

प्रभावी विनियमन – सुगम संचार Effective Regulation – Ease of Communication

Operator Assisted Drive Test Report

Maheswar City and nearby Area 7/11/2022 to 7/11/2022 By TRAI Regional Office Bhopal

The Operator Assisted Drive Test has been carried out by Regional Office, Bhopal with the help of Telecom Service Providers for Maheswar City as per following schedule.

TSP	Date	Duration	Route Km	No. of Calls
Airtel	10/11/2022 to 11/11/2022	9AM to 8PM	100	115
BSNL	9/11/2022	9AM to 8PM	34	69
JIO	10/11/2022	9AM to 8PM	14	526
VIL	7/11/2022	9AM to 8PM	40	99



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Maheswar City and nearby Area 7/11/2022 to 7/11/2022 By TRAI Regional Office Bhopal

The Operator Assisted Drive Test has been carried out by Regional Office, Bhopal with the help of Telecom Service Providers for Maheswar City from 9:00 AM to 8:00 PM from 07/11/2022 to 11/11/2022. The drive test covered drive route of around avg 47 KMs. Approximately ...91/99. calls were made for each of the 2G/3G/4G.

TSP	Network tested	
Airtel	2G & Volte	
BSNL	2G & 3G	
JIO	VoLTE	
VIL	2G, & Volte	

Key Performance Indicators:

KPI	Benchmark	Airtel Observations
Block call rate %	≤3 %₀	2G-0, VoLTE- 1.72
Drop call rate %	≤2 %₀	2G-1.85, VoLTE-1.752
CSSR %	≥95 %	2G-100%, VoLTE-98.28%
Mobility HOSR %	≥95%	2G-98.48, VoLTE-99.85%
Good RX Quality %	≥95 ‰	2G-98.47%, VoLTE-74.59%

Key Performance Indicators

KPI	Benchmark	BSNL Observations
Block call rate %	≤3%	Within Benchmark
Drop call rate %	≤2%	Within Benchmark
CSSR %	≥95 %	Within Benchmark
Mobility HOSR %	≥95%	Within Benchmark
Good RX Quality %	≥95%	Within Benchmark

KPI	Benchmark	JIO Observations
Block call rate %	≤3%	VoLTE-0
Drop call rate %	≤2%	VoLTE-0
CSSR %	≥95 %	VoLTE-100%
Mobility HOSR %	≥95%	VoLTE-99%
Good RX Quality %	≥95%	VoLTE- 90.78%

KPI	Benchmark	· VIL Observations
Block call rate %	≤3%	2G - 1.1% & VOLTE - 1.01%
Drop call rate %	≤2%	2G - 0% & VOLTE - 0%
CSSR %	≥95 %	2G - 98.90% & VOLTE - 98.99%
Mobility HOSR %	≥95%	2G - 97.51% & VOLTE - 98.42%
Good RX Quality %	≥95%	2G - 98.48% & VOLTE - 97.22%

Overview

Regional Office, TRAI Bhopal conducted Operator Assisted Drive Test. The performance of Airtel, BSNL, Vodafone Idea and Jio was monitored across various technologies (2G, 3G and 4G). The test results obtained from these drive tests were utilized to assess the network quality for Voice and Data services.

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

Data: Download Throughputs

Drive Test Details:

Voice Tests:

i.2G - measurement - UE Locked in 2G

ii.3G – measurement – UE in Dual mode (2G and 3G)

iii.4G - measurement - UE in Free mode

Calls were made for the **90-sec** duration with a wait time of **10 sec** between calls in all technologies.

Data Tests:

Dynamic data – repeat data file download (to check throughput on the entire route)

i.2G – measurement – UE Locked in 2G file size- 500KB

ii.3G - measurement - UE in 3G File Size- 20MB

iii.4G - measurement - UE in LTE File Size- 40MB

Static Data: Download and Upload Throughputs, Web Browsing Delay, Video Streaming Delay, and Latency

i.Download-2G - 500KB ,3G - 20 MB, 4G - 40MB

ii.Upload - 2G -100KB ,3G - 5 MB, 4G - 10MB

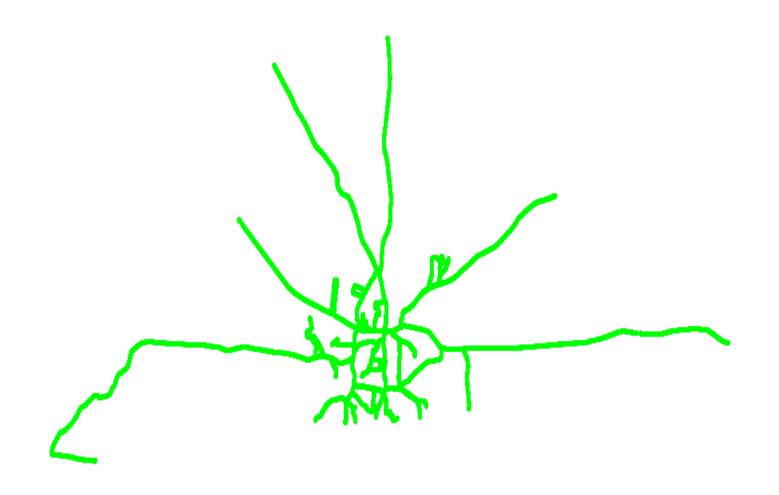
iii.Web browsing - 3 links of e-commerce websites https://www.amazon.in, https://www.flipkart.com, https://paytm.com.

iv.Video Streaming – 130 sec clip (only in 3G and LTE)

v.Latency – 32 Bytes on <u>www.google.com</u>.

Overview Airtel

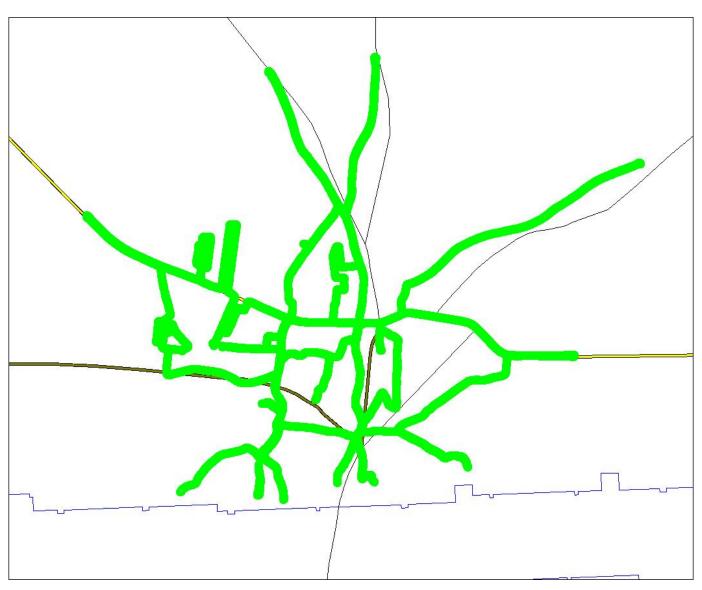
Voice & Dynamic Data Test Drive Route



List of i	mportant area covered during the drive test	
	Maheshwar ghat	
	Bus stand	
	Main market	
	MP Tourism	
	Maheshwar Fort	
	Rajeshwari temple	
	Rajwada	

Overview BSNL

Voice & Dynamic Data Test Drive Route



	List of important area covered during the drive test	
Bus Stand Area		
Maheshwar Fort Are	1	
Mahatma Gandhi Ro	ad, Dhamnod Road	
Vrandavan Colony		
Mahalaxmi Nagar, S	hastradhara Road	
Lakshmi Bai Marg, S	ukh Sagar Colony	
Mominpura, Dhapal	Marg	

Overview Reliance JIO

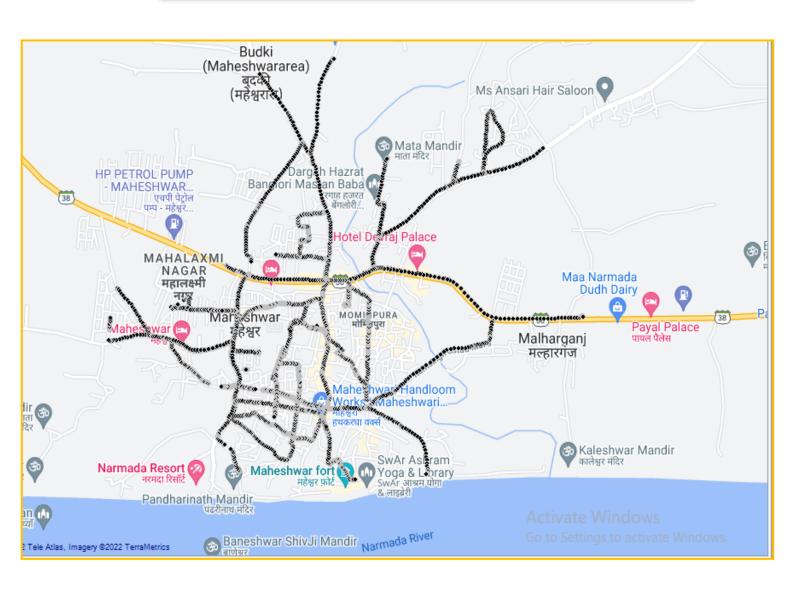
Voice & Dynamic Data Test Drive Route



List of important area covered during the drive test	
Jai satambh, Bus stand, Maheshwer Market, Fort area, Maheshwer resort, police station,	
Maheshwer govt hospital, hotel devraj, jail	

Overview VIL

Voice & Dynamic Data Test Drive Route



Paste list of important area covered during the drive test

Dhamnod Rd, MG Rd ,Govt Jail , Mahetwada Rd, Panchwati Colony

Nikunj Vihar Colony, Vallabh Vihar Colony, Pandrinath marg,

Tilak Marg , Maheshwrar , Mali mohalla , Ayodhya Basti

Bazaar chowk , Mahatma Gandhi Marg , Mominpura

Tilak Marg, Kamani Gate By pass, Ram Singh Ustad Marg

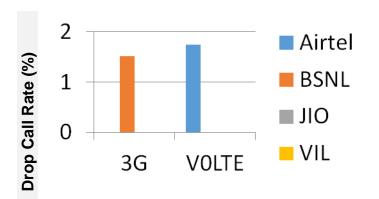
Sahastrarjun Marg , Jai Stambh Sqr MG Rd.

Maheswar Fort, MP Tourism Resort Narmada Resort.

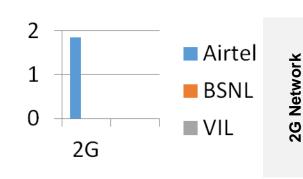
Voice Calls

Key Observations

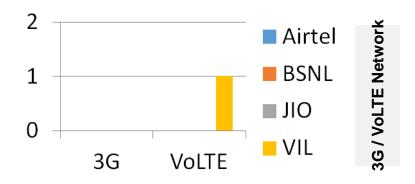
QoS compliance of the TSPs in Maheswar for Voice across technologies 2G/3G/4G-VoLTE:

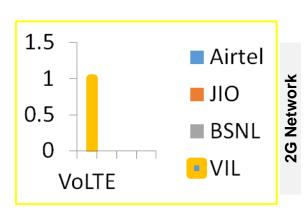


3G/VoLTE Network



Block Call Rate (%)





//Dia		00			•		VoLTE	
KPIs		2G		3	G			
	Airtel	BSNL	VIL	BSNL	VIL	Airtel	RJIL	VIL
Drop Call Rate %	1.85	0	0	1.52%	NA	1.75	0	0
Block Call Rate %	0	0	1.1	0	NA	0	0	1.01

- a) All TSPs have met the 2% QOS benchmark of Drop Call Rate (DCR%) except.....
- b) Call Block Rate (CBR%) benchmark of 3% was achieved by all TSP's.

Voice Calls

Key Observations

Coverage

a) Percentage of coverage samples for 2G ≥ -85 dBm.

	2G			
TSPs	Airtel	BSNL	VIL	
Coverage %	53.96%	95.63%	92.51%	

b) Percentage of coverage samples for 3G ≥ -90 dBm

TOD-	3G		
TSPs	BSNL	VIL	
Coverage %	96.01%	NA	

b) Percentage of coverage samples for LTE ≥ -110 dBm.

TSPs	VoLTE			
1575	Airtel	JIO	VIL	
Coverage %	98.10%	98.24%	98.80%	

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

	3G			VolTE	
TSPs	BSNL	VIL	Airtel	VIL	JIO
Time Spent on 3G/4G %	95.65%	NA	100%	90.82%	100%

Key Observations

Data Services Dynamic

In Dynamic Data test Download Throughput was tested.

Data Download Performance (kbps) - Dynamic

TSP (For 2G)	Airtel	BSNL	JIO	VIL
Average Download throughput- 2G iin Kbps	-	202 Kbps	NA	NA
Average Download throughput- 3G iin Mbps	-	2.65 Mbps	NA	NA
Average Download throughput-LTE iin Mbps	-	NA	7.24mbps	14.71mbps

Summary

City Level Summary- Voice

TSP (For 2G)	Airtel	BSNL	JIO	VIL
Call attempts	54	69	NA	91
Block call rate %	0	0.0 %	NA	1.1%
CSSR %	100	100 %	NA	98.90%
Drop call rate %	1.85	0.0 %	NA	0.00%
Mobility HOSR %	98.48	100 %	NA	97.51%
RX Quality %	98.47	99.48 %	NA	98.48%
Average CST (Sec)	3.95	2.2 Sec	NA	2.42

TSP (For 3G)	Airtel	BSNL	JIO	VIL
Call attempts	NA	66	NA	NA
Block call rate %	NA	0.0 %	NA	NA
CSSR %	NA	100 %	NA	NA
Drop call rate %	NA	1.52 %	NA	NA
Mobility HOSR %	NA	98.32 %	NA	NA
RX Quality %	NA	95.26 %	NA	NA
Average CST (Sec)	NA	2.1 sec	NA	NA

TSP (For VoITE)	Airtel	BSNL	JIO	VIL
Call attempts	58	NA	62	99
Block call rate %	1.72	NA	-	1.01%
CSSR %	98.28	NA	100%	98.99%
Drop call rate %	1.75	NA	0%	0.00%
Mobility HOSR %	99.85	NA	99%	98.42%
RX Quality %	74.59	NA	90.78%	97.22%
Average CST(Sec)	0.64	NA	1.62	1.10

Summary

City Level Summary-Data Services -Static

TSP (For 2G)	Airtel	BSNL	JIO	VIL
Download throughput in	NA	236	NA	NA
Kbps				INA
Upload Throughput in	NA	125	NA	NA
Kbps				INA
Web browsing delay in	NA	11	NA	NA
second				INA
Latency in (msec)	NA	156	NA	NA

TSP (For 3G)	Airtel	BSNL	JIO	VIL
Download throughput in	NA	4.71	NA	NA
Mbps				
Upload Throughput in	NA	1.44	NA	NA
Mbps				
Video streaming delay in	NA	1.03	NA	NA
sec				
Web browsing delay in	NA	3.67	NA	NA
second				
Latency in (msec)	NA	73	NA	NA

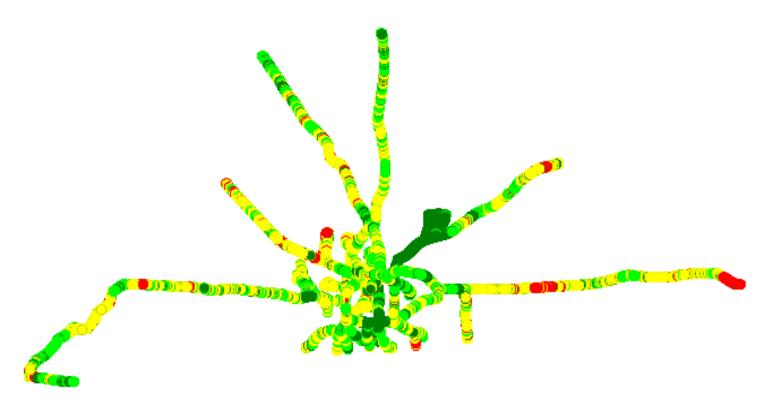
TSP (For LTE)	Airtel	BSNL	JIO	VIL
Download throughput in Mbps	3.92	NA	9.79	15.07
Upload Throughput in Mbps	3.33	NA	5.85	9.19
Video streaming delay in sec	NA	NA	1.18	0.2
Web browsing delay in second	NA	NA	3.00	3.3
Latency in (msec)	NA	NA	56	69

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	53.96%
BSNI 2G	95.63%
VIL 2G	92.51%
BSNL 3G	96.01%
VIL 3G	NA
Airtel VoLTE	98.10%
Jio VoLTE	98.26
VIL VoLTE	98.80%

TSP- Airtel

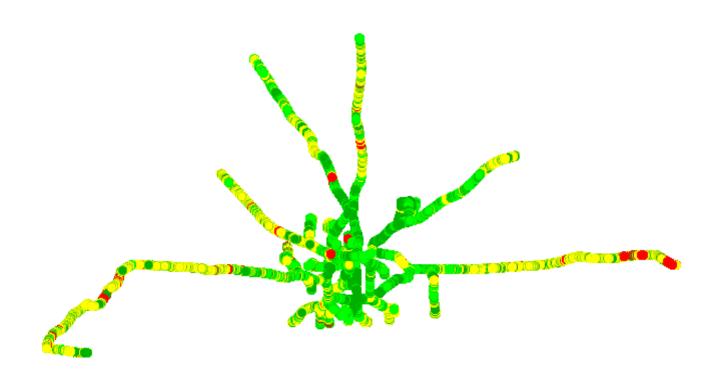
Technology	Coverage %
2G	53.96



	2G		
Overall RxLevel	# Samples	% PDF	Legends
[Max, >=-75]	249330	21.98	
[-75, >=-85)	362684	31.98	
[-85, >=-95)	483004	42.59	
[-95, >=Min)	39193	3.46	
Total	1134211	100	

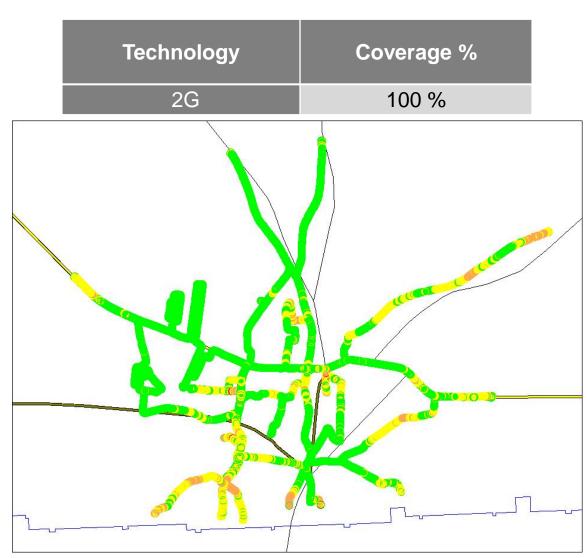
TSP- Airtel

Technology	Coverage %
VoLTE	98.10



VoLTE			
Overall RSRP	# Samples	% PDF	Legends
[Max, >=-80]	716584	35.67	
[-80, >=-90)	720825	35.87	
[-90, >=-110)	533586	26.56	
[-110, >=Min)	38134	1.90	
Total	2009129	100	

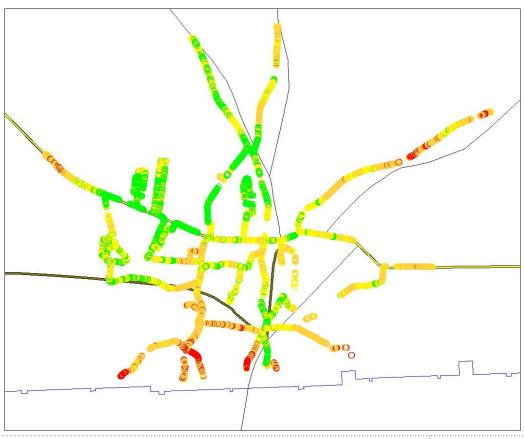
TSP-BSNL



	2G		
Overall RxLevel	# Samples	% PDF	Legends
[Max, >=-75]	145571	68.27%	
[-75, >=-85)	55338	27.36%	
[-85, >=-95)	11736	4.10%	
[-95, >=Min)	582	0.27%	
Total	213227	100.00%	

TSP-BSNL

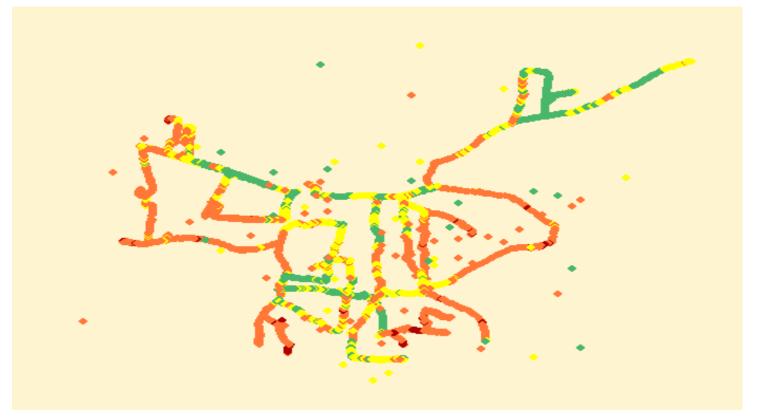
Technology	Coverage %
3G	100 %



	3G		
Overall RSCP	# Samples	% PDF	Legends
[Max, >=-70]	62729	27.01%	
[-70, >=-80)	82853	35.68%	
[-80, >=-90)	77368	33.32%	
[-90, >=Min)	9258	3.99%	
Total	232208	100.00%	

TSP Jio

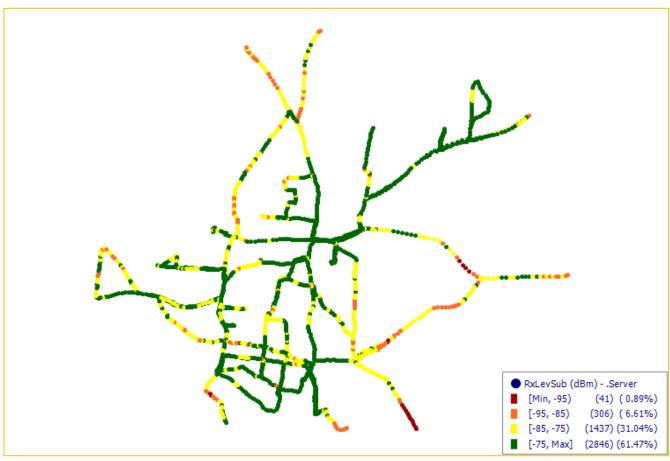
Technology	Coverage %
VoLTE	98.24%



	VoLTE		
Overall RSRP	# Samples	% PDF	Legends
[Max, >=-80]	1468	20.53%	
[-80, >=-90)	2088	29.20%	
[-90, >=-110)	3468	48.50%	
[-110, >=Min)	126	1.76%	
Total	7150	100%	

TSP-VIL

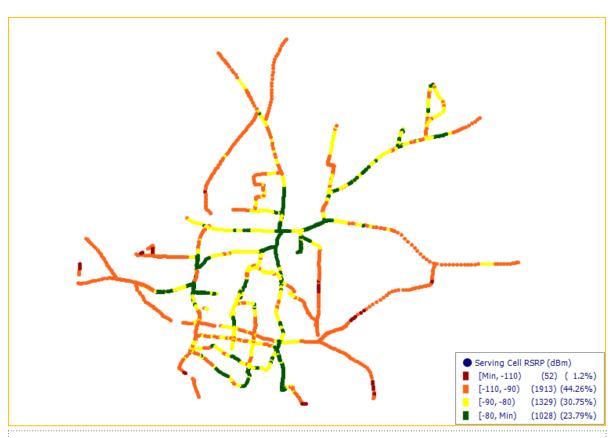
Technology	Coverage %
2G	92.51%



	2G		
Overall RxLevel	# Samples	% PDF	Legends
[Max, >=-75]	2846	61.47%	
[-75, >=-85)	1437	31.04%	
[-85, >=-95)	306	6.61%	
[-95, >=Min)	41	0.89%	
Total	4630	100%	

TSP-VIL

Technology	Coverage %
VoLTE	98.80%



	VoLTE		
Overall RSRP	# Samples	% PDF	Legends
[Max, >=-80]	1028	23.79%	
[-80, >=-90)	1329	30.75%	
[-90, >=-110)	1913	44.26%	
[-110, >=Min)	52	1.2%	
Total	4322	100%	

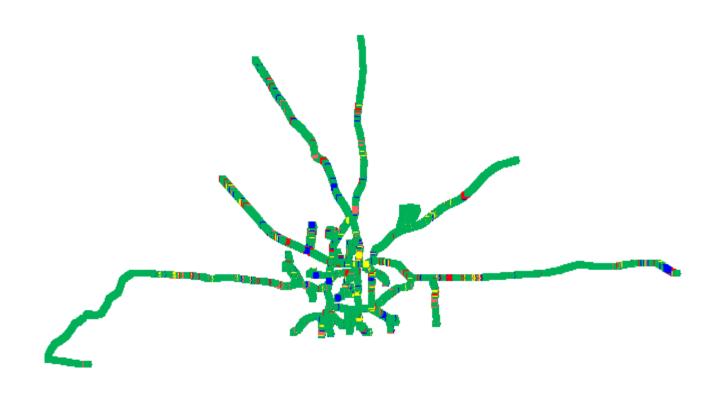
For measuring voice quality, as per the QoS norms, RxQual <=5 for GSM TSPs, EcNo >= -14 dBm for 3G TSP sand SINR >0 in case of VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP	Rx Quality %
Airtel 2G	98.47%
BSNI 2G	99.48%
VIL 2G	98.48%
BSNL 3G	95.26%
VIL 3G	NA
Airtel VoLTE	74.69%
Jio VoLTE	90.78%
VIL VoLTE	97.22%

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 VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP- Airtel

Technology	Rx Quality %
2G	98.47

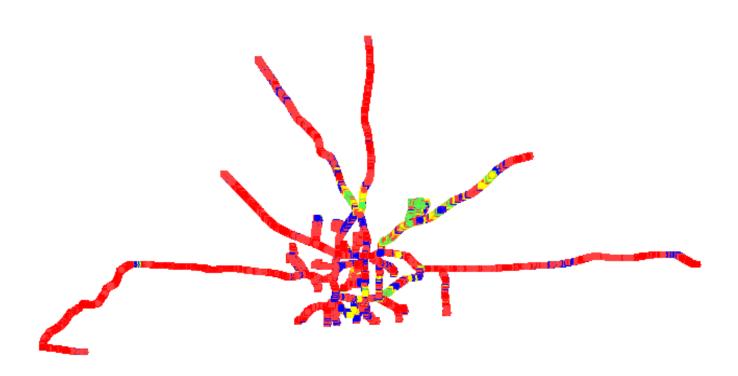


Overall Rx Quality	# Samples	% PDF	Legends
(Min, <=2)	958716	84.53	
(2, <=3)	49225	4.34	
(3 , <=4)	46987	4,.14	
(4 , <=5)	61891	5.46	
(5 , <=Max)	17391	1.53	
Total	1134211	100	

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 VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP- Airtel

Technology	Rx Quality %
VoLTE	74.59

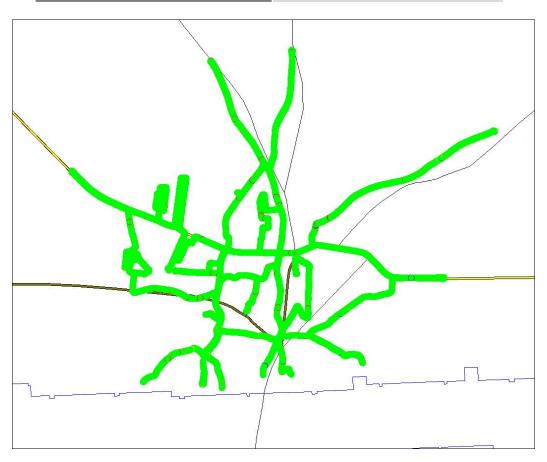


Overall SINR	# Samples	% PDF	Legends
(Min, <=0)	510480	25.41	
(0, <=5)	997610	49.65	
(5, <=10)	274798	13.68	
(10, <=15)	143938	7.16	
(15, <=Max)	82303	4.10	
Total	2009129	100	

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 VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP-BSNL

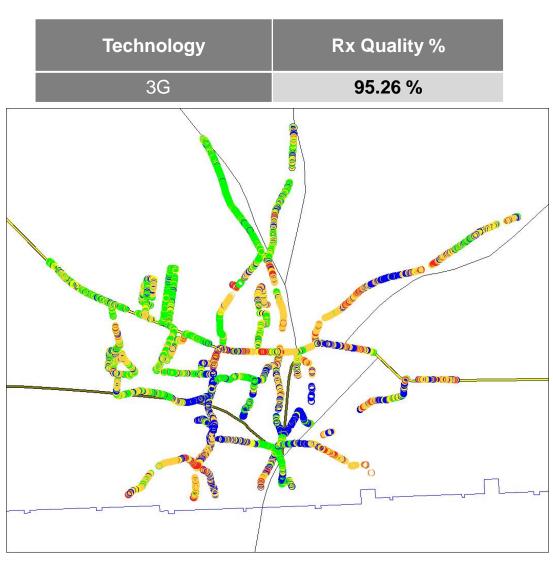
Technology	Rx Quality %
2G	99.48 %



Overall Rx Quality	# Samples	% PDF	Legends
(Min, <=2)	1148494	99.03%	
(2, <=3)	1965	0.17%	
(3 , <=4)	1958	0.17%	
(4 , <=5)	1273	0.11%	
(5 , <=Max)	6051	0.52%	
Total	1159741	100.00%	

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 VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP-BSNL



Overall Ec/No	# Samples	% PDF	Legends
(Max, <=-6)	66395	28.58%	
(-6, <=-9)	39042	16.81%	
(-9, <=-11)	48110	20.71%	
(-11, <=-14)	67728	29.16%	
(-14, <= Min)	11001	4.74%	
Total	232276	100.00%	

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 VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP-Jio

Technology	Rx Quality %
VoLTE	90.78%

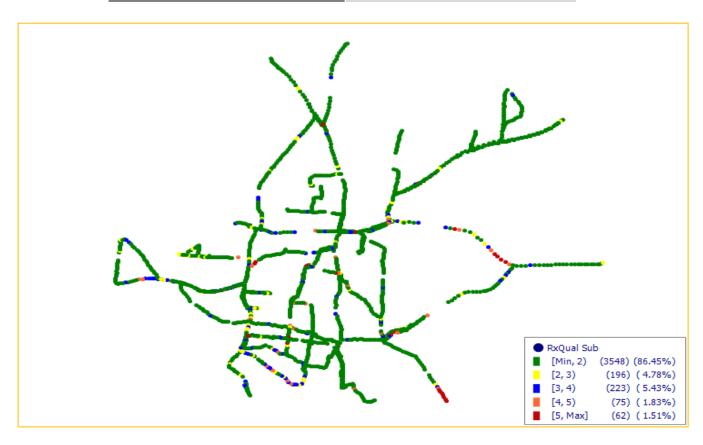


Overall SINR	# Samples	% PDF	Legends
(Min, <=0)	659	9.22%	
(0, <=5)	1481	20.71%	
(5, <=10)	1703	23.82%	
(10, <=15)	1766	24.7%	
(15, <=Max)	1541	21.55%	
Total	7150	100%	

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 VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP-VIL

Technology	Rx Quality %
2G	98.48%

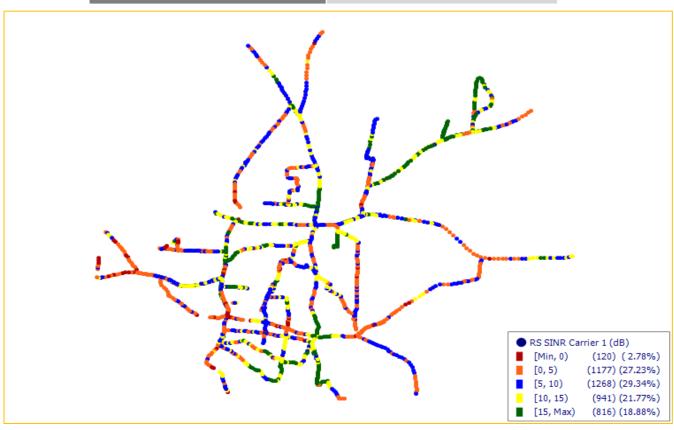


Overall Rx Quality	# Samples	% PDF	Legends
(Min, <=2)	3548	86.45%	
(2, <=3)	196	4.78%	
(3 , <=4)	223	5.43%	
(4 , <=5)	75	1.82%	
(5 , <=Max)	62	1.51%	
Total	4104	100%	

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 VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP-VIL

Technology	Rx Quality %
VoLTE	97.22%

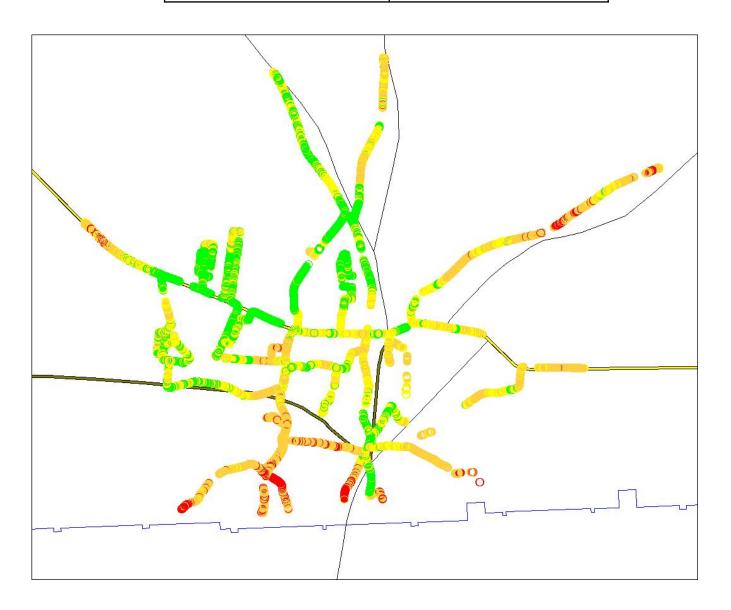


Overall SINR	# Samples	% PDF	Legends
(Min, <=0)	120	2.78%	
(0, <=5)	1177	27.23%	
(5, <=10)	1268	29.34%	
(10, <=15)	941	21.77%	
(15, <=Max)	816	18.88%	
Total	4322	100%	

TSP	% of Time Spent on 3G/VoLTE
BSNL 3G	NA
VIL Non Volte	9.18%
Airtel VoLTE	100%
Jio VoLTE	100%
VIL VoLTE	90.82%

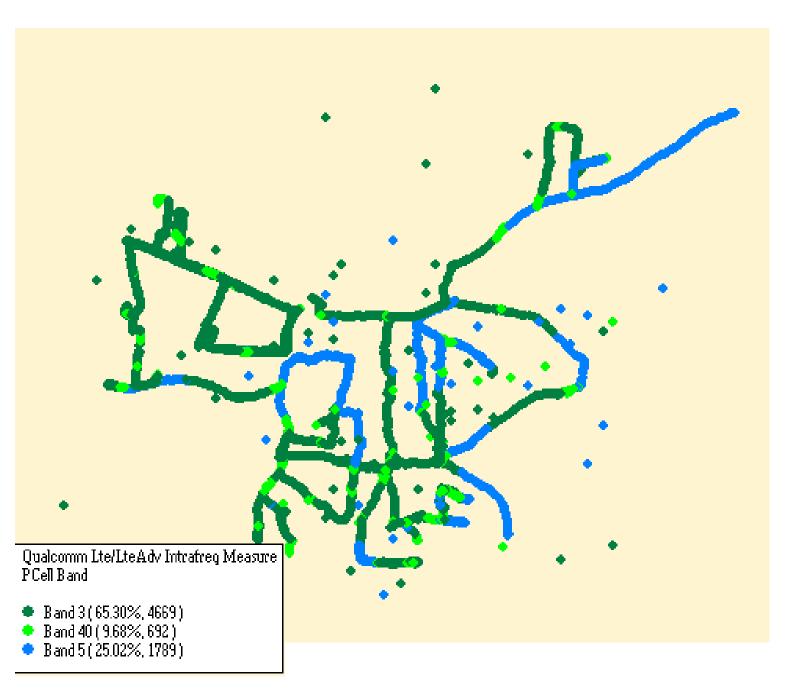
TSP-BSNL

Technology	% of Time Spent on
3G	95.65 %
VoLTE	NA



TSP- JIO

Technology	% of Time Spent on
3G	NA
VoLTE	100%



TSP-VIL

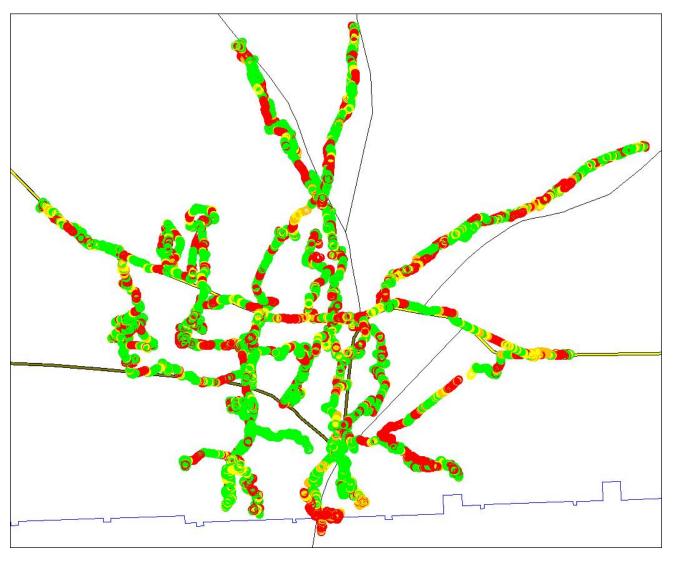
Technology	% of Time Spent on
Non Volte	9.18%
VoLTE	90.82%



TSP-BSNL

Data Statistics - Dynamic data testing

Data KPIs - Overall	2G
Download Throughput (Kbps)	202

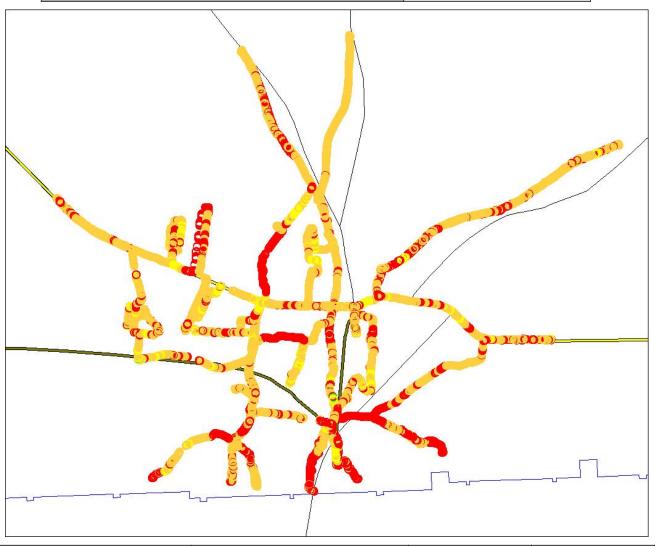


DL throughput	No of Sample	%	Legends
< 100 Kbps	542323	25.66%	
100-150Kbps	148406	7.02%	
150-200Kbps	257125	12.16%	
>200Kbps	1165889	55.16%	

TSP-BSNL

Data Statistics - Dynamic data testing

Data KPIs - Overall	3G
Download Throughput (Mbps)	2.65



DL throughput	No of Sample	%	Legends
< 1 Mbps	189105	27.07%	
1-5 Mbps	458460	65.62%	
5-10 Mbps	49658	7.11%	
>10Mbps	1420	0.20%	

TSP-JIO

Data Statistics - Dynamic data testing

Data KPIs - Overall	LTE
Download Throughput (Mbps)	7.23

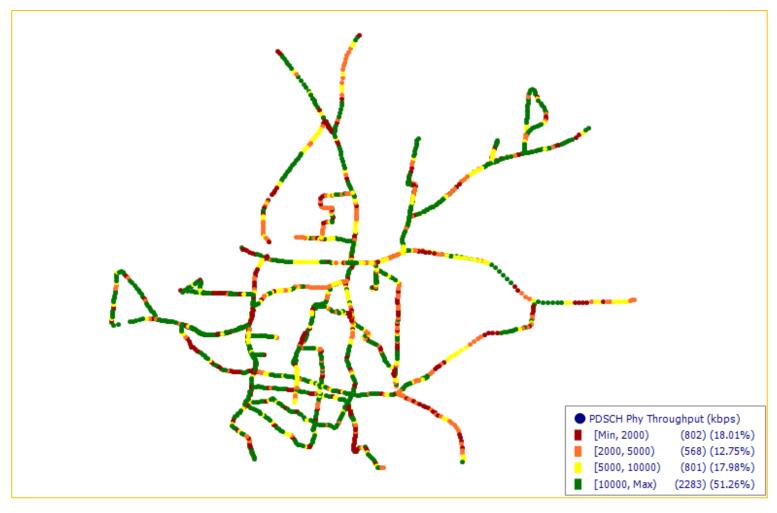


DL throughput	No of Sample	%	Legends
< 2Mbps	2297	34.12%	
2-5 Mbps	2021	30.02%	
5-10 Mbps	1504	22.34%	
>10Mbps	911	13.53%	

TSP-VIL

Data Statistics - Dynamic data testing - ...40 Kms

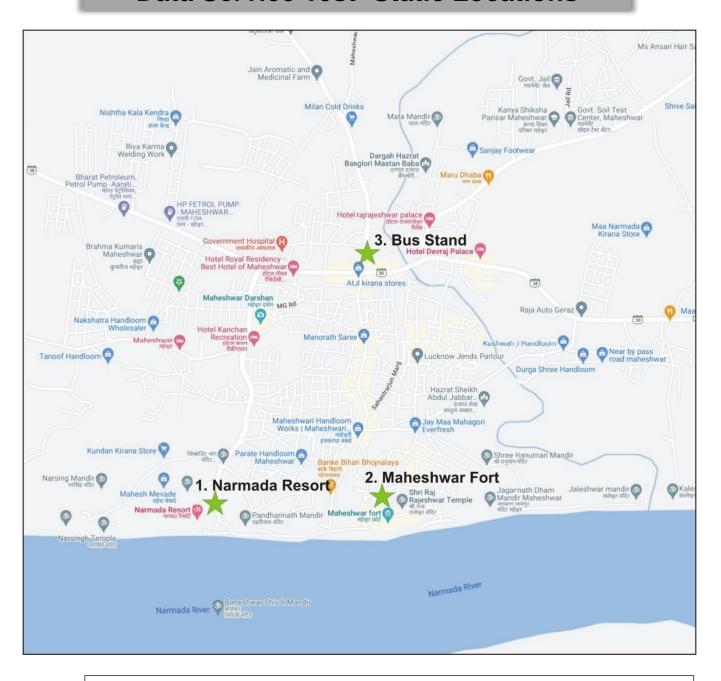
Data KPIs - Overall	LTE
Download Throughput (Mbps)	14.71%



DL throughput	No of Sample	%	Legends
< 2Mbps	802	18.01%	
2-5 Mbps	568	12.75%	
5-10 Mbps	801	17.98%	
>10Mbps	2283	51.26%	

Overview BSNL

Data Service Test- Static Locations



Hotspot Locations 1.Narmada Resort, Maheshwar 2.Maheshwar Fort, Maheshwar 3.Bus Stand, Maheshwar

Overview Reliance JIO

Data Service Test- Static Locations



Hotspot Locations 1. Bus stand 2. Hotel Devraj 3. Maheshwer market 4. Maheshwer fort 5. Maheshwer Ghat 6. Maheshwer resort

Overview VIL

Data Service Test- Static Locations



	Hotspot Locations				
1.	Maheswar Bus Stand				
2.	Maheswar Fort				
3.	MP Tourism Narmada Resort				

Hotspot		Airtel	BSNL	RJIO	VIL
1. Maheswar Bus	2G download in Mbps	NA	0.39	NA	NA
	2G upload in Mbps	NA	0.19	NA	NA
	3G download in Mbps	NA	8.57	NA	NA
Stand	3G upload in Mbps	NA	1.09	NA	NA
	4G download in Mbps	3.83	NA	14.31	16.57
	4G upload in Mbps	2.58	NA	7.60	14.70
2.Maheswar Fort	2G download in Mbps	NA	0.4	NA	NA
	2G upload in Mbps	NA	0.23	NA	NA
	3G download in Mbps	NA	9.91	NA	NA
	3G upload in Mbps	NA	1.23	NA	NA
	4G download in Mbps	0.97	NA	26.45	39.83
	4G upload in Mbps	0.11	NA	2.83	7.75

Hotspot		Airtel	BSNL	RJio	VIL
3.MP Tourism	2G download in Mbps	NA	0.4	NA	NA
	2G upload in Mbps	NA	0.25	NA	NA
	3G download in Mbps	NA	4.5	NA	NA
Narmada Resort	3G upload in Mbps	NA	1.42	NA	NA
	4G download in Mbps	6.44	NA	8.22	13.05
	4G upload in Mbps	8.64	NA	3.29	10.63
4. Maheshwar Market	2G download in Mbps	NA	NA	NA	NA
	2G upload in Mbps	NA	NA	NA	NA
	3G download in Mbps	NA	NA	NA	NA
	3G upload in Mbps	NA	NA	NA	NA
	4G download in Mbps	8.25	NA	20.11	NA
	4G upload in Mbps	9.31	NA	3.9	NA

Hotspot		Airtel	BSNL	JIO	VIL
5. Maheshwer Ghat	2G download in Mbps	NA	NA	NA	NA
	2G upload in Mbps	NA	NA	NA	NA
	3G download in Mbps	NA	NA	NA	NA
	3G upload in Mbps	NA	NA	NA	NA
	4G download in Mbps	2.92	NA	26.79	NA
	4G upload in Mbps	0.18	NA	8.08	NA
6. Devraj Hotel	2G download in Mbps	NA	NA	NA	NA
	2G upload in Mbps	NA	NA	NA	NA
	3G download in Mbps	NA	NA	NA	NA
	3G upload in Mbps	NA	NA	NA	NA
	4G download in Mbps	NA	NA	18.93	NA
	4G upload in Mbps	NA	NA	10.79	NA

Hotspot		Airtel	BSNL	JIO	VIL
	2G download in Mbps	NA	NA	NA	NA
	2G upload in Mbps	NA	NA	NA	NA
7. Rajeshwari	3G download in Mbps	NA	NA	NA	NA
Temple	3G upload in Mbps	NA	NA	NA	NA
	4G download in Mbps	0.95	NA	NA	NA
	4G upload in Mbps	0.08	NA	NA	NA
	2G download in Mbps	NA	NA	NA	NA
	2G upload in Mbps	NA	NA	NA	NA
8. Rajwada	3G download in Mbps	NA	NA	NA	NA
	3G upload in Mbps	NA	NA	NA	NA
	4G download in Mbps	4.10	NA	NA	NA
	4G upload in Mbps	2.38	NA	NA	NA