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For Immediate Release

TRAI Assesses Network Quality Across Madurai City and their adjoining areas in the State of Tamil Nadu (Under Tamil Nadu Licensed Service Area)

The Telecom Regulatory Authority of India (TRAI) released its Independent Drive Test (IDT) findings for the **Tamil Nadu** Licensed Service Area (LSA), covering extensive city routes of **Madurai** City in the month of July 2025. The drive tests conducted under the supervision of the TRAI Regional Office, Hyderabad were designed to capture real-world mobile network performance across diverse usage environments- Urban Zones, Institutional Hotspots, and Rural residential areas etc.

Between 17th July 2025 to 20th July 2025, TRAI teams conducted detailed tests across 454.6 Km of city drive test, 4.2Km walk test and 7 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 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.
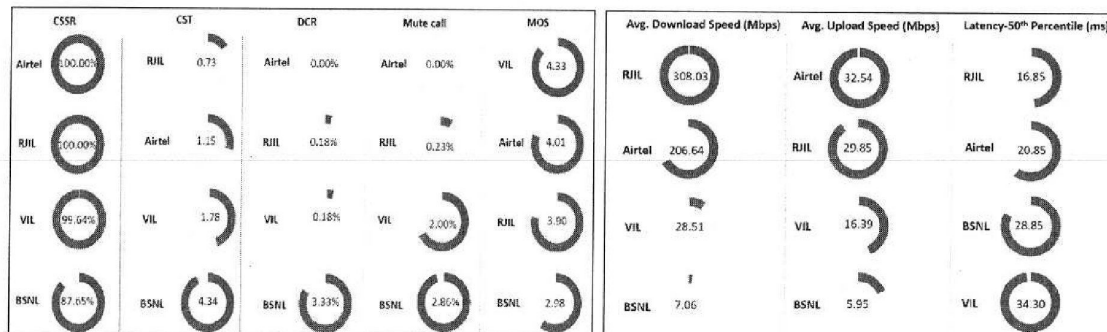
The overall mobile network performance in Madurai city is summarized below:

Call Setup Success Rate - Airtel, BSNL, RJIL and VIL have call setup success rate of 100.00%, 87.65%, 100.00% and 99.64% respectively in auto-selection mode (5G/4G/3G/2G).

Drop Call Rate - Airtel, BSNL, RJIL and VIL have drop call rate of 0.00%, 3.33%,0.18% and 0.18% respectively in auto-selection mode (5G/4G/3G/2G).

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		Avg. Download Speed (Mbps)		Avg. Upload Speed (Mbps)		Latency-50th Percentile (ms)
Airtel	100.00%	RJIL	0.73	Airtel	0.00%	Airtel	0.00%	VIL	4.33	RJIL	308.03	Airtel	32.54	RJIL	16.85
RJIL	100.00%	Airtel	1.15	RJIL	0.18%	RJIL	0.23%	Airtel	4.01	Airtel	206.64	RJIL	29.85	Airtel	20.85
VIL	99.64%	VIL	1.78	VIL	0.18%	VIL	2.00%	RJIL	3.90	VIL	28.51	VIL	16.39	BSNL	28.85
BSNL	87.65%	BSNL	4.34	BSNL	3.33%	BSNL	2.86%	BSNL	2.98	BSNL	7.06	BSNL	5.95	VIL	34.30

Summary-Voice Service

Call Setup Success Rate: Airtel, BSNL, RJIL and VIL have call setup success rate of 100.00%, 87.65%, 100.00% and 99.64% respectively in auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 1.15, 4.34, 0.73 and 1.78 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%, 3.33%, 0.18% and 0.18% respectively in auto-selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate: Airtel, BSNL, RJIL and VIL have silence call rate 0.00%, 2.86% 0.23%, and 2.00% respectively in packet switched network (5G/4G).

Mean Opinion Score (MOS): Airtel, BSNL, RJIL, and VIL have average MOS of 4.01, 2.98, 3.90 & 4.33 respectively.

Summary-Data Service

Data Download performance (Overall): Average download speed of Airtel (5G/4G) is 206.64 Mbps, BSNL (4G/3G/2G) is 7.06 Mbps, RJIL (5G/4G) is 308.03 Mbps and VIL (4G/2G) is 28.51 Mbps.

Data Upload performance (Overall): Average upload speed of Airtel (5G/4G) is 32.54 Mbps, BSNL (4G/2G) is 5.95 Mbps, RJIL (4G/3G/2G) is 29.85 Mbps, and VIL (5G/4G) is 16.39 Mbps.

Data performance - Hotspots (in Mbps):

Airtel-	4G D/L: 43.85	4G U/L: 24.05
	5G D/L: 249.58	5G U/L: 34.94
BSNL-	4G D/L: 9.20	4G U/L: 11.46
RJIL-	4G D/L: 31.11	4G U/L: 11.67
	5G D/L: 241.28	5G U/L: 26.34
VIL-	4G D/L: 28.19	4G U/L: 17.20

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

In Madurai City, the assessment included the areas of Karumathu, Alagusirai, Pannikundu, Sathangudi, Tirumangalam, Valaynkulam, Mangulam, Kappalur, Kothiyarkundu, Viradhanur, Solankuruni, Pejneri, Thenur, Anuppanadi, Ayyankottai, Mullipallam, Othakadai, Kalimangalam, Ovalur, Seegankulam, Gomathipuram & Ulaganeri etc.

TRAI also evaluated real-world conditions at 1. Arappalayam Bus Stand, 2. Collector Office, Madurai, 3. Govt Rajaji Hospital 4. Madurai Airport 5. Madurai Railway Station 6. Mattuthavani Bus Stand 7. Tirupuran Kundram Murugan Temple to reflect stationary user experience.

The tests were conducted using standardised equipment and protocols in real-time environments. The detailed report is available at TRAI website www.trai.gov.in. For any clarification/information, Shri B. Praveen Kumar, Advisor (Regional Office, Hyderabad) TRAI may be contacted on email: adv.hyderabad@trai.gov.in or at Tel. No. +91-40-23000761.

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