For Immediate Release

Information note to the Press (Press Release No. 94 /2017)

Telecom Regulatory Authority of India

TRAI Releases Report on Independent Drive Tests conducted in two cities viz. Allahabad and Jabalpur.

New Delhi, 10th November, 2017: TRAI through its agency conducted Independent Drive Tests (IDT) in two cities viz. Allahabad and Jabalpur. Drive tests were conducted to assess the network quality provided by cellular mobile telephone service providers for voice and data services. The drive tests were conducted in the two cities as per the details given below:-

S.No.	City	Licensed Service Area	Period of Conducting IDT	Summary of Results of IDT
1)	Allahabad	UP-East	17th to 22nd August 2017	Annexure-A
2)	Jabalpur	MP	4th to 8th September 2017	Annexure-B

2. The Key Performance Indicators (KPIs) were assessed for the networks of all telecom service providers operating in the region. KPIs for voice services were Coverage; Call Setup Success Rate; Drop Call Rate; Block Call Rate, Handover Success Rate; Rx Quality. KPIs for data services were Download and Upload Throughputs, Web Browsing Delay, Video Streaming Delay and Latency.

The complete report is available at TRAI website www.analytics.trai.gov.in

3. In case of any clarification, please contact, Shri. Asit Kadayan, Advisor (QoS) at Tel. No. +91-11-2323-0404 or at email.id: advqos@trai.gov.in

10.11.2017

(S K Gupta)
Secretary

Report on Independent Drive Test conducted in Allahabad from 17th to 22nd August 2017

The drive test in the city of Allahabad in UP-East LSA was conducted for a period of 5 days during 17th to 22nd August, 2017. It covered a route of approximately 680 KMs and data tests conducted on 6 hotspots. Cellular mobile telephone service providers included namely Aircel, Airtel, BSNL, Tata, Idea, RCOM, Vodafone, Telenor and Jio. Tests included 2G, 3G, 4G and CDMA radio access technologies.

The summary of the Service Provider's performance on the key parameters based on Independent Drive Test is given here under:-

Voice Call	2G								CDMA
	*Aircel	Airtel	BSNL	Tata	Idea	RCOM	Telenor	Vodafone	*Tata
Call Attempt	1093	1121	1170	1100	1142	1130	1121	1148	805
Blocked Call Rate (%)	2.6%	0.7%	1.2%	1.5%	0.1%	1.8%	0.1%	0.7%	0.1%
CSSR% (Accessibility)	97.4%	99.3%	98.8%	98.5%	99.9%	98.2%	99.9%	99.3%	99.9%
Drop Call Rate (%)	1.4%	0.4%	1.8%	2.1%	0.6%	1.8%	0.6%	0.3%	0.1%
Mobility HOSR (%)	98.2%	95.3%	94.5%	97.5%	99.2%	97.3%	95.8%	97.8%	100.0%
Rx Quality (%)	95.7%	95.7%	95.6%	94.3%	95.7%	95.1%	96.8%	97.1%	97.9%

Voice Call	3G					VoLTE
	*Aircel	Airtel	BSNL	Idea	Vodafone	Jio
Call Attempt	1098	1178	1148	1125	1147	1173
Blocked Call Rate (%)	1.5%	1.1%	1.9%	0.8%	0.8%	0.5%
CSSR% (Accessibility)	98.5%	98.9%	98.1%	99.2%	99.2%	99.5%
Drop Call Rate (%)	1.1%	0.5%	2.5%	0.7%	0.4%	0.2%
Mobility HOSR (%)	98.0%	99.4%	98.9%	95.4%	100.0%	99.8%
Rx Quality (%)	94.2%	93.9%	94.9%	72.6%	90.5%	86.2%

* In Aircel & Tata CDMA calls did not initiate at the outskirts of Allahabad city due to lack of coverage

Data Services	Aircel 2G	Airtel 2G	BSNL 2G	Tata 2G	Idea 2G	RCOM 2G	Telenor 2G	Vodafone 2G	Tata CDMA
Download Throughput (Kbps)	120.4	126.0	80.0	67.6	120.0	66.8	112.8	151.0	585.3
Upload Throughput (Kbps)	126.5	108.1	79.4	68.2	77.3	86.4	89.9	97.4	256.5
Web Browsing Delay (sec)	17.1	17.6	17.5	17.6	20.2	16.5	17.9	18.5	24.9
Latency (msec)	299	674	362	328	307	323	256	202	144

Data Services	Aircel 3G	Airtel 3G	BSNL 3G	Idea 3G	*Vodafone 3G	Airtel 4G	Idea 4G	Jio 4G	RCOM 4G	*Vodafone 4G
Download Throughput (Mbps)	1.4	4.7	1.4	2.5	4.0	4.9	8.3	4.7	4.7	6.6
Upload Throughput (Mbps)	1.6	1.5	1.5	1.2	2.2	4.3	5.7	3.4	2.0	6.9
Web Browsing Delay (sec)	13.3	6.3	10.4	12.3	7.8	6.9	5.9	8.7	8.2	5.3
Video Streaming Delay (sec)	1.9	4.5	8.8	2.4	2.4	1.1	0.8	4.3	2.9	0.8
Latency (msec)	127	119	109	347	-	117	146	142	146	-

Vodafone has disabled ping in 3G & 4G network

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Report on Independent Drive Test conducted in Jabalpur from 4th to 8th September 2017

The drive test in the city of Jabalpur in MP LSA was conducted for a period of 5 days during 4th to 8th September, 2017. It covered a route of approximately 620 KMs and data tests conducted on 6 hotspots. Cellular mobile telephone service providers included namely Airtel, BSNL, Idea, RCOM, Tata, Vodafone, and Jio. Tests included 2G, 3G, 4G and CDMA radio access technologies.

The summary of the Service Provider's performance on the key parameters based on Independent Drive Test is given here under:-

Voice Call	2G						CDMA
	Airtel	BSNL	*Idea	RCOM	Tata	Vodafone	*Tata
Call Attempt*	922	935	882	915	945	938	863
Blocked Call Rate (%)	0.2%	0.2%	0.1%	2.4%	0.8%	0.9%	1.5%
CSSR% (Accessibility)	99.8%	99.8%	99.9%	97.6%	99.2%	99.1%	98.5%
Dropped Call Rate (%)	0.3%	1.5%	0.3%	1.6%	1.1%	0.2%	3.5%
Mobility HOSR(%)	97.7%	98.3%	99.8%	99.2%	99.3%	99.8%	100.0%
Rx Quality	97.5%	98.8%	98.1%	96.4%	98.9%	99.4%	82.1%

Voice Call	3G						VoLTE
	Airtel	BSNL	*Idea	RCOM	Tata	Vodafone	Jio
Call Attempt	930	933	922	907	912	913	910
Blocked Call Rate (%)	0.8%	0.6%	0.7%	0.7%	1.0%	0.4%	0.8%
CSSR% (Accessibility)	99.2%	99.4%	99.3%	99.3%	99.0%	99.6%	99.2%
Dropped Call Rate (%)	0.4%	1.7%	0.4%	1.4%	0.4%	0.6%	0.6%
Mobility HOSR(%)	99.6%	98.5%	99.9%	99.0%	100.0%	99.6%	99.6%
Rx Quality	94.6%	96.6%	95.2%	95.9%	98.4%	95.8%	86.0%

* In Idea & Tata CDMA calls did not initiate at the outskirts of Jabalpur city due to lack of coverage

| Data Services | 2G | | | | | | CDMA |
	Airtel	BSNL	Idea	RCOM	Tata	Vodafone	Tata
Download Throughput (Kbps)	130.9	115.5	113.9	93	130	113.2	102.9
Upload Throughput (Kbps)	143.7	105.3	136.8	80.6	151.8	104	69.7
Web Browsing Delay (sec)	30.4	33.1	29.7	33.3	32.1	32.7	35
Latency (msec)	474	345	322	443	260	324	476

| Data Services | 3G | | | | | | 4G | | | |
	Airtel	BSNL	Idea	RCOM	Tata	Vodafone	Airtel	Idea	Jio	RCOM
Download Throughput (Mbps)	3.2	1.9	2.7	1.7	2.1	2.3	12.5	15.7	3.3	4.5
Upload Throughput (Mbps)	2.2	0.9	0.9	1.1	1.7	0.7	9.0	6.5	2.8	2.3
Web Browsing Delay (sec)	6.1	8.3	9.7	8.1	7.7	10.3	5.0	3.9	7.2	6.4
Video Streaming Delay (sec)	2.1	3.1	4.4	4.9	2.2	2.9	1.8	1.5	4.0	2.0
Latency (msec)	107	135	353	143	113	291	106	158	146	128

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