



Operator Assisted Drive Test Report

VIZIANAGARAM - SSA

MARCH - 2023

(RO, Hyderabad)

Key Performance Indicators: All TSPs have met the Drop Call Rate (DCR) benchmark of 2%. All TSPs have met the Call Setup Success Rate (CSSR) of 95%. All TSPs have met the Rx Quality of 95% except JIO VoLTE, VIL 3G & VoLTE networks.

The Operator Assisted Drive Test (OADT) has been carried out by TRAI RO Hyderabad with the help of Service Providers in vizianagaram City and surrounding areas cheepurupalle, parvathipuram, srungavarapukota from 9:00 AM to 8:00 PM during 27th to 29th & 31st March 2023. The drive test covered drive route of 404 KMs & 6 hotspot over a period of 4 days. Approximately 590 calls were made for each of the 8 networks: Three 2G networks, two 3G networks and Three LTE networks covering four TSPs.

Overview

Voice
Summary

Data
Summary

Overview

TRAI RO Hyderabad conducted Operator Assisted Drive Test from 27th to 29th & 31st March 2023 covering various locations in covering various locations in vizianagaram City & surrounding regions cheepurupalle, parvathipuram srungavarapukota.. The performance of Airtel, BSNL, Jio and Vodafone Idea Limited were 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 in terms of

Voice: Coverage, Quality, Handover 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 404 KMs over a period of 4 days from from 27th to 29th & 31st March 2023. Approximately 590 calls were made for each of the 8 networks: three 2G (Lock Mode) networks, two 3G (Dual mode) networks and three VoLTE network covering 4 unique TSPs.

Data Tests:

1.Dynamic data test was conducted for 404 KMs over a period of 3 days for download throughput for 3G & 4G technologies.

Data Tests were performed at 6 static locations for 2G, 3G & 4G technologies.

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

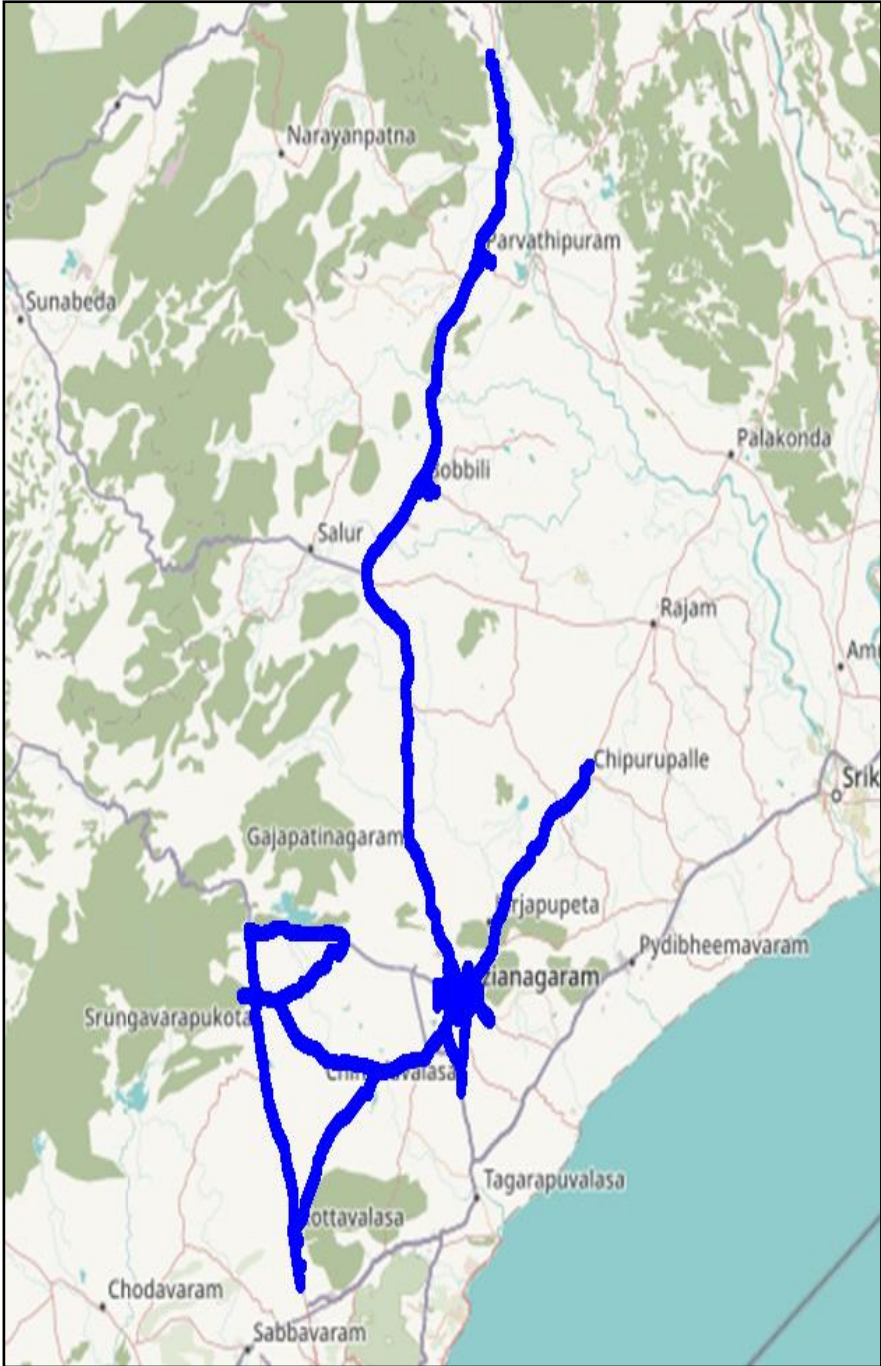
* 3G KPI's which are calculated from UE in Dual Mode (2G & 3G) includes samples and events of 2G.

* 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 www.myntra.com
Video Streaming	130 Sec Clip
Latency	32 Bytes on www.google.com

Overview

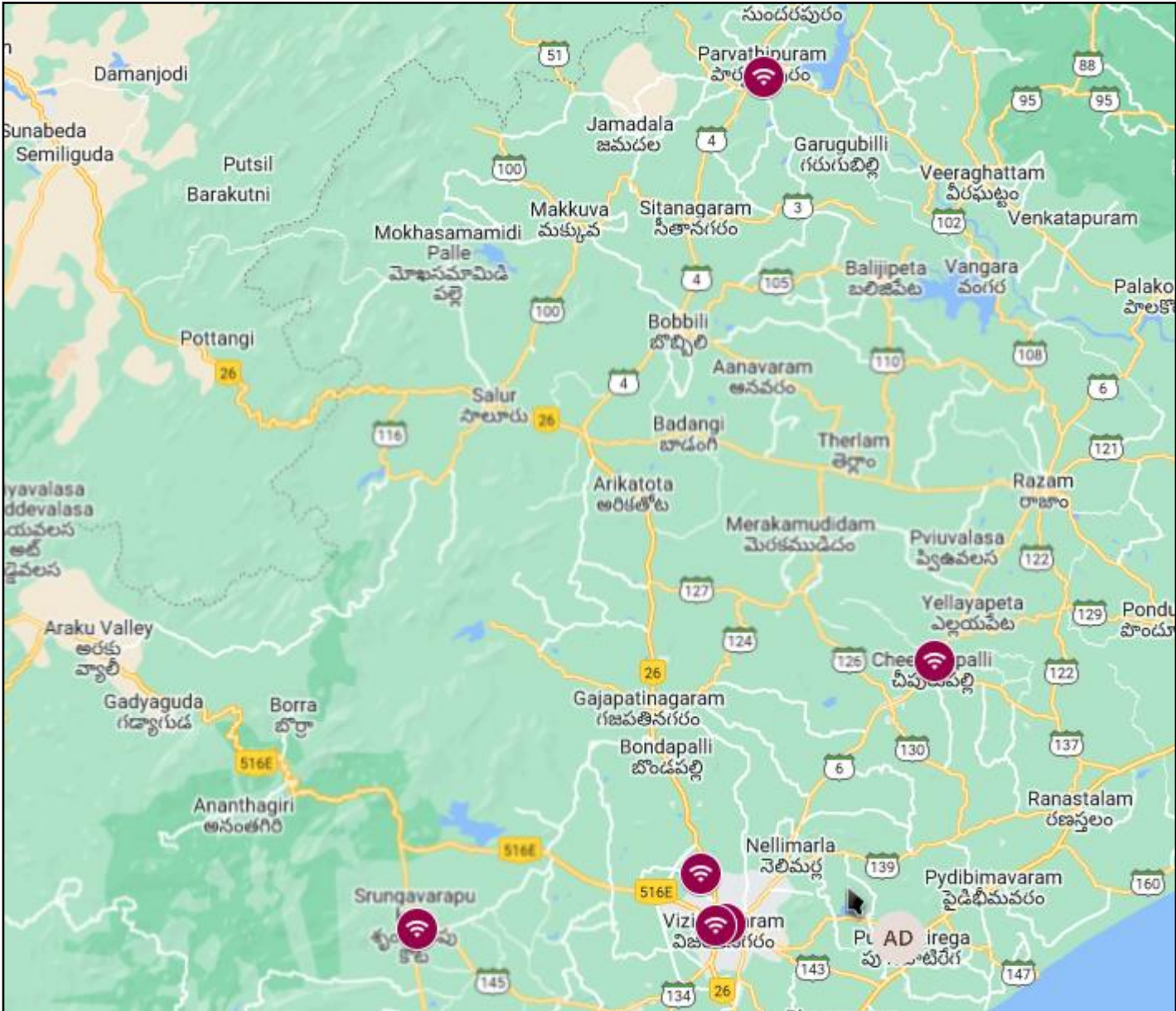
Voice & Dynamic Data Test Drive Route



Areas Covered –VIZIANAGARAM	
RTC Complex	ADARSHNAGAR
RING ROAD	VUDA COLONY
BABA METTA	AYYANNAPETA
J.N.PURAM	COLLECTOR OFFICE
THADIWADA	CONTONMENT
DHARMAPURI	TEXTILE MARKET
AYENADA JN	MG ROAD
CHINTALAVALASA	KOTHAPETA
Areas Covered-CHIPURUPALLI	Areas Covered-BOBBILI.
RTC BUS STAND	OLD BOBBILI
Railway Station	GOLLA PALLI
Garividi Road	MAIN ROAD
MAIN ROAD	RTC BUSSTAND
Areas Covered-PARVATHIPURAM	Areas Covered-KOTTAVALASA
COLLECTOR OFFICE AREA	RLY STATION ROAD
RTC BUS STAND	RTC Busstand ROAD
MARKET AREA	DESAPATRUNI PALEM
Areas Covered – S.KOTA	Routes Covered
BODWARA,RTC COMPLEX, PUNYAGIRI	Vizianagaram to Chipurupalli via Nellimarla Vizianagaram to Kureru via Parvathipuram Vizianagaram to Skota via Kottavalasa

Data Service Test- Static Locations

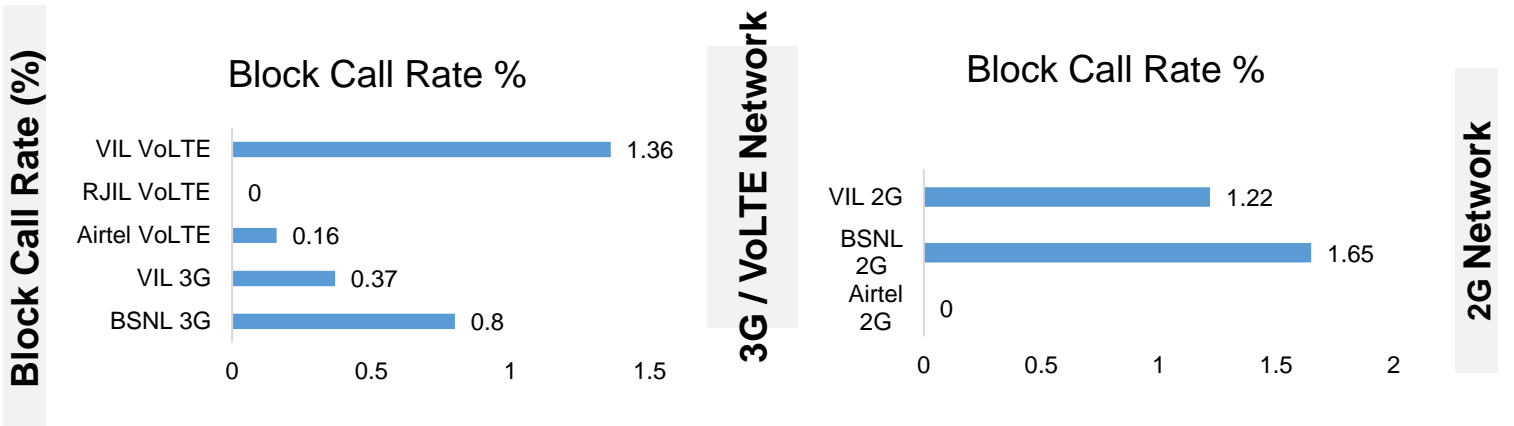
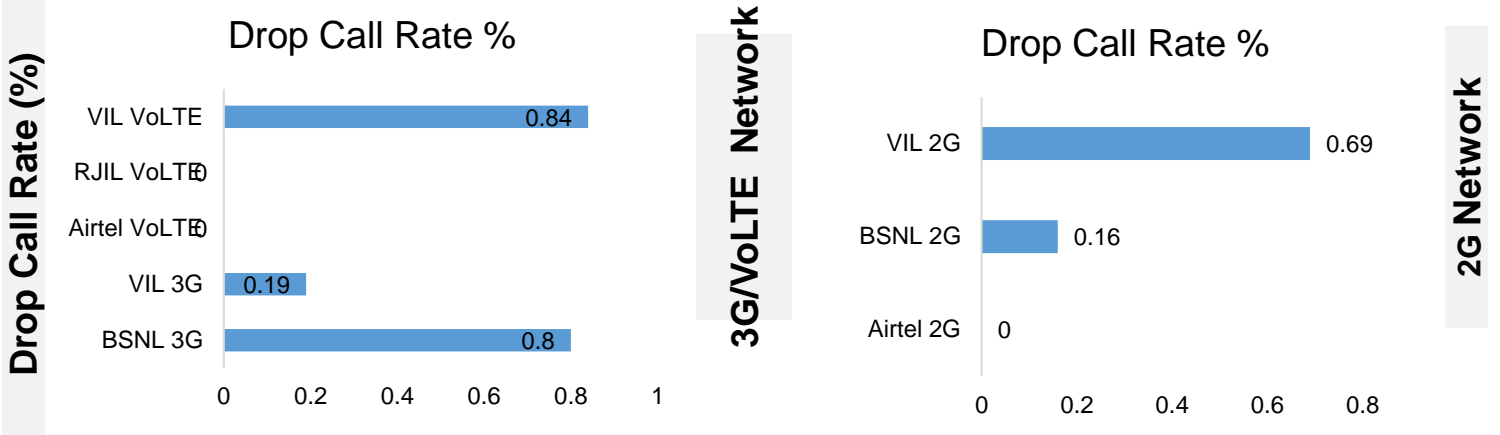
6 Static Locations
Cheepurupalli railway station
Parvathipuram bus stand
Srungavarapu kota bus stand
Vizianagaram railway station
Vizianagaram JNTU College
Vizianagaram Government Hospital



Voice Calls

Key Observations

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



KPIs	2G			3G		VoLTE		
	Airtel	BSNL	VIL	BSNL	VIL	Airtel	RJIL	VIL
Drop Call Rate %	0	0.16	0.69	0.8	0.19	0	0	0.84
Block Call Rate %	0	1.65	1.22	0.8	0.37	0.16	0	1.36

- a) All TSPs have met the 2% QoS benchmark of Drop Call Rate (DCR%)
- 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 \geq -85 dBm.

TSPS	2G		
	Airtel	BSNL	VIL
Coverage %	83.9	83.2	80.81

b) Percentage of coverage samples for 3G \geq -90dBm & LTE \geq -110 dBm.

TSP	3G		VoLTE		
	BSNL	VIL	Airtel	JIO	VIL
Coverage %	80.1	70.73	98.26	95.84	89.76

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

TSP	3G		VoLTE		
	BSNL	VIL	Airtel	JIO	VIL
Time spent %	28.6	84.98	100	100	96.79

Data Services Static

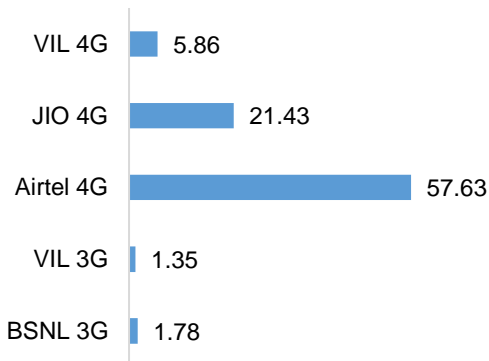
**Key Observations
(Average of 6
Hotspots)**

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

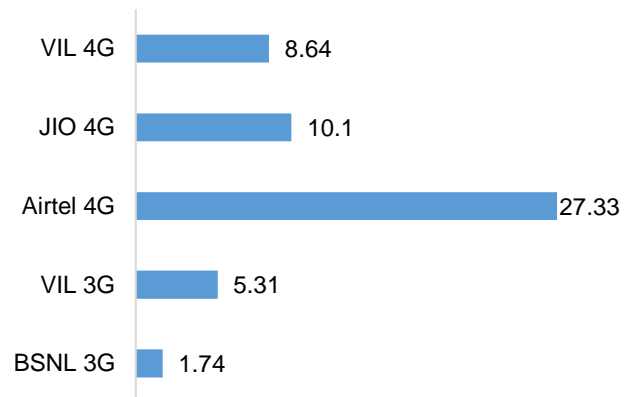
Data Download and Upload Performance (Mbps)

3G/4G Network:

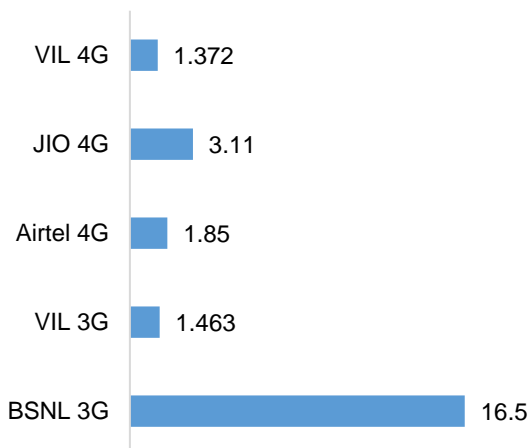
Download throughput in Mbps



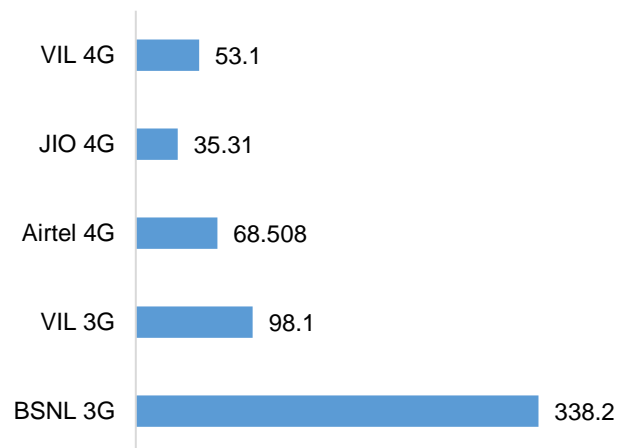
Upload Throughput in Mbps



Web browsing delay in sec



Latency in msec



Summary

SSA Level Summary (Average of 6 Hotspots) - Data Services

Data Services Static	2G		
	Airtel	BSNL	VIL
Download throughput in Kbps	179.5	173.9	215.1
Upload Throughput in Kbps	66.677	104	115.5
Web browsing delay in second	4.3583	32.5	11.163
Latency in (msec)	205.42	247.3	231.83

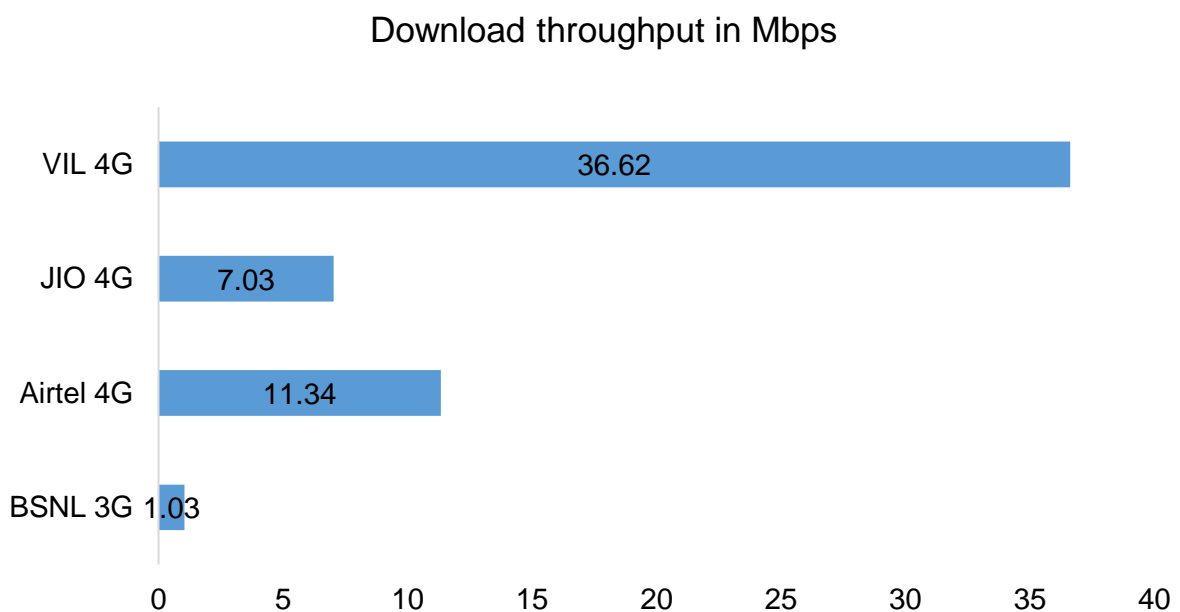
Data Services Static	3G / VoLTE				
	BSNL 3G	VIL 3G	Airtel VoLTE	JIO VoLTE	VIL VoLTE
Download throughput in Mbps	1.78	1.35	57.63	21.43	5.86
Upload Throughput in Mbps	1.745	5.31	27.33	10.10	8.64
Video Streaming Delay in Sec			0	0	
Web browsing delay in sec	16.5	1.463	1.85	3.11	1.372
Latency in msec	338.2	98.1	68.508	35.31	53.1

Data Services Dynamic

Key Observations

Dynamic Data was tested for 404 KMs. Download Throughput was tested.

Data Download Performance (Mbps) - Dynamic



Data Services Dynamic	3G / 4G			
	BSNL 3G	Airtel 4G	JIO 4G	VIL 4G
Download throughput in Mbps	1.03	11.34	7.03	36.62

Summary

SSA Level Summary-Voice

Voice Calls	2G		
	Airtel	BSNL	VIL
Call attempts	579	603	572
Block call rate %	0	1.65	1.2
CSSR %	100	98.34	98.77
Drop call rate %	0	0.16	0.69
Mobility HOSR %	95.87	98.6	98.23
Rx Quality %	96.68	98.4	95.65

TSP (For 3G)	3G		VoLTE		
	BSNL	VIL	Airtel	JIO	VIL
Call attempts	249	533	594	566	586
Block call rate %	0.80	0.37	0.16	0	1.36
CSSR %	99.2	99.6	99.83	100	98.63
Drop call rate %	0.8	0.19	0	0	0.84
Mobility HOSR %	100	97.37	99.87	98.59	99.12
RX Quality %	98.1	97.68	96.73	100	96.63

Cheepuripalli Railway station	2G		
	Airtel	BSNL	VIL
Download throughput in Kbps	191.5	204.53	85.3
Upload Throughput in Kbps	70.9	117.3	33.05
Web browsing delay in second	3.87	23.01	9.51
Latency in (msec)	173.8	182.86	176

Parvathipuram Bus station	2G		
	Airtel	BSNL	VIL
Download throughput in Kbps	164.0	175.35	109.1
Upload Throughput in Kbps	46.8	109.66	55.3
Web browsing delay in second	3.93	15.49	7.21
Latency in (msec)	258.99	161.16	279

Srungavarapukota Bus station	2G		
	Airtel	BSNL	VIL
Download throughput in Kbps	174.6	131.03	111.8
Upload Throughput in Kbps	67.8	52.92	36.9
Web browsing delay in second	5.43	34.63	8.59
Latency in (msec)	232.55	285.76	295

Vizianagaram Railway station	2G		
	Airtel	BSNL	VIL
Download throughput in Kbps	152.2	193.53	160.2
Upload Throughput in Kbps	44.9	109.25	115.5
Web browsing delay in second	4.42	30.7	7.05
Latency in (msec)	178.7	216.84	273

Vizianagaram JNTU College	2G		
	Airtel	BSNL	VIL
Download throughput in Kbps	192.4	173.97	43.1
Upload Throughput in Kbps	88.7	125.33	66.7
Web browsing delay in second	4.52	48.23	9.01
Latency in (msec)	178.2	326.59	183

Vizianagaram Govt. Hospital	2G		
	Airtel	BSNL	VIL
Download throughput in Kbps	192.4	165.04	90.1
Upload Throughput in Kbps	88.7	109.71	82.9
Web browsing delay in second	4.52	43.19	11.35
Latency in (msec)	178.2	310.57	185

Data Services static

SSA Level Summary (contd.)

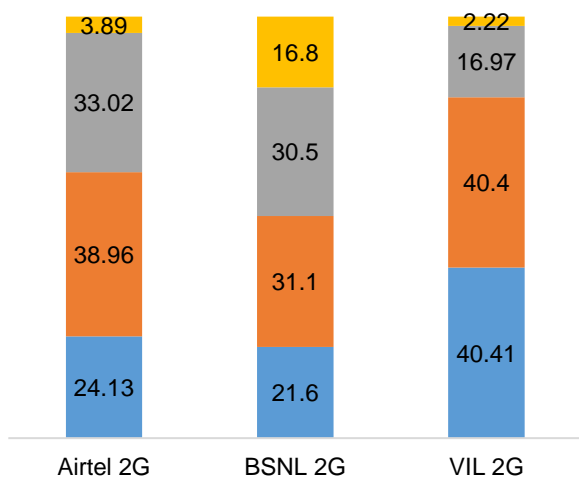
Cheepuripalli Railway station	3G		4G		
	BSNL	VIL	Airtel	JIO	VIL
Download throughput in Mbps	2.6	4.93	33.05	12.08	19.67
Upload Throughput in Mbps	2.24	3.80	16.48	6.37	3.76
Web browsing delay in second	18.12	3.12	2.52	3.29	1.37
Latency in (msec)	301.5	92.5	79.34	29	73
Parvathipuram Bus station	3G		4G		
	BSNL	VIL	Airtel	JIO	VIL
Download throughput in Mbps	1.37	12.78	58.35	12.57	33.81
Upload Throughput in Mbps	2.01	4.80	24.42	4.8	24.11
Web browsing delay in second	16.15	2.97	2.42	3.63	1.19
Latency in (msec)	433.73	75.02	71.74	38.36	45
Srungavarapukota Bus station	3G		4G		
	BSNL	VIL	Airtel	JIO	VIL
Download throughput in Mbps	NA	12.42	41.2	11.81	27.42
Upload Throughput in Mbps	NA	1.98	12.76	4.97	19.21
Web browsing delay in second	NA	2.37	3.45	1.95	1.53
Latency in (msec)	NA	78.3	65.8	38.85	65
Vizianagaram Railway station	3G		4G		
	BSNL	VIL	Airtel	JIO	VIL
Download throughput in Mbps	NA	8.87	66.75	55.84	71.46
Upload Throughput in Mbps	NA	5.07	13.34	12.63	7.45
Web browsing delay in second	NA	1.89	0.93	3.63	1.07
Latency in (msec)	NA	68.7	57.74	36.5	51
Vizianagaram JNTU College	3G		4G		
	BSNL	VIL	Airtel	JIO	VIL
Download throughput in Mbps	1.36	2.29	85.29	11.78	18.57
Upload Throughput in Mbps	0.98	4.22	58.1	14.13	2.41
Web browsing delay in second	15.43	3.12	0.86	3.15	1.59
Latency in (msec)	279.51	98.7	60.39	33.5	38
Vizianagaram Govt. Hospital	3G		4G		
	BSNL	VIL	Airtel	JIO	VIL
Download throughput in Mbps	NA	13.47	61.14	24.51	58.78
Upload Throughput in Mbps	NA	5.31	38.88	17.71	6.11
Web browsing delay in second	NA	1.73	0.92	3.02	2.12
Latency in (msec)	NA	63.2	76	35.67	36

I. Coverage Details

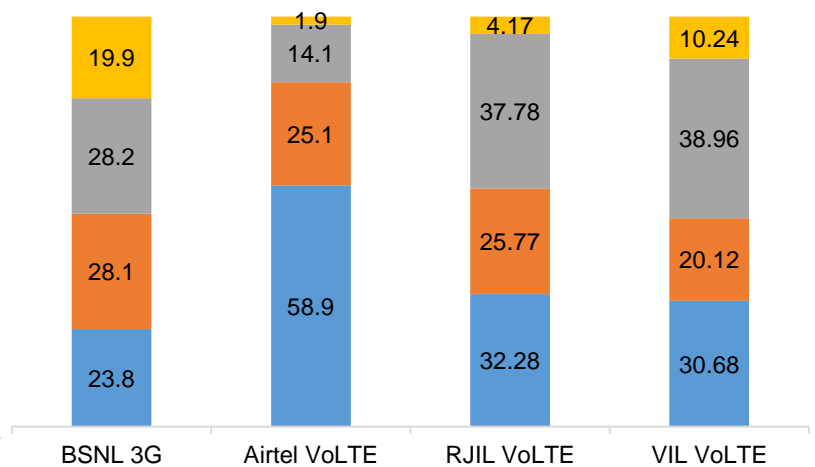
RF Coverage relates to the geographical footprint within the system that has sufficient RF signal strength to provide for a call session. The Coverage rate is calculated on the basis of % of samples in which the Rx level \geq -85 dBm, RSCP is \geq -90 dBm & RSRP \geq -110dBm. The details are as follows.

TSP	Coverage Rate %
Airtel 2G	83.9
BSNL 2G	83.2
VIL 2G	80.81
BSNL 3G	80.1
VIL 3G	70.73
Airtel VoLTE	98.26
Jio VoLTE	95.84
VIL VoLTE	89.76

Coverage Rate 2G



Coverage Rate 3G/VoLTE



■ [Max, >=-75] ■ [-75, >=-85]
 ■ [-85, >=-95] ■ [-95, >=-110]

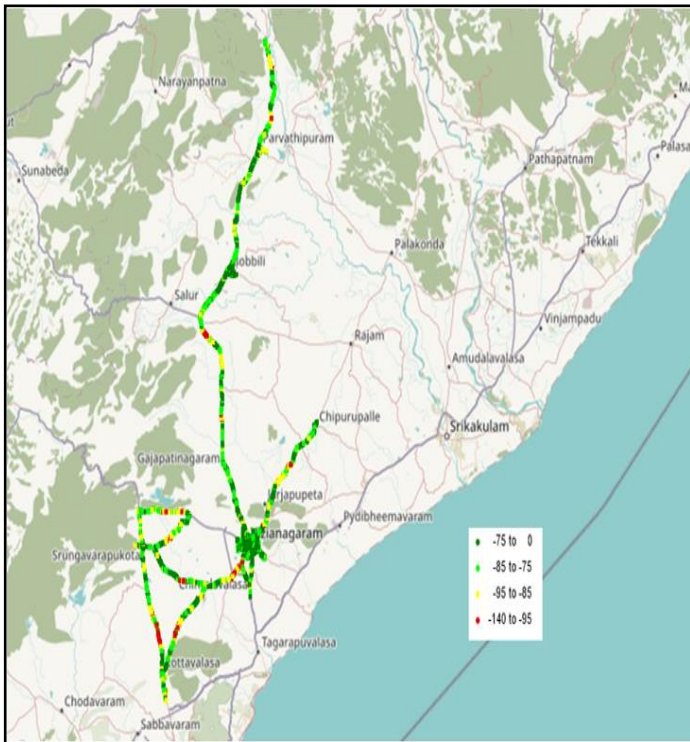
■ [Max, >=-80] ■ [-80, >=-90] ■ [-90, >=-110] ■ [-110, >=-120]

I. Coverage Details

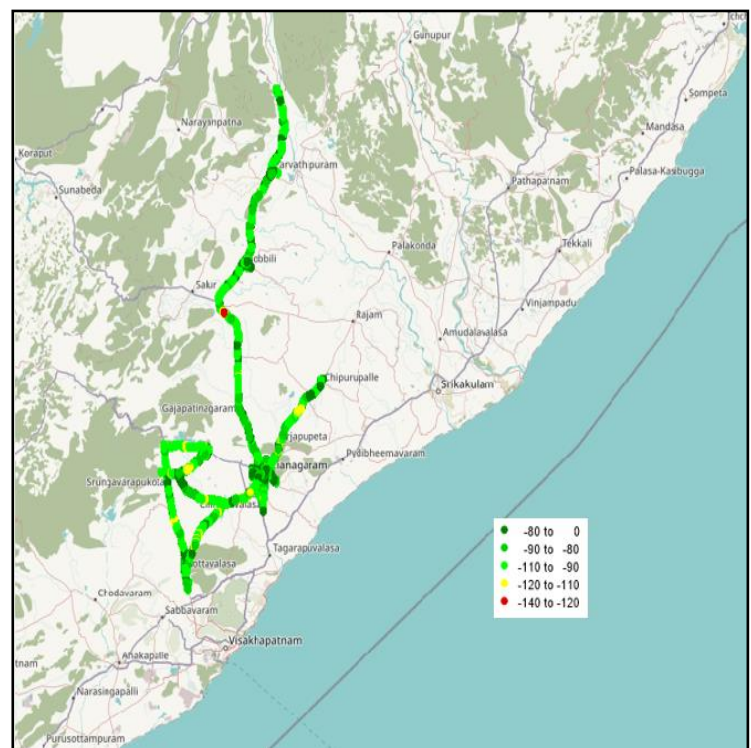
AIRTEL

Technology	Coverage Rate %
2G	83.9
VoLTE	98.26

2G



VoLTE



2G

Overall RxLevel	# Samples	%
[Max, >=-75]	3686374	58.9
[-75, >=-85]	1569714	25.1
[-85, >=-95]	886021	14.1
[-95, >=Min]	119171	1.9
Total	6261280	

VoLTE

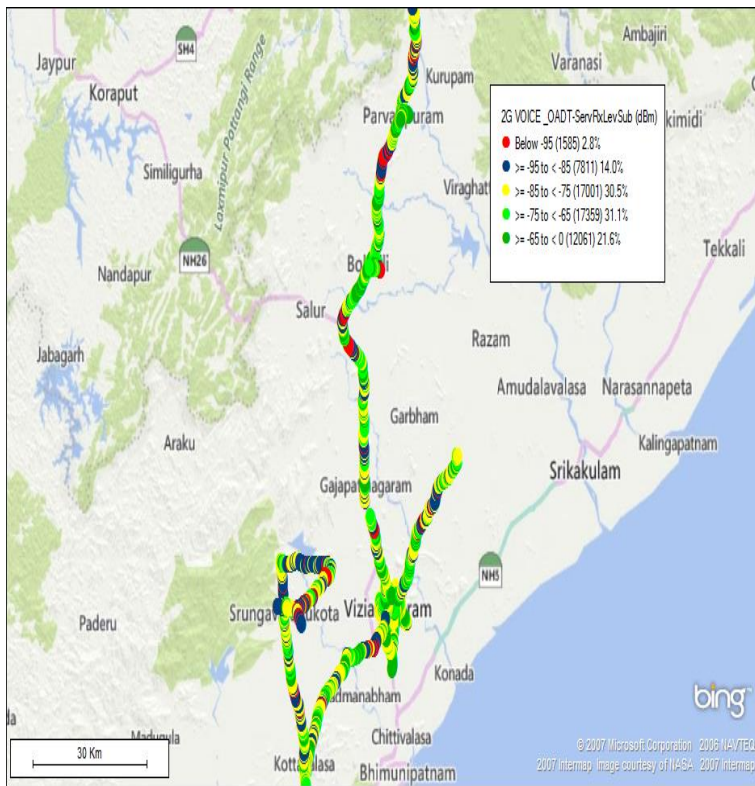
Overall RSRP	# Samples	%
[Max, >=-80]	4410225	28.53
[-80, >=-90]	4915166	31.79
[-90, >=-110]	5866370	37.95
[-110, >=-120]	259819	1.68
[-120, >=Min]	8513	0.06
Total	15460093	

I. Coverage Details

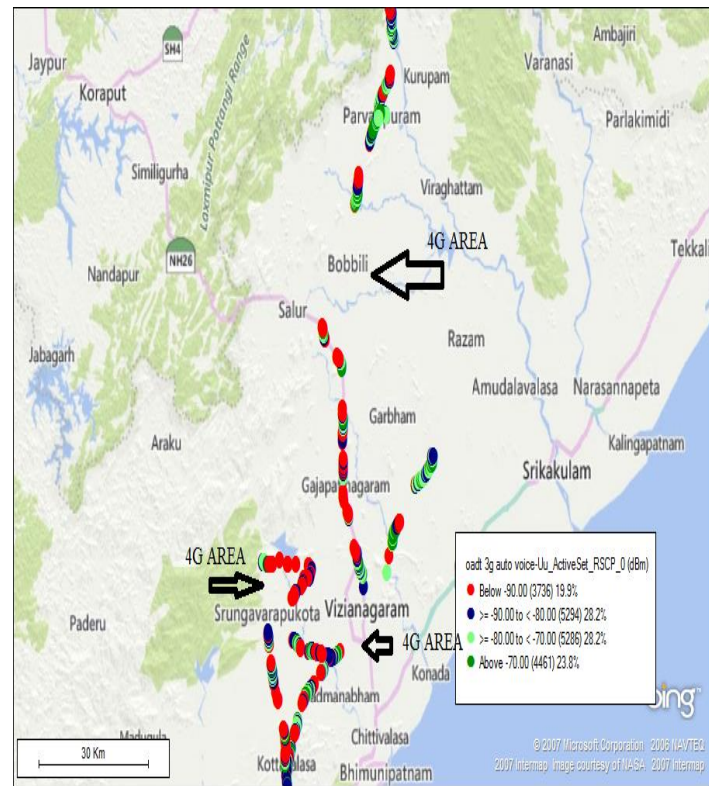
BSNL

Technology	Coverage Rate %
2G	83.2
3G	80.1

2G



3G (Dual mode)



2G

Overall RxLevel	# Samples	% PDF
[Max, ≥ -65]	12061	21.6
$[-65, \geq -75)$	17359	31.1
$[-75, \geq -85)$	17001	30.5
$[-85, \geq -95)$	7811	14.0
$[-95, \geq \text{Min})$	1585	2.8
Total	55817	100%

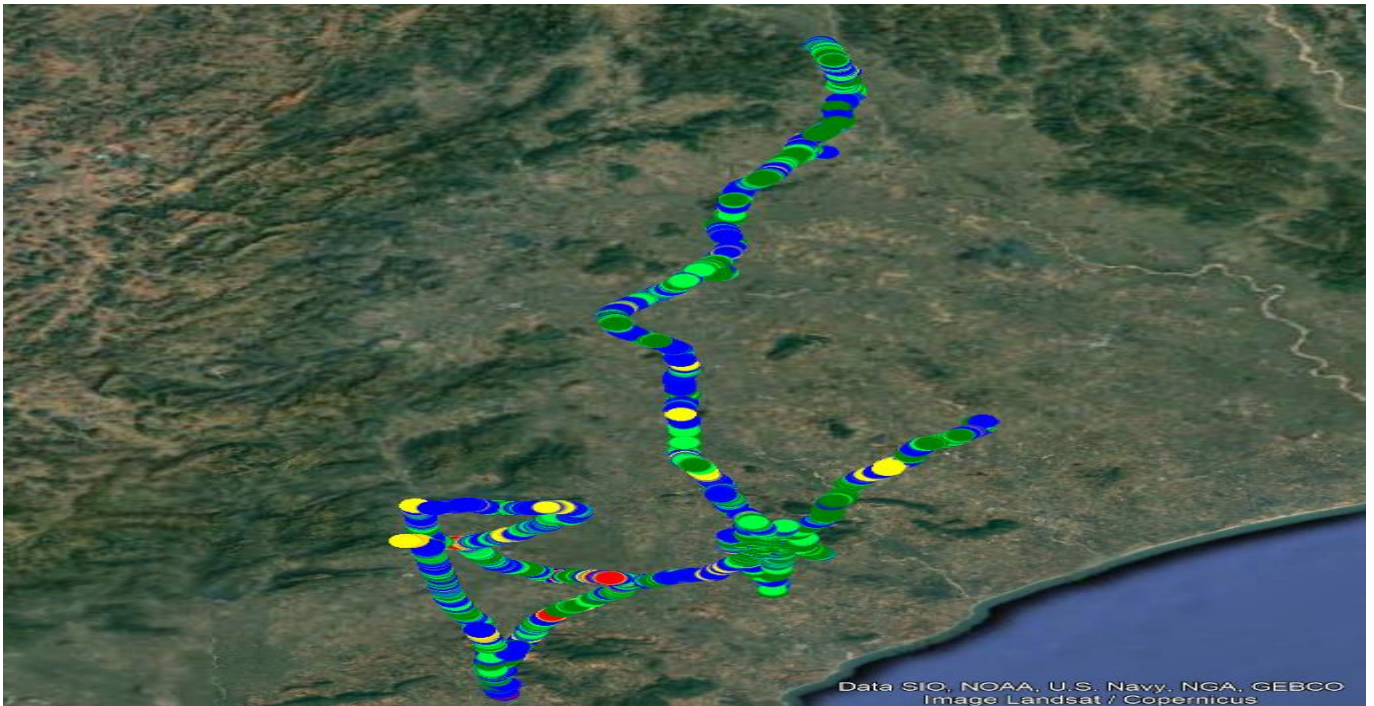
3G

Overall RSCP	# Samples	% PDF
[Max, ≥ -70]	4461	23.8
$[-70, \geq -80)$	5286	28.1
$[-80, \geq -90)$	5294	28.2
$[-90, \geq \text{Min})$	3736	19.9
Total	18777	100

I. Coverage Details

JIO

Technology	Coverage Rate %
VoLTE	95.84



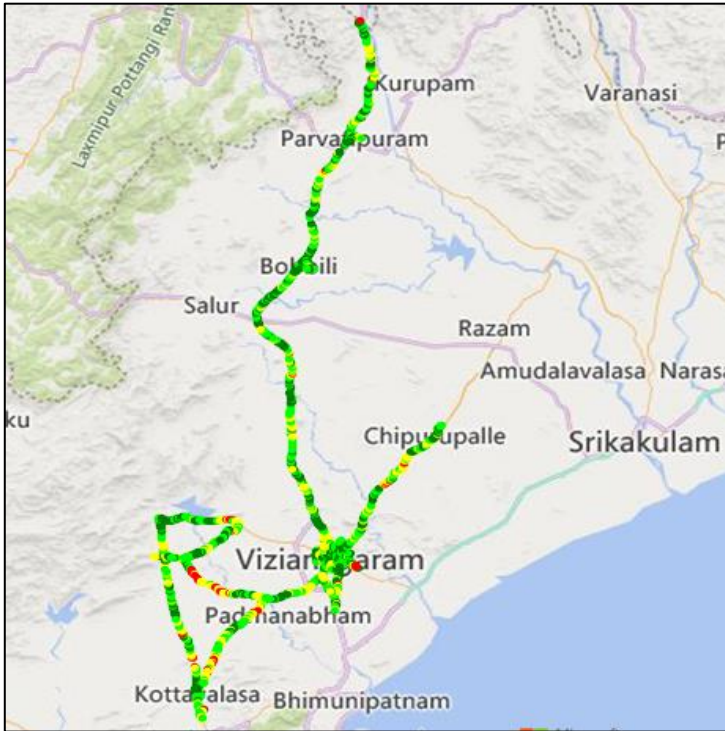
VoLTE		
Overall RSRP	# Samples	%
[Max, >=-80]	17971	32.28
[-80, >=-90]	14346	25.77
[-90, >=-110]	21040	37.78
[-110, >=-120]	2205	3.96
[-120, >=Min]	115	0.21
Total	55677	100

I. Coverage Details

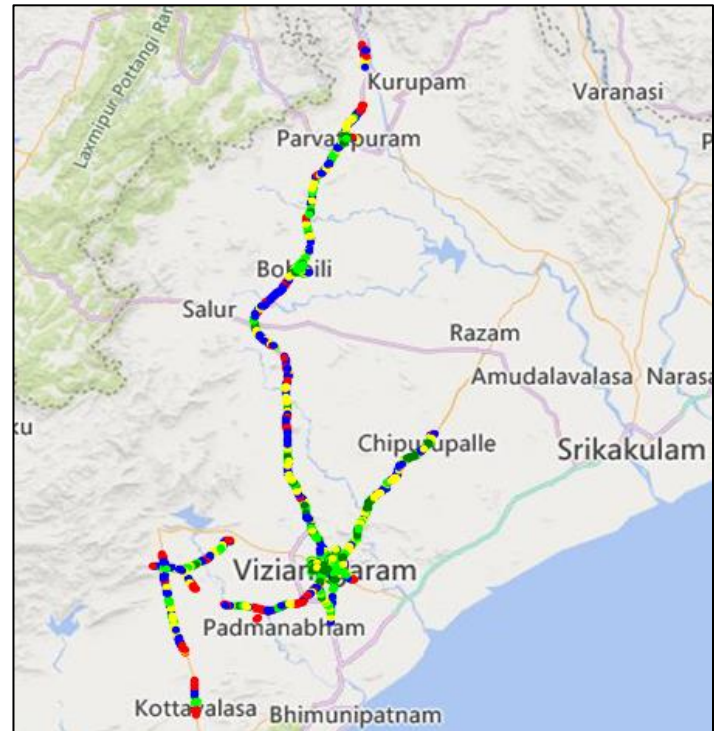
VIL

Technology	Coverage Rate %
2G	80.81
3G	70.73

2G



3G



2G

Overall RxLevel	# Samples	% PDF
[Max, >=-75]	2201000	40.40
[-75, >=-85)	2201121	40.40
[-85, >=-95)	924689	16.97
[-95, >=Min)	120860	2.22
Total	5447670	100

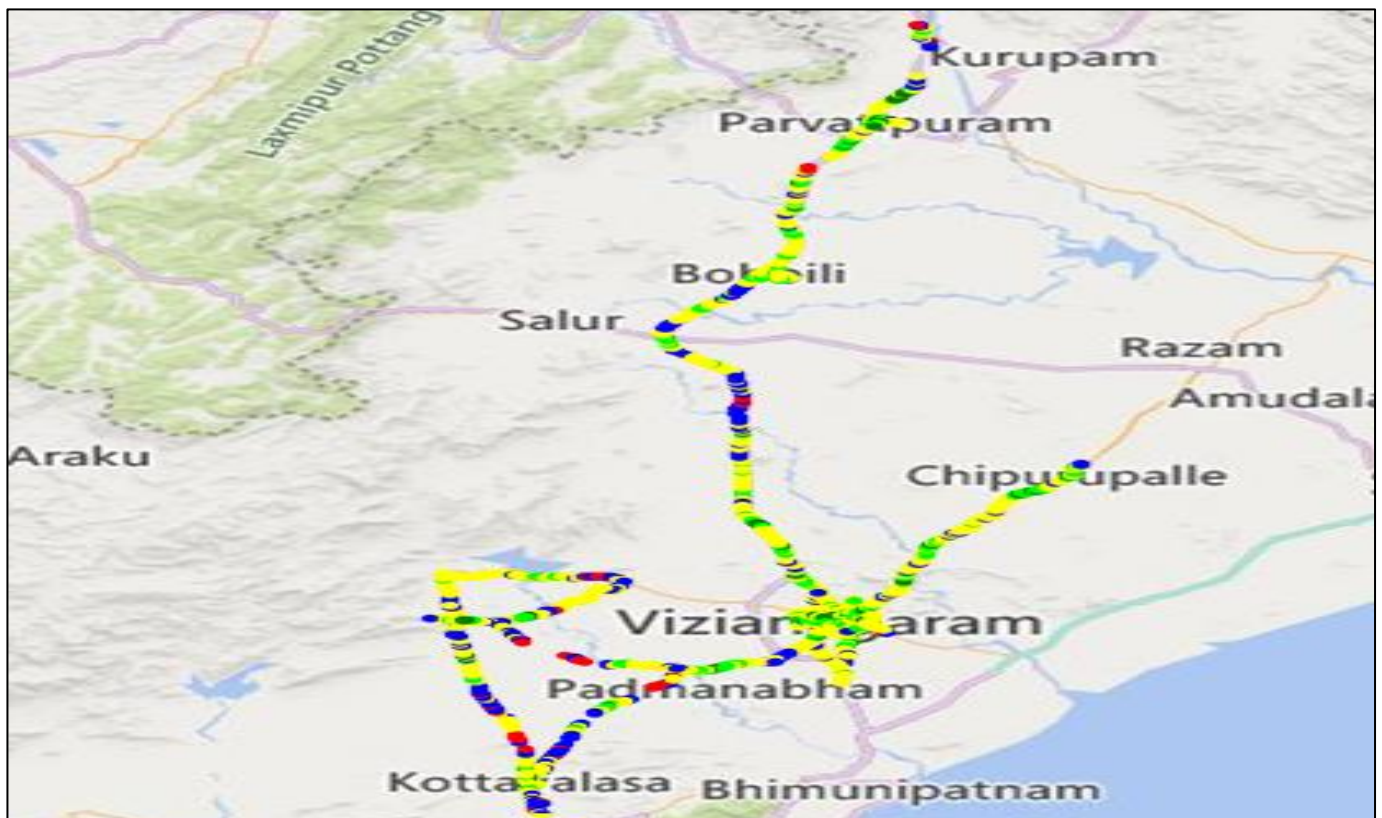
3G

Overall RSCP	# Samples	% PDF
[Max, >=-75]	2072810	26.12
[-75, >=-85)	2191083	27.61
[-85, >=-95)	1766003	22.25
[-95, >=-105)	1293359	16.30
[-105, >=Min]	612270	7.72
Total	7935525	100

I. Coverage Details

VIL

Technology	Coverage Rate %
4G	89.76



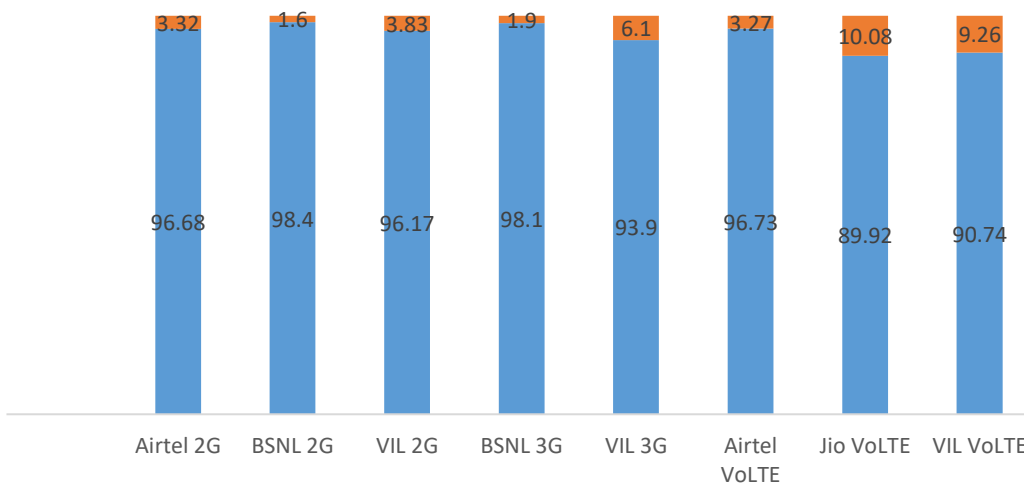
4G		
Overall RSRP	# Samples	% PDF
[Max, >=-80]	5088551	30.68
[-80, >=-90)	3337912	20.12
[-90, >=-110)	6462991	38.96
[-110, >=120)	1546060	9.32
[-120, >=Min]	153110	0.92
Total	12118275	100%

II. Quality Details

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	96.68
BSNL 2G	98.4
VIL 2G	96.17
BSNL 3G	98.1
VIL 3G	93.9
Airtel VoLTE	96.73
Jio VoLTE	89.92
VIL VoLTE	90.74

Rx Quality Distribution



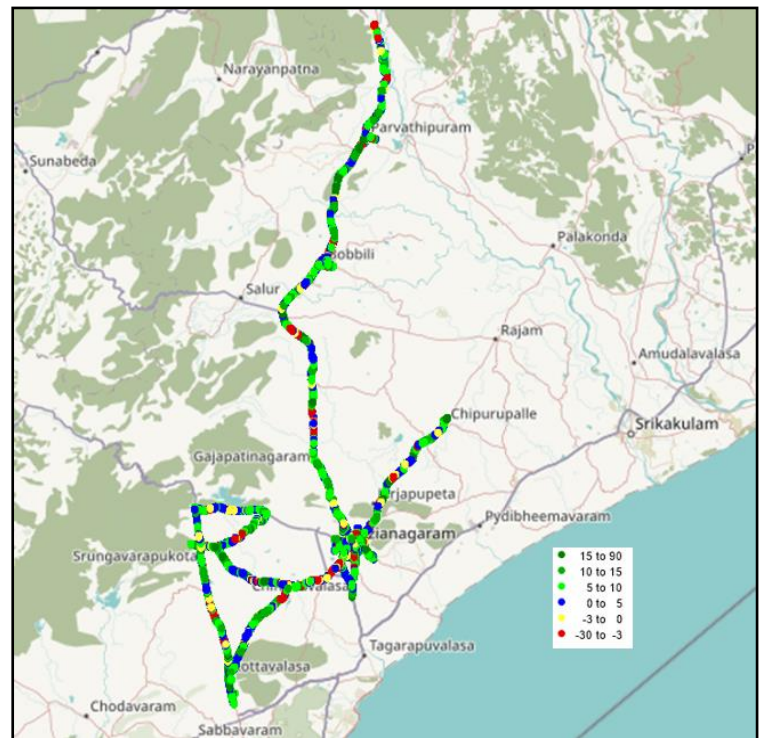
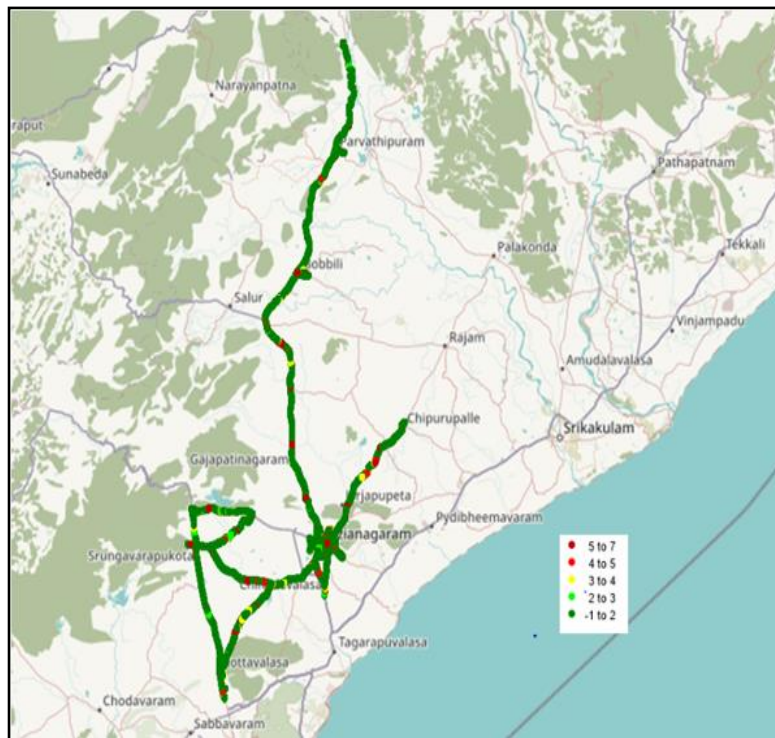
II. Quality Details

Airtel

Technology	Rx Quality %
2G	96.68
VoLTE	96.73

2G

VoLTE



Rx Qual	Samples	%
1 to 2	4931251	90.06
2 to 3	123303	2.25
3 to 4	128746	2.35
4 to 5	110269	2.02
5 to 7	181913	3.32

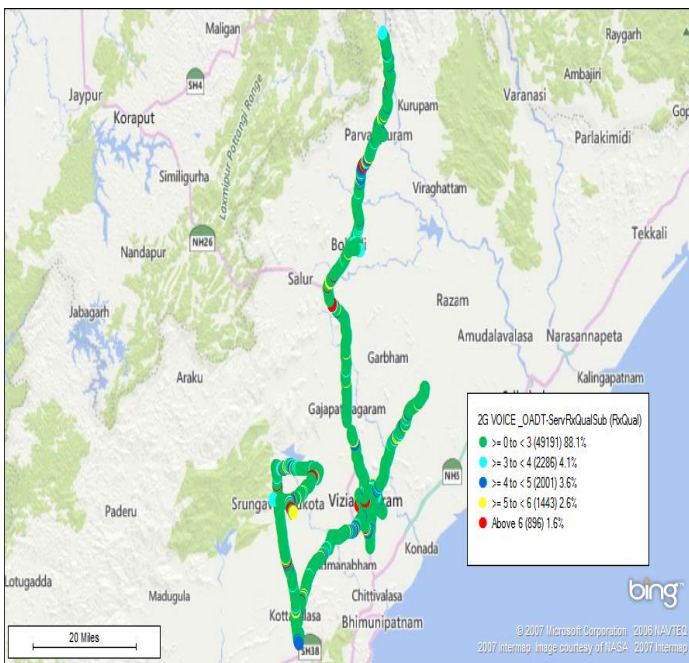
SINR	Total Samples	%
90 to 15	1957165	12.16
15 to 10	2759752	17.15
10 to 5	5124331	31.84
5 to 0	5724038	35.58
0 to -3	350984	2.18
(-3) to (-30)	175493	1.09

II. Quality Details

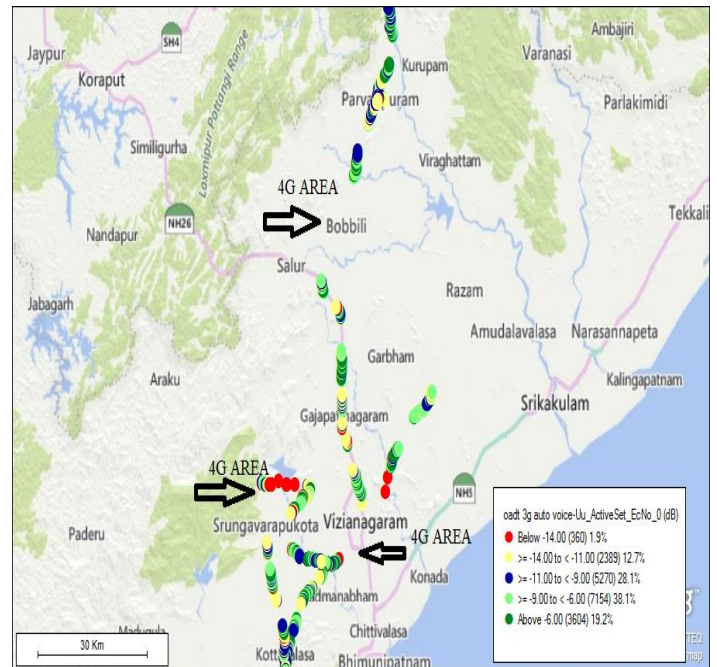
BSNL

Technology	Rx Quality %
2G	98.4
3G	98.1

2G



3G (Dual mode)



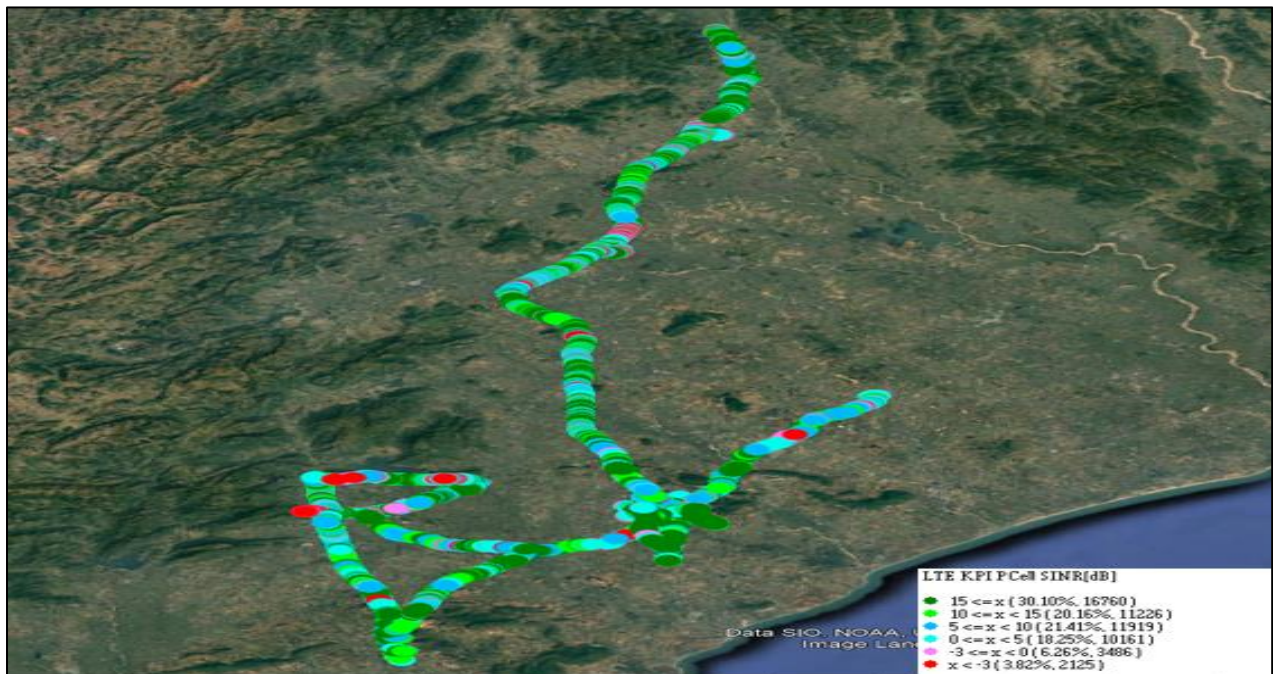
Overall Rx Quality	# Samples	% PDF
(Min, <=2)	49191	88.1
(2, <=3)	2286	4.1
(3, <=4)	2001	3.6
(4, <=5)	1443	2.6
(5, <=Max)	896	1.6
Total	55817	100

3G		
Overall EcNo	# Samples	% PDF
(Max, <=-6)	3604	19.2
(-6, <=-9)	7154	38.1
(-9, <=-11)	5270	28.1
(-11, <=-14)	2389	12.7
(-14, <= Min)	360	1.9
Total	18777	100

II. Quality Details

JIO

Technology	Rx Quality %
VoLTE	89.92



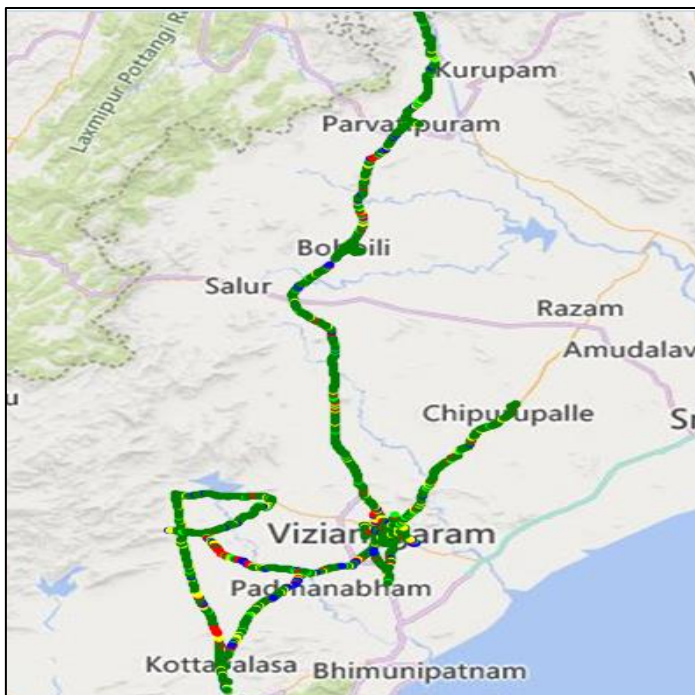
Overall SINR	# Samples	%
(Min, <=-3)	2125	3.82
(-3, <=0)	3486	6.26
(0, <=5)	10161	18.25
(5, <=10)	11919	21.41
(10, <=15)	11226	20.16
(15, <=Max)	16760	30.10
Total	55677	100

II. Quality Details

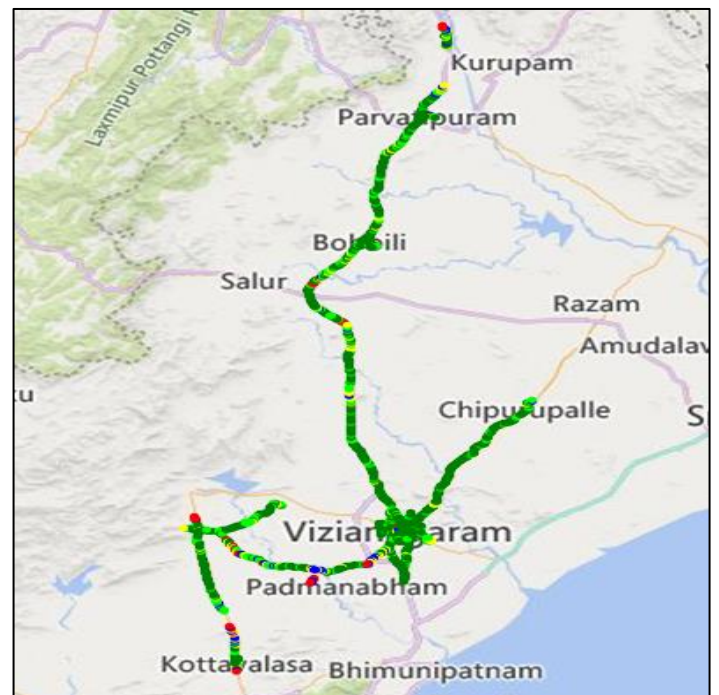
VIL

Technology	Rx Quality %
2G	96.17
3G	93.9

2G



3G



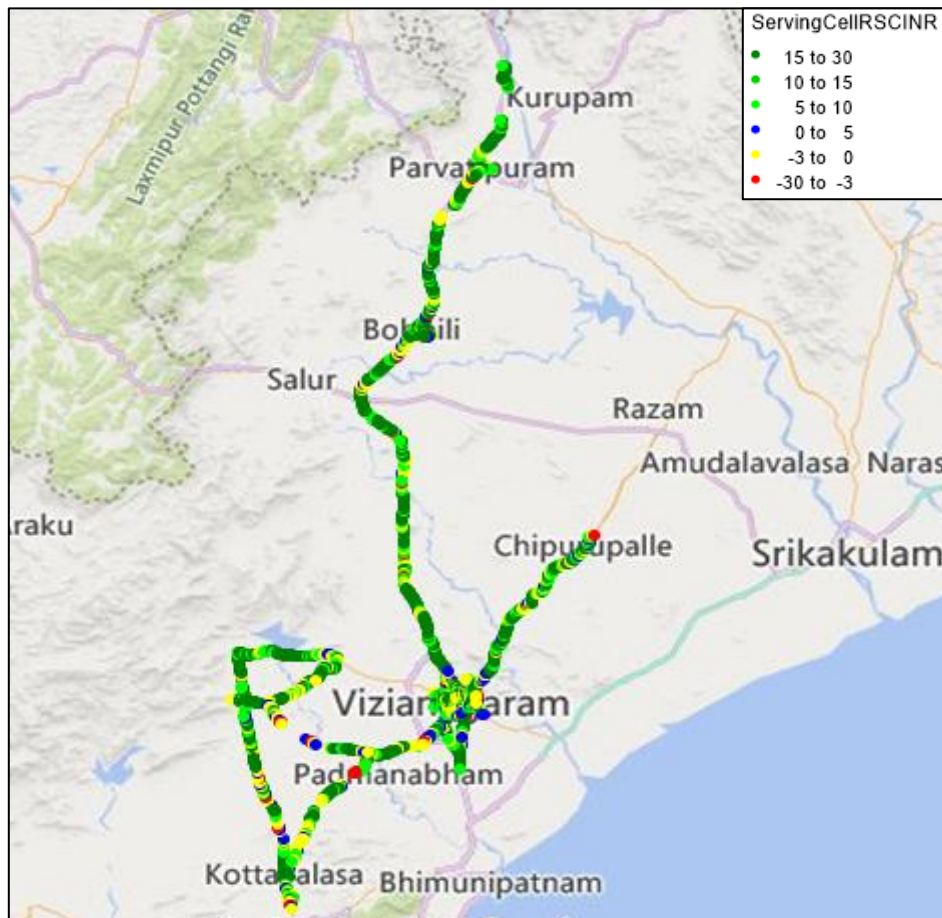
Overall Rx Quality	# Samples	% PDF
(Min, <=2)	4737771	86.96
(2, <=3)	127173	2.33
(3, <=4)	144526	2.65
(4, <=5)	229909	4.23
(5, <=Max)	208291	3.83
Total	5114206	100

3G		
Overall EcNo	# Samples	%
(Max, <=-6)	2907	6.3
(-6, <=-9)	11746	25.6
(-9, <=-11)	15593	34.0
(-11, <=-14)	12825	28.0
(-14, <= Min)	2797	6.1
Total	45868	100

II. Quality Details

VIL

Technology	Rx Quality %
4G	90.74

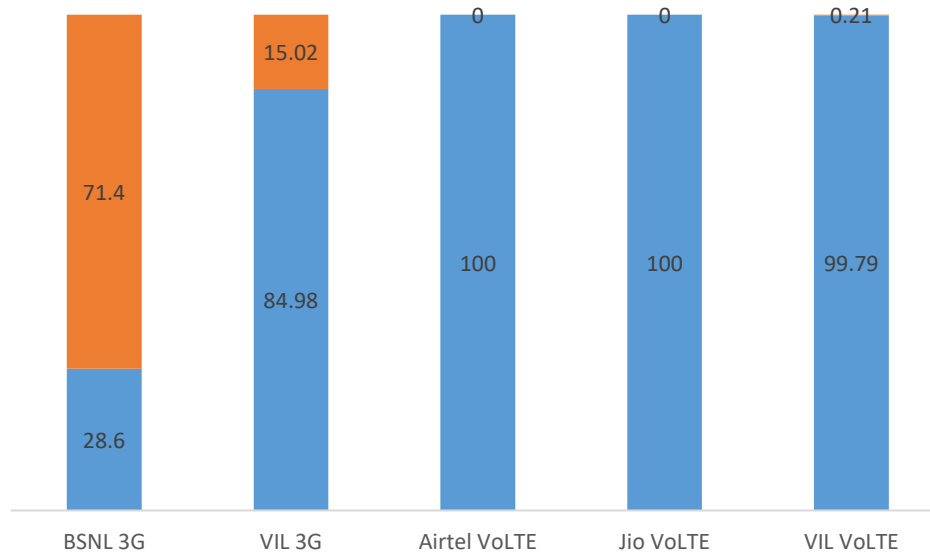


Overall SINR	# Samples	% PDF
(Min, <= -3)	559763	3.37
(-3, <=0)	976344	5.89
(0, <=5)	3329262	20.07
(5, <=10)	3045924	18.36
(10, <=15)	4541328	27.38
(15, <=Max)	4136003	24.93
Total	16588624	100

III. Technology Details

TSP	% of Time Spent on
BSNL 3G	28.6
VIL 3G	84.98
Airtel VoLTE	100
Jio VoLTE	100
VIL VoLTE	99.79

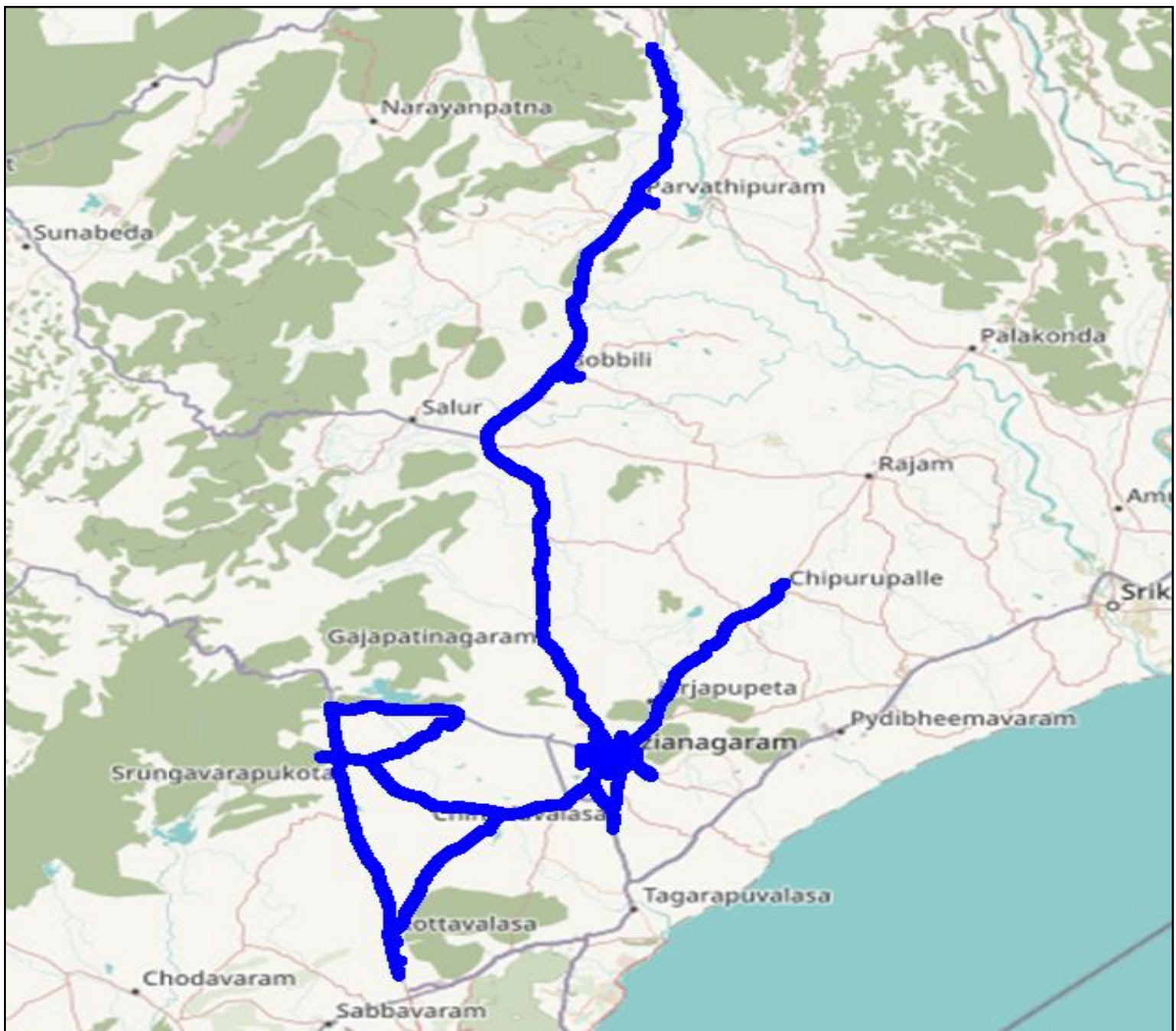
% of Time Spent on



III. Technology Details

Airtel

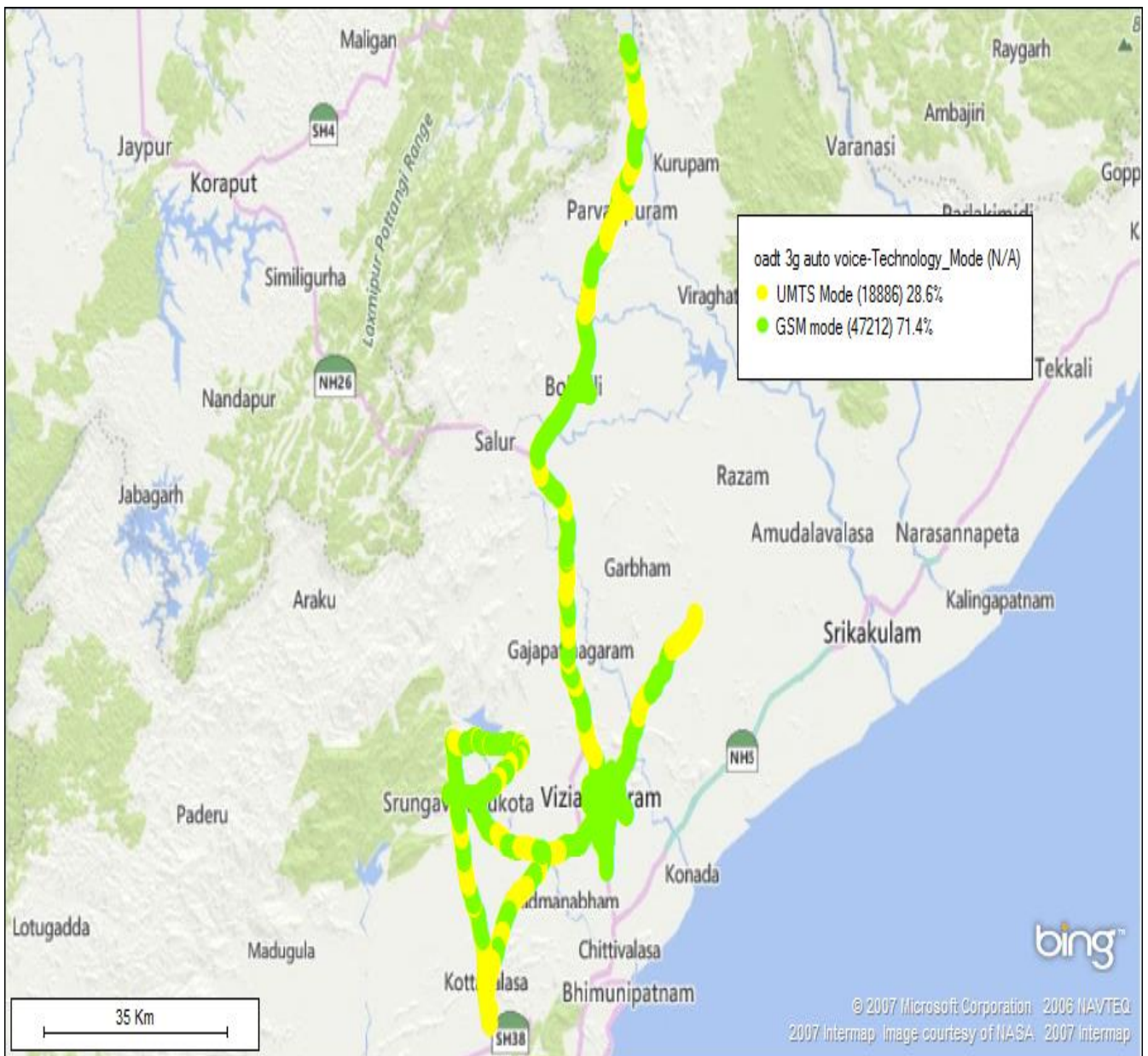
Technology	Time Spent %
3G / VoLTE	100



III. Technology Details

BSNL

Technology	Time Spent %
3G	28.6



III. Technology Details

RJIO

Technology	Time Spent %
VoLTE	100

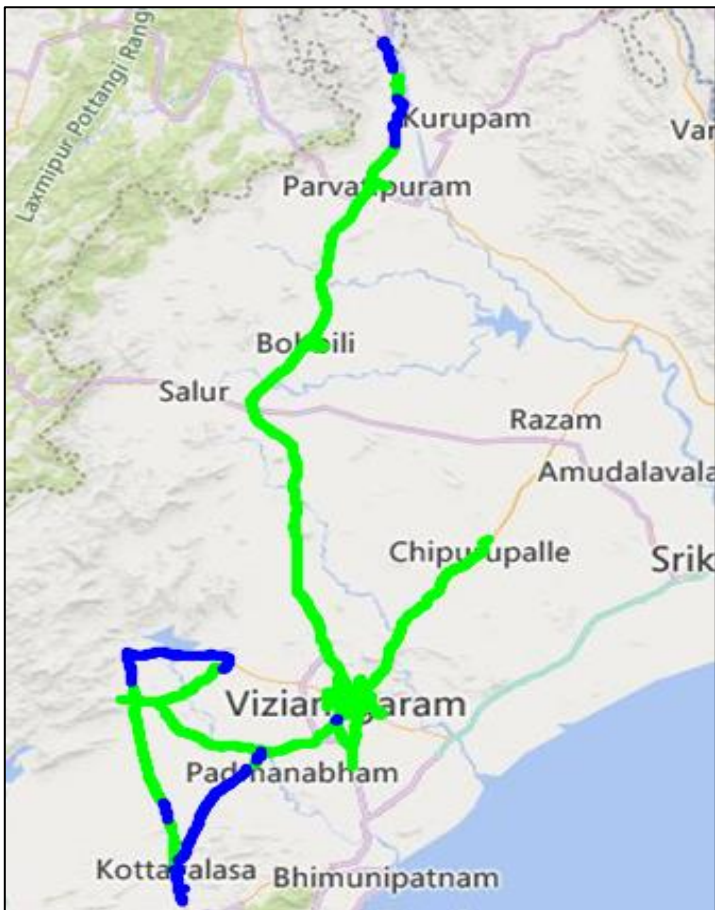


III. Technology Details

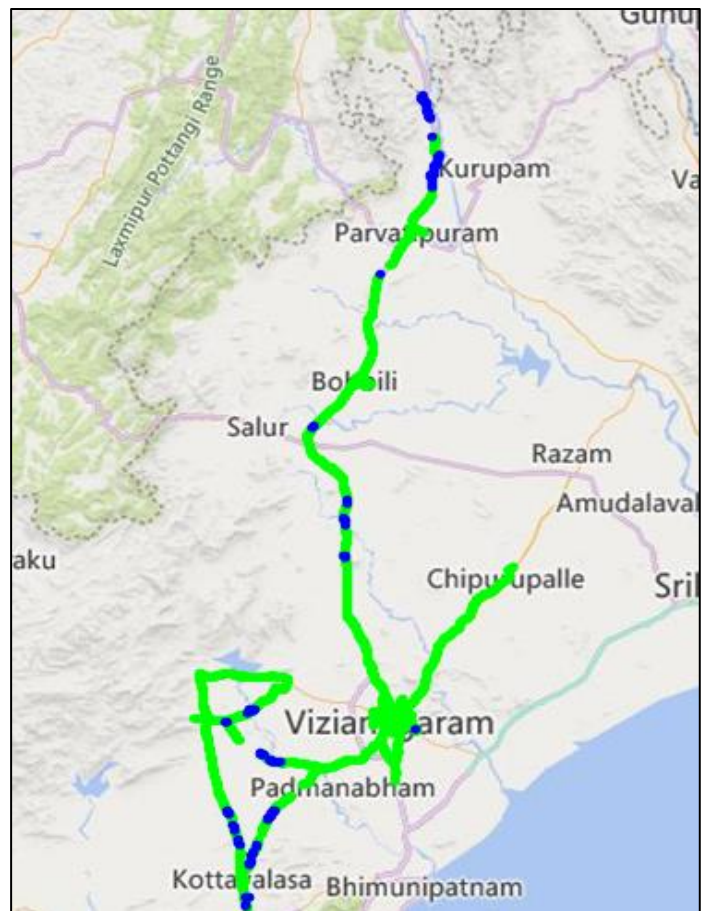
VIL

Technology	Time Spent on 3G
3G	84.98
4G	99.79

3G



4G

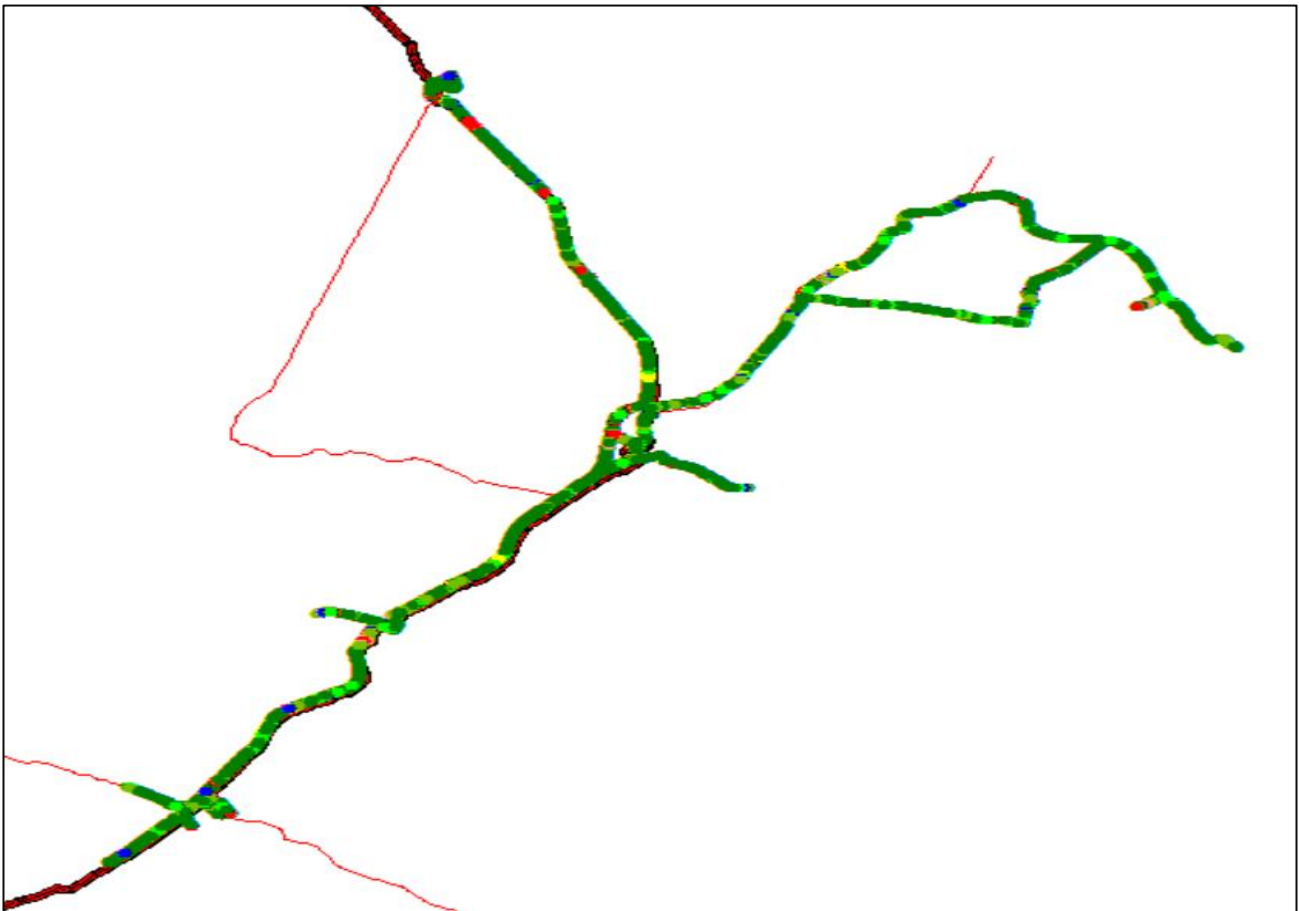


IV. Dynamic Data Test- 4G DL Details

Airtel

Data Statistics - Dynamic Complete SSA 430 Kms

Data KPIs - Overall	4G
Download Throughput (Mbps)	26.1



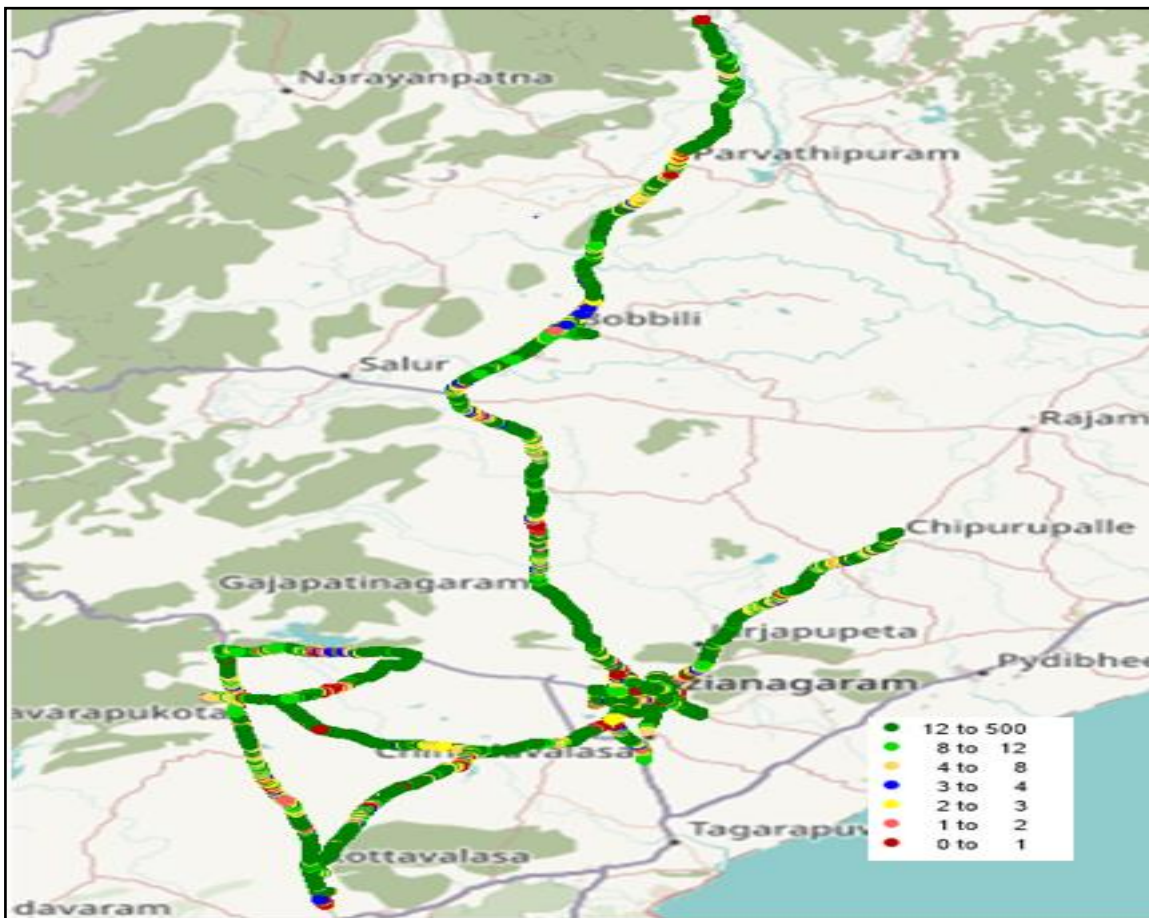
DL throughput	No of Sample	%
0 to 1 Mbps	814563	7.63
1 to 2 Mbps	152137	1.42
2 to 3 Mbps	202177	1.89
3 to 4 Mbps	195895	1.83
4 to 8 Mbps	1050498	9.84
8 to 12 Mbps	1319183	12.36
>12 Mbps	6942463	65.02

IV. Dynamic Data Test- 4G DL Details

Airtel

Data Statistics - Dynamic Complete SSA 404 Kms

Data KPIs - Overall	4G
Download Throughput (Mbps)	11.34



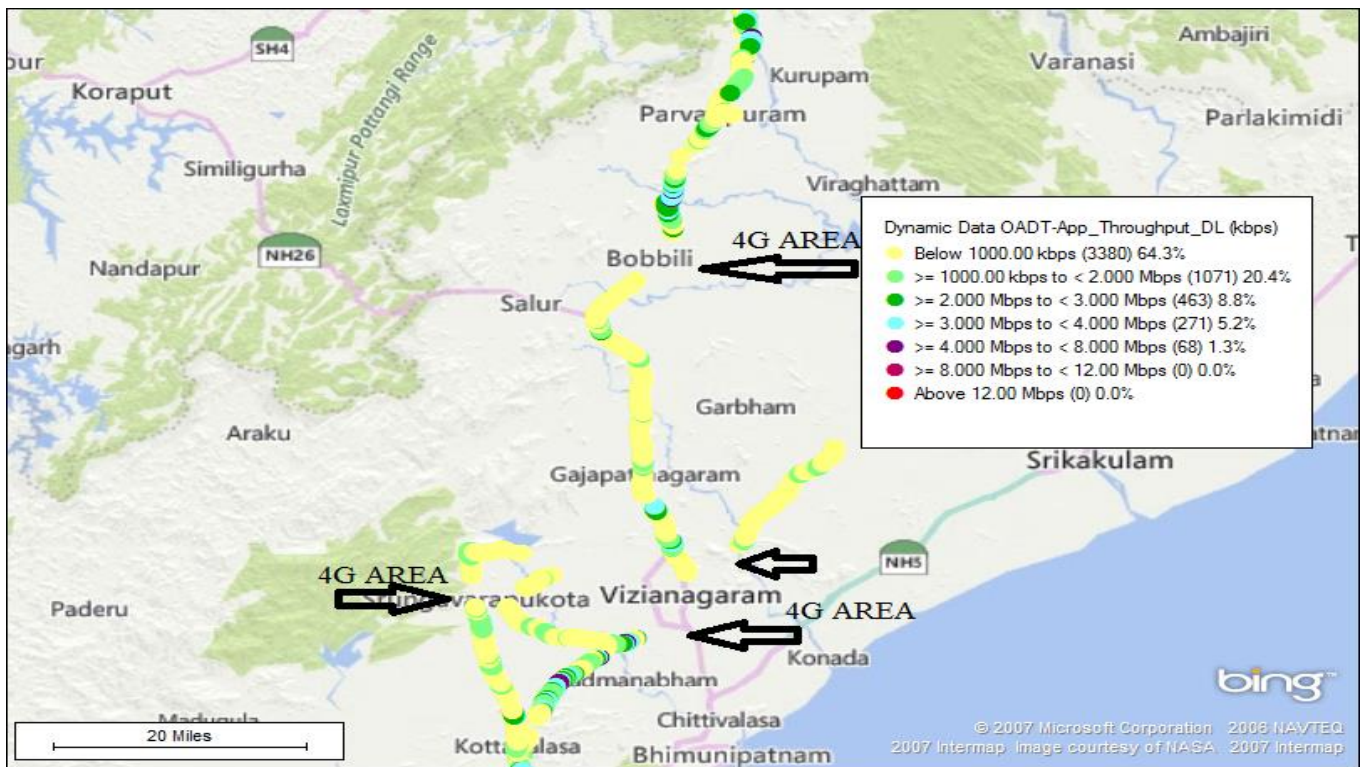
DL throughput	No of Sample	%
0 to 1 Mbps	138462	58.9
1 to 2 Mbps	26472	11.3
2 to 3 Mbps	30091	12.8
3 to 4 Mbps	9092	3.9
4 to 8 Mbps	12244	5.2
8 to 12 Mbps	5836	2.5
>12 Mbps	12822	5.46
Total	235019	

IV. Dynamic Data Test- 3G DL Details

BSNL

Data Statistics - Dynamic Complete SSA 404 Kms

Data KPIs - Overall	3G
Download Throughput (Mbps)	1.033



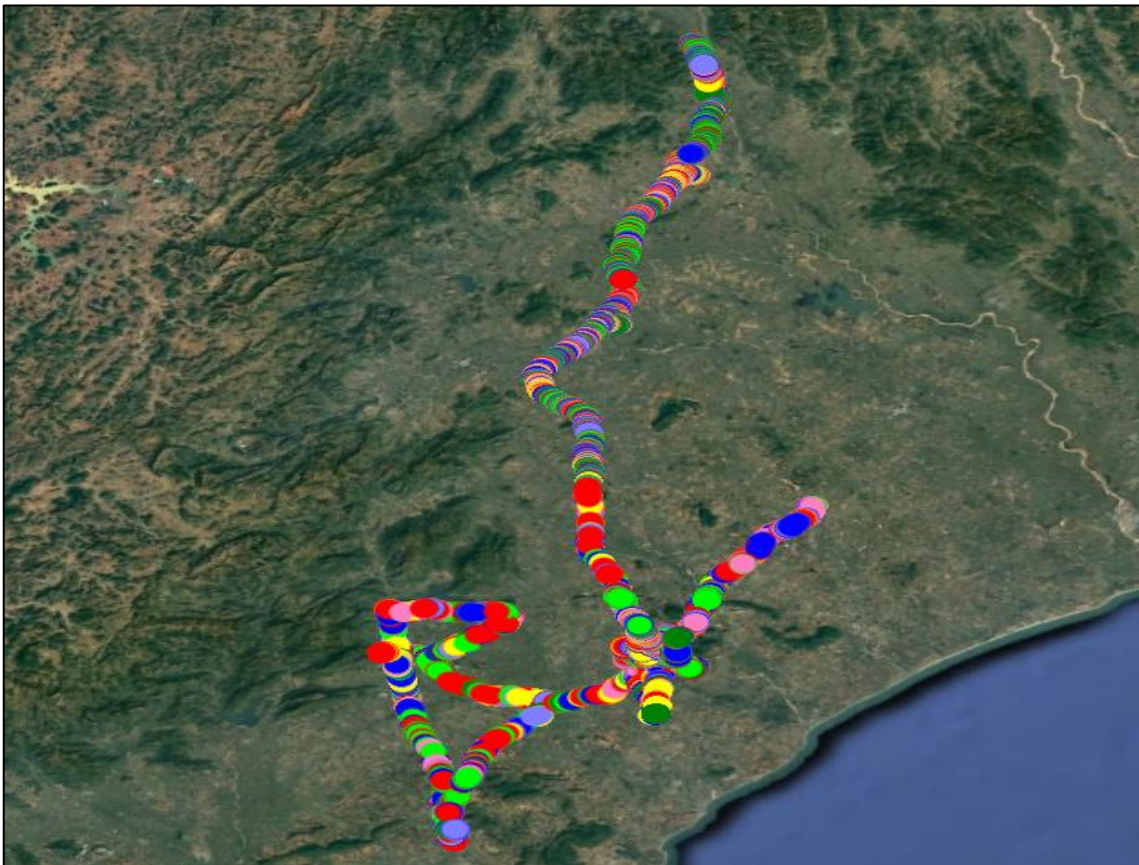
DL throughput	No of Samples	%
0 to 1 Mbps	3380	64.3
1 to 2 Mbps	1071	20.4
2 to 3 Mbps	463	8.8
3 to 4 Mbps	271	5.2
4 to 8 Mbps	68	1.3
8 to 12 Mbps	0	0
>12 Mbps	0	0

IV. Dynamic Data Test- 4G DL Details

RJIO

Data Statistics - Dynamic Complete SSA 404 Kms

Data KPIs - Overall	4G
Download Throughput (Mbps)	7.032



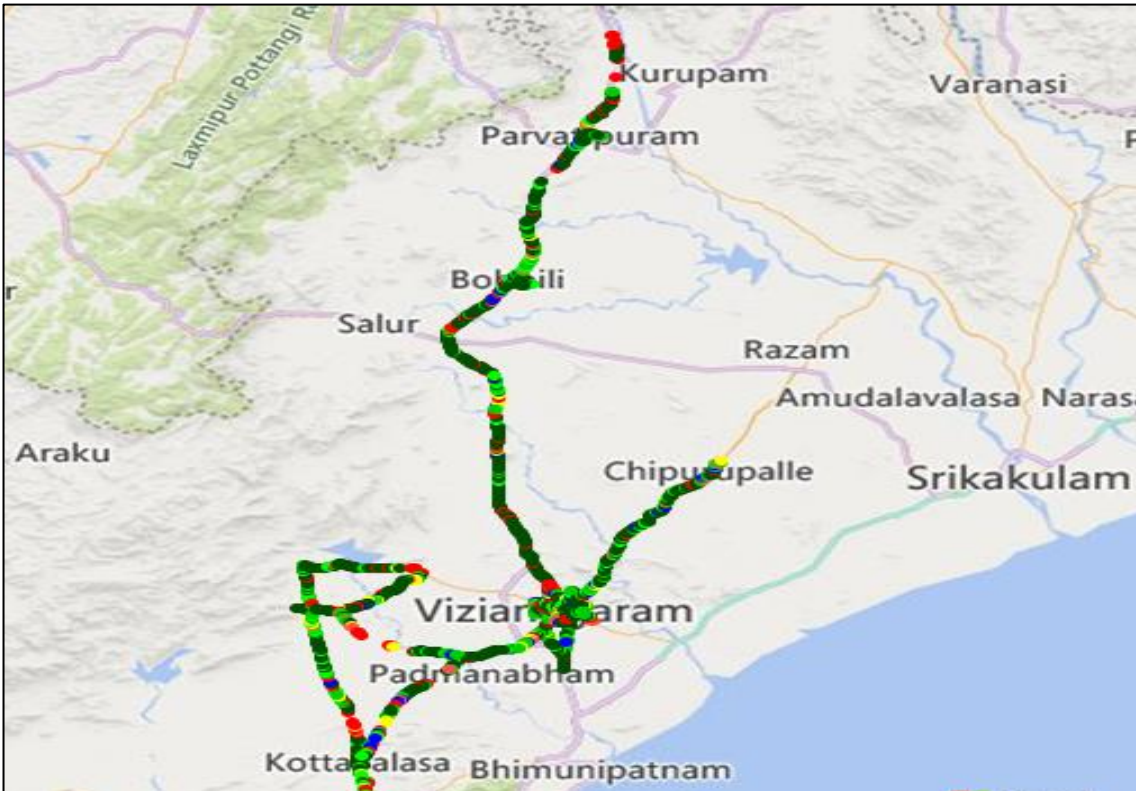
DL Throughput	No of Samples	%
0 to 1Mbps	9158	31.64
1 to 2Mbps	3931	13.58
2 to 3Mbps	6094	21.05
3 to 4Mbps	1918	6.63
4 to 8Mbps	1921	6.64
8 to 12 Mbps	2133	7.37
>12Mbps	3791	13.1

IV. Dynamic Data Test- 4G DL Details

VIL

Data Statistics - Dynamic Complete SSA 400 Kms

Data KPIs - Overall	4G
Download Throughput (Mbps)	36.615



DL throughput	No of Sample	%
0 to 1 Mbps	1192727	5.57
1 to 2 Mbps	291082	1.36
2 to 3 Mbps	4103955	19.17
3 to 4 Mbps	419656	1.96
4 to 8 Mbps	1672305	7.81
8 to 12 Mbps	1603722	7.49
>12 Mbps	12124172	56.63
Total	21407619	100

Airtel

Technology - 4G	Chepurupalli Rly station day	Parvathipuram Bus stand	SKOTA BUS STAND	Vizianagaram Rly station	Vizianagaram JNTU	Vizianagaram Govt.Hospital
Download in Mbps	38.18	61.63	74.85	55.50	77.67	68.34
Upload in Mbps	12.11	21.92	7.18	14.24	11.20	20.29

BSNL

Technology - 3G/4G	Chepurupalli Rly station-3G	Parvathipuram Bus stand-3G	SKOTA BUS STAND- 4G	Vizianagaram Rly station-4G	Vizianagaram JNTU-3G	Vizianagaram Govt.Hospital-4G
Download in Mbps	0.89	3.98	4.43	14.87	1.86	10.26
Upload in Mbps	0.86	2.16	7.28	5.95	2.94	7.20

JIO

Technology - 4G	Chepurupalli Rly station	Parvathipuram Bus stand	SKOTA BUS STAND	Vizianagaram Rly station	Vizianagaram JNTU	Vizianagaram Govt. Hospital
Download in Mbps	36.62	35.68	51.45	94.94	37.10	47.17
Upload in Mbps	8.32	56.78	27.22	12.73	5.03	28.08

VIL

Technology - 4G	Chepurupalli Rly station	Parvathipuram Bus stand	SKOTA BUS STAND	Vizianagaram Rly station	Vizianagaram JNTU	Vizianagaram Govt. Hospital
Download in Mbps	27.26	16.86	28.05	34.19	10.96	46.38
Upload in Mbps	0.63	3.91	3.52	12.03	3.26	21.7

VI. NH/SH Routes covered

NH/SH Routes covered in OADT by Airtel / BSNL / RJIL / VIL				
S No	No of NH/SH routes	NH routes	SH routes	Distance(Km)
1	Vizianagaram-Gajapathinagaram-Ramabhadrapuram	NH 26		50 Kms
2	Ramabhadrapuram – Bobbili - Kureru		SH 36	64 Kms
3	Vizianagaram-Kothavalasa-Srungavarapukota		SH 39	71 Kms
4	Srungavarapukota-Thamarapalli	NH 516E		22 Kms