Pradesh	2.79	2.62	2.35	2.24
			Jammu & Kashmir	2.73	2.48	2.33	2.16
			Madhya Pradesh	2.30			
			Maharashtra	2.33			
			Mumbai	2.58			
			North East	2.47	2.55	2.78	2.22
			Rajasthan	2.56			
			UP(W)	2.03			
			UP-East	2.63			
Network QoS DCR Temporal Distribution Measure [Network_	≤ 3%		Assam	3.33	4.18	3.44	3.51
			Bihar	3.62			
			Himachal	3.48			

QTD(97,90)]			Pradesh				
			Jammu & Kashmir	3.43			
			North East	4.34	4.81	3.74	3.39
			UP-East	3.54			
Network QoS DCR Spatial Distribution Measure [Network_ QSD(90,90)]	≤ 2%	Tata	Andhra Pradesh	2.06			
			Haryana	2.08	3.85		
			Maharashtra			2.71	
			Punjab		2.17		
			Rajasthan		2.55		
			UP-East	2.32	5.00	2.71	
			UP-West		3.22		
Network QoS DCR Temporal Distribution Measure [Network_ QTD(97,90)]	≤ 3%		Gujarat		3.90		
			Haryana	3.50	5.29		
			Maharashtra			5.37	
			Mumbai		3.86		
			Punjab	3.16	4.79		
			Rajasthan		3.86		
			UP-East	4.00	7.69	6.16	
			UP-West	3.44	6.78	7.13	
Network QoS DCR Spatial Distribution Measure [Network_ QSD(90,90)]	≤ 2%	Telenor	Andhra Pradesh	2.07			
			Maharashtra	2.82	2.52		
			Bihar	2.17			
			UP-East	3.13	2.67		
Network QoS DCR Temporal Distribution Measure [Network_ QTD(97,90)]	≤ 3%		Maharashtra	3.29	3.10		
			Bihar	3.35			
			UP-East	3.83	3.32		
Network QoS DCR Spatial Distribution Measure [Network_ QSD(90,90)]	≤ 2%	Vodafone	Bihar	2.67			
			Delhi	2.33			
			Himachal Pradesh	2.32			
			Orissa	2.20			
			UP-West	2.26			

Annexure-IV

Financial disincentives imposed by TRAI on non-compliant TSPs against Benchmarks for Drop Call Rate.

Quarter ending	**Name of TSP**	**Financial disincentive imposed as per notified Benchmarks (in Rs.)**	
		Network QoS DCR Spatial Distribution	**Network QoS DCR Temporal Distribution**
June 2018	M/s BSNL	Two lakh for One License Service Area (LSA)	Two lakh for One LSA
	M/s Idea	Eight lakh for Four LSAs	Four lakh for Two LSAs
March 2018	M/s BSNL	One lakh fifty thousand for One LSA	One lakh fifty thousand for One LSA
	M/s Idea	Seven lakh fifty thousand for Five LSAs	Three lakh for Two LSAs
	M/s Tata	Seven lakh fifty thousand for Five LSAs	Fifteen lakh for Seven LSAs
	M/s Telenor	Three lakh for Two LSAs	Three lakh for Two LSAs

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