

Operator Assisted Drive Test (OADT)
Report for

February 2026

ERODE and Nearby Areas

23.02.2026 to 26.02.2026

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1. Overview

The Operator Assisted Drive Test carried out in Erode City and nearby areas from date 23-02-2026 to 26-02-2026 & 9:00 AM to 8:00 PM. The drive test covered drive route of around 356 KMs in 4 days and 8 hotspot locations.

1.1 Telecom Service Providers (TSPs), Technologies and frequency bands captured during Drive Test are as below:

S. No.	Name of TSP	Technology	Frequency Bands (In MHz)
1	Bharti Airtel Ltd.	2G	G 1800
2	Bharti Airtel Ltd.	4G	L1800 , L2100 , L2300 & L900
3	Bharti Airtel Ltd.	5G	NR 3500
4	BSNL	2G	900
5	BSNL	3G	2100
6	BSNL	4G	700/2100
7	Reliance JIO Infocomm Ltd.	4G	850,1800 & 2300
8	Reliance JIO Infocomm Ltd.	5G	700 & 3500
9	Vodafone Idea Ltd.	2G	900
10	Vodafone Idea Ltd.	3G	
11	Vodafone Idea Ltd.	4G	2100,1800 & 900

1.2 Quality of Service parameters measured:

(1) Voice Service:

Dynamic	Static (Hotspot Location)
Call setup time	Call setup time
Call setup success rate (CSSR)	Call setup success rate (CSSR)
Dropped Call rate	Dropped Call rate
Call Silence Rate	
Handover Success Rate (HOSR)	
Packet Drop Rate (Uplink & Downlink)	
Mean Opinion Score (MOS)	
Signal Strength	

(2)

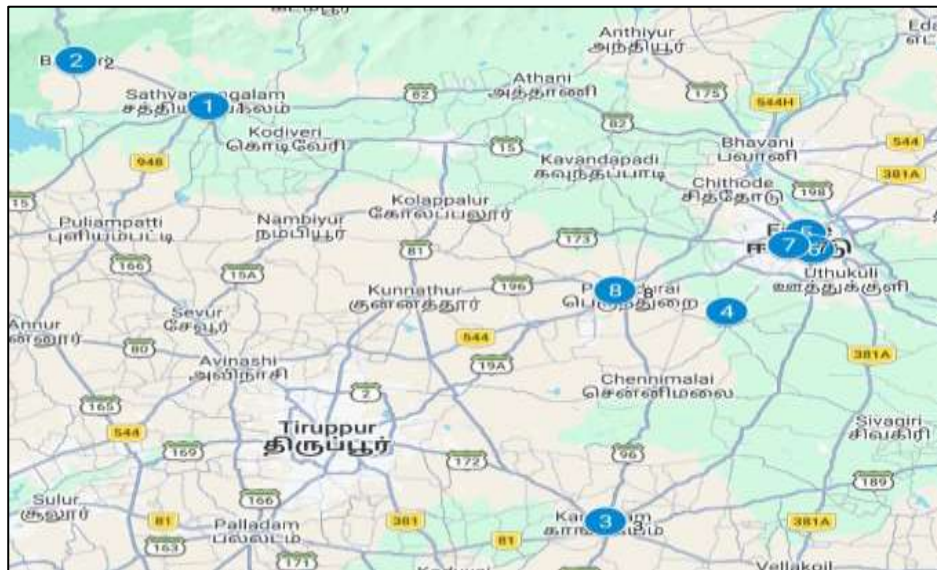
Dynamic	Static (Hotspot Location)
Data speed (DL / UL both)	Data speed (DL/UL both)
Latency	Latency
Jitter	Jitter
	Session Setup Success Rate (DL/UL)
	Packet Drop rate
	Web browsing delay
	Video Streaming performance

Drive Test Methodology adopted during the Drive test is attached as Annexure-I.

2. Executive Summary

This report covers the findings of the OADT undertaken in ERODE, Tamil Nadu License Service Area (LSA), during the month of February (2026) under the supervision of TRAI Regional Office (RO), Hyderabad. Details of route/ area covered during the IDT is as given below:

2.1. Route Map of Drive test & Hotspot locations:



2.2. Drive Test Area detail:

Date	Duration 10:00 AM to 08:30 PM	Drive test route	Distance covered (in Kms)
23/02/2026	10:00AM to 08:30PM	Erode town – Perundurai - Erode town	118
24/02/2026	10:00AM to 08:30PM	Lakshinagar–Bhavani – sathiyamangalam - gobi -Chithode	113
25/02/2026	10:00AM to 08:30PM	Solar – Muthur – vellakovil –Kangeyam - Erode Annamar petrol Bunk	125

Date	Time	Hotspot Location	Latitude / Longitude
24/02/2026	03:00PM	Sathyamangalam Bus Stand	11.49819/77.24466
24/02/2026	05:00PM	Bannariamman Temple	11.55155/77.13878
25/02/2026	12:15PM	Kangeyam Bus Stand	11.00680/77.56060
25/02/2026	04:00PM	Vellode Birds Sanctuary	11.25463/77.6582
26/02/2026	09:30AM	Erode Bus Stand	11.34805/77.71936
26/02/2026	11:15AM	Erode Junction	11.32962/77.72676
26/02/2026	01:15PM	Erode Collector Office	11.33477/77.70796
26/02/2026	03:30PM	Perundurai Medical College	11.28116/77.56841

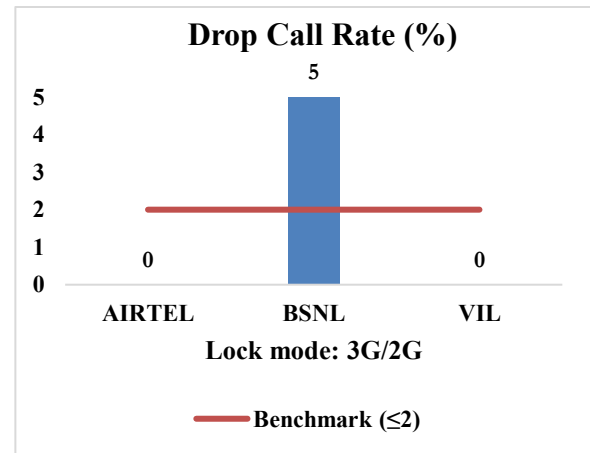
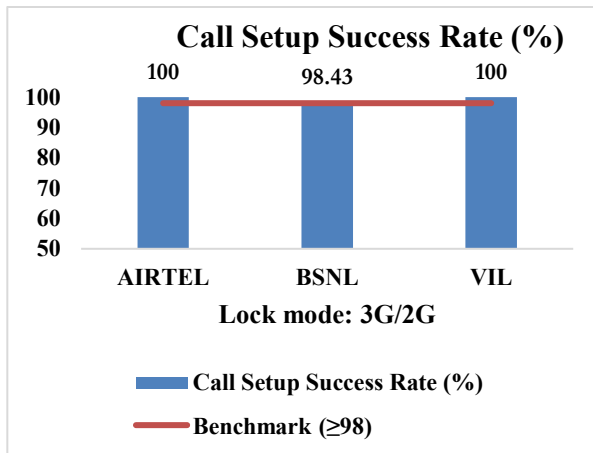
2.3. Details of Drive Test Tools used

S. No	Name of TSP	Tool Name																											
1.	Airtel	TEMS INVESTIGATION 27.1 <table> <tr> <th colspan="3">Scenario</th></tr> <tr> <td rowspan="4">Laptop 1</td><td>Handset 1</td><td>2G Voice Call to Switch</td></tr> <tr> <td>Handset 2</td><td>4G Volte Call to Switch</td></tr> <tr> <td>Handset 3</td><td>MOS MO</td></tr> <tr> <td>Handset 4</td><td>MOS MT</td></tr> <tr> <td rowspan="3">Laptop 2</td><td>Handset 5</td><td>Auto Download</td></tr> <tr> <td>Handset 6</td><td>Auto Upload</td></tr> <tr> <td>Handset 7</td><td>Ping</td></tr> <tr> <td>Laptop 3</td><td>Handset 8</td><td>Streaming</td></tr> </table>	Scenario			Laptop 1	Handset 1	2G Voice Call to Switch	Handset 2	4G Volte Call to Switch	Handset 3	MOS MO	Handset 4	MOS MT	Laptop 2	Handset 5	Auto Download	Handset 6	Auto Upload	Handset 7	Ping	Laptop 3	Handset 8	Streaming					
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4.	VIL	TEMS Investigation 23.2.1 Azenqos 3.2.554																											

		Scenario	
Laptop 1	Handset 1	4G Voice Call to Switch	
	Handset 2	2G Volte Call to Switch	
Laptop 2	Handset 1	4G Download/Upload/ Ping	
Mobile	Handset 1	MOS Call MO	
	Handset 2	MOS Call MT	

2.4. Key findings (Voice & Data)

2.4.1. Voice Service performance in 3G/2G mode only

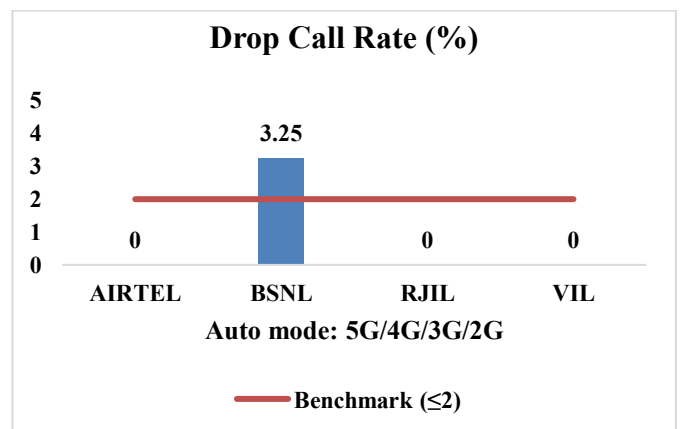
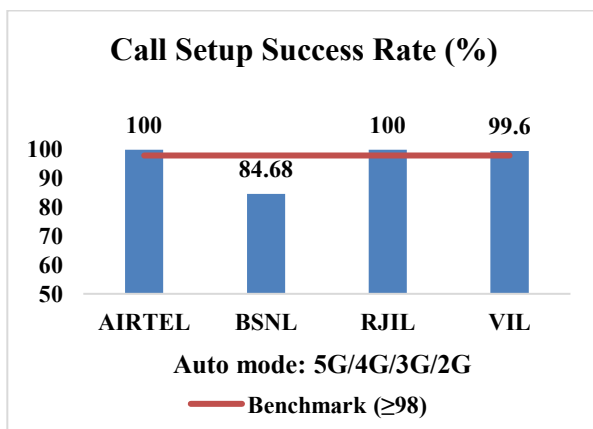


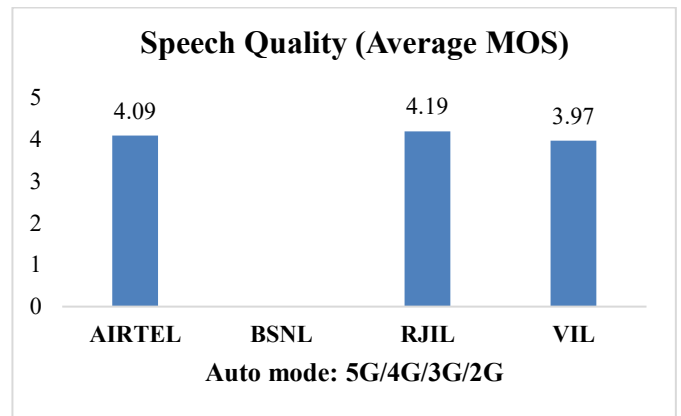
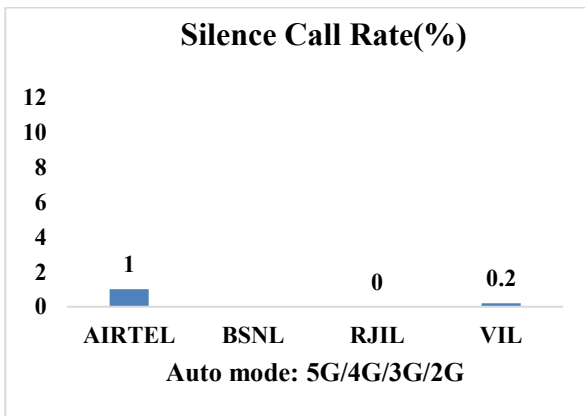
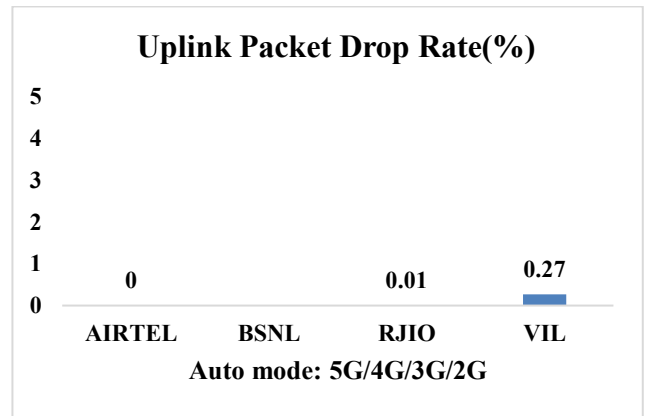
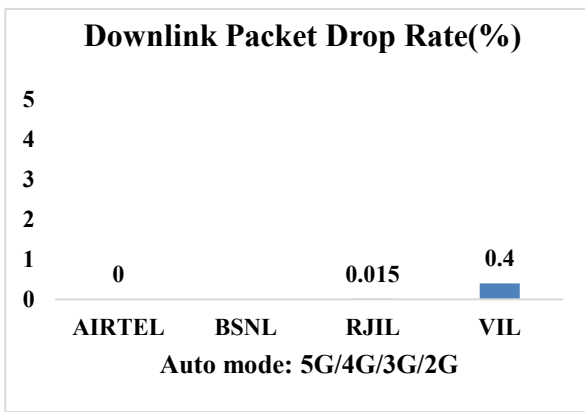
Parameter	Benchmark	AIRTEL	BSNL	VIL
Call Attempts		294	320	316
Call Setup Success Rate (in %)	98	100	98.43	100
Drop Call Rate (in %)	≤ 2	0	5	0
Call Setup Time-Average (in Seconds)		3.38	3.49	2.53
Handover Success Rate (in %)	95	98.42	99.95	99.8

2.4.2. Number of Cell ids latched during drive test (3G/2G mode)

Technology	AIRTEL	BSNL	VIL
3G	NA	237	NA
2G	535	110	365

2.4.3. Voice Service performance in 5G/4G/3G/2G (Auto mode)



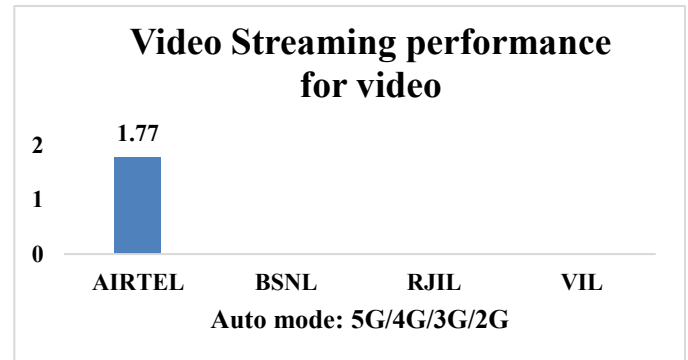
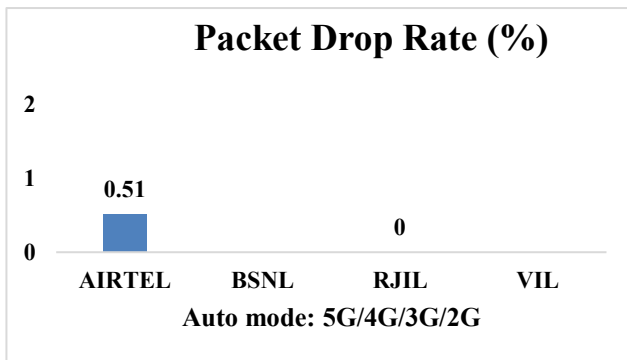
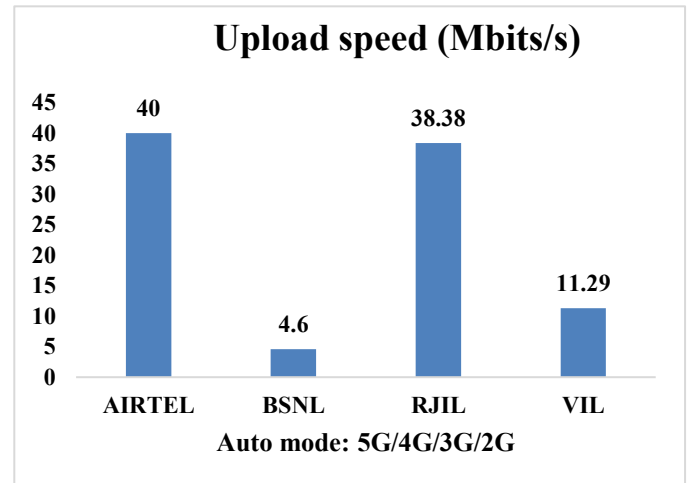
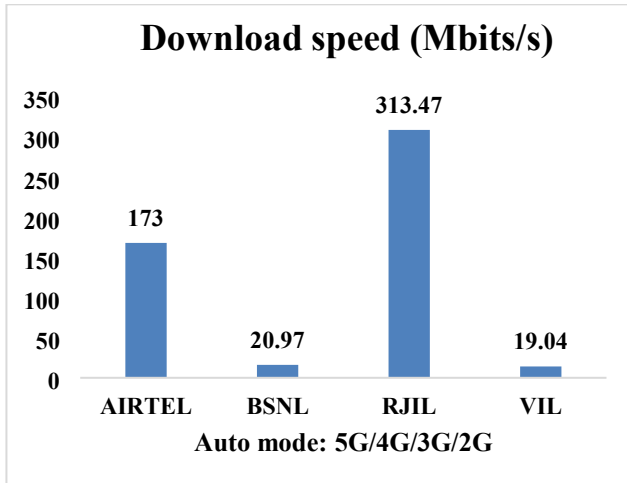


Parameter	AIRTEL	BSNL	RJIL	VIL
Call Attempts	298	431	358	311
Call Setup Success Rate %	100	84.68	100	99.6
Drop Call Rate%	0	3.25	0	0
Call Setup Time-Average (Second)	1.81	2.87	1.22	0.43
Handover Success Rate %	99.84	100	99.65	99.9
Downlink Packet drop rate %	0	The test could not be performed due to non-availability of tools	0.015	0.4
Uplink Packet drop rate %	0		0.01	0.27
Silence Call Rate %	1		0	0.20
Speech Quality (Average MOS)	4.09		4.19	3.97

2.4.4. Number of Cell ids latched during drive test (Auto mode)

Technology	AIRTEL	BSNL	RJIL	VIL
5G	NA	Technology Not Available	186	NA
4G	1037	496	515	696
3G	NA	16	NA	NA
2G	NA	4	NA	10

2.4.5. Data performance in 5G/4G/3G/2G (Auto mode)



QoS Parameters		AIRTEL	BSNL	RJIL	VIL
Download speed (Mbits/s)	Typical	114	5	Typical Values cannot be captured from Drive Logs	37.5
	Average	173	20.97	313.47	19.04
	80 th Percentile	247	37.74	532.09	27.79
Download Session Setup Success Rate %		98.06	100	100	100
Upload speed (Mbits/s)	Typical	25	3	Typical Values cannot be captured from Drive Logs	26.96
	Average	40	4.6	38.38	11.29
	80 th Percentile	54	8.28	71.15	16.88
Upload Session Setup Success Rate %		98.15	97.1	100	100

Latency (in ms)	50 th Percentile	52.68	75.55	35	64
Jitter (in ms)	Average	27.3	3.36	21	12.9
Packet Drop Rate %		0.51	The test could not be performed due to non-availability of tools	0	NA
Web browsing delay (in sec)		NA		NA	NA
Video Streaming performance for video		1.77		NA	NA

2.4.6. TSP-wise Key Findings:

- Airtel has 96.7% of samples falling in the excellent signal strength category for 3G/2G (Lock mode) and 99.28% of samples falling in the excellent signal strength category for 5G/4G/3G/2G (Auto-selection mode)
- BSNL has 64.69% of samples falling in the excellent signal strength category for 2G/3G And 82.43% of samples falling in the excellent signal strength category for 4G.
- RJIO has 98.76% of samples falling in the excellent signal strength category for auto-selection mode (5G/4G/3G/2G).
- VIL has 93.2 % of samples falling in the excellent signal strength category for 3G/2G (Lock mode) and 96.73% of samples falling in the excellent signal strength category for 5G/4G/3G/2G (Auto-selection mode)

Voice-3G/2G Mode

- Airtel has 100% call setup success rate and 0% drop call rate have been observed in 3G/2G network mode
- BSNL has 98.43% Call Setup Success Rate, and 5% Drop Call Rate have been observed in 3G/2G network mode.
- VIL has 100% call setup success rate and 0% drop call rate have been observed in 2G network mode

5G/4G/3G/2G (Auto mode)

- Airtel has 100% call setup success rate and 0% drop call rate have been observed for auto-selection mode (5G/4G/3G/2G)
- BSNL has 84.68% Call Setup Success Rate, and 3.25% Drop Call Rate have been observed for auto-selection mode (5G/4G/3G/2G).
- RJIO has 100% call setup success rate and 0% drop call rate have been observed for auto-selection mode (5G/4G/3G/2G)
- VIL has 99.60% call setup success rate and 0% drop call rate have been observed for auto-selection mode (5G/4G/3G/2G)

Hotspot Locations

- Airtel has 100% call setup success rate and 0% drop call rate have been observed in auto-selection mode (5G/4G/3G/2G) for all hotspot locations
- BSNL has 96.11% call setup success rate and 0% drop call rate have been observed in auto-selection mode (5G/4G/3G/2G) for all hotspot locations
- RJIO has 100% call setup success rate and 0% drop call rate have been observed in auto-selection mode (5G/4G/3G/2G) for all hotspot locations

- VIL has 100% call setup success rate and 0% drop call rate have been observed in auto-selection mode (5G/4G/3G/2G) for all hotspot locations

Data- 5G/4G/3G/2G (Auto mode)

- Airtel has 172.97 Mbps average download speed & 39.67 Mbps average upload speed across measured routes
- BSNL has 20.97 Mbps average Download Speed & 4.6 Mbps average Upload Speed across measured routes.
- RJIO has 313.47 Mbps average download speed & 38.38 Mbps average upload speed across measured routes
- VIL has 19.04 Mbps average download speed & 11.29 Mbps average upload speed across measured routes

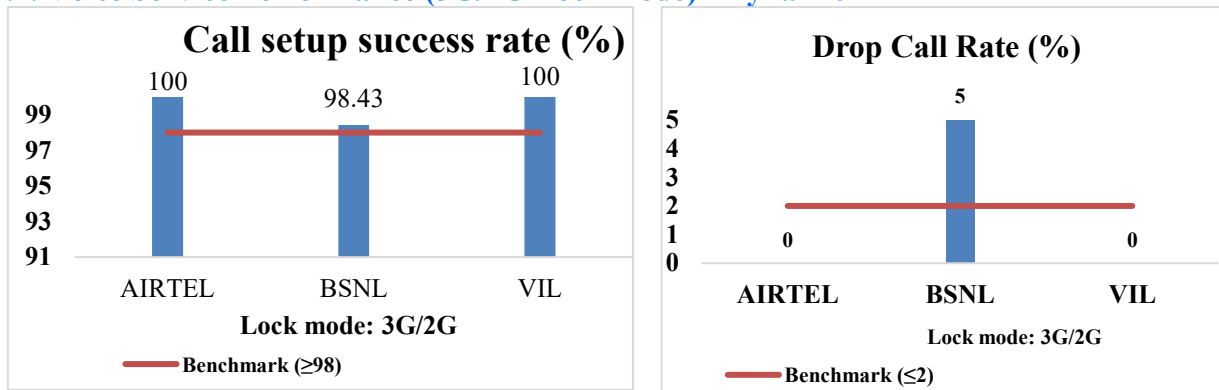
Hotspot Locations

- Airtel has 211.43 Mbps average download speed & 43.52 Mbps average upload speed overall Hotspot location
- BSNL has 4.23 Mbps average Download Speed & 1.99 Mbps average Upload Speed Overall Hotspot Locations.
- RJIO has 539.84 Mbps average download speed & 89 Mbps average upload speed overall Hotspot location
- VIL has 26.7 Mbps average download speed & 20.80 Mbps average upload speed overall Hotspot location

Detailed QoS Performance Analysis

3. QoS Performance Analysis – Dynamic

3.1. Voice Service Performance (3G/2G Lock mode) - Dynamic



Parameters	Airtel	BSNL	VIL
Total Distance covered (in Kms)	354	342	354
No. of Call Attempts	294	320	316
No. of Call Established	294	315	316
Call setup success rate (CSSR) %	100	98.43	100
No. of Drop Call	0	16	0
Drop Call Rate %	0	5	0
Call Setup Time Average (Sec.)	3.38	3.49	2.53
No. of Handover Attempts	569	2251	913
No. of Handover success	560	2250	912
HOSR %	98.42	99.95	99.89
Total no of RLT Occurrence	36468	0	0
No of RLT > 48	0	0	0

3.1.1. Number of Cell ids latched during drive test (3G/2G - Lock mode)

Number of unique Cell ids covered in Voice test				
Technology	AIRTEL	BSNL	RJIL	VIL
3G	NA	237	NA	NA
2G	535	110	NA	365

3.1.2. Signal Strength Map: (3G/2G - Lock mode)

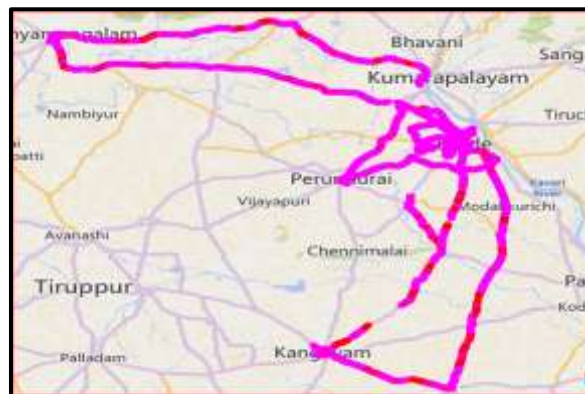
Signal Strength Map (for each TSP)	Map Legend:	
	2G- Pink (Rx Level ≥ -85 dBm), 3G- Sky blue (RSCP Level ≥ -90 dBm) < -90 dBm)	Red (Rx Level < -85 dBm) Dark Blue (RSCP Level



Airtel-2G



BSNL



VIL-2G

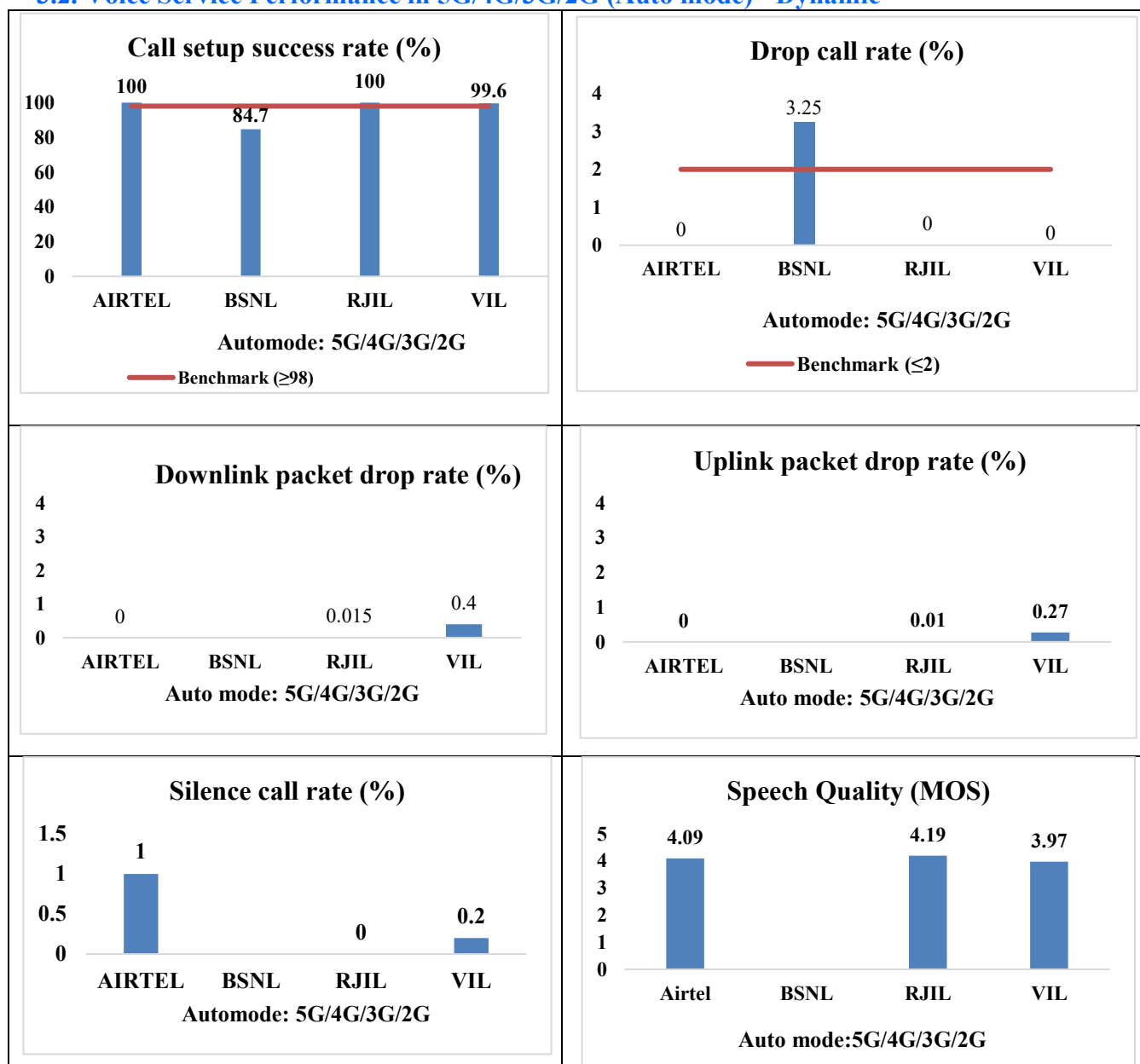
3.1.3. Signal Strength distribution: (3G/2G - Lock mode)

Rx Level - 2G								
Overall Rx Level	No of Sample				Sample %			
	Airtel	BSNL	RJIL	VIL	Airtel	BSNL	RJIL	VIL
[Max, ≥ -65]	10760	510	NA	9149	51.6	1.71	NA	43.61
$[-65, \geq -75]$	5958	2700	NA	6302	28.6	9.06	NA	30.04
$[-75, \geq -85]$	3451	6543	NA	4102	16.5	21.95	NA	19.55
$[-85, \geq \text{Min}]$	682	20056	NA	1428	3.3	67.28	NA	6.8
Total	20851	29809	NA	20981	100	100	NA	100

Rx Level - 3G								
Overall RSCP	No of Sample				Sample %			
	Airtel	BSNL	RJIL	VIL	Airtel	BSNL	RJIL	VIL
$[\text{Max}, \geq -70]$	ND	23527	NA	NA	ND	15.73	NA	NA
$[-70, \geq -80]$	ND	41973	NA	NA	ND	28.06	NA	NA

[-80, ≥-90)	ND	40778	NA	NA	ND	27.27	NA	NA
[-90, ≥Min)	ND	43276	NA	NA	ND	28.94	NA	NA
Total	ND	149554	NA	NA	ND	100	NA	NA

3.2. Voice Service Performance in 5G/4G/3G/2G (Auto mode) - Dynamic



Parameters	Airtel	BSNL	RJIL	VIL
Total Distance covered (in Kms)	354	342	354	357
No. of Call Attempts	298	431	358	311
No. of Call Established	298	365	358	310
Call setup success rate (CSSR) %	100	84.7	100	99.6
No. of Drop Call	0	14	0	0
Drop Call Rate %	0	3.25	0	0
Call Setup Time Average (Sec.)	1.81	2.87	1.22	0.43
No. of Handover Attempts	1283	710	2270	1412
No. of Handover success	1281	710	2262	1411
HOSR %	99.84	100	99.65	99.92
Packet Drop Rate (Downlink)	0	The test	0.015	0.4

Packet Drop Rate (Uplink)	0	could not be performed due to limitations of the tools	0.01	0.27
Number of silence call for > 2 sec.	3		0	1
Silence Call Rate %	1		0	0.20
Number of MOS samples	2858		2043	2266
Average MOS score	4.09		4.19	3.97

3.2.1. Number of Cell ids latched during drive test 5G/4G/3G/2G - Auto mode)

Number of unique cell ids covered in Voice test				
Technology	Service Provider			
	AIRTEL	BSNL	RJIL	VIL
3G	--	129	--	--
2G	--	14	--	10
4G	1037	419	515	696
5G	--	Technology Not Available	186	--

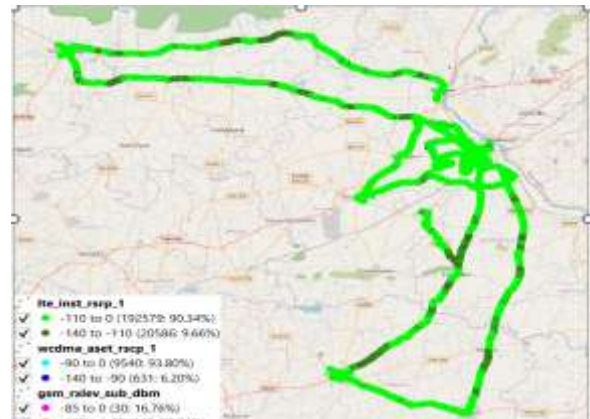
3.2.2. Signal Strength Map: (5G/4G/3G/2G - Auto mode)

Signal Strength Map	Map Legend- 2G- Pink (Rx Level $\geq$ -85 dBm), 3G- Sky blue (RSCP Level $\geq$ -90 dBm)	Red (Rx Level $<$ -85 dBm) Dark Blue (RSCP Level $<$ -90 dBm)
	Map Legend- 4G- Light Green (RSRP Level $\geq$ -110 dBm), 5G- Light Yellow (RSRP Level $\geq$ -110 dBm),	Dark Green (RSRP Level $<$ -110 dBm) Dark Yellow (RSRP Level $<$ -110 dBm)

Technology	Parameter	Range	Colour
2G	Rx Level	$\geq$ -85 dBm	Pink
		$<$ -85 dBm	Red
3G	RSCP	$\geq$ -90 dBm	Sky blue
		$<$ -90 dBm	Dark Blue
4G	RSRP	$\geq$ -110 dBm	Light Green
		$<$ -110 dBm	Dark Green
5G	RSRP	$\geq$ -110 dBm	Light Yellow
		$<$ -110 dBm	Dark Yellow



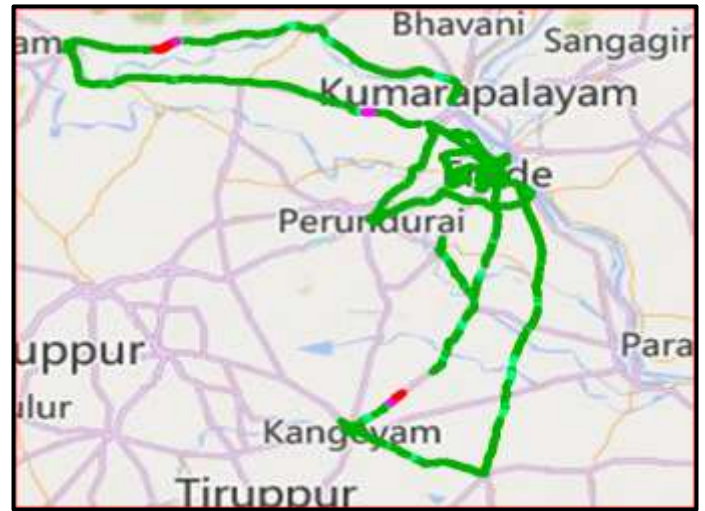
Airtel



BSNL



JIO



VIL

3.2.3. Signal Strength distribution: (5G/4G/3G/2G - Auto mode)

Rx Level - 2G								
Overall Rx Level	No of Sample				Sample %			
	Airtel	BSNL	RJIL	VIL	Airtel	BSNL	RJIL	VIL
[Max, ≥ -65]		546	NA	13		1.73	NA	9.77
$[-65, \geq -75)$		3595	NA	25		11.39	NA	18.8
$[-75, \geq -85)$		9729	NA	29		30.82	NA	21.8
$[-85, \geq \text{Min}]$		17698	NA	66		56.06	NA	49.62
Total		31568	NA	133		100	NA	100
Rx Level -3G								
Overall RSCP	No of Sample				Sample %			
	Airtel	BSNL	RJIL	VIL	Airtel	BSNL	RJIL	VIL
[Max, ≥ -70]		23527	NA	NA	NA	15.75	NA	NA
$[-70, \geq -80)$		41973	NA	NA	NA	28.06	NA	NA
$[-80, \geq -90)$		40778	NA	NA	NA	28.27	NA	NA
$[-90, \geq \text{Min}]$		43276	NA	NA	NA	28.94	NA	NA
Total		149554	NA	NA	NA	100	NA	NA
Rx Level -4G								
Overall RSRP	No of Sample				Sample %			
	Airtel	BSNL	RJIL	VIL	Airtel	BSNL	RJIL	VIL
[Max, ≥ -80]	8943	131965	5953	3968	43.51	52.43	34.26	18.75
$[-80, \geq -95]$	9233	42853	6495	10548	44.92	17.03	37.38	49.83
$[-95, \geq -110]$	2227	61823	4511	6021	10.83	24.56	25.96	28.45
$[-110, \geq \text{Min}]$	150	15055	415	630	0.72	5.98	2.4	2.98
Total	20553	251696	17374	21167	100	100	100	100
Rx Level -5G								
Overall RSRP	No of Sample				Sample %			
	Airtel	BSNL	RJIL	VIL	Airtel	BSNL	RJIL	VIL
[Max, ≥ -80]		NA	13376	NA		NA	47.16	NA
$[-80, \geq -95]$		NA	11942	NA		NA	42.1	NA

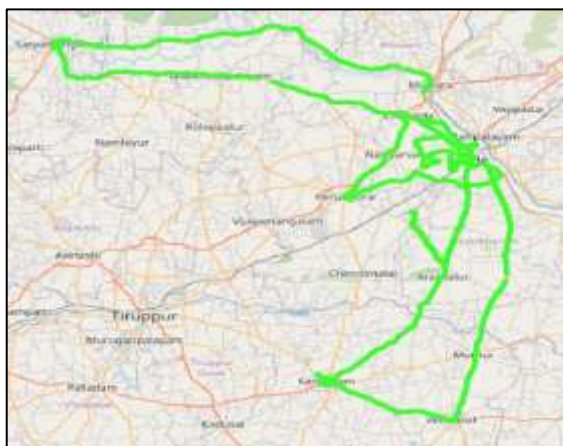
[-95, ≥-110]		NA	2893	NA		NA	10.2	NA
[-110, ≥Min]		NA	152	NA		NA	0.52	NA
Total		NA	28363	NA		NA	100	NA

3.3. Data Service performance in 5G/4G/3G/2G (Auto mode) - Dynamic

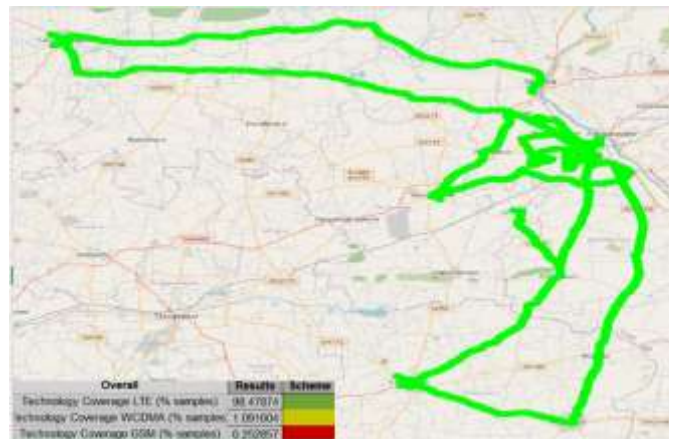
QoS Parameters		AIRTEL	BSNL	RJIL	VIL
Download speed (Mbits/s)	Average	172.97	20.97	313.47	19.04
	80th Percentile	247.26	37.74	532.09	27.79
	20th Percentile	113.73	4.19	61.82	7.71
Upload speed (Mbits/s)	Average	39.67	4.6	38.38	11.29
	80th Percentile	54.18	8.28	71.15	16.88
	20th Percentile	25.3	0.92	3.60	5.33
Latency (ms)	Average	44	73.55	38	77.2
	50th Percentile	52.68	73.55	35	64
Jitter (ms)	Average	27.3	3.36	21	12.9

3.4. Time Spent (Technology-wise)

Time Spent Map (for each TSP)	Map Legend: 2G – Red 3G – Yellow 4G – Green 5G - Blue
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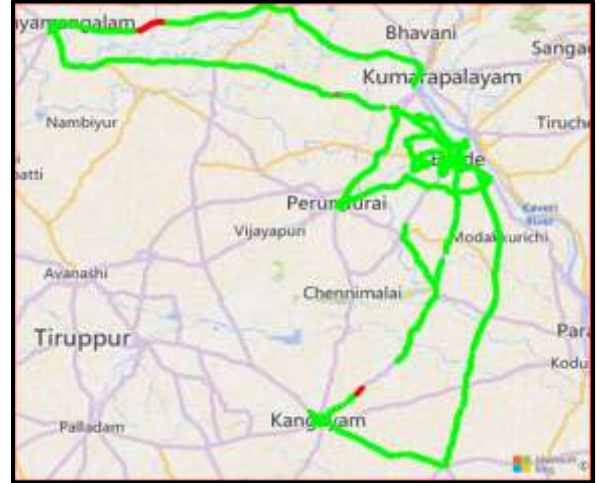
Airtel



BSNL



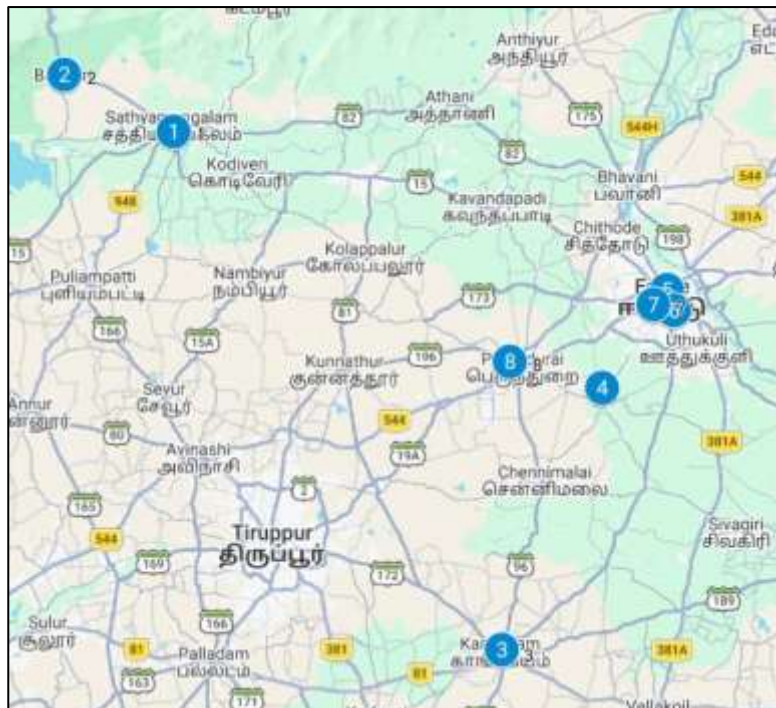
RJIL



VIL

4. QoS Performance Analysis – Static

4.1. Hot spot Locations



Hotspot Name	Latitude & Longitude	Date of Measurement	Time of Measurement
Sathyamangalam Bus Stand	11.49819/77.24466	24/02/2026	03:00PM
Bannariamman Temple	11.55155/77.13878	24/02/2026	05:00PM
Kangeyam Bus Stand	11.00680/77.56060	25/02/2026	12:15PM
Vellode Birds Sanctuary	11.25463/77.6582	25/02/2026	04:00PM
Erode Bus Stand	11.34805/77.71936	26/02/2026	09:30AM
Erode Junction	11.32962/77.72676	26/02/2026	11:15AM
Erode Collector Office	11.33477/77.70796	26/02/2026	01:15PM
Perundurai Medical College	11.28116/77.56841	26/02/2026	03:30PM

4.2. Voice Service Performance (5G/ 4G/ 3G/ 2G - Auto mode) – Over all

Parameters	Airtel	BSNL	RJIL	VIL
No. of Call Attempts	78	80	80	80
No. of Call Established	78	77	80	80
Call setup success rate (CSSR) %	100	96.11	100	100
No. of Drop Call	0	0	0	0
Drop Call Rate %	0	0	0	0
Call Setup Time Average (Sec.)	1.93	2.96	1.20	1.89

4.3. Data Service Performance (5G/ 4G/ 3G/ 2G - Auto mode) – Over all

QoS Parameters		AIRTEL	BSNL	RJIL	VIL
Download speed (Mbits/s)	Typical	40.14	5	*Typical Values not available	37.5
	Average	211.43	4.23	539.84	26.7
	80th Percentile	326	7.63	645.5	31.09
Download Session Setup Success Rate %		100	100	100	100
Upload speed (Mbits/s)	Typical	12.93	3	*Typical Values not available	26.96
	Average	43.52	1.99	89	20.80
	80th Percentile	63.56	3.59	103.6	24.96
Upload Session Setup Success Rate %		100	100	100	100
Latency (in ms)	50th Percentile	28	40.12	31.3	40.5
Jitter (in ms)	Average	14.84	The test could not be performed due to limitations of the tools	4.6	10.67
Packet Drop Rate %		0		0	0
Web browsing delay (in sec)		3.59		3.39	3.70
Video Streaming performance for video		2.00		0.279	1.87

*Typical - Typical Values cannot be captured from Drive Logs

4.4. Voice Service Performance (5G/ 4G/ 3G/ 2G - Auto mode) at each Hotspot location

Name of Hotspot Location	Sathyamangalam Bus Stand			
Parameters	Airtel	BSNL	RJIL	VIL
No of Call Attempts	10	10	10	10
No of Call Established	10	10	10	10
Call setup success rate (CSSR) %	100	100	100	100
No. of Drop Call	0	0	0	0
Drop Call Rate %	0	0	0	0
Call Setup Time Average (Sec.)	1.9	1.9	1.29	1.83
Total no of RLT Occurrence	NA	0	Applicable for 2G only	Drive kit not supported
No of RLT > 48	NA	0		

4.5. Data Service Performance (5G/4G/3G/2G - auto mode) at each Hotspot location:

Name of Hotspot Location	Sathyamangalam Bus Stand			
QoS Parameters	AIRTEL	BSNL	RJIL	VIL

Download speed (Mbits/s)	Typical	318.17	5	*Typical Values not available	18.6
	Average	346.24	3.51	451	15.02
	80th Percentile	374.34	6.32	568	16.17
Download Session Setup Success Rate %		100	100	100	100
Upload speed (Mbits/s)	Typical	59.91	3	*Typical Values not available	21.80
	Average	60.15	3.15	112	21.69
	80th Percentile	60.39	5.67	134.9	21.58
Upload Session Setup Success Rate %		100	100	100	100
Latency (in ms)	50th Percentile	24	45.18	28	40
Jitter (in ms)	Average	14	The test could not be performed due to limitations of the tools	5.4	11.74
Packet Drop Rate %		0		0	0
Web browsing delay (in sec)		2.81		3.31	3.90
Video Streaming performance for video		1.23		.207	2.56

*Typical - Typical Values cannot be captured from Drive Logs

4.6. Voice Service Performance (5G/ 4G/ 3G/ 2G - Auto mode) at each Hotspot location

Name of Hotspot Location	Bannariamman Temple			
Parameters	Airtel	BSNL	RJIL	VIL
No of Call Attempts	10	10	10	10
No of Call Established	10	10	10	10
Call setup success rate (CSSR) %	100	100	100	100
No. of Drop Call	0	0	0	0
Drop Call Rate %	0	0	0	0
Call Setup Time Average (Sec.)	1.85	1.99	1.21	1.83
Total no of RLT Occurrence	NA	0	Applicable for 2G only	Drive kit not supported
No of RLT > 48	NA	0		

4.7. Data Service Performance (5G/4G/3G/2G - auto mode) at each Hotspot location:

Name of Hotspot Location		Bannariamman Temple			
QoS Parameters		AIRTEL	BSNL	RJIL	VIL
Download speed (Mbits/s)	Typical	33.44	5	*Typical Values not	24.34

				available	
	Average	36.74	4.36	12.4	22.89
	80th Percentile	40.14	7.86	17	24.04
Download Session Setup Success Rate %		100	100	100	100
Upload speed (Mbits/s)	Typical	5.56	3	*Typical Values not available	18.92
	Average	5.93	01.45	8.5	17.58
	80th Percentile	6.26	2.61	9.8	18.46
Upload Session Setup Success Rate %		100	100	100	100
Latency (in ms)	50th Percentile	34.5	59.86	25	70.5
Jitter (in ms)	Average	19.8	The test could not be performed due to limitations of the tools	3.7	7.19
Packet Drop Rate %		0		0	0
Web browsing delay (in sec)		3.18		3.20	4.06
Video Streaming performance for video		1.34		0.271	2.14

*Typical - Typical Values cannot be captured from Drive Logs

4.8. Voice Service Performance (5G/ 4G/ 3G/ 2G - Auto mode) at each Hotspot location

Name of Hotspot Location	Kangayam Bus Stand			
Parameters	Airtel	BSNL	RJIL	VIL
No of Call Attempts	9	11	10	10
No of Call Established	9	11	10	10
Call setup success rate (CSSR) %	100	100	100	100
No. of Drop Call	0	0	0	0
Drop Call Rate %	0	0	0	0
Call Setup Time Average (Sec.)	2.51	4.01	1.28	2.03
Total no of RLT Occurrence	NA	0	Applicable for 2G only	Drive kit not supported
No of RLT > 48	NA	0		

4.9. Data Service Performance (5G/4G/3G/2G - auto mode) at each Hotspot location

Name of Hotspot Location		Kangayam Bus Stand			
QoS Parameters		AIRTEL	BSNL	RJIL	VIL
Download speed (Mbits/s)	Typical	336.6	5	*Typical Values not available	33.37
	Average	373.87	4.02	561	26.39

	80th Percentile	405.43	7.24	650	28.9
Download Session Setup Success Rate %		100	100	100	100
Upload speed (Mbits/s)	Typical	64.17	3	*Typical Values not available	25.87
	Average	67.44	1.60	86.5	20.59
	80th Percentile	70.63	2.88	107	23.69
Upload Session Setup Success Rate %		100	100	100	100
Latency (in ms)	50th Percentile	28	42.31	27	43
Jitter (in ms)	Average	13.9	The test could not be performed due to limitations of the tools	2.4	9.29
Packet Drop Rate %		0		0	0
Web browsing delay (in sec)		1.81		3.848	3.43
Video Streaming performance for video		3.07		0.278	1.72

*Typical - Typical Values cannot be captured from Drive Logs

4.10. Voice Service Performance (5G/ 4G/ 3G/ 2G - Auto mode) at each Hotspot location

Name of Hotspot Location	Vellode Birds Sanctuary			
Parameters	Airtel	BSNL	RJIL	VIL
No of Call Attempts	10	10	10	10
No of Call Established	10	8	10	10
Call setup success rate (CSSR) %	100	80	100	100
No. of Drop Call	0	0	0	0
Drop Call Rate %	0	0	0	0
Call Setup Time Average (Sec.)	1.86	2.36	1.19	1.89
Total no of RLT Occurrence	NA	0	Applicable for 2G only	Drive kit not supported
No of RLT > 48	NA	0		

4.11. Data Service Performance (5G/4G/3G/2G - auto mode) at each Hotspot location

Name of Hotspot Location		Vellode Birds Sanctuary			
Parameters		AIRTEL	BSNL	RJIL	VIL
Download speed (Mbits/s)	Typical	23.23	5	Typical Values not available	39.1
	Average	26.81	2.48	426.5	32.5
	80th Percentile	31.16	4.46	567.8	35.6
Download Session Setup Success Rate %		100	100	100	100
Upload speed (Mbits/s)	Typical	10.22	3	Typical Values not available	26.33

	Average	11.6	2.53	37.4	22.61
	80th Percentile	12.93	4.55	41.7	25.26
Upload Session Setup Success Rate %		100	100	100	100
Latency (in ms)	50th Percentile	28.50	54.1	33	40.7
Jitter (in ms)	Average	14.43	The test could not be performed due to limitations of the tools	4.1	9.94
Packet Drop Rate %		0		0	0
Web browsing delay (in sec)		3.7		3.00	3.46
Video Streaming performance for video		1.52		0.342	1.58

*Typical - Typical Values cannot be captured from Drive Logs

4.12. Voice Service Performance (5G/ 4G/ 3G/ 2G - Auto mode) at each Hotspot location

Name of Hotspot Location	Erode Bus Stand			
Parameters	Airtel	BSNL	RJIL	VIL
No of Call Attempts	10	10	10	10
No of Call Established	10	10	10	10
Call setup success rate (CSSR) %	100	100	100	100
No. of Drop Call	0	0	0	0
Drop Call Rate %	0	0	0	0
Call Setup Time Average (Sec.)	1.87	2.36	1.13	1.95
Total no of RLT Occurrence	NA	0	Applicable for 2G only	Drive kit not supported
No of RLT > 48	NA	0		

4.13. Data Service Performance (5G/4G/3G/2G - auto mode) at each Hotspot location

Name of Hotspot Location		Erode Bus Stand			
QoS Parameters		AIRTEL	BSNL	RJIL	VIL
Download speed (Mbits/s)	Typical	272.8	5	Typical Values not available	28.05
	Average	289.79	8.88	628	22.33
	80th Percentile	303.99	15.98	696	23.50
Download Session Setup Success Rate %		100	100	100	100
Upload speed (Mbits/s)	Typical	66.12	3	Typical Values not available	24.47
	Average	67.51	1.77	98	19.06
	80th Percentile	68.79	3.19	118.8	21.24

Upload Session Setup Success Rate %		100	100	100	100
Latency (in ms)	50th Percentile	28.5	20.12	31	44
Jitter (in ms)	Average	14.83	The test could not be performed due to limitations of the tools	7.6	9.46
Packet Drop Rate %		0		0	0
Web browsing delay (in sec)		5.2		3.77	3.76
Video Streaming performance for video		1.17		0.271	1.73

*Typical - Typical Values cannot be captured from Drive Logs

4.14. Voice Service Performance (5G/ 4G/ 3G/ 2G - Auto mode) at each Hotspot location

Name of Hotspot Location	Erode Junction			
Parameters	Airtel	BSNL	RJIL	VIL
No of Call Attempts	9	9	10	10
No of Call Established	9	8	10	10
Call setup success rate (CSSR) %	100	88.88	100	100
No. of Drop Call	0	0	0	0
Drop Call Rate %	0	0	0	0
Call Setup Time Average (Sec.)	1.85	5.2	1.05	2.08
Total no of RLT Occurrence	NA	0	Applicable for 2G only	Drive kit not supported
No of RLT > 48	NA	0		

4.15. Data Service Performance (5G/4G/3G/2G - auto mode) at each Hotspot location

Name of Hotspot Location		Erode Junction			
QoS Parameters		AIRTEL	BSNL	RJIL	VIL
Download speed (Mbits/s)	Typical	228.19	5	Typical Values not available	37.35
	Average	237.43	3.96	602	30.2
	80th Percentile	248.05	7.13	716	33.50
Download Session Setup Success Rate %		100	100	100	100
Upload speed (Mbits/s)	Typical	51.23	3	Typical Values not available	26.39
	Average	52.91	0.17	113.7	22.62
	80th Percentile	54.9	0.306	129.5	25.30
Upload Session Setup Success Rate %		100	100	100	100

Latency (in ms)	50th Percentile	27	40.96	31	42.7
Jitter (in ms)	Average	13.8	The test could not be performed due to limitations of the tools	4.4	10.7
Packet Drop Rate %		0		0	0
Web browsing delay (in sec)		3.53		3.47	3.68
Video Streaming performance for video		2.23		0.267	1.76

*Typical - Typical Values cannot be captured from Drive Logs

4.16. Voice Service Performance (5G/ 4G/ 3G/ 2G - Auto mode) at each Hotspot location

Name of Hotspot Location	Erode Collector Office			
Parameters	Airtel	BSNL	RJIL	VIL
No of Call Attempts	10	10	10	10
No of Call Established	10	10	10	10
Call setup success rate (CSSR) %	100	100	100	100
No. of Drop Call	0	0	0	0
Drop Call Rate %	0	0	0	0
Call Setup Time Average (Sec.)	1.8	3.4	1.26	1.62
Total no of RLT Occurrence	NA	0	Applicable for 2G only	Drive kit not supported
No of RLT > 48	NA	0		

4.17. Data Service Performance (5G/4G/3G/2G - auto mode) at each Hotspot location

Name of Hotspot Location		Erode Collector Office			
QoS Parameters		AIRTEL	BSNL	RJIL	VIL
Download speed (Mbits/s)	Typical	195.9	5	Typical Values not available	52.3
	Average	210.65	2.12	737.8	36.3
	80th Percentile	224.65	3.82	888.9	38.6
Download Session Setup Success Rate %		100	100	100	100
Upload speed (Mbits/s)	Typical	42.07	3	Typical Values not available	28.9
	Average	44.12	2.44	113.6	25.1
	80th Percentile	46.13	4.39	124	27.9
Upload Session Setup Success Rate %		100	100	100	100
Latency (in ms)	50th Percentile	26	29.67	39	39
Jitter (in ms)	Average	13.63	The test could not be performed due to limitations of	5.2	12.25
Packet Drop Rate %		0		0	0

Web browsing delay (in sec)	5.28	the tools	3.135	3.56
Video Streaming performance for video	3.15		0.279	1.53

*Typical - Typical Values cannot be captured from Drive Logs

4.18. Voice Service Performance (5G/ 4G/ 3G/ 2G - Auto mode) at each Hotspot location

Name of Hotspot Location	Perundurai Medical College			
Parameters	Airtel	BSNL	RJIL	VIL
No of Call Attempts	10	10	10	10
No of Call Established	10	10	10	10
Call setup success rate (CSSR) %	100	100	100	100
No. of Drop Call	0	0	0	0
Drop Call Rate %	0	0	0	0
Call Setup Time Average (Sec.)	1.86	2.5	1.21	1.85
Total no of RLT Occurrence	NA	0	Applicable for 2G only	Drive kit not supported
No of RLT > 48	NA	0		

4.19. Data Service Performance (5G/4G/3G/2G - auto mode) at each Hotspot location

Name of Hotspot Location		Perundurai Medical College			
QoS Parameters		AIRTEL	BSNL	RJIL	VIL
Download speed (Mbits/s)	Typical	152.54	5	Typical Values not available	30.2
	Average	169.94	4.57	900	24.8
	80th Percentile	185.96	8.23	1060	27.6
Download Session Setup Success Rate %		100	100	100	100
Upload speed (Mbits/s)	Typical	37.33	3	Typical Values not available	24.6
	Average	38.48	2.84	144.5	18.9
	80th Percentile	39.49	5.11	163	22.8
Upload Session Setup Success Rate %		100	100	100	100
Latency (in ms)	50th Percentile	26	28.78	36	36.5
Jitter (in ms)	Average	14.37	The test could not be performed due to limitations of the tools	4.09	11.86
Packet Drop Rate %		0		0	0
Web browsing delay (in sec)		3.15		3.465	3.7
Video Streaming performance for video		1.55		0.318	1.68

4.20. Signal Strength distribution at Static location – Over all

Rx Level -2G								
Overall Rx Level	No. of Sample				Sample %			
	Airtel	BSNL	RJIL	VIL	Airtel	BSNL	RJIL	VIL
[Max, $\geq$ -65]	NA	1	NA	NA	NA	0.033	NA	NA
[-65, $\geq$ -75)	NA	219	NA	NA	NA	7.42	NA	NA
[-75, $\geq$ -85)	NA	1155	NA	NA	NA	39.15	NA	NA
[-85, $\geq$ Min)	NA	1575	NA	NA	NA	53.40	NA	NA
Total	NA	2627	NA	NA	NA	100	NA	NA
Rx Level -3G								
Overall RSCP	No. of Sample				Sample %			
	Airtel	BSNL	RJIL	VIL	Airtel	BSNL	RJIL	VIL
[Max, $\geq$ -70]	NA	87	NA	NA	NA	7.49	NA	NA
[-70, $\geq$ -80)	NA	175	NA	NA	NA	15.07	NA	NA
[-80, $\geq$ -90)	NA	384	NA	NA	NA	33.07	NA	NA
[-90, $\geq$ Min)	NA	515	NA	NA	NA	44.35	NA	NA
Total	NA	1161	NA	NA	NA	100	NA	NA
Rx Level -4G								
Overall RSRP	No. of Sample				Sample %			
	Airtel	BSNL	RJIL	VIL	Airtel	BSNL	RJIL	VIL
[Max, $\geq$ -80]	1855601	15870	1347	4057	46.70	49.17	39.85	24.46
[-80, $\geq$ -95]	1197731	11803	130	10856	30.14	36.57	3.85	65.45
[-95, $\geq$ -110]	919817	4139	1697	1645	23.15	12.82	50.2	9.92
[-110, $\geq$ Min]	91	463	206	28	0.0	1.43	6.1	0.17
Total	3973240	32275	3380	16586	100	100	100	100
Rx Level -5G								
Overall RSRP	No. of Sample				Sample %			
	Airtel	BSNL	RJIL	VIL	Airtel	BSNL	RJIL	VIL
[Max, $\geq$ -80]	NA	NA	12167	NA	NA	NA	67.96	NA
[-80, $\geq$ -95]	NA	NA	3522	NA	NA	NA	19.67	NA
[-95, $\geq$ -110]	NA	NA	1866	NA	NA	NA	10.42	NA
[-110, $\geq$ Min]	NA	NA	349	NA	NA	NA	1.95	NA
Total	NA	NA	17904	NA	NA	NA	100	NA

5. Improvement plan for shortcoming observed during Drive Test

Sr. No.	Name of TSP	Route / Location	Name of Area & LSA	Lat. & Long.	Observation (No coverage / Poor coverage / Poor Signal Quality/ Call drops / Call Setup failure, and Hand Over failure/ Block/ Down Link Packet Drop/ Up	Improvement Plan (Optimization/Radiation of New Site/up-gradation of existing site/upgradation of backhaul etc.)	Time Line/ Remarks
1	Airtel	Solar to Kangayem	Elumathur	11.159306 77.773734	Poor coverage observed due to high ISD	New site planned (ELMTHR)	May'26
2	Airtel	Bhavani to Sathyamangalam	Bannaramman Kovil	11.552670 77.139222	Poor coverage due to ISD issue / Speed issue	New site Required	Under planning validation
3	Airtel	Vellode Birds Sanctuary	Vellode	11.25463 77.6582	Less Potential area and Scatter Clutter, inconsistent users, currently covered with 4G and DL Thpt of >26 Mbps and UL Thpt of 12 Mbps	Future 5G Upgrade Planned	Aug'26
4	BSNL	Palliyuthu	Erode & TN	11.194457/ 77.704439	No coverage for the stretch of 4 Kms and the nearest site is 3.8 Km. Call Dropped.	Coverage can be improved with New site only.	
5	BSNL	Vellode Bird Scantuary	Erode & TN	11.2500/ 77.66493	Poor coverage and hence data throughput is less in this area. Nearest site is 1.8 Kms .	Coverage can be improved with New site only.	

6	BSNL	Modakuruchi Taluk Office	Erode & TN	11.214213 / 77.77587	Poor coverage and hence data throughput is less in this area. Nearest site is 2.7Kms .	Coverage can be improved with New site.	
7	BSNL	Ellakadai	Erode & TN	11.1598 / 77.7736	Poor coverage and the nearest site is 1.9 Kms.	Coverage can be improved with New site.	
8	BSNL	Selvam Nagar Area	Erode & TN	11.08252 / 77.74443	Poor coverage for the stretch of 3.2 Kms . Nearby site is 2.3 Kms.	Coverage can be improved with New site.	
9	BSNL	Karaiyur	Erode & TN	11.032284 / 77.736275	Poor / No Coverage in Karaiyur area. Existing site is 1.8 Kms away.	Coverage can be improved with New site.	
10	BSNL	Varathappampalayam	Erode & TN	11.03256 / 77.60087	No / Poor coverage for the stretch of 3 kms. Near site is 4.5 Kms away.	Coverage can be improved with New site.	
11	BSNL	Moolapattarai	Erode & TN	11.35283 / 77.7245	Multiple signals serving in this area and hence quality is poor.	New site required to overcome Island effect.	
12	BSNL	Railway station Erode	Erode & TN	11.329096 / 77. 724020	Multiple signals serving in this area and hence quality is poor.	New site required to overcome Island effect.	
13	BSNL	Thayirpalayam	Erode & TN	11.40000 / 77.637902	Poor Coverage and poor quality due to multiple signals from far away sites, which could not be restricted due to terrain	New site required to overcome Island effect.	

					condition. To overcome this dominant radiator is required.		
14	BSNL	Krishnapuram	Erode & TN	11.416494 / 77.5653	Poor coverage.Call Drop.Near by site is 1.7 Kms. Being the RTT site and due to high raised buildings, providing coverage from the existing site is impossible.	Coverage can be improved with New site.	
15	BSNL	Bannari Amman Temple	Erode & TN	11.55309/ 77.1384	Poor Coverage due to distance constraint of the near by site which is 3.1 Kms away.	Being the important temple where mobile population is anticipated, new site required .	
16	BSNL	Varapallam	Erode & TN	11.52642 / 77.48507	Poor coverage due to distance constraint. Call drop occurred.	Coverage can be improved with New site.	
17	BSNL	Koothampoondi	Erode & TN	11.49022 / 77.56001	Poor coverage. Near by site is 2.1 Kms.	Coverage can be improved with New site.	
18	BSNL	AkkaraiKoduveri	Erode & TN	11.45945 / 77.30673	Call Drop	Poor coverage due to distance constraint. New site required at Koduveri.	
19	BSNL	Alukuli	Erode & TN	11.45655 / 77.36594	Poor coverage. Inter site distance is 8.1 Kms	Coverage can be improved with New site.	
20	RJIL	Kangeyam to Erode	Thirumalai nagar	11.021523/ 77.587114	Poor coverage	Soft Optimization Planned KNGY-A005	31/03/26

						and KNGY-G004 site	
21	RJIL	Kangeyam to Erode	Varathapampalayam	11.037416/77.606548	Poor coverage	Soft Optimization Planned KNGY-G004 site	31/03/26
22	RJIL	Kangeyam to Erode	Kangeyam institute of technology	11.074219/77.649641	Poor coverage	NEW SITE/ I-TN-KNGY-ENB-9079 /WIP	31May26
23	RJIL	Kangeyam to Erode	Palayakottai	11.106925/77.670479	Poor coverage	Soft Optimization Planned I-TN-EROD-ENB-B003-2	31/03/26
24	RJIL	Erode to Sathy	Sakthi nager	11.485227/77.564658	Poor coverage	Soft Optimization Planned /I-TN-BHVN-ENB-I017-1	31/03/26
25	RJIL	Erode to Perundurai	Nasiyanur Privu	11.330094/77.629642	Poor coverage	Soft Optimization Planned I-TN-PNDI-ENB-9085-0	31/03/26
26	RJIL	Bhavani to Sathy	Appakoodal GH	11.471827/77.587120	Poor coverage	Soft Optimization Planned I-TN-APKD-ENB-6000-0	31/03/26
27	VIL	Erode to Kangeyam	Erode Hyderabad	11.0613/77.6374	Poor Coverage	New Site Planned	Within 6months
28	VIL	Erode to Vellakkovil	Erode Hyderabad	11.28545/77.76001	Poor Coverage	New Site Planned	Within 6months
29	VIL	Erode Railway Colony	Erode Hyderabad	11.31043/77.76361	Poor Coverage	New Site Planned	Within 6months
30	VIL	Erode to Perundurai	Erode Hyderabad	11.28731/77.60847	Poor Coverage	New Site Planned	Within 6months

6. Compliance Report for shortcomings observed during Drive Test

Improvement in KPI Parameter	Airtel	BSNL	RJIL	VIL
Call Drop location/area wise action taken and improvement observed	No Call Drop Observed			NIL
Down Link Packet Drop (DLPD) for voice & Up Link Packet Drop (ULPD) for voice in 4G & 5G - location/area wise action taken and improvement observed	VLODE1 site 5G Upgrade planned			NIL
Call Setup failure, and Hand Over failure -location/area wise action taken and improvement observed	No Issue observed			NIL
Poor Rx Quality - location/area wise action taken and improvement observed	No Issue observed			Mentioned is Sec:5
Poor Coverage - location/area wise action taken and improvement observed	New site On aired (ELMTHR) Kangayam to Erode / Bannariam man Kovil New site Requirment under planning Validation			Mentioned is Sec:5
Poor DL Speed (i.e. Speed < 2 Mbps) -location/area wise action taken and improvement observed	No Issue observed			NIL
Others Poor KPIs (e.g. high latency, etc) - location/area wise action taken and improvement observed	No issue observed			NIL

Annexure-I**Drive Test Methodology adopted during the Drive test:****(1) Voice Tests:**

Sl. No.	QoS Parameter	Measurement Criteria and methodology
1	Call setup time	Time taken from call initiate to call alerting/ringing.
2	Call setup success rate	CSSR = (Total Call Established/ Total Call Attempt) *100 Call Setup attempt time: 30 sec. Call duration (City/Highway): 90/180 sec. Wait/ Guard Time: 15sec.
3	Dropped Call rate (DCR)	Call Drop Rate = (Total Call Drop/Total Call Established) *100
4	Call Silence Rate (Muting)	Silence call rate = (count of silence / Total calls established) *100 Continuous RTP gap ≥ 2 sec
5	Handover Success Rate	Handover Success Rate = Count of successful handovers (All Technology Handover combined) / Total count of Handover Attempt (All Technology Handover combined) *100 Handover types which are considered- 2G Inter & Intra cell, 3G Soft & IRAT, 4G Inter & Intra frequency & SRVCC, 5G Inter & Intra frequency & 5G to 4G handovers.
6	Packet Drop Rate (DL & UL) for Packet Switched Network (4G & 5G)	Number of RTP (Real-time Transport Protocol) Packets lost divided by total RTP packet received (against each source SSRC and sequence number) at call originating handset. This KPI will be calculated from MOS call for packet call only (VoNR/VoLTE)
7	Mean Opinion Score (MOS) Performance (in 5G/4G/3G/2G: Auto mode)	Voice quality in mobile networks is measured with algorithms based on ITU-T P.863 (POLQA) Excellent: MOS ≥ 4 and < 5 , Good: MOS ≥ 3 and < 4 , Fair: MOS ≥ 2 and < 3 , Poor : MOS ≥ 1 and < 2

(2) Data Tests:

Sl. No.	QoS Parameter	Measurement Criteria and methodology
1	Data speed in Mbits/s (DL/UL both)	Download Speed = Total bytes transferred during download / Total time for transfer Upload Speed = Total bytes transferred during upload / Total time for transfer. Download: File Size: 500 MB for 120 sec, 30 Sec Timeout

		Upload: File size: 250 MB for 120 sec, 30 Sec Timeout (Multithread 3- TCP Connection at a time for both DL & UL)
2	Latency (in ms)	Latency is the time taken by a packet to reach the receiving end point after being transmitted from the sending point in broadband service. Test with Packet of size of 512 Bytes - 1000 count on TSP's Test server using UDP packets (TWAMP)
3	Jitter (in ms)	Test with Packet of size of 512/256 Bytes - 1000 count on TSP's own Test server using UDP (TWAMP) & RTP packets separately
4	Session Setup Success Rate (in %) (DL/UL)	(Total DL or UL session established (successfully connected to server)/ Total DL or UL session attempt) x100
5	Packet drop rate (in %)	No. of packets lost out of total packet transferred during the testing. • Packet loss rate = (Total packet lost / Total packet sent) x100 Packet delay (RTT) >90 ms considered as packet loss and included in Packet drop rate. • The measurement should include all major types of packets i.e., TCP, UDP and RTP in their representative ratio. The 90th percentile value of the packet drop measurements shall be considered the Packet drop rate.
6	Web browsing delay (in seconds)	Time taken to open the web page successfully is considered as web browsing delay / web page download time. LSA-wise 3 popular websites to be taken
7	Video Streaming performance (in seconds)	TRAI Prescribed Video of 20 Sec with 25 sec Timeout & without caching https://www.youtube.com/watch?v=rH2RjvI0DFs