

For Immediate Release

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Telecom Regulatory Authority of India

TRAI Releases Report on Drive Tests conducted in eight cities viz. Agra, Jodhpur, Shivamogga, Chennai, Vijayawada, Mahaboobnagar, Gangtok & Dhanbad and NH-19 (Dankuni to Asansol)

New Delhi, 11 February 2022: TRAI, with the assistance of the Telecom Service Providers, conducted Drive Tests in eight cities viz. Agra, Jodhpur, Shivamogga, Chennai, Vijayawada, Mahaboobnagar, Gangtok & Dhanbad and NH-19 (Dankuni to Asansol) in the quarter ending in September 2021. The Drive tests were conducted to assess the network quality provided by cellular mobile telephone service providers for voice and data services. The details of drive tests conducted are given below;

Cities

S. No	City	Licensed Service Area (LSA)
1.	Agra	Uttar Pradesh
2.	Jodhpur	Rajasthan
3.	Shivamogga	Karnataka
4.	Chennai	Tamilnadu
5.	Vijayawada	Andhra Pradesh
6.	Mahaboobnagar	Andhra Pradesh
7.	Gangtok	West Bengal
8.	Dhanbad city	Bihar
9.	NH-19 (Dankuni to Asansol)	West Bengal

2. The Key Performance Indicators (KPIs) were assessed for the networks of all telecom service providers operating in the region. KPIs for voice services are Coverage; Call Setup Success Rate (CSSR); Drop Call Rate; Block Call Rate, Handover Success Rate; Rx Quality. KPIs for data services are 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. The key findings of Drive test are summarized below:
 - (i) **Agra:** The drive test was conducted in Agra SSA in UPW LSA, covering a total of 610Km of drive route. Testing for Voice, dynamic data and static data testing (hotspots) were also done at 10 locations of the Agra SSA. In Agra City, BSNL failed to meet mobility HOSR benchmark in 2G & 3G and for RX Qual(%) parameter, Airtel, VI & BSNL in 2G and BSNL in 3G failed to meet the benchmark.
 - (ii) **Jodhpur:** The drive test of Jodhpur SSA of Rajasthan LSA was carried out, covering various locations in Jodhpur City & surrounding areas and two SDCA of Jodhpur SSA namely Mathaniya and Pipar. The drive test covered a drive route of 362 KMs & 7 hotspots in Jodhpur city and in two SDCAs. It is found that all the operators are meeting the network parameters for voice calls except VI for Rx Qual(%) parameter in 2G and 4G.
 - (iii) **Shivamogga:** The drive test was conducted covering various locations in Shivamogga City & surrounding regions - Bhadravathi and Thirthahalli. The drive test covered a drive route of approximately 315 KMs. Approximately 680+ calls were made for each of the 8 networks and

dynamic data testing was also conducted. For the parameter Rx Quality%, except for VI in 2G & 3G, all TSPs failed to meet the benchmark. Static Data testing at six locations was also carried out during drive tests

- (iv) **Chennai:** The Drive Test was carried out in Chennai City & adjoining areas from covering a drive route of 400 KMs & 5 Hotspots. Approximately 600 calls were made for each of 8 networks: Three 2G networks, Two 3G networks, Three LTE networks covering 4 unique TSPs. All TSPs have met the benchmarks with reference to DCR and BCR parameters. Some TSPs network did not meet the Rx Quality%- Airtel for 2G & 4G network, BSNL for 3G and RJio for 4G.
- (v) **Vijayawada:** The Drive Test has been carried out in Vijayawada City & adjoining areas covering a drive route of 360 KMs & 5 Hotspots. Approximately 600 calls were made for each of 9 networks: Three 2G networks, Two 3G networks, Four LTE networks covering 4 unique TSPs. All TSPs have met the Drop Call Rate (DCR), Block Call Rate (BCR), the Call Setup Success Rate (CSSR) benchmarks. 3G & 4G Download & Upload throughputs are low compared to specifications. Rx Quality% for 4G of Airtel & VI was found to be not meeting the benchmark.
- (vi) **Mahaboobnagar:** The Drive Test has been carried out in Mahaboobnagar SSA covering a drive route of 380 KMs & 5 Hotspots. Approximately 600 calls were made for each of 8 networks: Three 2G networks, Two 3G networks, Three LTE networks covering 4 unique TSPs. All TSPs have met the benchmarks with reference to DCR, BCR and Call Setup Success Rate (CSSR) parameters. Some TSP's network did not meet the Rx Quality% benchmark- Airtel in 4G, BSNL in 2G & 3G, RJIO and VI in 4G.
- (vii) **Gangtok:** The Drive Test was conducted covering drive route of 280Kms of drive route. Approximately 200+ calls were made for each of the 8 networks: three 2G (GSM) networks, one 3G (UMTS) network and four 4G LTE network covering four TSPs. In Airtel network, the parameters Rx Quality% in 2G network and SINR% in 4G network did not meet the benchmarks. For BSNL network, the parameters DCR and Rx Quality% in 2G network and CSSR, DCR, SINR, RRC Congestion, BCR, HOSR in 4G network did not meet the benchmarks. In RJIO network, the parameters RRC Congestion and SINR did not meet the benchmarks.
- (viii) **Dhanbad city:** The Drive Test was conducted covering drive route of 210 KMs & 5 hotspots. Approximately 180+ calls were made for each of the 8 networks: three 2G networks, two 3G network and three LTE network covering four TSPs. In BSNL network on drive route, the parameters CSSR, DCR in 2G network and CSSR, Call Drop rate & Ec/No in 3G network did not meet the benchmarks. Airtel, RJIO & VI in 4G network fail to meet the benchmarks for the parameter SINR%.
- (ix) **NH-19 (Dankuni to Asansol):** The Drive Test was conducted covering drive route of 220 KMs & 1 hotspot. Approximately 80+ calls were made for each of the 8 networks: three 2G networks, two 3G network and three LTE network covering four TSPs. In BSNL Network, SDCCCH Congestion, HOSR & Rx Quality in 2G network and DCR & Ec/No in 3G network did not meet the benchmarks. In RJIO & VI in 4G network for SINR% parameter, failed to meet the benchmark. In VI network, Rx Quality% in 2G network did not meet the benchmarks.
4. The complete report is available at TRAI website www.analytics.trai.gov.in In case of any clarification, please contact, Shri. Asit Kadayan, Advisor (QoS) at Tel. No. +91-11-2323-0404 or at email.id: advqos@traigov.in

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