

Operator Assisted Drive Test Report

For

Thiruvananthapuram

19th to 22nd Sep 2023 Trivandrum-Kollam NH(66) - 70 Kms (19th Sep 2023)

Trivandrum City & Surrounding Area - 360 Kms (20th to 22th Sep 2023)

TRAI RO, Bengaluru

Key Performance Indicators:

- All TSPs have met the 2% QOS benchmark of Drop Call Rate.
- All TSPs have met the 3% QOS benchmark of Call Block Rate.
- All 2G/3G/4G TSPs have met the Rx Quality except BSNL 3G, Airtel 4G & VIL 4G.

The Operator Assisted Drive Test has been carried out by Regional Office, Bangalore with the help of Service Providers from 19th to 22th Sep 2023 The drive test covered the route of 430 KMs including NH of 70 Kms & 6 hotspots. Approximately 600 calls were made for each of the 7 networks: three 2G networks, one 3G network and three LTE networks covering four TSPs.

OverviewVoice
SummaryData
Summary

Regional Office, TRAI Bengaluru conducted Operator Assisted Drive Test from 19th to 22th Sep 2023 covering various locations in **Thiruvanathapuram & Surrounding Region**. The performance of Airtel, BSNL, Vodafone Idea and Jio were monitored across various technologies (2G, 3G and 4G/4G). The test results obtained from these drive tests were utilized to assess the network quality for Voice and Data services in terms of

Voice: Coverage, Quality, Hand Over Success Rate, Call Setup Success Rate, Drop Call Rate and Block Call Rate.

Data: Download and Upload Throughputs, Web Browsing Delay and Latency

Drive Test Details:

Voice Tests: Calls were made for 90 sec duration with wait time of 10 sec between calls in all technologies. The drive test covered a drive route of approximately 430 KMs including NH of 70 Kms over a period of 4 days from 19th to 22th Sep 2023. Approximately 600 calls were made for each of the 7 networks: three 2G (Lock Mode) networks, one 3G (Dual mode) networks and three 4G network covering 4 unique TSPs.

Data Tests: Dynamic data test (Test Data on Move) was conducted for 430 KMs including NH of 70 Kms over a period of 4 days for download throughput for 3G & 4G technology. Data Tests were performed at 6 static locations; three 2G (Lock mode) networks, one 3G (Dual mode) networks and three 4G (Free mode) networks covering 4 unique TSPs were tested. All the data through put figure mentioned in the report are based on the average value.

* For Voice and Data KPI's, 2G measurement is done with UE locked on 2G, 3G measurement is done with UE in Dual mode (2G & 3G) and 4G measurement is done with UE in Free Mode.

* 3G KPI's which are calculated from UE in Dual Mode (2G & 3G) includes samples and events of 2G.

* 4G KPI's which are calculated from the UE in Free Mode included samples and events of 2G & 3G.

Service	Specifications					
Download	2G (Locked) - 500KB, 3G (Dual) - 20 MB, 4G (Free) - 40 MB					
Upload	2G (Locked) - 100KB, 3G (Dual) - 5 MB, 4G (Free) - 10 MB					
Web Browsing	3 links of e/m commerce website www.amazon.in, www.flipkart.com and PayTm					
Latency	32 Bytes on www.google.com					
Video Streaming	130 secs clip					

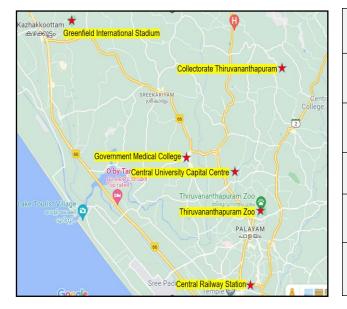
Overview

Voice & Dynamic Data Test (Data Test on Move) Drive Route

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Areas covered					
Kazhakoottam	Prasala				
Attingal	Vellarada				
Parippalli	Aryanad				
Kollam	Nedumangad				
Kundara	Proorkkada				
Kottarakkara	Thambanoor				
Kilimanoor	Palayam				
Venjarammood	Nemom				
Kovalam	Shangumugham				
Poovar	Karyavattom				

Data Service Test- Static Locations

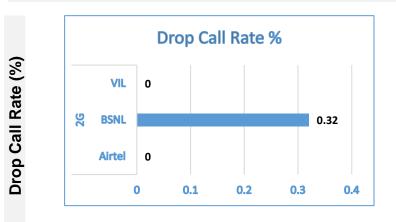


1. Central Railway Station
2. Thiruvananthapuram Zoo
3. Central University Capital Centre
4. Collectorate Thiruvananthapuram
5. Government Medical College
6. Greenfield International Stadium

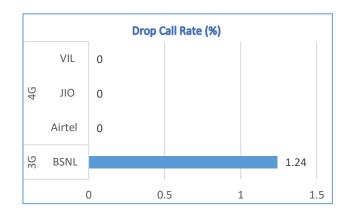
Overview Details

Voice Calls

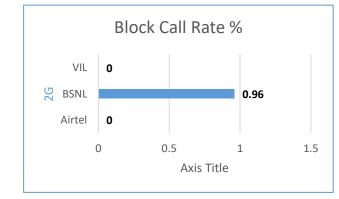
Key Observations

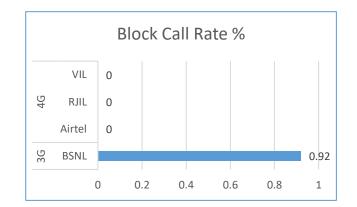


QoS compliance of the TSPs for Voice across technologies 2G/3G/4G-4G:









KPIs	2G		3G	4G			
	Airtel	BSNL	VIL	BSNL	Airtel	RJIL	VIL
Drop Call Rate %	0	0.32	0	1.24	0	0	0
Block Call Rate %	0	0.96	0	.92	0	0	0

- a) All TSPs have met the 2% QOS benchmark of Drop Call Rate.
- b) All TSPs have met the 3% QOS benchmark of Call Block.

Voice Calls

Key Observations

Coverage

a) Percentage of coverage samples for $2G \ge -85$ dBm.

TSPs	2G			
	Airtel	BSNL	VIL	
Coverage%	93.2	91.61	96.35	

b) Percentage of coverage samples for $3G \ge -90 \text{ dBm \& LTE } \ge -110 \text{ dBm}$.

	3G	4G			
TSPs	BSNL	Airtel JIO VIL			
Coverage %	87.9	99.21	99.3	96.71	

c) Percentage of time spent on 3G/4G network

	3G	4G			
TSPs	BSNL	Airtel	JIO	VIL	
Time Spent on 3G/4G%	92.11	100	100	96.3	

City Level Summary

Voice Call	2G			
	Airtel	BSNL	VIL	
Call Attempt	663	624	644	
Blocked Call Rate (%)	0	0.96	0	
CSSR% (Accessibility)	100	99.04	100	
Drop Call Rate (%)	0	0.32	0	
Rx Quality (%)	98.06	98.29	98.67	
Mobility HOSR (%)	99.89	96.11	98.35	

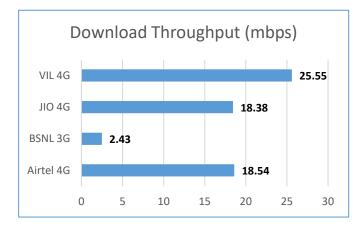
	3G/4G					
Voice Call	BSNL 3G	Airtel 4G	JIO 4G	VIL 4G		
Call Attempt	651	688	665	660		
Blocked Call Rate (%)	0.92	0	0	0		
CSSR% (Accessibility)	99.08	100	100	100		
Drop Call Rate (%)	1.24	0	0	0		
Rx Quality (%)	59.83	90.17	95.9	92.4		
Mobility HOSR (%)	98.9	99.89	99.8	99.1		

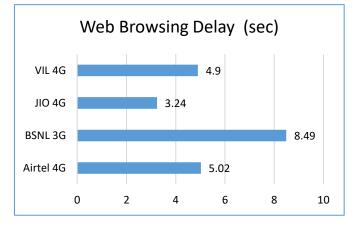
Data Services Static

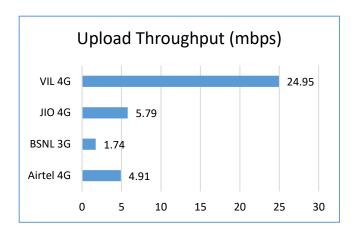
Data was tested at 6 locations .Following services were tested: Data Download/Upload, Latency (www.google.com), and Web browsing (Flipkart, Amazon, PayTm)

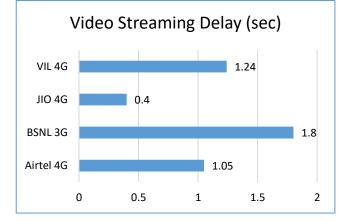
Data Download, Upload Performance (Mbps), Web Browsing delay, Video Streaming and Latency 3G/4G

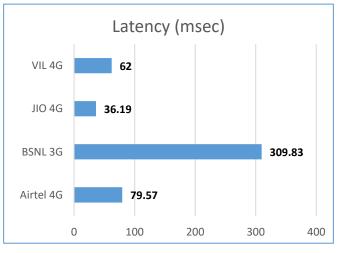
3G/4G/ Network:











City Level Summary(contd.)

Data Services Static	2G		
	Airtel	BSNL	VIL
Download Throughput (kbps)	158.51	90.2	139.72
Upload Throughput (kbps)	74.08	24.83	65.27
Web Browsing Delay (sec)	53.89	17.53	75.34
Latency (msec)	366.83	365.47	607

	3G/4G				
Data Services Static	BSNL 3G	Airtel 4G	JIO 4G	VIL 4G	
Download Throughput (mbps)	2.43	18.54	18.4	25.6	
Upload Throughput (mbps)	1.74	4.91	5.79	25	
Web Browsing Delay (sec)	8.49	5.02	3.24	4.9	
Video Streaming Delay (sec)	1.8	1.05	0.4	1.24	
Latency (msec)	309.83	79.57	36.2	62	

Data Services Dynamic	3G/4G				
(Data Test on Move)	BSNL 3G	Airtel 4G	JIO 4G	VIL 4G	
Download Throughput (mbps)	2.13	8.23	8.03	20.6	
Upload Throughput (mbps)	2.09	5.31	2.77	7.54	

City Level Data Services Static(contd.)

Data Services Static – Central			2G		
Railway Station	Airtel	BS	NL		VIL
Download Throughput (kbps)	105.78	11	1.2		94.93
Upload Throughput (kbps)	44.3	3	3		68.18
Web Browsing Delay (sec)	72.68	12	.52		103.94
Latency (ms)	364	50)3		541
Data Services Static –Central	4G				
Railway Station	BSNL 3G	Airtel	JIO		VIL
Download Throughput (Mbps)	3.07	22.53	14.57	7	17.42
Upload Throughput (Mbps)	1.62	5.91	8.98	}	12.09
Web Browsing Delay (sec)	2.98	4.24	3.68	;	4.78
Video Streaming Delay (sec)	1.44	1.01	0.39)	0.91
Latency (ms)	211	81	33.4	-	50.8

Data Services Static –		2G	
Thiruvananthapuram Zoo	Airtel	BSNL	VIL
Download Throughput (kbps)	175.04	120.2	197.25
Upload Throughput (kbps)	87.78	22.8	74.178
Web Browsing Delay (sec)	60.75	11.23	68.356
Latency (msec)	361.2	258	562

Data Services Static -		4	G	
Thiruvananthapuram Zoo	BSNL 3G	Airtel	JIO	VIL
Download Throughput (Mbps)	1.41	5.4	33.65	28.38
Upload Throughput (Mbps)	1.51	3.06	5.03	23.852
Web Browsing Delay (sec)	9.29	4.65	3.49	4.79
Video Streaming Delay (sec)	1.68	1.32	0.32	0.842
Latency (ms)	563	93.4	53	53

City Level Data Services Static(contd.)

Data Services Static – Central	2G			
University Capital Centre	Airtel	BS	SNL	VIL
Download Throughput (kbps)	172.68	8 81	.40	76.64
Upload Throughput (kbps)	92.56	38	.20	36.956
Web Browsing Delay (sec)	42.29	28	.86	77.448
Latency (ms)	376	403	L.40	893
Data Services Static Central			G	
University Capital Centre	BSNL 3G	Airtel	JIO	VIL
Download Throughput (Mbps)	3.26	26.96	19.63	34.38
Upload Throughput (Mbps)	2.39	5.94	6.92	29.63
Web Browsing Delay (sec)	8.36	3.45	2.89	4.85
Video Streaming Delay (sec)	1.73	0.78	0.36	1.79
Latency (ms)	291.00	53	34	71
	_			
Data Services Static Collectorate			2G	
Thiruvananthapuram	Airtel	BS		VIL
Download Throughput (kbps)	178.9	67	' .4	207.59
Upload Throughput (kbps)	65.06	24	1.2	86.238
Web Browsing Delay (sec)	44.03	22	.04	64.106
Latency (msec)	371	32	25	680

Data Services Static – Collectorate		4	G	
Thiruvananthapuram	BSNL 3G	Airtel	JIO	VIL
Download Throughput (Mbps)	3.16	27.84	15.76	25.34
Upload Throughput (Mbps)	1.63	4.81	3.74	35.63
Web Browsing Delay (sec)	7.61	5.35	2.89	5.02
Video Streaming Delay (sec)	1.13	0.9	0.37	1.12
Latency (ms)	258	69	31	69

City Level Data Services Static(contd.)

Data Services Static – Government		2G	
Medical College	Airtel	BSNL	VIL
Download Throughput (kbps)	95.08	62.20	102.15
Upload Throughput (kbps)	40.38	15.40	40.12
Web Browsing Delay (sec)	55.46	17.53	64.32
Latency (ms)	364	272.80	834

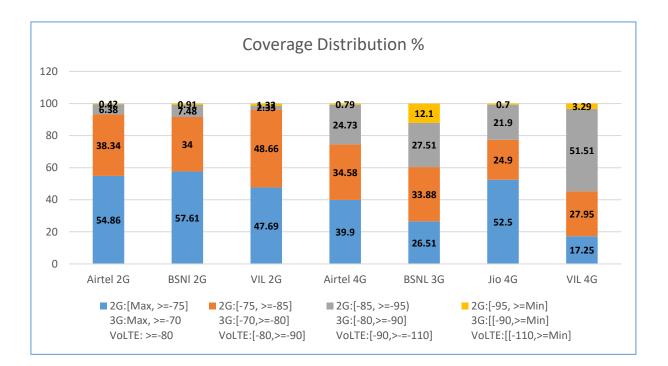
Data Services Static – Government	3G/4G			
Medical College	BSNL 3G	Airtel	JIO	VIL
Download Throughput (Mbps)	0.9	7.12	12.28	18.69
Upload Throughput (Mbps)	1.65	2.39	4.62	22.41
Web Browsing Delay (sec)	15.51	7.17	3.05	5.59
Video Streaming Delay (sec)	3.4	1.1	0.48	1.8
Latency (ms)	292	90	33	72

Data Services Static – Greenfield		2G	
International Stadium	Airtel	BSNL	VIL
Download Throughput (kbps)	223.6	98.80	159.75
Upload Throughput (kbps)	114.38	15.40	85.97
Web Browsing Delay (sec)	48.11	13.03	73.85
Latency (msec)	364.2	433.60	134

Data Services Static – Greenfield		3G/	/4G	
International Stadium	BSNL 3G	Airtel	JIO	VIL
Download Throughput (Mbps)	2.78	21.36	14.4	29.08
Upload Throughput (Mbps)	1.63	7.36	5.46	26.07
Web Browsing Delay (sec)	7.2	5.25	3.41	4.4
Video Streaming Delay (sec)	1.42	1.18	0.48	0.97
Latency (ms)	243	91	33	58

RF Coverage relates to the geographical footprint within the system that has sufficient RF signal strength to provide for a call session. The Coverage rate is calculated on the basis of % of samples in which the Rx level \geq -85 dBm, RSCP is \geq -90 dBm & RSRP \geq -110dBm. The details are as follows.

TSP	Coverage Rate %
Airtel 2G	93.2
BSNL 2G	91.61
VIL 2G	96.35
Airtel 4G	99.21
BSNL 3 G	87.9
Jio 4G	99.3
VIL 4G	96.71



AIRTEL

Technology	Coverage Rate %
2G	93.20
4G	99.21





4G

2G		
Overall RxLevel	# Samples	% PDF
[Max, >=-75]	18899	54.86%
[-75, >=-85)	13206	38.34%
[-85, >=-95)	2198	6.38%
[-95, >=Min)	145	0.42%
Total	34448	100

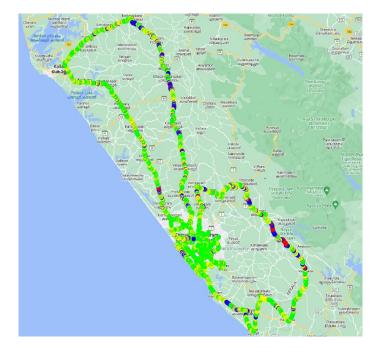
4G/VoLTE			
Overall RSRP	# Samples	% PDF	
[Max, >=-80]	13731	39.90%	
[-80, >=-90)	11902	34.58%	
[-90, >=-110)	8511	24.73%	
[-110, >=Min)	271	0.79%	
Total	34415	100	

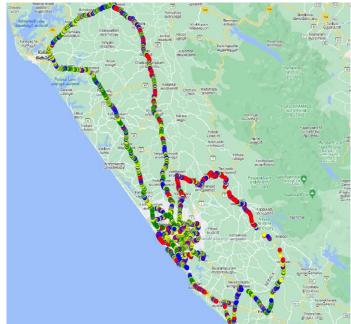
Coverage Details

I. Coverage Details

BSNL		
Technology	Coverage Rate %	
2G	91.61	
3G	87.90	

2G





3G

2G			
Overall RxLevel	# Samples	% PDF	
[Max, >=-75]	135686	57.61%	
[-75, >=-85)	80087	34.00%	
[-85, >=-95)	17616	7.48%	
[-95, >=Min)	2139	0.91%	
Total	235528	100%	

3G		
Overall RSCP	# Samples	% PDF
[Max, >=-70]	17134	26.51%
[-70, >=-80)	21902	33.88%
[-80, >=-90)	17781	27.51%
[-90, >=Min)	7821	12.10%
Total	64638	100%

I. Coverage Details

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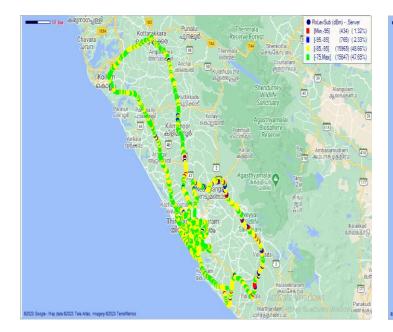
Technology	Coverage Rate %
4G	99.3



4G/VoLTE		
Overall RSRP	# Samples	% PDF
[Max, >=-80]	39570	52.5
[-80, >=-90)	18743	24.9
[-90, >=-110)	16500	21.9
[-110, >=Min)	556	0.7
Total	75369	100

VIL		
Technology	Coverage Rate %	
2G	96.35	
4G	96.71	

2**G**



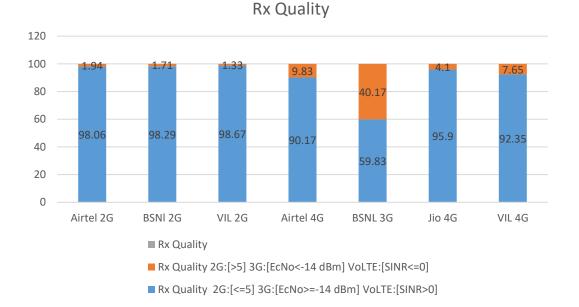
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Kollyn Geolgo	Anchal		tallam precio	35 Alangulam
Paravur John State	Paopally NJOR pal	S Sanctuary		ajoningen i
Vari		exaggiolot Agasinyama Ponmud Biosphere encomosis Reserve Kallar	Par	Ambasamudram (41)
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4G

	2G			4G/VoLTE	
Overall RxLevel	# Samples	% PDF	Overall RSRP	# Samples	% PDF
[Max, >=-75]	15647	47.69%	[Max, >=-80]	5586	17.25%
[-75, >=-85)	15965	48.66%	[-80, >=-90)	9051	27.95%
[-85, >=-95)	765	2.33%	[-90, >=-110)	16778	51.51%
[-95, >=Min)	434	1.32%	[-110, >=Min)	1066	3.29%
Total	32811	100%	Total	24272	100%

For measuring voice quality, as per the QoS norms, RxQual <=5 for GSM TSPs, EcNo >= -14 dBm for 3G TSP sand SINR >0 in case of 4G is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP	Rx Quality %
Airtel 2G	98.06
BSNL 2G	98.29
VIL 2G	98.67
Airtel 4G	90.17
BSNL 3G	59.83
Jio 4G	95.90
VIL 4G	92.35

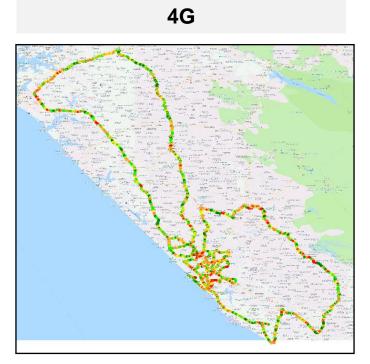


Quality Details

Airtel

Technology	Rx Quality %
2G	98.06
4G	90.17





Overall Rx Quality	# Samples	% PDF	Overall SINR	# Samples	% PDF
(Min, <=2)	24919	75.35%			0.000/
(2 ~-2)	4843	14.64%	(Min, <=0)	3384	9.83%
(2, <=3)	4043	14.04%	(0, <=5)	9585	27.85%
(3 , <=4)	1441	4.36%	(5, <=10)	9358	27.19%
(4 , <=5)	1228	3.71%	(10, <=15)	6387	18.56%
(5 , <=Max)	640	1.94%	(15, <=Max)	5700	16.56%
Total	33071	100	Total	34414	100

Quality Details

BSNL

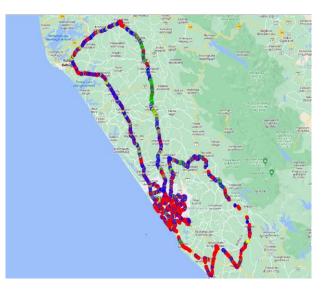
Technology	Rx Quality %
2G	98.29
3G	59.83

2G



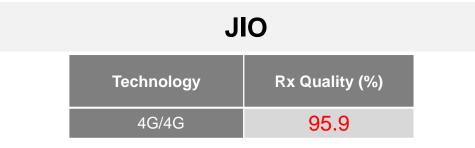
Overall Rx Quality	# Samples	% PDF
(Min, <=2)	221703	94.13%
(2, <=3)	3852	1.64%
(3 , <=4)	3576	1.52%
(4 , <=5)	2366	1.00%
(5 , <=Max)	4031	1.71%
Total	235528	100%

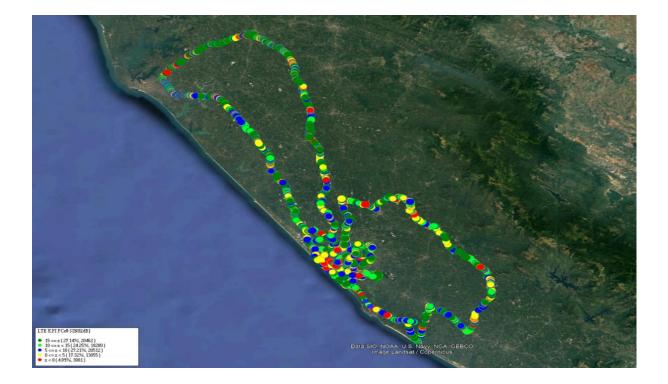
3**G**



Overall EcNo	# Samples	% PDF
(Max, <=-6)	962	1.49%
(-6, <=-9)	3211	4.97%
(-9, <=-11)	6974	10.79%
(-11, <=-14)	27524	42.58%
(-14, <= Min)	25967	40.14%
Total	64638	1 00 %

II. Quality Details





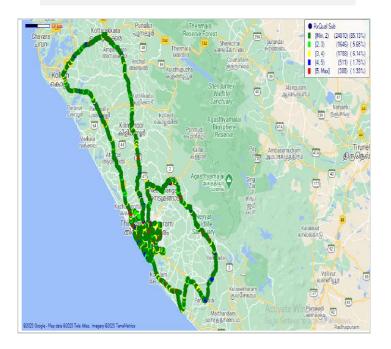
Overall SINR	# Samples	% PDF
(Min, <=0)	3081	4.1%
(0, <=5)	13055	17.3%
(5, <=10)	20512	27.2%
(10, <=15)	18280	24.2%
(15, <=Max)	20462	27.1%
Total	75390	100%

II. Quality Details

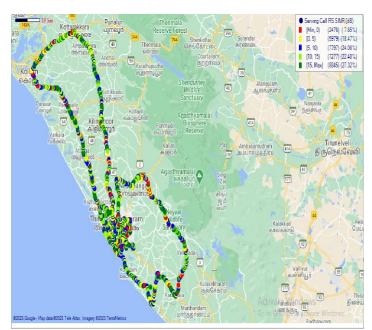
VIL

Technology	Rx Quality %
2G	98.67
4G	92.35

2G



4G

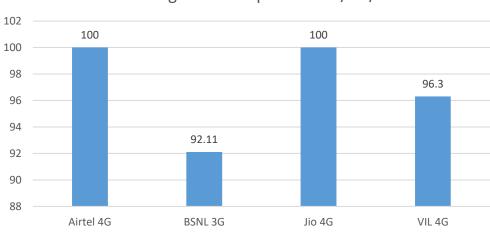


Overall Rx Quality	# Samples	% PDF	Overall SINR	# Samples	% PDF
(Min, <=2)	24810	85.13%	(Min, <=0)	2476	7.65%
(2, <=3)	1646	5.65%	(0, <=5)	5979	18.47%
(3 , <=4)	1788	6.14%	(5, <=10)	7797	24.08%
(4 , <=5)	511	1.75%	(10, <=15)	7277	22.48%
(5 , <=Max)	388	1.33%	(15, <=Max)	8845	27.32%
Total	29143	100.00%	Total	32374	100%

Quality Details

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TSP	Time Spent on 3G/4G %
Airtel 4G	100
BSNL 3G	92.11
Jio 4G	100
VIL 4G	96.30



Percentage of time spent on 3G/4G/4G

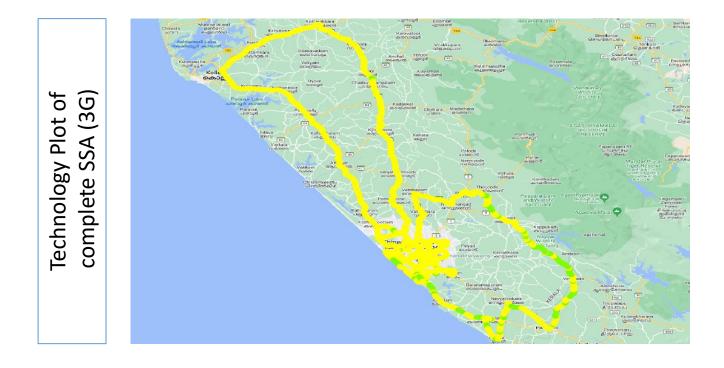
III. Technology Details

Airtel

Technology	Time Spent %
4G	100



BSNLTechnologyTime Spent %3G92.11



III. Technology Details

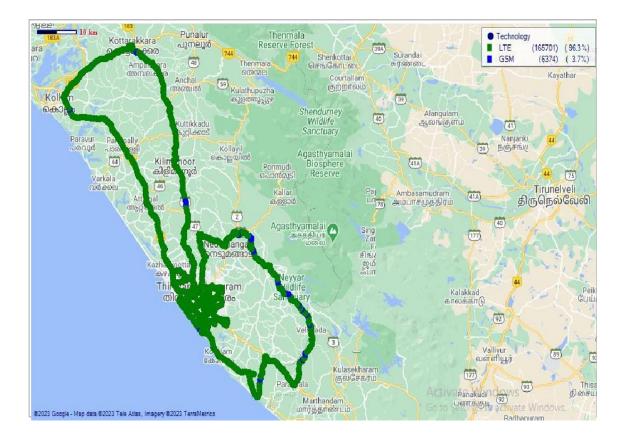
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Technology	Time Spent %
4G	100



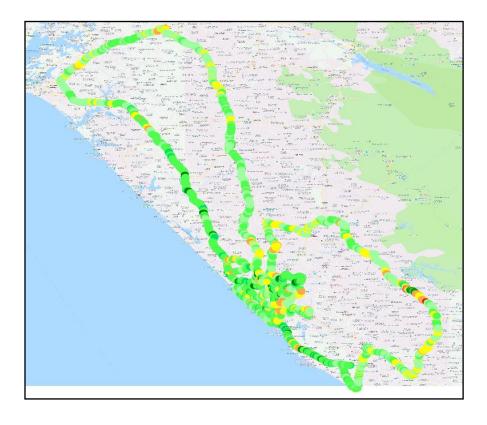
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Technology	Time Spent
4G	96.3

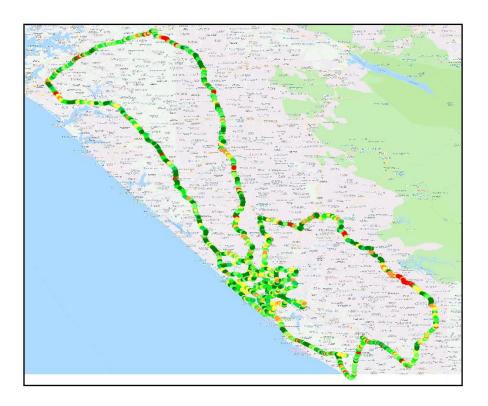


IV. Dynamic Data Test(Data Test on Move)- 4G DL/UL Details

Airtel



DL throughput	No. of Samples	%
0 to 1 Mbps	167	0.50
1 to 2 Mbps	1101	3.31
2 to 3 Mbps	4491	13.52
3 to 4 Mbps	10771	32.42
4 to 8 Mbps	14708	44.27
8 to 12 Mbps	1285	3.87
>12 Mbps	698	2.10
Total	33221	100

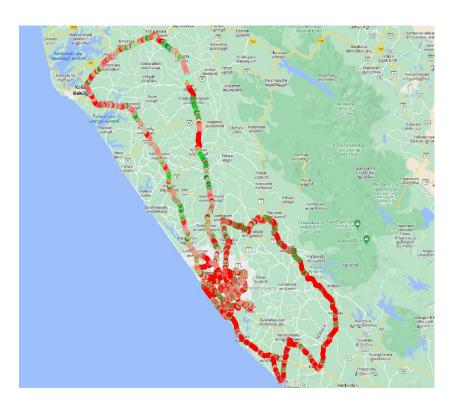


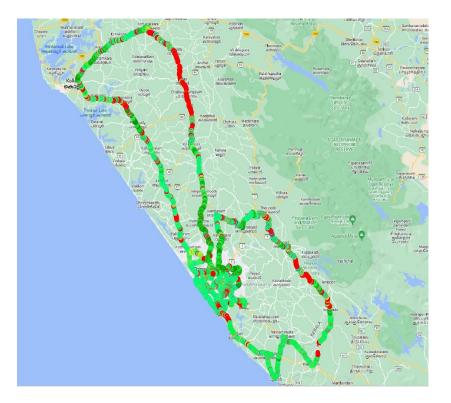
UL throughput	No. of samples	%
0 to 256 Kbps	987	3.87
250 to 512 Kbps	2183	8.57
512 Kbps to 1 Mbps	5638	22.13
1 to 2 Mbps	6164	24.19
2 to 3 Mbps	3770	14.80
3 to 4 Mbps	2438	9.57
>4 Mbps	4301	16.88
Total	25481	100

Dynamic Data Test Details

IV. Dynamic Data Test(Data Test on Move)-3G/4G DL/UL Details

BSNL



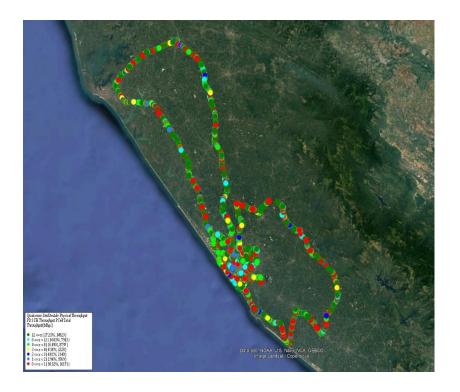


DL throughput	No. of Samples	%
0 to 1 Mbps	194508	48.74
1 to 2 Mbps	72121	18.07
2 to 3 Mbps	44047	11.04
3 to 4 Mbps	29013	7.27
4 to 8 Mbps	49608	12.43
8 to 12 Mbps	8813	2.21
>12 Mbps	938	0.24
Total	399048	100

UL throughput	No. of Samples	%
0 to 1 Mbps	46301	13.28
1 to 2 Mbps	11353	3.26
2 to 3 Mbps	24053	6.90
3 to 4 Mbps	135151	38.77
4 to 8 Mbps	59805	17.16
8 to 12 Mbps	26344	7.56
>12 Mbps	45601	13.08
Total	348608	

IV. Dynamic DataTest(Data Test on Move)-4G DL/UL Details

JIO



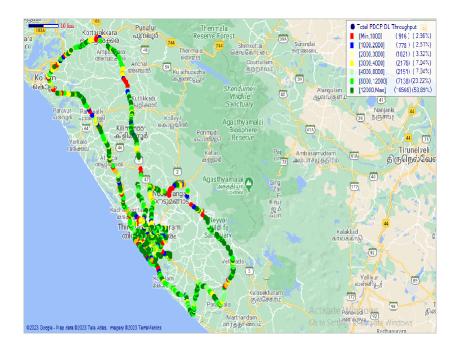


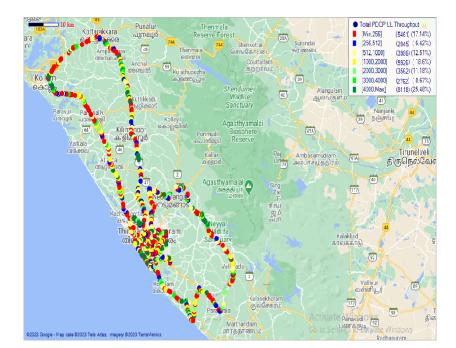
DL throughput	No. of Samples	%	
0 to 1 Mbps	16171	30	
1 to 2 Mbps	1569	3	
2 to 3 Mbps	2140	4	
3 to 4 Mbps	2228	4	
4 to 8 Mbps	8797	16	
8 to 12 Mbps	7913	15	
>12 Mbps	14523	27	
Total	53341	100	

UL throughput	No. of samples	%
0 to 256 kbps Mbps	18862	29.1%
256 to 512 kbps	3048	4.7%
512 Kbps to 1 Mbps	5060	7.8%
1 to 2 Mbps	8321	12.9%
2 to 3 Mbps	6059	9.4%
3 to 4 Mbps	4722	7.3%
>4Mbps	18679	28.8%
Total	64751	100%

IV. Dynamic Data Test(Data Test on Move)-4G DL/UL Details

VIL





DL throughput	No. of Samples	%
0 to 1 Mbps	916	2.98
1 to 2 Mbps	772	2.51
2 to 3 Mbps	1021	3.32
3 to 4 Mbps	2176	7.04
4 to 8 Mbps	2151	7.04
8 to 12 Mbps	7138	23.22
>12 Mbps	16566	53.89
Total	30740	100

UL throughput	No. of samples	%
0 to 256 Kbps	5461	17.14
250 to 512 Kbps	2045	6.42
512 Kbps to 1 Mbps	3986	12.51
1 to 2 Mbps	5926	18.60
2 to 3 Mbps	3562	11.18
3 to 4 Mbps	2762	8.67
>4Mbps	8118	25.48
Total	31859	100

AIRTEL

V. TRAI My Speed App Test Details-2G

Techology-2G	Central Railway Station	Thiruvananth apuram Zoo	Central University Capital Centre	Collectorate Thiruvanant hapuram	Government Medical College	Greenfield Internation al Stadium
Download Speed (Mbps)	0.21	0.21	0.27	0.21	0.21	0.16
Upload Speed (Mbps)	0.03	0.11	0.08	0.11	0.01	0.13
Latency	327.9	238.7	1928.8	3861.3	687.5	427.6

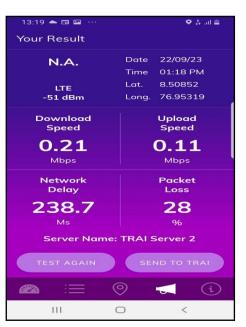
Central Railway Station

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Thiruvananthapuram Zoo



Government Medical College



Central University Capital Centre



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	Time 07:33 PM
EDGE	Lat. 8.56622
-51 dBm	Long. 76.88564
Download	Upload
Speed	Speed
0.16	0.13
Mbps	Mbps
Network	Packet
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427.6	23
Ms	%
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V. TRAI My Speed App Test Details-4G

Techology-4G/VoLTE	Central Railway Station	Thiruvananth apuram Zoo	Central University Capital Centre	Collectorate Thiruvanant hapuram	Governm ent Medical College	Greenfield Internatio nal Stadium
Download Speed (Mbps)	34.76	15.8	39.34	32.69	21.23	33.74
Upload Speed (Mbps)	6.26	8	6.11	8.88	5.47	4.47
Latency	45.5	58	47.1	46.9	63.4	43.9

Central Railway Station



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Thiruvananthapuram Zoo



Government Medical College



Central University Capital





Greenfield International Stadium



TRAI MySpeed Details

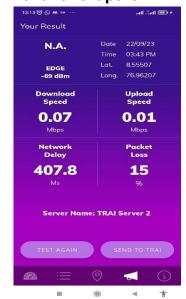
V. TRAI MySpeed App Test Details-2G

Techology-2G	Central Railway Station	Thiruvananth apuram Zoo	Central University Capital Centre	Collectorate Thiruvanant hapuram	ment	Greenfield Internatio nal Stadium
Download Speed (Mbps)	0.12	0.09	0.03	0.07	0.06s	0.06
Upload Speed (Mbps)	0.01	0.02	0.01	0.01	0.03	0.01
Latency(ms)	237.5	N.A	252.2	407.8	603.4	N.A

Central Railway Station



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Thiruvananthapuram Zoo



Government Medical College

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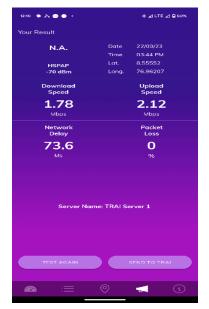
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Techology-4G/VoLTE	Central Railway Station	Thiruvanan thapuram Zoo	Central University Capital Centre	(Alloctorato	ent	Greenfield Internatio nal Stadium
Download Speed (Mbps)	3.49	5.31	3.64	1.78	0.70	1.56
Upload Speed (Mbps)	1.93	2.06	2.12	2.12	1.07	2.03
Latency(ms)	76.5	89.7	64.8	73.6	74.7	68.9

Central Railway Station



Collectorate Thiruvananthapuram



Thiruvananthapuram Zoo



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CELLONE	Date Time	22/09/23 04:53 PM
HSPAP -84 dBm	Lat. Long.	8.52165 76.93003
Download Speed		Upload Speed
0.70 Mbps		1.07
Network Delay		Packet Loss
74.7		0
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Central University Capital

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HSPAP -71 dBm	Lat. Long.	8.52433 76.94594	
Download Speed		Upload Speed	
3.64		2.12 Mbps	
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CELLONE	Date Time	22/09/23 06:57 PM
HSPAP -74 dBm	Lat. Long.	8.56509 76.88586
Download Speed		Upload Speed
1.56 Mbps		2.03
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V. TRAI MySpeed App Test Details-4G

Techology-4G	Central Railway Station	Thiruvananth apuram Zoo	Central University Capital Centre	Collectorate Thiruvanant hapuram	Government Medical College	Greenfield International Stadium
Download Speed (Mbps)	13.78	21.92	18.91	21.39	15.52	16.96
Upload Speed (Mbps)	7.01	7.7	6.54	9.19	7.72	5.53
Latency	84.1	59.8	51.3	66.4	89.5	58.7

Central Railway Station



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Thiruvananthapuram Zoo



Government Medical College



Central University Capital Centre

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VODAFONE IDEA

V. TRAI MySpeed App Test Details-2G

Techology-2G	Central Railway Station	Thiruvanant hapuram Zoo	Central University Capital Centre	Collectorate Thiruvanan thapuram		Greenfield Internation al Stadium
Download Speed (Mbps)	0.21	0.09	0.20	0.10	0.11	0.21
Upload Speed (Mbps)	0.08	0.04	0.08	0.07	0.05	0.09
Latency	NA	NA	NA	NA	NA	NA

Central Railway Station



Collectorate Thiruvananthapuram



Thiruvananthapuram Zoo



Government Medical College



Central University Capital Centre



Greenfield International Stadium

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Your Result	
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LTE -65 dBm	Lat. 8.56513 Long. 76.88610
Download Speed	Upload Speed
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TRAI MySpeed Details

VODAFONE IDEA

V. TRAI MySpeed App Test Details-4G

Techology-4G/VoLTE	Central Railway Station	Thiruvanant hapuram Zoo	Central University Capital Centre	Collectorat e Thiruvanan thapuram	Governmen t Medical	Greenfield Internation al Stadium
Download Speed (Mbps)	25.91	28.31	34.13	23.24	19.24	26.70
Upload Speed (Mbps)	14.75	21.45	28.54	21.48	17.21	23.52
Latency	NA	NA	NA	NA	NA	NA

Central Railway Station

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Thiruvananthapuram Zoo



Government Medical College

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Central University Capital Centre

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