For Immediate Release

TRAI Assesses Network Quality Across Jamshedpur, East Singhbhum district and adjoining areas in the state of Jharkhand and Gaya district and adjoining areas in the state of Bihar, both under Bihar Licensed Service Area

The Telecom Regulatory Authority of India (TRAI) released its Independent Drive Test (IDT) findings for the Bihar Licensed Service Area (LSA), covering extensive city routes of Jamshedpur, East Singhbhum district and adjoining areas in the state of Jharkhand and Gaya district and adjoining areas in the state of Bihar in the month of August' 2025. The drive tests, conducted under the supervision of the TRAI Regional Office, Kolkata, were designed to capture real-world mobile network performance across diverse usage environments- Urban Zones, Institutional Hotspots, rural residential areas, tourist locations etc.

Between 4th August 2025 to 14th August 2025, TRAI teams conduced detailed tests across 577.1 Km of city test, 3.5 Km of walk test and 19 Hotspot locations. Technologies evaluated included 2G, 3G, 4G, and 5G, reflecting the service experience of users across multiple handset capabilities. The findings of the IDT have already been intimated to all the TSPs concerned.

Key Parameters Assessed:

a) **Voice Services**: Call Setup Success Rate (CSSR), Drop Call Rate (DCR), Call Setup Time, Call Silence Rate, Speech Quality (MOS), Coverage.

b) **Data Services**: Download/Upload Throughput, Latency, Jitter, Packet Drop Rate, and Video Streaming Delay.

The overall mobile network performance in Jamshedpur, East Singhbhum district and adjoining areas in the state of Jharkhand and Gaya district and adjoining areas in the state of Bihar is summarized below:

Call Setup Success Rate- Airtel, BSNL, RJIL and VIL have call setup success rate of 99.36%, 87.26%, 99.89% and 85.62% respectively in Auto-selection mode (5G/4G/3G/2G).

Drop Call Rate- Airtel, BSNL, RJIL and VIL have drop call rate of 0.00%, 4.63%, 0.11% & 1.39% respectively in Auto-selection mode (5G/4G/3G/2G).
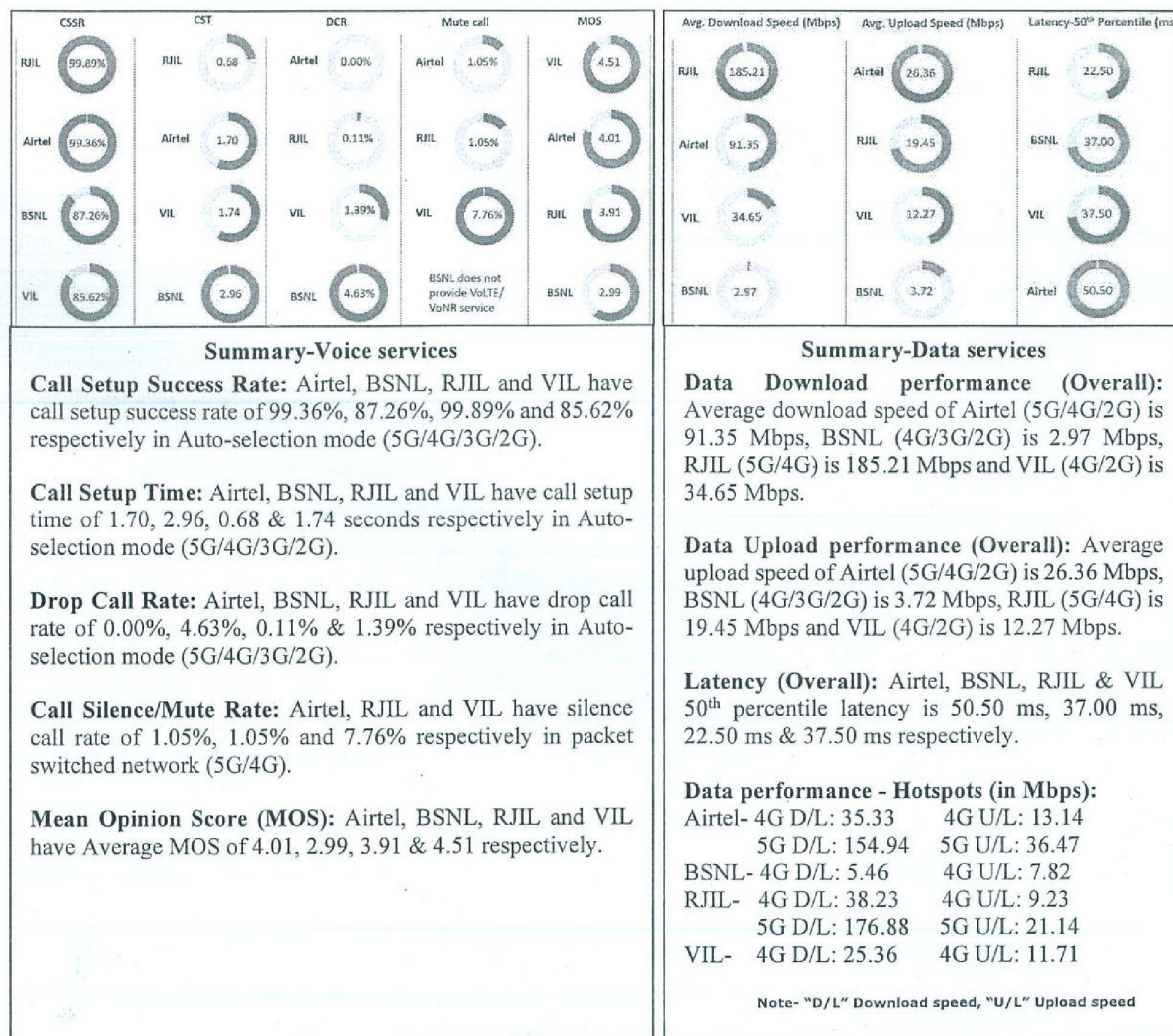
5G Data Services delivered maximum average download speed of 185.21 Mbps and maximum average upload speed of 26.36 Mbps in city drive.

In **Jamshedpur, East Singhbhum district** and adjoining areas in the state of Jharkhand the assessment included the areas of - Janamdi, Haldipokhar, Hata, Potka, Jadugora, Terenga, Benashol, Ghatshila, Tamakpal, Ulda, Belajuri, Mango, Baridih, Sidhgora, Birsanagar, Ghorabandha, Kalimali, Chhota Govindpur, Bagbera Colony, Adityapur, and Sunder Nagar etc. TRAI also evaluated real-world conditions at (i) Ghatera Post Office Mathurapur, (ii) Ghatsila College Phuldungri Ghatshila (iii) Hata Mor, (iv) Jadugora, (v) Mango Bus Stand Mango Jamshedpur, (vi) National Institute of Technology Jamshedpur (NIT Jamshedpur), (vii) Sadar Hospital Jamshedpur, (viii) Swami Vivekananda Chowk Haldipokhar, (ix) Tata Motors Hospital Kharangajhar Jamshedpur, (x) Tatanagar Railway Station Jamshedpur, through **static testing** and at (i) Civil Court Jamshedpur (ii) Jubilee Park, (iii) XLRI School of Management, through **walk-test**.

In **Gaya district and adjoining areas in the state of Bihar** the assessment included the areas of - Bajaura, Dobhi, Sherghati, Cherki, Magadh, Paraiya, Guraru, Panchananpur, Tekari, Belaganj, Silaunga, Chakand, Kujapi, Kaiya, Wazirganj, Tarawan, Bhare and Bodh Gaya etc. TRAI also evaluated real-world conditions at (i) Kamta Prasad Sinha Inter College Gaya, (ii) Magadh Medical College Gaya (iii) Mahabodhi Temple Bodh Gaya (iv) Office of District Magistrate Gaya (v) PHC Dobhi, (vi) Police Station Wajirganj Gaya, (vii) S.N.S. College Tekari, (viii) The Great Buddha Statue Bodh Gaya, (ix) Vishnupad Temple, through **static test** and at (i) Gaya International Airport, (ii) Gaya Railway Station, through **walk-test** to reflect stationary user experience.

Performance against key QoS parameters:

CSSR: Call Setup Success Rate (in %), **CST**: Call Setup Time (in seconds), **DCR**: Drop Call Rate (in %) & **MOS**: Mean Opinion Score

CSSR	CST	DCR	Mute call	MOS
RJIL 99.89%	RJIL 0.68	Airtel 0.00%	Airtel 1.05%	VIL 4.51
Airtel 99.36%	Airtel 1.70	RJIL 0.11%	RJIL 1.05%	Airtel 4.01
BSNL 87.26%	VIL 1.74	VIL 1.39%	VIL 7.76%	RJIL 3.91
VIL 85.62%	BSNL 2.96	BSNL 4.63%	BSNL does not provide VoLTE/VoNR service	BSNL 2.99

Avg. Download Speed (Mbps)	Avg. Upload Speed (Mbps)	Latency-50ᵗʰ Percentile (ms)
RJIL 185.21	Airtel 26.36	RJIL 22.50
Airtel 91.35	RJIL 19.45	BSNL 37.00
VIL 34.65	VIL 12.27	VIL 37.50
BSNL 2.97	BSNL 3.72	Airtel 50.50

Summary-Voice services

Call Setup Success Rate: Airtel, BSNL, RJIL and VIL have call setup success rate of 99.36%, 87.26%, 99.89% and 85.62% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 1.70, 2.96, 0.68 & 1.74 seconds respectively in Auto-selection mode (5G/4G/3G/2G).

Drop Call Rate: Airtel, BSNL, RJIL and VIL have drop call rate of 0.00%, 4.63%, 0.11% & 1.39% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate: Airtel, RJIL and VIL have silence call rate of 1.05%, 1.05% and 7.76% respectively in packet switched network (5G/4G).

Mean Opinion Score (MOS): Airtel, BSNL, RJIL and VIL have Average MOS of 4.01, 2.99, 3.91 & 4.51 respectively.

Summary-Data services

Data Download performance (Overall): Average download speed of Airtel (5G/4G/2G) is 91.35 Mbps, BSNL (4G/3G/2G) is 2.97 Mbps, RJIL (5G/4G) is 185.21 Mbps and VIL (4G/2G) is 34.65 Mbps.

Data Upload performance (Overall): Average upload speed of Airtel (5G/4G/2G) is 26.36 Mbps, BSNL (4G/3G/2G) is 3.72 Mbps, RJIL (5G/4G) is 19.45 Mbps and VIL (4G/2G) is 12.27 Mbps.

Latency (Overall): Airtel, BSNL, RJIL & VIL 50ᵗʰ percentile latency is 50.50 ms, 37.00 ms, 22.50 ms & 37.50 ms respectively.

Data performance - Hotspots (in Mbps):

Airtel-	4G D/L: 35.33	4G U/L: 13.14
	5G D/L: 154.94	5G U/L: 36.47
BSNL-	4G D/L: 5.46	4G U/L: 7.82
RJIL-	4G D/L: 38.23	4G U/L: 9.23
	5G D/L: 176.88	5G U/L: 21.14
VIL-	4G D/L: 25.36	4G U/L: 11.71

Note- "D/L" Download speed, "U/L" Upload speed

The tests were conducted using TRAI-suggested equipment and standardised protocols in real-time environments. The detailed report is available at TRAI website www.trai.gov.in. For any clarification/information, Shri Kaushik Mukherjee, Advisor (Regional Office, Kolkata) TRAI may be contacted on email: adv.kolkata@trai.gov.in or at Tel. No. +91-33-22361401

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