For Immediate Release

TRAI Assesses Network Quality Across Samastipur district in the State of Bihar under Bihar Licensed Service Area (LSA)

The Telecom Regulatory Authority of India (TRAI) released its Independent Drive Test (IDT) findings for the Bihar LSA, covering extensive city routes of Samastipur district in the State of Bihar in the month of January 2026. 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- Institutional Hotspots, secretariat areas, residential areas etc.

Between **20th January 2026 and 23rd January 2026**, TRAI teams conduced detailed tests across city routes of Samastipur district in the State of Bihar in Bihar LSA covering **272.2 Km of city drive** test, **10 Hotspot** locations, and **1.9 Km of walk test**. 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 city routes of Samastipur district in the State of Bihar in Bihar LSA is summarized below:

Call Setup Success Rate- Airtel, BSNL, RJIL and VIL have call setup success rate of 100.00%, 36.89%, 99.76% and 98.82% respectively in Auto-selection mode (5G/4G/3G/2G).

Drop Call Rate Airtel, BSNL, RJIL and VIL have drop call rate of 0.00%, 10.04%, 0.24% and 1.67% respectively in Auto-selection mode (5G/4G/3G/2G).

5G Data Services delivered maximum average download speed of 158.64 Mbps and maximum average upload speed of 21.39 Mbps in the overall city drive test.

The **poor Signal Strength** in auto-selection mode (5G/4G/3G/2G) has been observed for 3.42%, 51.32%, 2.20% & 7.10% of the total IDT route during **voice testing in city drive** in case of Airtel, BSNL, RJIL & VIL respectively. The same, during **data testing in city drive** was observed for 16.52%, 37.25%, 13.10% & 11.92% in case of Airtel, BSNL, RJIL & VIL respectively.
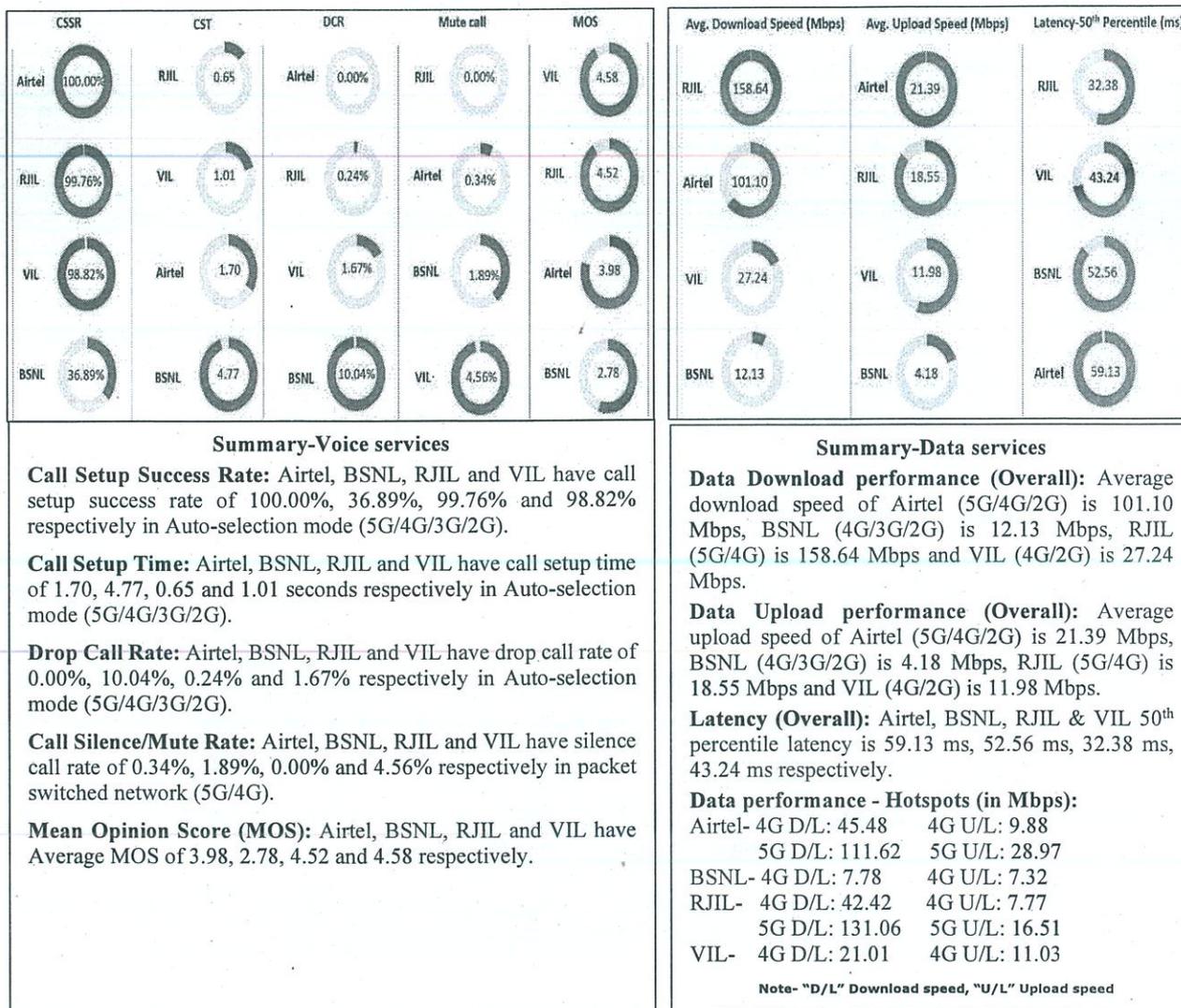
In Samastipur district, the assessment included the areas of Musrigharari, Sarairanjan, Patori, Mohiuddinagar, Sahit, Dalsinghsarai, Satanpur, Barbatta, Tajpur, Pusa, Saidpur, Kalyanpur, Basudeopur, Satmalpur, Khanpur, Ballipur, Singhia ii, Lagma, Deodha, Rosera, Belsandi Tara and Mohanpur etc.

TRAI also evaluated real-world conditions at (i) Dalsingh Sarai Railway Station; (ii) District Court, Samastipur; (iii) Government Bus Stand Uttarayan Samastipur; (iv) Government Engineering College (GEC) Samastipur; (v) Govt. ITI Samastipur Mordewa; (vi) Head Post Office Sakra Bazar Uttarayan Samastipur; (vii) Subdivisional Civil Court Dalsinghsarai; (viii) Sub-Divisional Hospital Rosera Sahiar Dih; (ix) UR College Jarahi Khaira; (x) V2 Mall 08 Tajpur Rd Professor Colony Kashipur Samastipur; through **static testing** and

at (i) Dr. Rajendra Prasad Central Agriculture University Pusa; (ii) Samastipur Junction Railway Station *through walk-test.*

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	
Airtel	100.00%	RJIL	0.65	Airtel	0.00%	RJIL	0.00%	VIL	4.58
RJIL	99.76%	VIL	1.01	RJIL	0.24%	Airtel	0.34%	RJIL	4.52
VIL	98.82%	Airtel	1.70	VIL	1.67%	BSNL	1.89%	Airtel	3.98
BSNL	36.89%	BSNL	4.77	BSNL	10.04%	VIL	4.56%	BSNL	2.78

Avg. Download Speed (Mbps)		Avg. Upload Speed (Mbps)		Latency-50th Percentile (ms)	
RJIL	158.64	Airtel	21.39	RJIL	32.38
Airtel	101.10	RJIL	18.55	VIL	43.24
VIL	27.24	VIL	11.98	BSNL	52.56
BSNL	12.13	BSNL	4.18	Airtel	59.13

Summary-Voice services

Call Setup Success Rate: Airtel, BSNL, RJIL and VIL have call setup success rate of 100.00%, 36.89%, 99.76% and 98.82% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 1.70, 4.77, 0.65 and 1.01 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%, 10.04%, 0.24% and 1.67% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate: Airtel, BSNL, RJIL and VIL have silence call rate of 0.34%, 1.89%, 0.00% and 4.56% respectively in packet switched network (5G/4G).

Mean Opinion Score (MOS): Airtel, BSNL, RJIL and VIL have Average MOS of 3.98, 2.78, 4.52 and 4.58 respectively.

Summary-Data services

Data Download performance (Overall): Average download speed of Airtel (5G/4G/2G) is 101.10 Mbps, BSNL (4G/3G/2G) is 12.13 Mbps, RJIL (5G/4G) is 158.64 Mbps and VIL (4G/2G) is 27.24 Mbps.

Data Upload performance (Overall): Average upload speed of Airtel (5G/4G/2G) is 21.39 Mbps, BSNL (4G/3G/2G) is 4.18 Mbps, RJIL (5G/4G) is 18.55 Mbps and VIL (4G/2G) is 11.98 Mbps.

Latency (Overall): Airtel, BSNL, RJIL & VIL 50th percentile latency is 59.13 ms, 52.56 ms, 32.38 ms, 43.24 ms respectively.

Data performance - Hotspots (in Mbps):
Airtel- 4G D/L: 45.48   4G U/L: 9.88
       5G D/L: 111.62   5G U/L: 28.97
BSNL- 4G D/L: 7.78   4G U/L: 7.32
RJIL- 4G D/L: 42.42   4G U/L: 7.77
       5G D/L: 131.06   5G U/L: 16.51
VIL-   4G D/L: 21.01   4G U/L: 11.03

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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