

Operator Assisted Drive Test Report

For

Aurangabad

13th to 16th June 2023 Aurangabad-Shirdi (NH) – 98 Kms (13th June 2023)

Aurangabad City & Surrounding Area – 324 Kms (14th to 16th June 2023)

TRAI RO, Bengaluru Operator-Assisted

Key Performance Indicators:

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

The Operator Assisted Drive Test has been carried out by Regional Office, Bangalore with the help of Service Providers from 13th Jun 2023 to 16th Jun 2023 The drive test covered the route of 422 KMs including NH of 98 Kms & 6 hotspots. Approximately 500 calls were made for each of the 7 networks: three 2G networks, one 3G network and three LTE networks covering four TSPs.

Overview



Data Summary Regional Office, TRAI Bengaluru conducted Operator Assisted Drive Test from **13th Jun 2023 to 16th Jun 2023** covering various locations in **Aurangabad City & 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 **422 KMs** including **NH of 98 Kms** over a period of 4 days from **13th Jun 2023 to 16th Jun 2023**. Approximately 500 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 422 KMs including NH of 98 Kms over a period of 3 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.

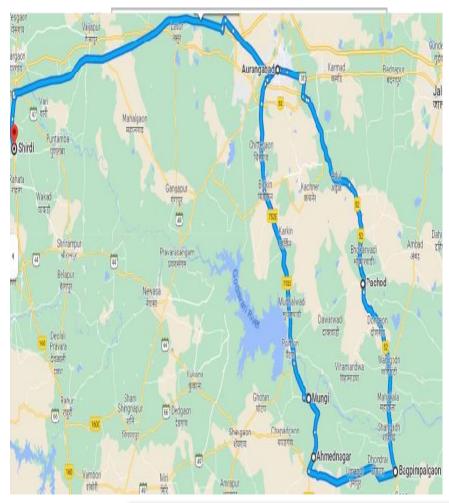
* 3G KPI's which are calculated from UE in Dual Mode (2G & 3G) includes samples and events of 2G.

* 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



Areas covered				
Aurangabad City	Pachod			
Vaijapur	Dodadgaon			
Kopargaon	Bag Pimpalgaon			
Shirdi	Bodhegaon			
Cidco	Pategaon			
Chikalthana	Paithan			
Sundarwadi	Mudhalwadi			
Chitegaon	Dhorkin			
Dabhrul	Bidkin			
Adul	Kanchanwdi			

	Areas covered				
DAY 1	Aurangabad to Shirdi				
DAY 2	Aurangabad - Sundarwadi – Chitegaon – Dabhrul – Dodadgaon – Bagpimpalgaon – Bodhegoan – Pategaon – Mudhalwadi – Aurangabad				
DAY 3	Aurangabad City Drive				
DAY 4	Static Locations				

Data Service Test- Static Locations

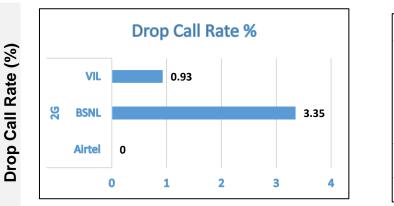


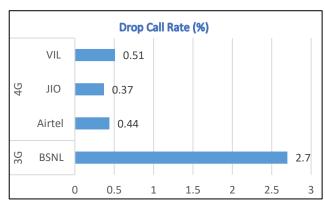
1. Sai Nagar Shirdi
2. Prozone Mall, Aurangabad
3. Collector office Aurangabad
4. Central Bus Stand, Aurangabad
5. Railway Station Aurangabad
6. Dr. Babasaheb Ambedkar Marathwada University

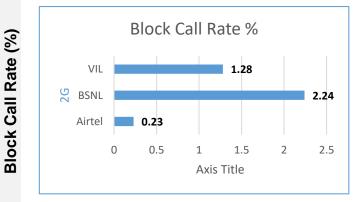
Voice Calls

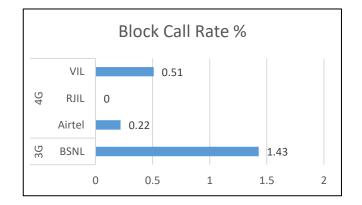
Key Observations

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









	2G		3G	4G			
KPIs	Airtel	BSNL	VIL	BSNL	Airtel	RJIL	VIL
Drop Call Rate %	0	3.35	0.93	2.7	0.44	0.37	0.51
Block Call Rate %	0.23	2.24	1.28	1.43	0.22	0	0.51

a) All TSPs have met the 2% QOS benchmark of Drop Call Rate except BSNL 2G & 3G.

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.

		2G	
TSPs	Airtel	BSNL	VIL
Coverage%	71.03	81.04	90.49

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

TSPs	3G	4G		
	BSNL	Airtel	JIO	VIL
Coverage %	75.98	96.3	98.4	91.08

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

	3G	4G		
TSPs	BSNL	Airtel	JIO	VIL
Time Spent on 3G/4G%	56.79	100	100	99.66

City Level Summary

Voice Call	2G			
	Airtel	BSNL	VIL	
Call Attempt	429	489	547	
Blocked Call Rate (%)	0.23	2.24	1.28	
CSSR% (Accessibility)	99.76	97.75	98.72	
Drop Call Rate (%)	0	3.35	0.93	
Rx Quality (%)	95.52	97.95	95.19	
Mobility HOSR (%)	99.75	93.43	97.52	

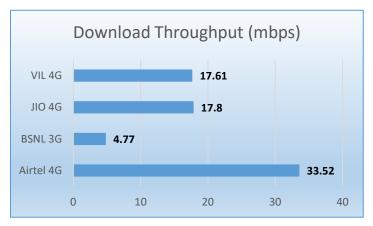
	3G/4G				
Voice Call	BSNL 3G	Airtel 4G	JIO 4G	VIL 4G	
Call Attempt	488	446	538	591	
Blocked Call Rate (%)	1.43	0.22	0	0.51	
CSSR% (Accessibility)	98.6	99.77	100	99.49	
Drop Call Rate (%)	2.7	0.44	0.37	0.51	
Rx Quality (%)	94.04	95.17	89	86.92	
Mobility HOSR (%)	94.02	100	99.2	99.53	

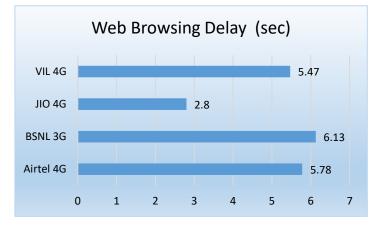
Data Services Static

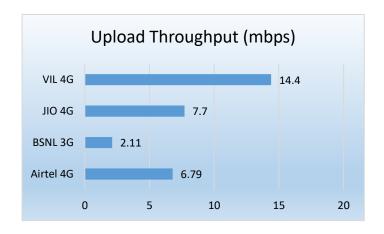
Data was tested at 6 locations .Following services were tested: Data Download/Upload, Latency (www.google.com), and Web browsing (Flipkart, Amazon, PayTm)

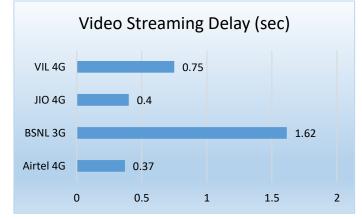
Data Download, Upload Performance (Mbps), Web Browsing delay, Video Streaming and Latency 3G/4G

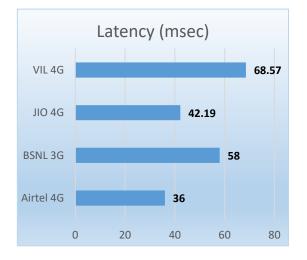
3G/4G/ Network:











Data Summary

City Level Summary(contd.)

Data Services Static	2G			
	Airtel	BSNL	VIL	
Download Throughput (kbps)	22.50	140.30	121.98	
Upload Throughput (kbps)	16.66	65.07	76.95	
Web Browsing Delay (sec)	34.54	32.12	27.00	
Latency (msec)	243.00	252.87	189.67	

	3G/4G				
Data Services Static	BSNL 3G	Airtel 4G	JIO 4G	VIL 4G	
Download Throughput (mbps)	4.77	33.52	17.8	17.61	
Upload Throughput (mbps)	2.11	6.79	7.7	14.4	
Web Browsing Delay (sec)	6.13	5.78	2.8	5.47	
Video Streaming Delay (sec)	1.62	0.37	0.4	0.75	
Latency (msec)	58	36	49.6	68.57	

Data Services Dynamic	3G/4G				
(Data Test on Move)	BSNL 3G	Airtel 4G	JIO 4G	VIL 4G	
Download Throughput (mbps)	2.78	7.61	15.3	7.41	
Upload Throughput (mbps)	0.026	3.81	2.8	3.87	

City Level Data Services Static(contd.)

Data Services Static – Sai Nagar	2G				
Shirdi	Airtel	BS	NL		VIL
Download Throughput (kbps)	29.38	177	7.72		110.14
Upload Throughput (kbps)	15.12	63	.69		94.48
Web Browsing Delay (sec)	35.78	31	.41		40.18
Latency (ms)	242.4	176		248	
Data Services Static –Sai Nagar	4G				
Shirdi	BSNL 3G	Airtel	JIO		VIL
Download Throughput (Mbps)	2.39	40.15	6.2		15.97
Upload Throughput (Mbps)	1.9	6.08	12.46	6	21.174
Web Browsing Delay (sec)	6.78	6.04	3.9		3.967
Video Streaming Delay (sec)	1.97	0.37	0.41		0.574
Latency (ms)	68	35.6	60.6		38

Data Services Static – Prozon Mall			
Aurangabad	Airtel	BSNL	VIL
Download Throughput (kbps)	17.83	174.09	110.14
Upload Throughput (kbps)	14.43	69.52	68.02
Web Browsing Delay (sec)	36.16	31.85	24.88
Latency (msec)	238.4	216	163

Data Services Static - Prozon Mall		4	G	
Aurangabad	BSNL 3G	Airtel	JIO	VIL
Download Throughput (Mbps)	7.26	30.73	15.26	25.29
Upload Throughput (Mbps)	2.31	7.36	2.84	8.74
Web Browsing Delay (sec)	4.38	5.6	2.38	4.68
Video Streaming Delay (sec)	0.89	0.35	0.35	0.54
Latency (ms)	56	32.8	50	60.6

City Level Data Services Static(contd.)

Data Services Static – Collector		2G	
Office Aurangabad	Airtel	BSNL	VIL
Download Throughput (kbps)	27.21	147.42	157.48
Upload Throughput (kbps)	23.34	66.55	70.22
Web Browsing Delay (sec)	29.26	33.42	24.45
Latency (ms)	247	238.00	168

Data Services Static- Collector		4	G	
Office Aurangabad	BSNL 3G	Airtel	JIO	VIL
Download Throughput (Mbps)	7.1	29.31	17.72	9.53
Upload Throughput (Mbps)	2.1	8.33	7.18	4.5
Web Browsing Delay (sec)	5.85	5.64	2.32	7.46
Video Streaming Delay (sec)	1.14	0.37	0.33	1.07
Latency (ms)	48.8	40	48	92

Data Services Static – Central Bus		2G	
Stand Aurangabad	Airtel	BSNL	VIL
Download Throughput (kbps)	17.84	70.2	102.88
Upload Throughput (kbps)	10.33	28.39	77.4
Web Browsing Delay (sec)	36.52	31.63	19.68
Latency (msec)	245	359	170

Data Services Static – Central Bus	4G			
Stand Aurangabad	BSNL 3G	Airtel	JIO	VIL
Download Throughput (Mbps)	3.27	24.93	14.48	12.88
Upload Throughput (Mbps)	1.99	6.69	7.4	11.3
Web Browsing Delay (sec)	7.47	5.64	2.42	6.92
Video Streaming Delay (sec)	2.13	0.35	0.42	0.64
Latency (ms)	59	39	40	56

City Level Data Services Static(contd.)

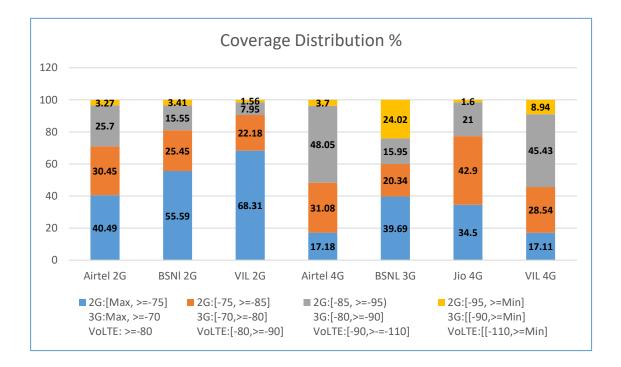
Data Services Static – Railway			2G	
Station Aurangabad	Airtel	BS	SNL	VIL
Download Throughput (kbps)	26.18	10	4.34	136.26
Upload Throughput (kbps)	24.46	76	5.28	80.54
Web Browsing Delay (sec)	34.84	33	3.17	24.2
Latency (ms)	243	36	4.60	228
Data Services Static – Railway	3G/4G			
Station Aurangabad	BSNL 3G	Airtel	JIO	VIL
Download Throughput (Mbps)	3.67	35.54	18.26	22.38
Upload Throughput (Mbps)	2.26	5.06	8.2	21.58
Web Browsing Delay (sec)	6.99	5.68	2.94	4.81
Video Streaming Delay (sec)	1.71	0.33	0.4	0.74
Latency (ms)	58	39	44	76

Data Services Static – Dr. Ambedkar		2G	2G			
Marathwada University	Airtel	BSNL	VIL			
Download Throughput (kbps)	16.59	168.03	114.96			
Upload Throughput (kbps)	12.31	85.96	71.05			
Web Browsing Delay (sec)	34.66	31.23	28.62			
Latency (msec)	245.8	164.00	161			

Data Services Static – Dr.		3G/	/4G	
Ambedkar Marathwada University	BSNL 3G	Airtel	JIO	VIL
Download Throughput (Mbps)	4.92	40.45	34.62	19.63
Upload Throughput (Mbps)	2.09	7.2	8.02	19.08
Web Browsing Delay (sec)	4.55	6.1	2.8	5.01
Video Streaming Delay (sec)	1.85	0.42	0.43	0.93
Latency (ms)	58	36	54	89

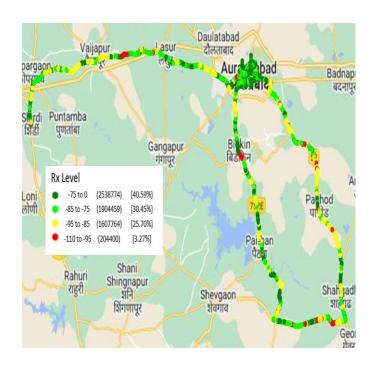
RF Coverage relates to the geographical footprint within the system that has sufficient RF signal strength to provide for a call session. The Coverage rate is calculated on the basis of % of samples in which the Rx level \geq -85 dBm, RSCP is \geq -90 dBm & RSRP \geq -110dBm. The details are as follows.

TSP	Coverage Rate %
Airtel 2G	71.03
BSNL 2G	81.04
VIL 2G	90.49
Airtel 4G	96.3
BSNL 3 G	75.98
Jio 4G	98.4
VIL 4G	91.08



AIRTEL

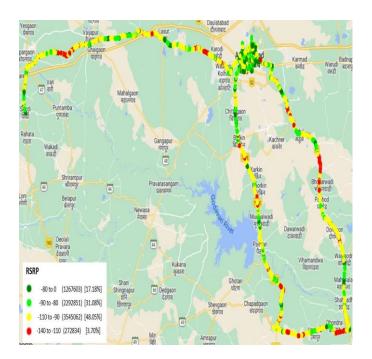
Technology	Coverage Rate %
2G	71.03
4G	96.30



2G

2G		
Overall RxLevel	# Samples	% PDF
[Max, >=-75]	2538774	40.59
[-75, >=-85)	1904459	30.45
[-85, >=-95)	1607764	25.70
[-95, >=Min)	204400	3.27
Total	6255397	100

4G



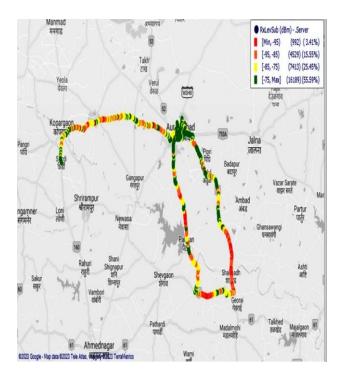
4G/VoLTE		
Overall RSRP	# Samples	% PDF
[Max, >=-80]	1267603	17.18
[-80, >=-90)	2292851	31.08
[-90, >=-110)	3545062	48.05
[-110, >=Min)	272834	3.70
Total	7378350	100

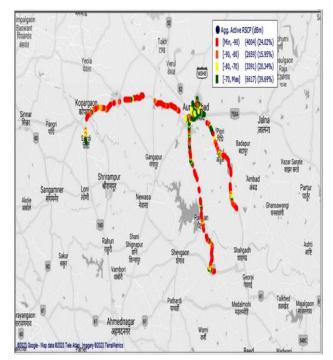
Coverage Details

I. Coverage Details

BSNL		
Technology Coverage Rate %		
2G	81.04	
3G	75.98	

2G





2G		
Overall RxLevel	# Samples	% PDF
[Max, >=-75]	16189	55.59%
[-75, >=-85)	7413	25.45%
[-85, >=-95)	4529	15.55%
[-95, >=Min)	992	3.41%
Total	29123	100%

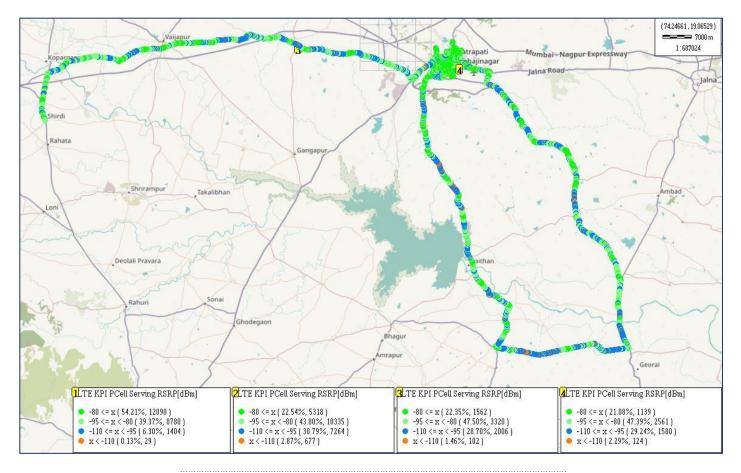
3G		
Overall RSCP	# Samples	% PDF
[Max, >=-70]	6617	39.69%
[-70, >=-80)	3391	20.34%
[-80, >=-90)	2659	15.95%
[-90, >=Min)	4004	24.02%
Total	16671	100%

3G

Coverage Details

I. Coverage Details

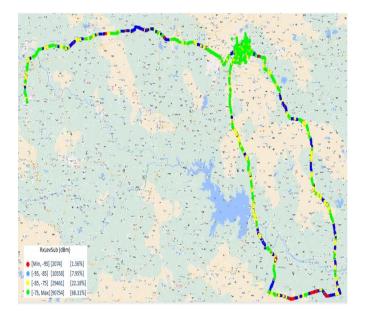
Technology	Coverage Rate %
4G	98.40



4G/VoLTE		
Overall RSRP	# Samples	% PDF
[Max, >=-80]	12090	54.21
[-80, >=-90)	8780	39.37
[-90, >=-110)	1404	6.3
[-110, >=Min)	29	0.13
Total	58291	100

VIL		
Technology	Coverage Rate %	
2G	90.49	
4G	91.08	

2G



The Way week	A CONTRACTOR OF	and the state of the state of the state	
and the second	a state of the state of		- Bre
the second s	the state of the s		-
			F
	Contraction of the second s		
	and the second	and the second second second second	1.4.5
	V 194 A 194 V 12 M 🚺	APP - Contraction of the second	
The second second	and the second		
A Carlo and Carlo and	a ward they are		
	1	The the state of the second se	
	Carles and the Diama Date of the	I THE EXCHANCE THE	
	Alt in the second		(6)
	What have the same that	A CALL AND A DESCRIPTION	
the star was the start	요즘 전화 문화 가 많이 있는 것	New York and the Contraction of the	1
and the state of the second	State and the state of the		* *
*			17 10
the stand with the stand			3
્રાન્ટ્રેટ 👘 પરિંદ છે. જે જે 💦 નુમાં	al an a stranger of the	and the party of the second	
and the second		Call March & Section 1 Sec	111
and the second	and the second	ALL DE CALLER ALLE	4
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
and the second			1
and the second		-7.7 Sec. 37 2 2.	1
and the set of the set	Mar & Mar Long Have		1 0.
and the second second			.
and the set of the set	a start a grade and		
Serving cell RSRP (dBm)	1	a la	1~
• [Min, -110] [63904] [8.92%]	and the second	AFT - TO A TO A TO A TO A	1
• [-110, -90] [325375] [45.43%]	a marine to the second of the	Se la Bre 🖌 👘 🖓	1
[-90, -80] [204395] [28.54%]		The state of the s	-5
• [-80, Max] [122555] [17.11%]	and the second second		4
11 P V 18 11 1 11 11 11 11 11 11 11 11 11 11 1	and the second se	and a second sec	in the

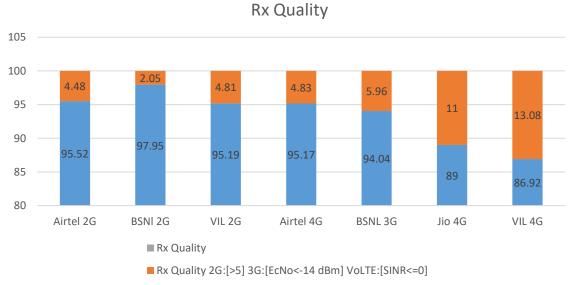
4G

2G		
Overall RxLevel	# Samples	% PDF
[Max, >=-75]	90754	68.31
[-75, >=-85)	29461	22.18
[-85, >=-95)	10558	7.95
[-95, >=Min)	2074	1.56
Total	132847	100

4G/VoLTE		
Overall RSRP	# Samples	% PDF
[Max, >=-80]	122555	17.11
[-80, >=-90)	204395	28.54
[-90, >=-110)	325375	45.43
[-110, >=Min)	63904	8.94
Total	716229	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	95.52
BSNL 2G	97.95
VIL 2G	95.19
Airtel 4G	95.17
BSNL 3G	94.04
Jio 4G	89
VIL 4G	86.92

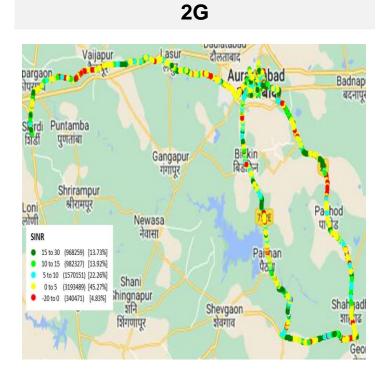


Rx Quality 2G:[<=5] 3G:[EcNo>=-14 dBm] VoLTE:[SINR>0]

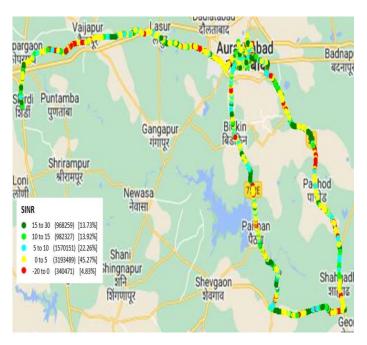
II. Quality Details

Airtel

Technology	Rx Quality %
2G	95.52
4G	95.17



A	1	
4	Ś	7



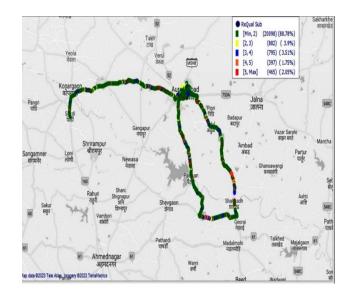
Overall Rx Quality	# Samples	% PDF	Overall SINR	# Samples	% PDF
(Min, <=2)	5037361	76.47	(Min	340471	4.83
(2, <=3)	829952	12.60	(Min, <=0)	0.0.0.1	
(3 , <=4)	239316	3.63	(0, <=5)	3193489	45.27
	185477	2.82	(5, <=10)	1570151	22.26
(4 , <=5)	105477	2.02	(10, <=15)	982327	13.92
(5 , <=Max)	295246	4.48	(15, <=Max)	968259	13.73
Total	6587352	100	Total	7054697	100

Quality Details

BSNL

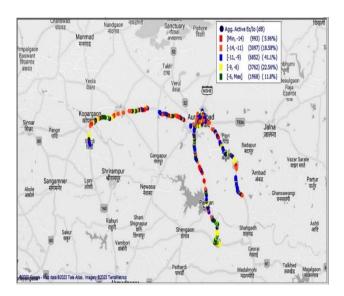
Technology	Rx Quality %
2G	97.95
3G	94.04

2G



Overall Rx Quality	# Samples	% PDF
(Min, <=2)	20098	88.78%
(2, <=3)	882	3.9%
(3 , <=4)	795	3.51%
(4 , <=5)	397	1.75%
(5 , <=Max)	465	2.05%
Total	22637	100%

3G

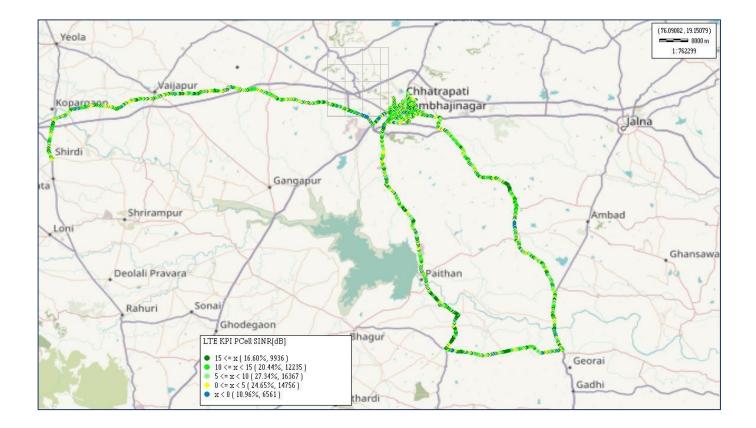


Overall EcNo	# Samples	% PDF
(Max, <=-6)	1968	11.8%
(-6, <=-9)	3762	22.56%
(-9, <=-11)	6852	41.1%
(-11, <=-14)	3097	18.58%
(-14, <= Min)	993	5.96%
Total	16672	100%

Quality Details

II. Quality Details





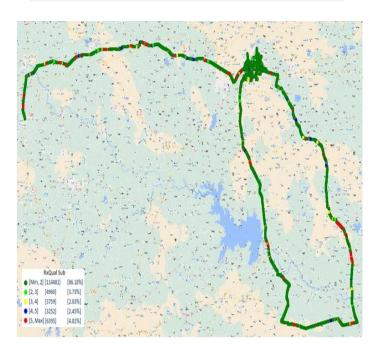
Overall SINR	# Samples	% PDF
(Min, <=0)	9936	16.6
(0, <=5)	12235	20.44
(5, <=10)	16367	27.34
(10, <=15)	14756	24.65
(15, <=Max)	6561	10.96
Total	59855	100

II. Quality Details

VIL

Technology	Rx Quality %
2G	95.19
4G	86.92

2G



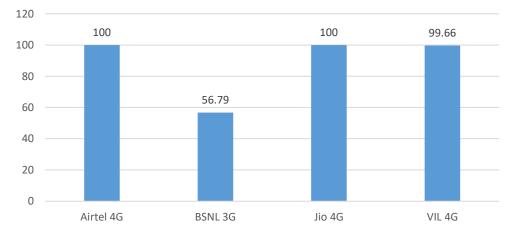
		· · · · · · · · · · · · · · · · · · ·	We and a strend a		" The At
	· · · · · · · · · · · · · · · · · · ·	100			and the second
	The second of the second		V	L'an it	and your and
and the second second	and the state of the second		1. The state	Para 2	in with in
A STREET, STRE	5 ··· · · · ·	a la serie de la	The name	" g *** " = " 0	and the fi
	The the well	1 / - +	A 11 1	Mar + Mr. Cotters	inche Du th
		and the second second	100 A 100	100	
	1 1 1 1 1 L.	a to the train	and the second of	· · · · · · · · · · · · · · · · · · ·	Carlor and a
And the providence of the second seco	the way of the second	and a set	to all that will get	Contraction of the	
A CARLES AND	a la marte a la l	In Beth my	4 9 mm @		1.00
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The second	Y. 9. 1. 1.	3. 1 Sec. 26	The state	12.10
had the way	2	L HALL DA	2 E . T		
CT - Martin	14 14 The 1	A CARE CAR	AN TANK	a sp an an f	. in in man ?
and the state of a	and the second second	a serie de la serie	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	14 P	
100 M 10	the a second	1		A	Sterne 1
in the state	19 4 - 19 St	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	19 4 W	1 ··· 3
and write and it.	well is the first	the market at the	1 4 4 4	N. 19	N
	- Warne	1 1 y 4 72	a the state of the	a marine a la familia de	1 T
had a same to make	a set in the	in a sure de	Che min Cherry	Y	1
" a la trans a la trans	all and a strand	No. WWW. S	1. X. 1.	- Engl	the way is is
and the second second second	A	why spirms	1 . Y. T. C.	1 Y .	2 87 TO W
a frage the second	Part and Parts	a and a	5 T	1	No 44 (19)
and the second second	and the second	55 8 X 16 8 11	N 1 1	1	
· martin States	Carlos and the second	and the state	1. M 1. M 1 1.		
A TO AND	A AND AND	1. 22 2 4 4	12		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	the second second	T. (S			When a lot
and the second second	the at the	Mark 1 Marks	w. Shutt A.		I was not as
A Star and	a set a	See San 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A STATE	St. mer av
17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	77	1		N. A. A.	1 T 1
1 4 4 1 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	and a second		a po and		N
The second state of the	and the server a	1.60	· · · · ·	and the second	Sec. 25.
Serving cell RS SINR (dB)	1.18.	· · · · · ·	1 1 1 1 1	3	CARLON HARRIS
• [Min, -6] [11159] [1.56%]	- Contraction		an iteration		+
[min,-o] [1155] [1507]	e company the	a har a man	1.00 1 14	14	4497
[-6, 0] [85925] [11.99%]		Har Street -	the way of a series	2 1 H H	in the
(0, Max] [619145] [86.45%]	1 N 10 10 10 10 10 10 10 10 10 10 10 10 10	An 2 2 2	N N N N	S STREET, MILLION	
	the state of the state of the	4 5 4	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		

4G

Overall Rx Quality	# Samples	% PDF	Overall SINR	# Samples	% PDF
(Min, <=2)	114481	86.18	(Min, <=0)	93673	13.08
(2, <=3)	4960	3.73	(0, <=5)	157499	21.99
(3 , <=4)	3759	2.83	(5, <=10)	157895	22.05
(4 , <=5)	3252	2.45	(10, <=15)	130237	18.18
(5 , <=Max)	6395	4.81	(15, <=Max)	176925	24.70
Total	132847	100	Total	716229	100

TSP	Time Spent on 3G/4G %
Airtel 4G	100
BSNL 3G	56.79
Jio 4G	100
VIL 4G	99.66

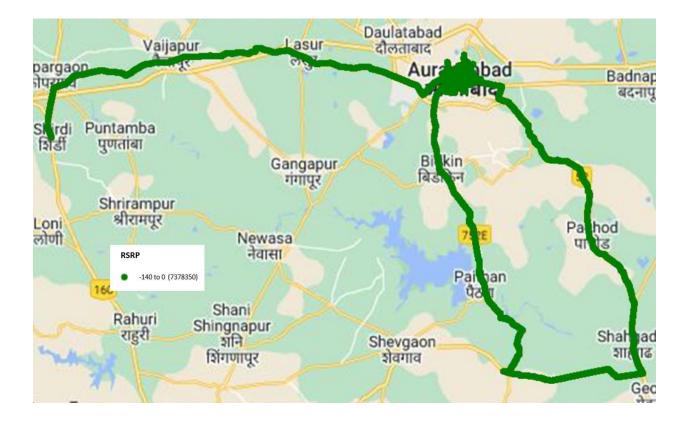
Percentage of time spent on 3G/4G/4G



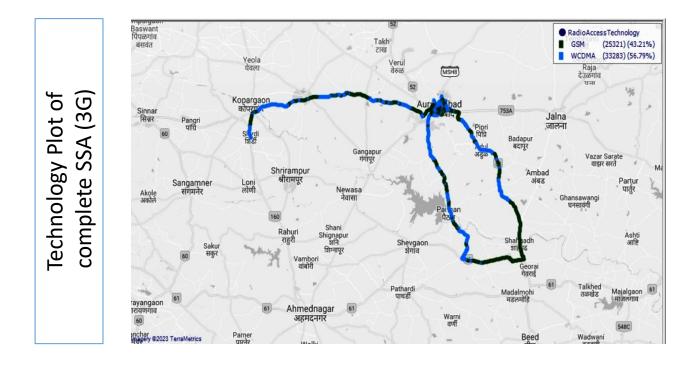
III. Technology Details

Airtel

Technology	Time Spent %
4G	100



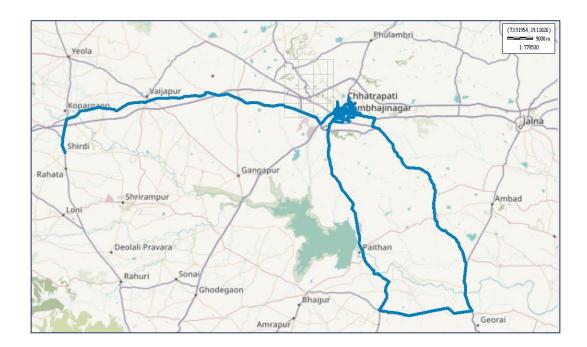
BSNL		
Technology	Time Spent %	
3G	56.79	



III. Technology Details

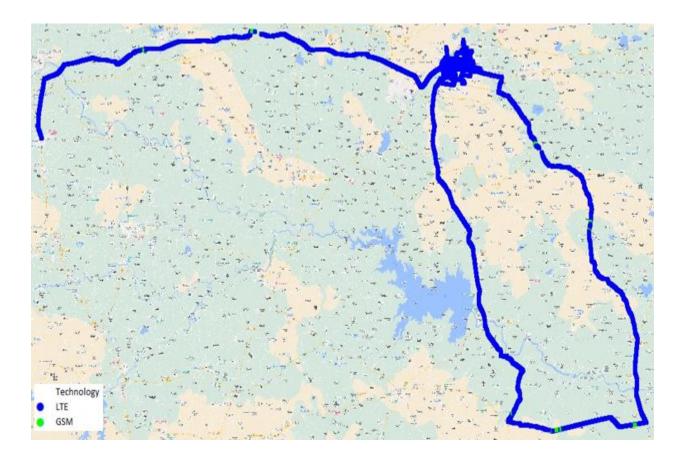
JIO

Technology	Time Spent %
4G	100



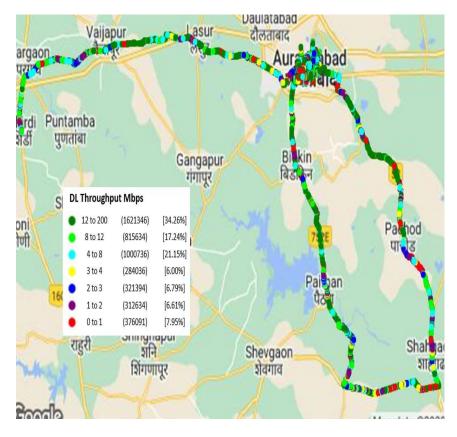
VIL

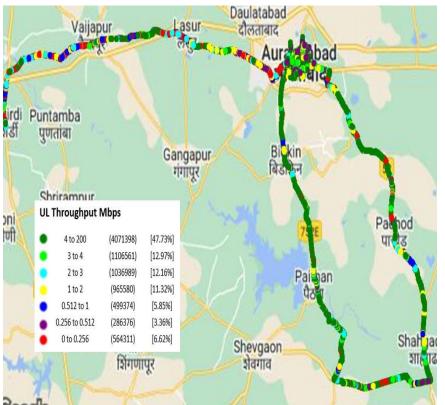
Technology	Time Spent
4G	99.66



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

Airtel





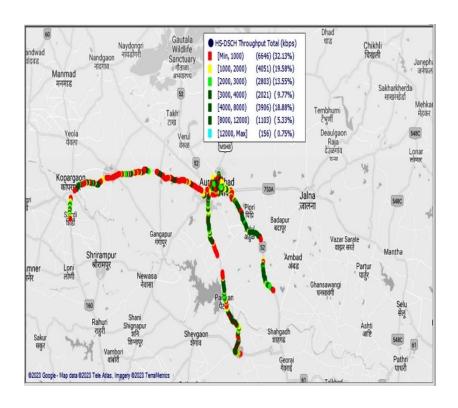
DL throughput	No. of Samples	%
0 to 1 Mbps	376091	7.95
1 to 2 Mbps	312634	6.61
2 to 3 Mbps	321394	6.79
3 to 4 Mbps	284036	6.00
4 to 8 Mbps	1000736	21.15
8 to 12 Mbps	815634	17.24
>12 Mbps	1621346	34.26
Total	4731871	100

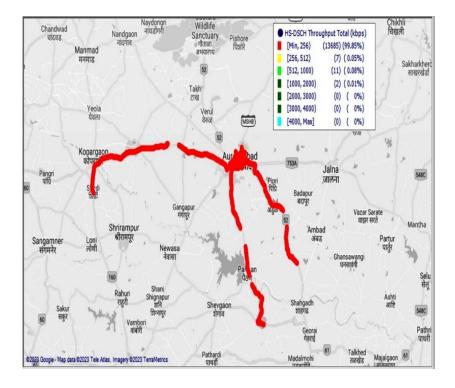
UL throughput	No. of samples	%
0 to 256 Kbps	564311	6.62
250 to 512 Kbps	286376	3.36
512 Kbps to 1 Mbps	499374	5.85
1 to 2 Mbps	965580	11.32
2 to 3 Mbps	1036989	12.16
3 to 4 Mbps	1106561	12.97
>4 Mbps	4071398	47.73
Total	8530589	100

Dynamic Data Test Details

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

BSNL



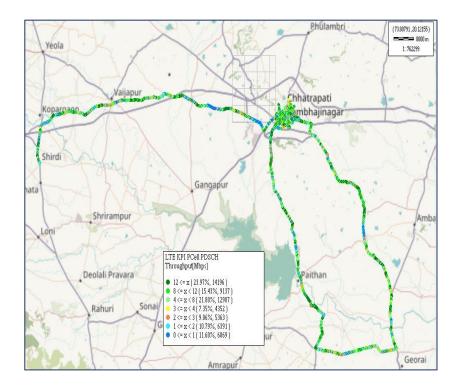


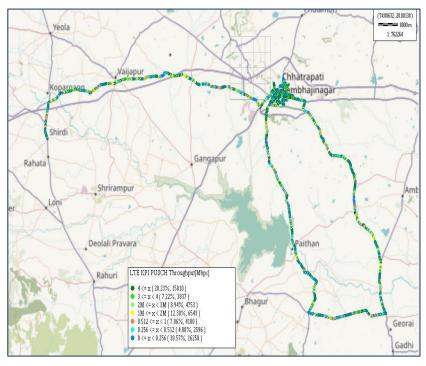
DL throughput	No. of Samples	%
0 to 1 Mbps	6646	32.13
1 to 2 Mbps	4051	19.58
2 to 3 Mbps	2803	13.55
3 to 4 Mbps	2021	9.77
4 to 8 Mbps	3906	18.88
8 to 12 Mbps	1103	5.33
>12 Mbps	156	0.75
Total	20686	100

UL throughput	No. of Samples	%
0 to 1 Mbps	13685	99.85
1 to 2 Mbps	7	0.05
2 to 3 Mbps	11	0.08
3 to 4 Mbps	2	0.01
4 to 8 Mbps	0	0
8 to 12 Mbps	0	0
>12 Mbps	0	0
Total	13705	100

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

JIO



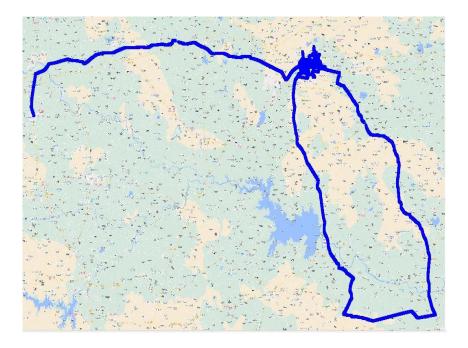


DL throughput	No. of Samples	%
0 to 1 Mbps	6,869	11.6
1 to 2 Mbps	6,391	10.8
2 to 3 Mbps	5,363	9.06
3 to 4 Mbps	4,352	7.35
4 to 8 Mbps	12,907	21.8
8 to 12 Mbps	9,137	15.43
>12 Mbps	14,196	23.97
Total	59,215	100.00

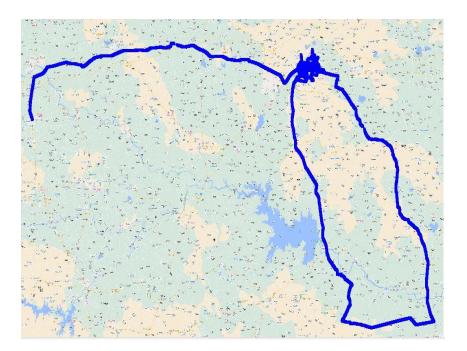
UL throughput	No. of samples	%
0 to 256 kbps Mbps	16,258	30.57
256 to 512 kbps	2,596	4.88
512 Kbps to 1 Mbps	4,180	7.86
1 to 2 Mbps	6,543	12.3
2 to 3 Mbps	4,753	8.94
3 to 4 Mbps	3,837	7.22
>4Mbps	15,010	28.23
Total	53,177	100

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

VIL



DL throughput	No. of Samples	%
0 to 1 Mbps	7047273	18.95
1 to 2 Mbps	1988833	5.35
2 to 3 Mbps	1726026	4.64
3 to 4 Mbps	1791067	4.82
4 to 8 Mbps	4460005	11.99
8 to 12 Mbps	3737230	10.05
>12 Mbps	16435442	44.20
Total		100



UL throughput	No. of samples	%
0 to 256 Kbps	2786232	12.22
250 to 512 Kbps	770677	3.38
512 Kbps to 1 Mbps	1183528	5.19
1 to 2 Mbps	5061900	22.20
2 to 3 Mbps	3166862	13.89
3 to 4 Mbps	2320104	10.18
>4Mbps	7509336	32.94
Total		100

AIRTEL

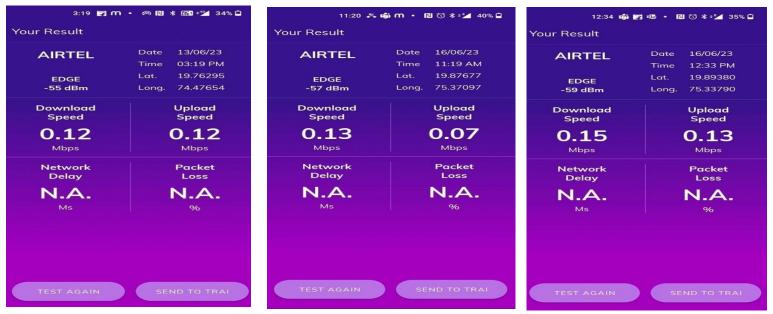
V. TRAI My Speed App Test **Details-2G**

Techology-2G	Shirdi Sai Nagar	Prozone Mall	Collector Office	Central Bus Stand	Railway Station	Dr.B.A.M. University
Download Speed (Mbps)	0.12	0.13	0.15	0.15	0.14	0.21
Upload Speed (Mbps)	0.12	0.07	0.13	0.12	0.10	0.10
Latency	0	0	0	0	0	0

Sai Nagar Shirdi

Prozon Mall

Collector Office



Central Bus Stand



Railway Station

5:30 ᄎ 🏉 🕯	ୟ • 🛯 🛈 ≭û ÷ 📶 31% 🖟	6:49 🕥 🚭	m • 🛯 🗇 🕏 ፡ 🕍 64%
ur Result		Your Result	
EDGE -51 dBm	Date 16/06/23 Time 05:30 PM Lat. 19.86050 Long. 75.31129	EDGE -57 dBm	Date 16/06/23 Time 06:42 PM Lat. 19.89431 Long. 75.31238
Download Speed	Upload Speed	Download Speed	Upload Speed
0.14	0.10 Mbps	0.21	0.10
Network Delay	Packet Loss	Network Delay	Packet Loss
N.A. Ms	N.A. %	N.A. Ms	N.A. %
TEST AGAIN	SEND TO TRAI	TEST AGAIN	SEND TO TRAI

AIRTEL

V. TRAI My Speed App Test Details-4G

Techology-4G	Shirdi Sai Nagar	Prozone Mall	Collector Office	Central Bus Stand	Railway Station	Dr.B.A.M. University
Download Speed (Mbps)	16.02	32.48	44.74	70.90	22.26	32.55
Upload Speed (Mbps)	14.57	4.23	34.42	35.21	20.97	3.96
Latency	NA	NA	NA	NA	NA	NA

Sai Nagar Shirdi



Prozon Mall 10:32 🔹 • @ 🛯 🛈 🕸 🐨 🞾 61% 🔒 Your Result AIRTEL 19.87684 LTE -90 dBm Upload Speed Download Speed 4.23 32.48 Mbps Mbps Network Delay Packet Loss N.A. 0 TEST AGAIN SEND TO TRAI

Collector Office



Central Bus Stand

LTE -79 dBm	Date 16/06/23 Time 01:43 PM Lat. 19.88062 Long. 75.31677
Download Speed	Upload Speed
70.90	35.21 Mbps
Network Delay	Packet Loss
N.A.	N.A. %

Railway Station



6:58 🔘 🗟 🔹 閣 🗇 🕷 🕍 62% 🔒			
Your Result			
AIRTEL	Date Time	16/06/23 06:58 PM	
LTE -93 dBm	Lat. Long.	19.89430 75.31236	
Download Speed		Upload Speed	
32.55 Mbps		3.96 Mbps	
Network Delay		Packet Loss	
N.A.		0	
Ms		%	
TEST AGAIN	SE	ND TO TRAI	

V. TRAI MySpeed App Test Details-2G

Techology-2G	Shirdi Sai Nagar	Prozone Mall	Collector Office	Central Bus Stand	Railway Station	Dr.B.A.M. University
Download Speed (Mbps)	0.14	0.23	0.21	0.23	0.11	0.16
Upload Speed (Mbps)	0.23	0.23	0.22	0.24	0.14	0.17
Latency(ms)	339.4	95.5	168.3	209	0	0

Sai Nagar Shirdi



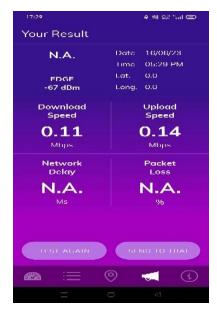
Central Bus Stand

15:38 👳 😑	69 4 8 160 cm
Your Result	
BSNL	Date 16/06/23
	Time 03:38 PM
FDGF	Lat. 0.0
-51 dBm	Long. 0.0
Download Speed	Upload Speed
0.23	0.24
Mbps	Mbps
Network	Packet
Delay	Loss
209.0	9
Ms	%
# 2 :=	• 🤜 🛈
	□ <1

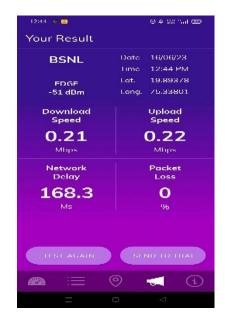
Prozon Mall

15:10 🕲 🚍	(8) (4) 222 ") (220)		
Your Result			
BSNL	Date 16/06/23		
	Lime 01:18 PM		
EDGE	Lat. 19.87629		
55 dBm	Long 75 37124		
Download Speed	Upload Speed		
0.23	0.23		
Mbps	Mbps		
Network	Packet		
Delay			
95.5	0		
Ms	%		
<i>a</i> a :=	© 🛃 🛈		

Railway Station



Collector Office

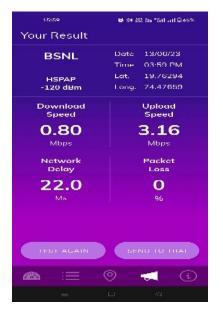


Your Result	
N.A.	Date 16/06/23
8. 878-838.	Lime 08:51 PM
EDGE	Lat. 19.90175
65 dBm	Long 75 30977
Download	Upload
Speed	Speed
0.16	0.17
Mbps	Mbps
Network	Packet
Delay	Loss
N.A.	N.A.
Ms	96
	SEND TO HUAT
<i>a</i> a := (9 🛃 🛈
	o •

V. TRAI MySpeed App Test Details-3G/4G

Techology-3G	Shirdi Sai Nagar	Prozone Mall	Collector Office	Central Bus Stand	Railway Station	Dr.B.A.M. University
Download Speed (Mbps)	0.80	9.39	7.42	4.94	3.18	5.24
Upload Speed (Mbps)	3.16	2.31	1.12	3.82	2.38	3.76
Latency(ms)	22	25,3	58.9	27.6	0	25.4

Sai Nagar Shirdi



Prozon Mall



Collector Office

12:43	65 @ JXK 2m "Firl and @ 62%
Your Result	
BSNL	Date 16/06/23
	Time 12:43 PM
HSPAP	Lot. 19.89362
-56 dBm	Long. 75.33759
Download Speed	Upload Speed
7.42	1.12
Mbps	Mbps
lour 478	1 International
Network	Packet
Delay	Loss
58.9	0
Ma	%
TEST AGAIN	SEND TO TRAI
e iiii	© <table-cell-columns> 🕚</table-cell-columns>
<u></u>	

Dr. Ambedkar Marathwada University

20:54	66 (C. 118). She "Sirt of 1 (2 55%)
Your Result	
BSNL	Date 16/06/23 Tim e 08:51 PM
HSPAP 120 dBm	Lat. 19.90196 Long 75.30965
Download Speed	Upload Speed
5.24	3.76
Mbps	Mbps
Network Delay	Packet Loss
25.4	0
Ms	76
TEST AGAIN	SEND TO TRAI
	9 <table-cell-columns> û</table-cell-columns>
=	

Central Bus Stand

15:38	les (0) 888 26 1911 mil © ∋e≫
/our Result	
BSNL	Date 16/06/23
	Lime 03:38 PM
LISPAP	Lot 19.88017
-120 dBm	Long. /5.31880
Download	Upload
Speed	Speed
4.94	3.82
Mbps	Mbps
Network	Packet
Delay	Loss
27.6	0
Ma	96
TEST AGAIN	SEND TO TRAI
a :=	💿 📹 (i.

Railway Station

17:27	👹 882 866 "Still att 🗅 24%		
Your Result			
N.A.	Date 16/06/23		
	Time 05/26 PM		
HSPAP	Lat. 19.86053		
-43 dBm	Long. 75.31129		
Download	Upload		
Speed	Speed		
3.18	2.38		
Мыры	Mbps		
Network	Packet		
Delay	Loss		
N.A.	N.A.		
Ma	96		
	SEND TO THAT		
æ :=	0 - 0		

V. TRAI MySpeed App Test Details-4G

Techology-4G	Shirdi Sai Nagar	Prozone Mall	Collector Office	Central Bus Stand	Railway Station	Dr.B.A.M. University
Download Speed (Mbps)	12.98	18.08	22.54	20.34	21.07	32.36
Upload Speed (Mbps)	5.1	4.07	8.15	8.5	8.7	17.77
Latency	46.0	40.9	49.7	40.9	39.7	66.9

Sai Nagar Shirdi



Prozon Mall



Collector Office

teres and the second	
Your Result	
JIO	Time DATE THE
	Long PLADIE
Downdood Speed	Uphred Speed
22.54	8.15 unps
Automatic Coding 49.7	Parter Loss
CONTRACT	
A = -	0 🗖 🛈

Dr. Ambedkar Marathwada University

Your Result	
JIO	Date USES27 Time US22754
- CTE - No. Address	Let. 1330160 Long 75.30979
Download Speed	Upload
32.36	17.77
Performente Derbary	Pucket
66.9	0

Central Bus Stand



Railway Station

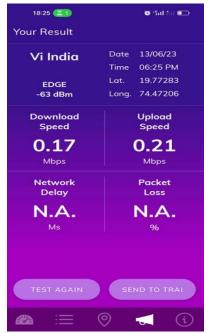
25 adus 25 adus Descritored Speed	Date Maria 113 Tane 0425 Per Lot 1946057 Long 75.31173
-25 adas -25 adas Download Speed	Los. 1406057 Long 7531173
and the second se	Approved
	Several
21.07	8.70
Bistowith Dollary 39.7	Packet Loss O

VODAFONE IDEA

V. TRAI MySpeed App Test Details-2G

Techology-2G	Shirdi Sai Nagar	Prozone Mall	Collector Office	Central Bus Stand	Railway Station	Dr.B.A.M. University
Download Speed (Mbps)	0.17	0.02	0.03	0.06	0.03	0.02
Upload Speed (Mbps)	0.21	0.02	0.01	0.04	0.01	0.20
Latency	NA	NA	NA	NA	NA	NA

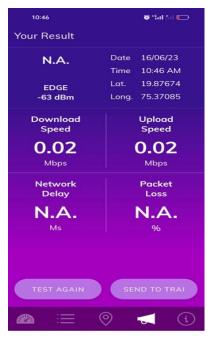
Sai Nagar Shirdi



Central Bus Stand



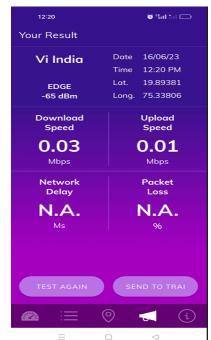
Prozon Mall



Railway Station



Collector Office



Dr. Ambedkar Marathwada

Unive	ersity
19:17 📧 🔁 🤁	S fail fail 💷
Your Result	
N.A.	Date 16/06/23
	Time 07:17 PM
EDGE	Lat. 19.90118
-73 dBm	Long. 75.30997
Download	Upload
Speed	Speed
0.02	0.20
Mbps	Mbps
Network	Packet
Delay	Loss
N.A.	N.A.
Ms	%
TEST AGAIN	SEND TO TRAI
@ a :=	🛛 🔽 🔍

VODAFONE IDEA

V. TRAI MySpeed App Test Details-4G

Techology-4G	Shirdi Sai Nagar	Prozone Mall	Collector Office	Central Bus Stand	Railway Station	Dr.B.A.M. University
Download Speed (Mbps)	32.31	20.46	67.38	53.98	54.36	5.43
Upload Speed (Mbps)	21.18	1.28	26.14	17.90	23.21	2.02
Latency	NA	NA	NA	NA	NA	NA

Sai Nagar Shirdi



Central Bus Stand



Prozon Mall

10:28 🍓 🍯 🖶 🚍 🖷	• • 🗸 🛪 🖏 🗂 📼
Your Result	
Vi India	Date 16/06/23
	Time 10:28 AM
LTE	Lat. 19.87687
-101 dBm	Long. 75.37091
Download Speed	Upload Speed
20.46	1.28
Mbps	Mbps
Network Delay	Packet Loss
N.A.	N.A.
Ms	%
TEST AGAIN	SEND TO TRAI
& :=	🛛 🔜 🛈

Railway Station

15:54 💷 🕀	o 11: 11: 11 📼
Your Result	
Vi India	Date 16/06/23
	Time 03:54 PM
LTE	Lat. 19.86125
-62 dBm	Long. 75.31184
Download	Upload
Speed	Speed
54.36	23.21
Mbps	Mbps
Network Delay	Packet Loss
N.A.	N.A.
Ms	%
TEST AGAIN	SEND TO TRAI
	9 🛃 (ì

Collector Office

12:34 💷	S 26 *#11 51 - +
Your Result	
Vi India	Date 16/06/23
	Time 12:34 PM
LTE	Lat. 19.89385
-83 dBm	Long. 75.33812
Download	Upload
Speed	Speed
67.38	26.14
Mbps	Mbps
Network	Packet
Delay	Loss
N.A.	N.A.
Ms	%
TEST AGAIN	SEND TO TRAI
	9 🛃 (ì

Onversity	
19:16 📧 1 🤂	🗢 No "Million 📼
Your Result	
N.A.	Date 16/06/23
	Time 07:15 PM
LTE	Lat. 19.90231
-109 dBm	Long. 75.31037
Download	Upload
Speed	Speed
5.43	2.02
Mbps	Mbps
Network	Packet
Delay	Loss
N.A.	N.A.
Ms	%
TEST AGAIN	SEND TO TRAI