Information note to the Press (Press Release No. 67/2018)

Telecom Regulatory Authority of India

TRAI Releases Independent Drive Test Report of Delhi service area including Ghaziabad, Noida, Gurugram and Faridabad

New Delhi 26th June 2018: TRAI conducted Independent Drive Tests (IDT) through its appointed in Delhi License service area including Ghaziabad, Noida, Gurugram and Faridabad. Tests were conducted from 20th February to 16th March 2018 covering a drive test route of 2300 kms and data tests were conducted on 23 hotspots, spread across service area. IDT assess the network quality provided by cellular mobile telephone service providers for voice and data services. The key Performance Indicators (KPIs) were assessed for voice services are Network Coverage, Call Setup Success Rate; Drop Call Rate; Block Call Rate, Handover Success Rate and Rx Quality. The KPIs for data service were Download and Upload Throughputs, web Browsing Delay, Video Streaming Delay and Latency.

2.   IDT included TSPs namely Aircel, Airtel, MTNL, Idea, Tata Vodafone and R-Jio on 2G, 3G and 4G and CDMA radio access technologies.

3.   The summary of the TSPs performance on the key parameters based on IDT is given here under:-

Voice Call	2G					CDMA
	Aircel	Airtel	Idea	MTNL	Vodafone	Tata
Call Attempt	1056	3519	3468	2941	3408	3301
Blocked Call Rate (%)	5.7%	0.8%	0.7%	17.7%	0.5%	1.6%
CSSR% (Accessibility)	94.3%	99.2%	99.3%	82.3%	99.5%	98.4%
Drop Call Rate (%)	5.7%	0.3%	0.4%	19.5%	0.6%	2.0%
Mobility HOSR (%)	98.9%	98.8%	98.9%	68.4%	97.7%	100.0%
Rx Quality (%)	86.7%	96.7%	98.5%	96.9%	95.0%	95.1%

Voice Call	3G				VoLTE
	Airtel	Idea	MTNL	Vodafone	Jio
Call Attempt	3549	3463	2984	3502	3469
Blocked Call Rate (%)	1.1%	2.0%	6.3%	1.5%	1.7%
CSSR% (Accessibility)	98.9%	98.0%	93.7%	98.5%	98.3%
Drop Call Rate (%)	0.3%	0.7%	8.3%	1.0%	0.2%
Mobility HOSR (%)	99.9%	99.7%	95.6%	100.0%	99.5%
Rx Quality (%)	90.3%	93.2%	95.9%	81.9%	86.7%
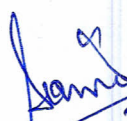
Data Service	2G				CDMA
	Airtel	Idea	MTNL	Vodafone	Tata
Download Throughput (kbps)	106.0	128.7	-	90.0	1383.5
Upload Throughput (kbps)	121.3	152.1	46.2	67.4	267.5
Web Browsing Delay (sec)	36.8	37.6	33.3	34.8	22.1
Latency (msec)	239	239	634	-	22.1

Data Service	3G				4G		
	Airtel	Idea	MTNL	Vodafone	Airtel	Jio	Vodafone
Download Throughput (Mbps)	3.3	2.0	3.7	2.3	8.9	7.3	4.9
Upload Throughput (Mbps)	0.7	1.1	0.7	1.1	2.0	2.1	5.8
Web Browsing Delay (sec)	11.7	13.2	10.2	11.6	6.7	7.2	9.0
Video Streaming Delay (sec)	2.6	2.9	2.3	3.2	1.7	2.6	2.7
Latency (msec)	294	342	149	-	102	168	-

4.   The key findings of IDT are mentioned below:

(i) Most of the TSPs have met the 2% Drop Call Rate of QoS benchmark (DCR%) except Aircel and MTNL.

(ii) Most of the TSPs have met the 95% Call Set up success rate of QoS benchmark (DCR%) except Aircel and MTNL.

(iii) In Data measurement the Maximum Download throughput has been achieved by M/s MTNL for 3G services and M/s Airtel for 4G services.

5.   The complete report is available at TRAI website www.analytics.trai.gov.in. In case any clarification, please contact, Shri Asit Kadayan, Advisor (QoS) at Tel No. +91-11-23230404 or at email.id: advqos@trai.gov.in.

26/6/2018

(S.K. Gupta)
Secretary, TRAI

Definitions

Call Attempt: An attempt to achieve a connection to device attached to a telecommunication network.

Block Call<=3%: A call that is not connected because there is no free channel in radio access network to serve a call attempt.

CSSR (Call Setup Success Rate)>=95%: Ratio of establish calls to Call Attempts.

Drop Call Rate<=2%: An ability to maintain a call it has been correctly established.

Handover Success Rate>=95%: Ratio between successful handovers to handover requested. (Handover is process by which a mobile telephone call is transferred from one base station to another as the subscriber passes the boundary of a cell).

Rx Quality>=95%: Measure of quality of voice.

Download Throughput: Data transmission rate for downloading a test file from a test server to a test device.

Upload Throughput: Data transmission rate for uploading a test file from a test device to a test server.

Web browsing delay (secs): Average time taken to fully load the website tested.

Video streaming delay (secs): Average time taken to fully load the video tested.

Latency (msecs): Time taken for a packet to reach the receiving endpoint after transmitted from the sending point.

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