

# Operator Assisted Drive Test Report

For

## Kasargod

04<sup>th</sup> to 07<sup>th</sup> Mar 2024

Kasargod – Kannur (NH 66) - 110 Kms  
(04<sup>th</sup> Mar 2024)

Kasargod & Surrounding Area - 260 Kms  
(05<sup>th</sup> to 07<sup>th</sup> Mar 2024)

### 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 3G/4G TSPs have met the Rx Quality except BSNL 3G and VIL 4G.

The Operator Assisted Drive Test has been carried out by the Regional Office, Bangalore with the help of Service Providers from **04<sup>th</sup> to 07<sup>th</sup> Mar 2024**. The drive test covered the route of **370 Kms** including NH/SH of **110 Kms** & **6** hotspots. Approximately **580** calls were made for each of the 7 networks: three 2G networks, one 3G network, and three LTE networks covering four TSPs.

Overview

Voice  
Summary

Data  
Summary

# Overview

Regional Office, TRAI Bengaluru conducted Operator Assisted Drive Test from **04<sup>th</sup> to 07<sup>th</sup> Mar 2024** covering various locations in **Kasargod & 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 a wait time of 10 sec between calls in all technologies. The drive test covered a drive route of approximately **370 Kms** including NH/SH of **110 Kms** over a period of 4 days from **04<sup>th</sup> to 07<sup>th</sup> Mar 2024**. Approximately 580 calls were made for each of the 7 networks: three 2G (Lock Mode) networks, one 3G (Dual mode) network, and three 4G networks covering 4 unique TSPs.

**Data Tests:** Dynamic data test (Test Data on Move) was conducted for **370 Kms** including NH/SH of **110 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) network, 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.**

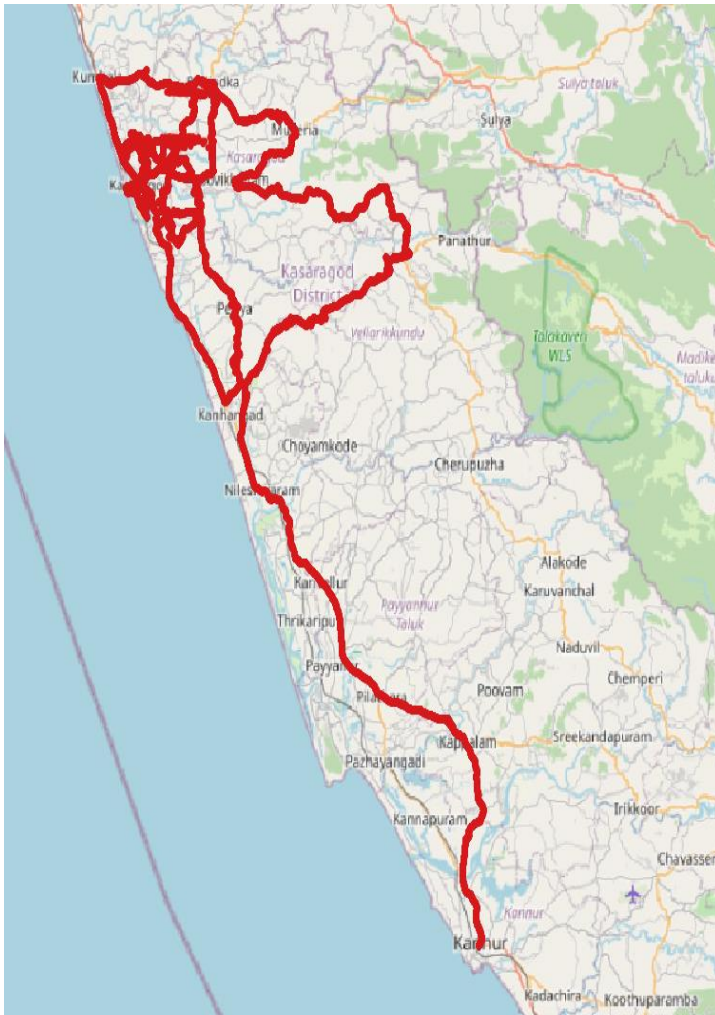
\* For Voice and Data KPI's, 2G measurement is done with UE locked on 2G, 3G measurement is done with UE in Dual mode (2G & 3G) and 4G measurement is done with UE in Free Mode.

\* 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.

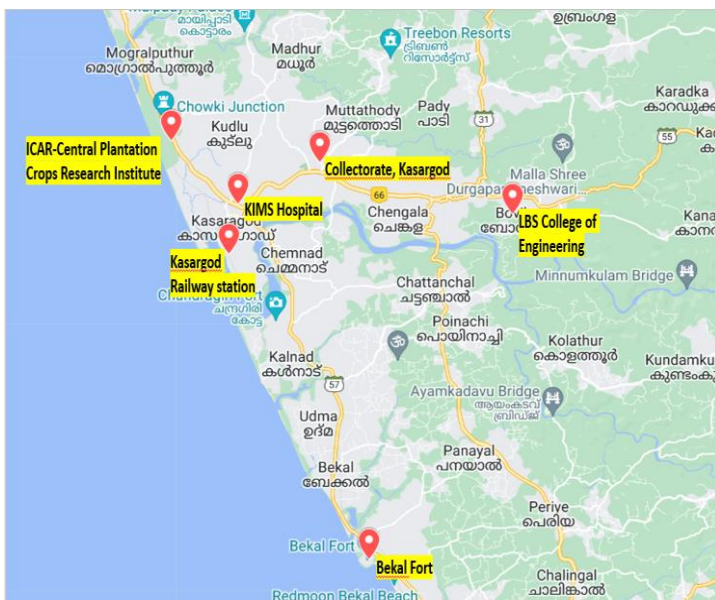
Service	Specifications
Download	2G (Locked) - 500KB, 3G (Dual) - 20 MB, 4G (Free) - 40 MB
Upload	2G (Locked) - 100KB, 3G (Dual) - 5 MB, 4G (Free) - 10 MB
Web Browsing	3 links of e/m commerce website <a href="http://www.amazon.in">www.amazon.in</a> , <a href="http://www.flipkart.com">www.flipkart.com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

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



Areas covered	
KASARGOD	ODAYANCHA
CHERKALA	KUTTIKODE
POINACHI	BANDADKA
CHERUVATHOOR	MULLERIYA
NEELESWAR	KUMBLA
PAYYANUR	BADIYADKA
THALIPARAMBU	
KANNUR	
BEKAL	
KANHAGAD	

## Data Service Test- Static Locations



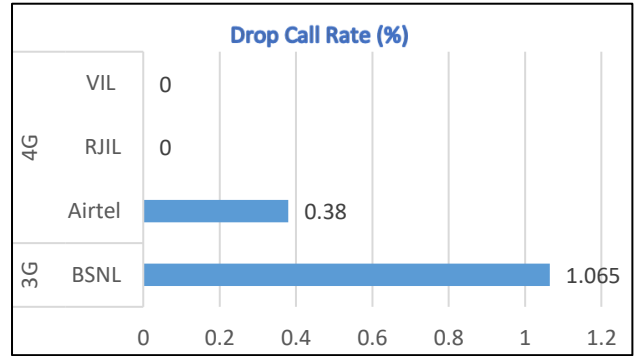
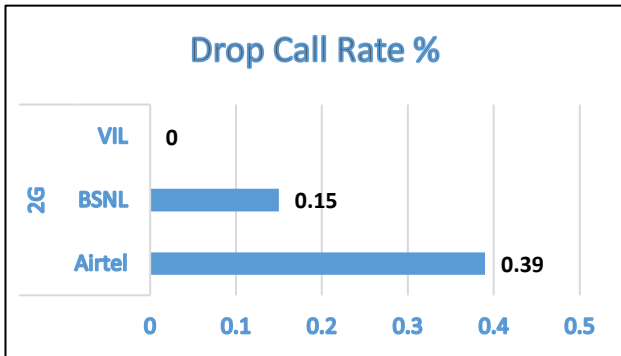
1. COLLECTORATE, KASARGOD
2. LBS COLLEGE OF ENGINEERING
3. ICAR – (CENTRAL PLANTATION CROPS RESEARCH INSTITUTE)
4. KIMS HOSPITAL
5. KASARGOD RAILWAY STATION
6. BEKAL FORT

# Voice Calls

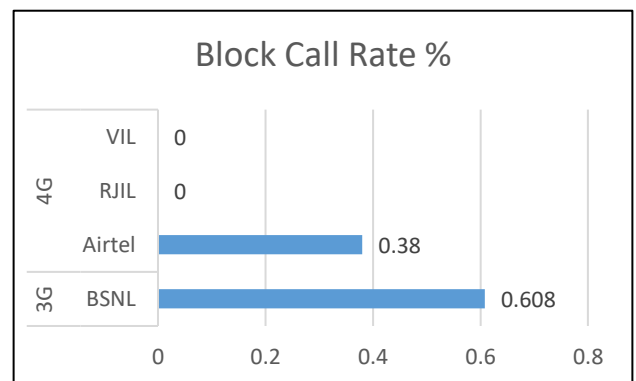
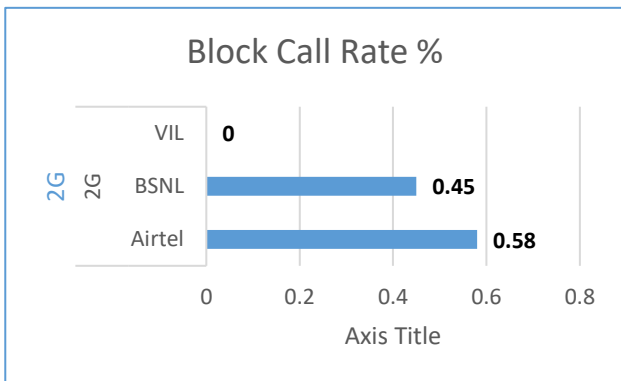
## Key Observations

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

Drop Call Rate (%)



Block Call Rate (%)



KPIs	2G			3G	4G		
	Airtel	BSNL	VIL	BSNL	Airtel	RJIL	VIL
Drop Call Rate %	0.39	0.15	0	1.065	0.38	0	0
Block Call Rate %	0.58	0.45	0	0.608	0.38	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  $\geq$  -85 dBm.

TSPs	2G		
	Airtel	BSNL	VIL
Coverage%	69.61	98.00	96.65

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

TSPs	3G	4G		
	BSNL	Airtel	JIO	VIL
Coverage %	78.80	87.10	98.10	98.53

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

TSPs	3G	4G		
	BSNL	Airtel	JIO	VIL
Time Spent on 3G/4G%	97.2	100	100	99.6

# Summary

## City Level Summary

Voice Call	2G		
	Airtel	BSNL	VIL
Call Attempt	520	671	560
Blocked Call Rate (%)	0.58	0.45	0
CSSR% (Accessibility)	99.04	99.55	100
Drop Call Rate (%)	0.39	0.15	0
Rx Quality (%)	97.82	99.5	98.15
Mobility HOSR (%)	97.84	99.84	98.51

Voice Call	3G/4G			
	BSNL 3G	Airtel 4G	JIO 4G	VIL 4G
Call Attempt	657	526	582	570
Blocked Call Rate (%)	0.608	0.38	0	0
CSSR% (Accessibility)	99.24	99.23	100	100
Drop Call Rate (%)	1.065	0.38	0	0
Rx Quality (%)	58.9	97.52	95.3	92.14
Mobility HOSR (%)	100	99.86	99.63	99.17

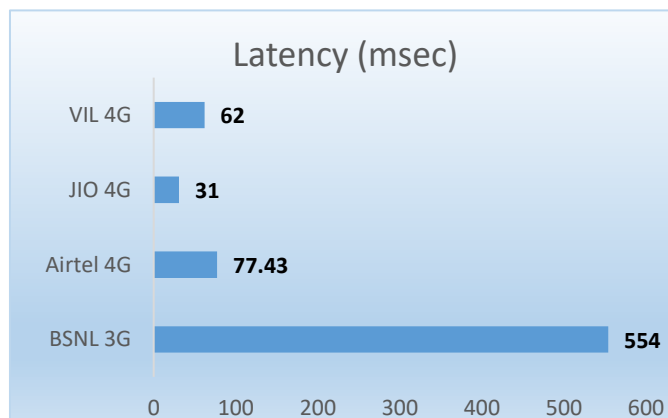
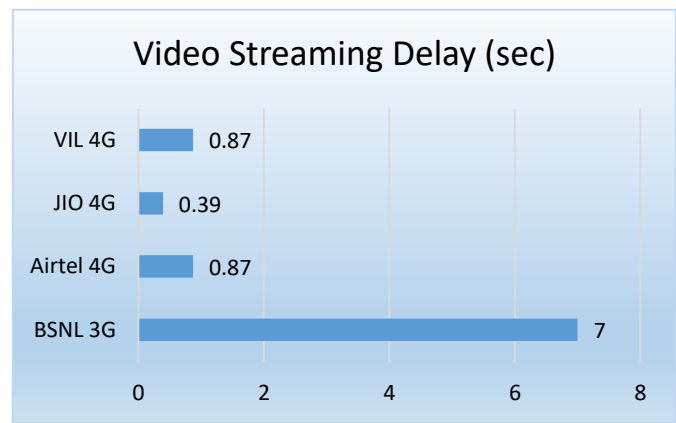
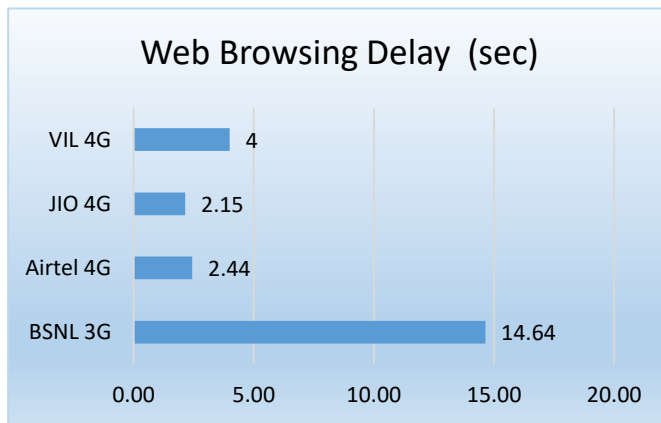
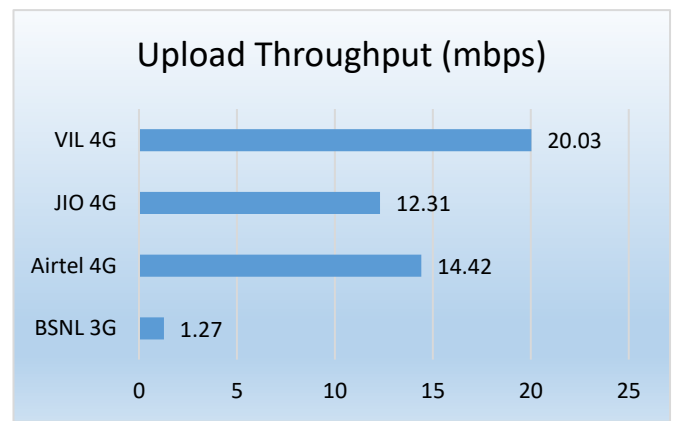
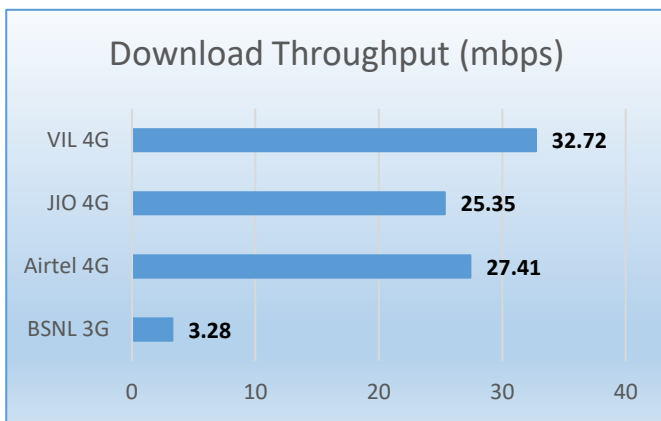
# Data Services Static

## Key Observations

Data was tested at 6 locations. The 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:



# Summary

## City Level Summary(contd.)

Data Services Static	2G		
	Airtel	BSNL	VIL
Download Throughput (kbps)	214.83	174.88	126.34
Upload Throughput (kbps)	98.85	83.7	74.73
Web Browsing Delay (sec)	50.11	79.35	53.02
Latency (msec)	381.52	463	243

Data Services Static	3G/4G			
	BSNL 3G	Airtel 4G	JIO 4G	VIL 4G
Download Throughput (mbps)	3.28	27.41	25.35	32.72
Upload Throughput (mbps)	1.27	14.42	12.31	20.03
Web Browsing Delay (sec)	14.64	2.44	2.15	4
Video Streaming Delay (sec)	7	0.87	0.39	0.87
Latency (msec)	554	77.43	31	62

Data Services Dynamic (Data Test on Move)	3G	4G		
	BSNL	Airtel	JIO	VIL
Download Throughput (mbps)	1.97	29.37	9.06	19.72
Upload Throughput (mbps)	1.295	3.47	3.85	17.65



# Summary

## City Level Data Services Static(contd.)

Data Services Static – Collectorate	2G		
	Airtel	BSNL	VIL
Download Throughput (kbps)	183.22	141.99	125.23
Upload Throughput (kbps)	85.24	91.262	78.75
Web Browsing Delay (sec)	55.19	84.59	58.91
Latency (ms)	396.2	471	179

Data Services Static – Collectorate	3G	4G		
	BSNL	Airtel	JIO	VIL
Download Throughput (Mbps)	1.83	9.18	32.6	22.22
Upload Throughput (Mbps)	1.2	23.78	16.4	17.38
Web Browsing Delay (sec)	20.32	2.35	1.8	4.12
Video Streaming Delay (sec)	10.3	0.85	0.3	0.84
Latency (ms)	815	63.4	32.8	64

Data Services Static – LBS College of Engg	2G		
	Airtel	BSNL	VIL
Download Throughput (kbps)	243.2	128.48	138.41
Upload Throughput (kbps)	115.56	94.84	57.146
Web Browsing Delay (sec)	61.7	80.41	58.472
Latency (msec)	378.4	439	338

Data Services Static - LBS College of Engg	3G	4G		
	BSNL	Airtel	JIO	VIL
Download Throughput (Mbps)	3.05	12.14	10	22.28
Upload Throughput (Mbps)	1.25	7.76	13.2	16.142
Web Browsing Delay (sec)	17.62	3.04	2.2	4.19
Video Streaming Delay (sec)	8.2	0.73	0.31	0.89
Latency (ms)	378	72.6	32	70.8

# Summary

## City Level Data Services Static(contd.)

Data Services Static – ICAR	2G		
	Airtel	BSNL	VIL
Download Throughput (kbps)	227.26	173.41	117.17
Upload Throughput (kbps)	83.8	77.69	74.89
Web Browsing Delay (sec)	45.48	82.03	57.726
Latency (ms)	434	517.99	130

Data Services Static – ICAR	3G	4G		
	BSNL	Airtel	JIO	VIL
Download Throughput (Mbps)	2.98	40.68	30.8	32.27
Upload Throughput (Mbps)	1.19	4.47	6.2	15.66
Web Browsing Delay (sec)	14.86	2.15	1.8	3.64
Video Streaming Delay (sec)	7.02	0.82	0.38	0.78
Latency (ms)	506.74	67	24	64

Data Services Static – KIMS	2G		
	Airtel	BSNL	VIL
Download Throughput (kbps)	212.02	162.85	166.9
Upload Throughput (kbps)	96.86	75.7	63.55
Web Browsing Delay (sec)	52.97	78.75	50.844
Latency (msec)	323	429	347

Data Services Static – KIMS	3G	4G		
	BSNL	Airtel	JIO	VIL
Download Throughput (Mbps)	2.76	38.65	32.4	36.09
Upload Throughput (Mbps)	1.37	9.02	12	18.19
Web Browsing Delay (sec)	12.24	3.06	2.68	4.1
Video Streaming Delay (sec)	5.21	0.72	0.35	0.94
Latency (ms)	640	88	34	56

# Summary

## City Level Data Services Static(contd.)

Data Services Static – Railway Station	2G		
	Airtel	BSNL	VIL
Download Throughput (kbps)	209.78	216.80	113.46
Upload Throughput (kbps)	121.2	84.33	97.87
Web Browsing Delay (sec)	49.67	78.42	45.05
Latency (ms)	350	465.42	224

Data Services Static – Railway Station	3G	4G		
	BSNL	Airtel	JIO	VIL
Download Throughput (Mbps)	3.29	26.74	17.98	35.8
Upload Throughput (Mbps)	1.33	14.62	14.34	44.43
Web Browsing Delay (sec)	12.52	2.11	2.18	3.97
Video Streaming Delay (sec)	5.87	1.29	0.61	0.89
Latency (ms)	452	112	32	49

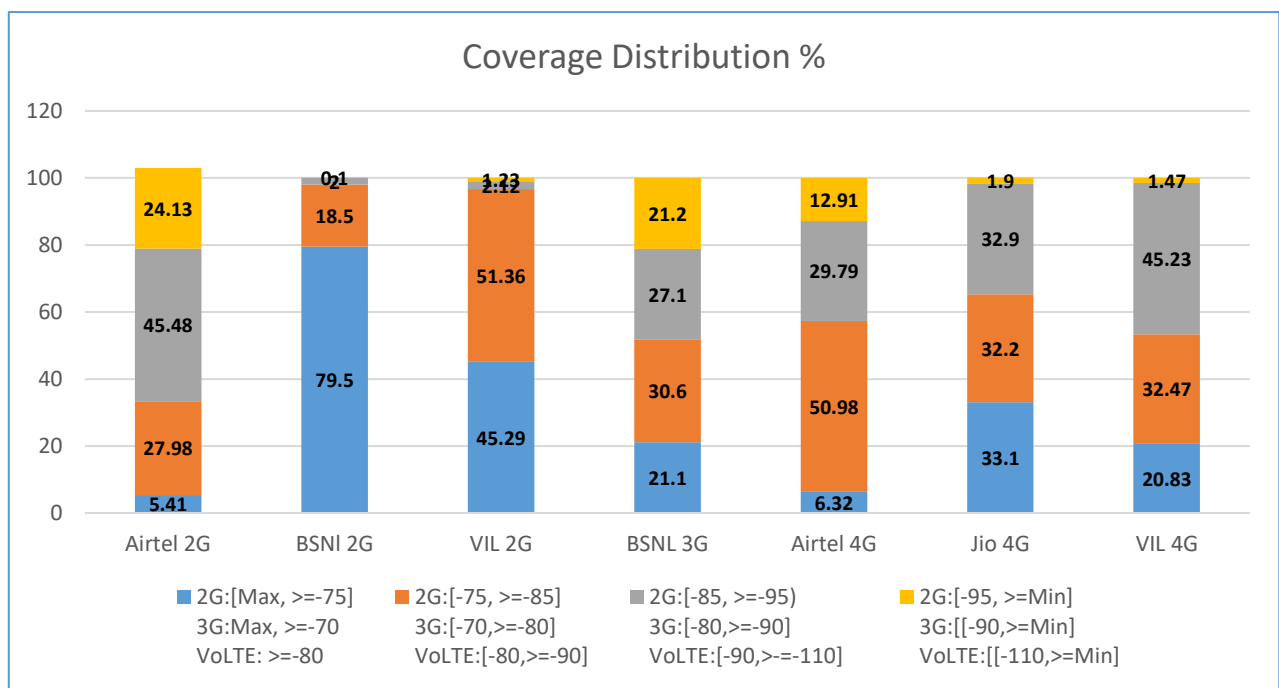
Data Services Static – Bakel Fort	2G		
	Airtel	BSNL	VIL
Download Throughput (kbps)	213.52	225.77	96.87
Upload Throughput (kbps)	90.42	78.37	76.14
Web Browsing Delay (sec)	35.67	71.93	47.12
Latency (msec)	408	454.73	237

Data Services Static – Bakel Fort	3G	4G		
	BSNL	Airtel	JIO	VIL
Download Throughput (Mbps)	5.75	37.07	28.3	47.66
Upload Throughput (Mbps)	1.3	26.89	11.1	8.41
Web Browsing Delay (sec)	10.31	1.92	2.26	4
Video Streaming Delay (sec)	5.52	0.84	0.38	0.86
Latency (ms)	533	62	30	65

# 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  $\geq -110$  dBm. The details are as follows.

TSP	Coverage Rate %
Airtel 2G	69.61
BSNI 2G	98.00
VIL 2G	96.65
BSNL 3G	78.80
Airtel VoLTE	87.10
Jio VoLTE	98.10
VIL VoLTE	98.53

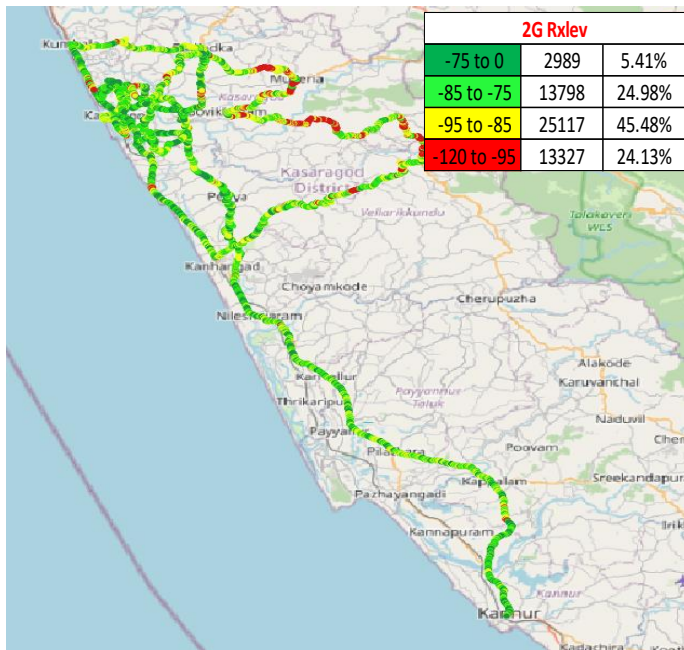


# I. Coverage Details

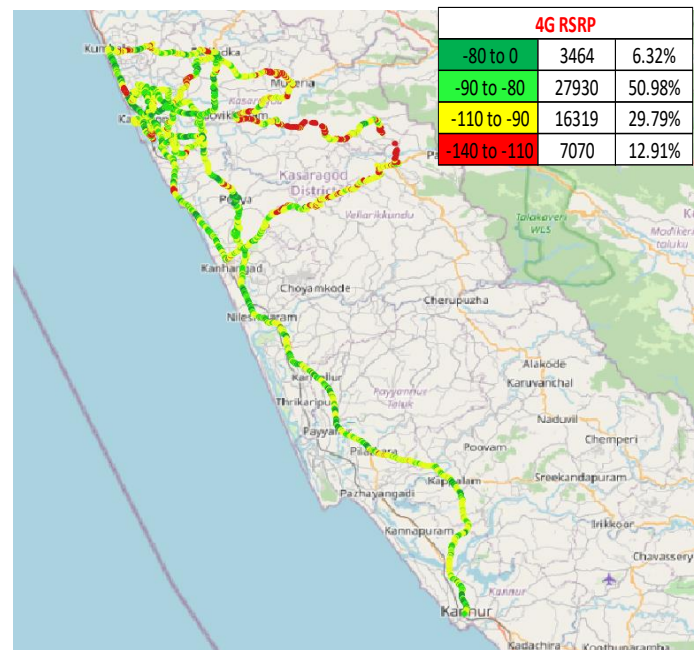
## AIRTEL

Technology	Coverage Rate %
2G	69.61
4G	87.10

### 2G



### 4G



2G		
Overall RxLevel	# Samples	% PDF
[Max, >=-75]	2989	5.41
[-75, >=-85)	13798	24.98
[-85, >=-95)	25117	45.48
[-95, >=Min)	13327	24.13
<b>Total</b>	<b>55231</b>	<b>100</b>

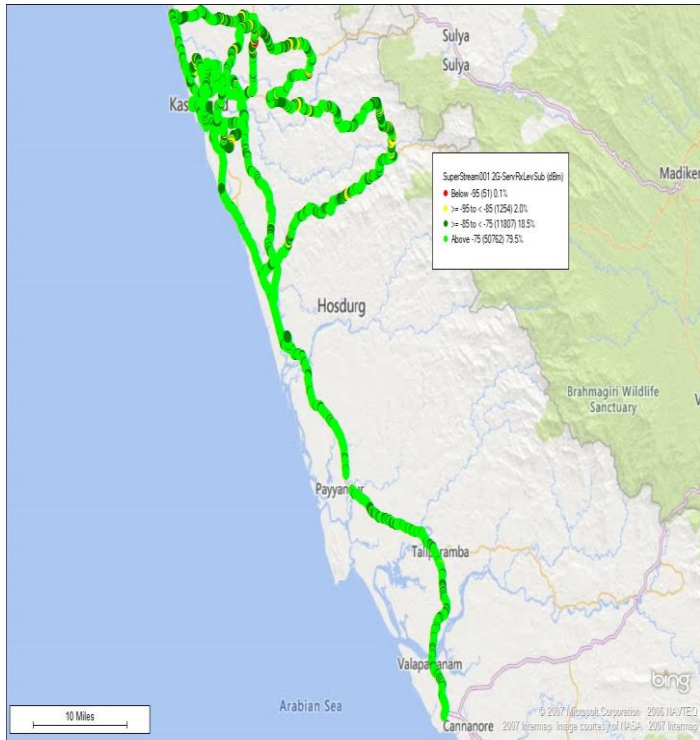
4G/VoLTE		
Overall RSRP	# Samples	% PDF
[Max, >=-80]	3464	6.32
[-80, >=-90)	27930	50.98
[-90, >=-110)	16319	29.79
[-110, >=Min)	7070	12.91
<b>Total</b>	<b>54777</b>	<b>100</b>

# I. Coverage Details

## BSNL

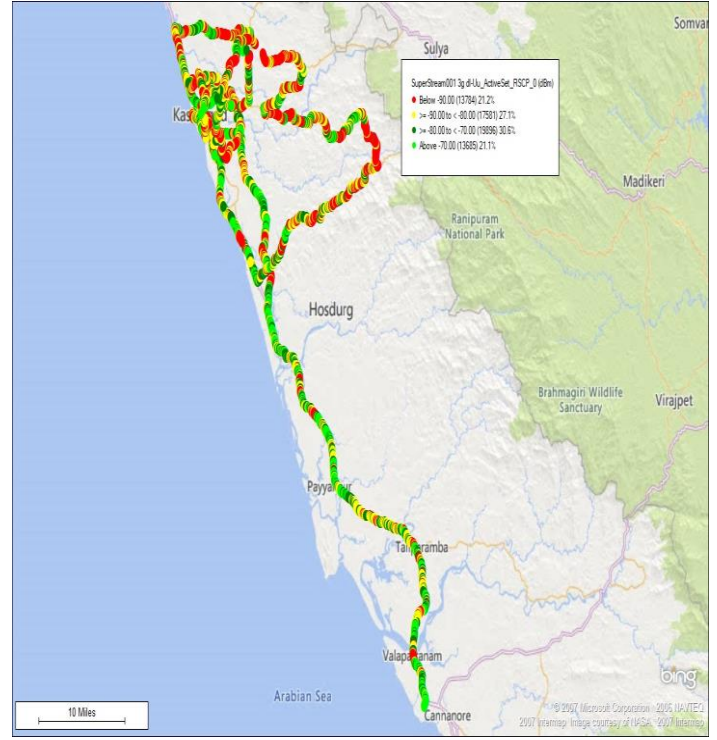
Technology	Coverage Rate %
2G	98
3G	78.8

### 2G



Overall RxLevel	# Samples	% PDF
[Max, >=-75]	50762	79.5
[-75, >=-85]	11807	18.5
[-85, >=-95]	1254	2
[-95, >=Min]	51	0.1
<b>Total</b>	<b>63874</b>	<b>100</b>

### 3G



Overall RSCP	# Samples	% PDF
[Max, >=-70]	13685	21.1
[-70, >=-80]	19896	30.6
[-80, >=-90]	17581	27.1
[-90, >=Min]	13784	21.2
<b>Total</b>	<b>64946</b>	<b>100</b>

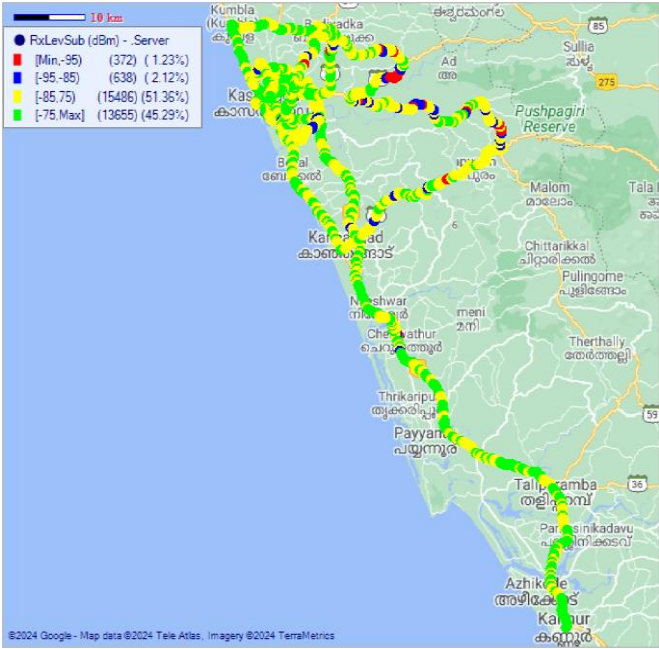


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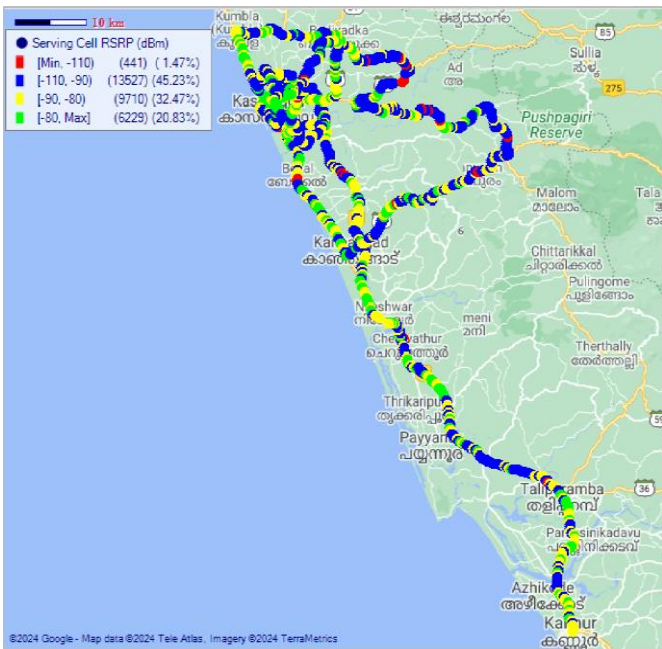
## VIL

Technology	Coverage Rate %
2G	96.65
4G	98.53

### 2G



### 4G



2G		
Overall RxLevel	# Samples	% PDF
[Max, >=-75]	13655	45.29
[-75, >=-85]	15486	51.36
[-85, >=-95]	638	2.12
[-95, >=Min]	372	1.23
<b>Total</b>	<b>30151</b>	<b>100</b>

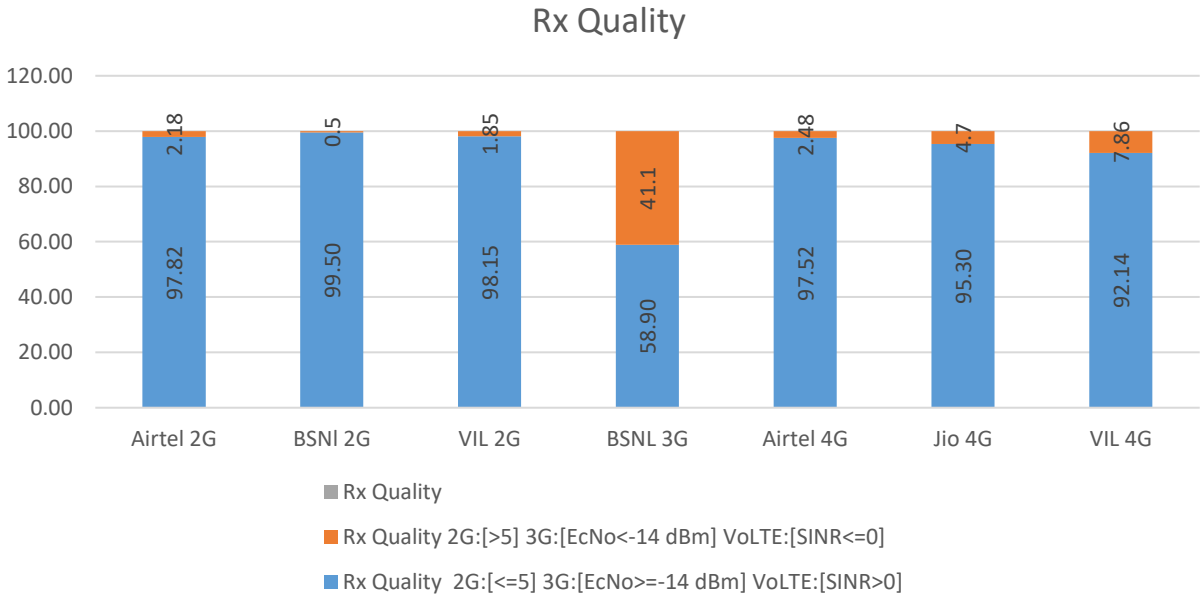
4G/VoLTE		
Overall RSRP	# Samples	% PDF
[Max, >=-80]	6229	20.83
[-80, >=-90]	9710	32.47
[-90, >=-110]	13527	45.23
[-110, >=Min]	441	1.47
<b>Total</b>	<b>29907</b>	<b>100</b>



## II. Quality Details

For measuring voice quality, as per the QoS norms, RxQual  $\leq 5$  for GSM TSPs, EcNo  $\geq -14$  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	<b>97.82</b>
BSNI 2G	<b>99.50</b>
VIL 2G	<b>98.15</b>
BSNL 3G	<b>58.90</b>
Airtel VoLTE	<b>97.52</b>
Jio VoLTE	<b>95.30</b>
VIL VoLTE	<b>92.14</b>

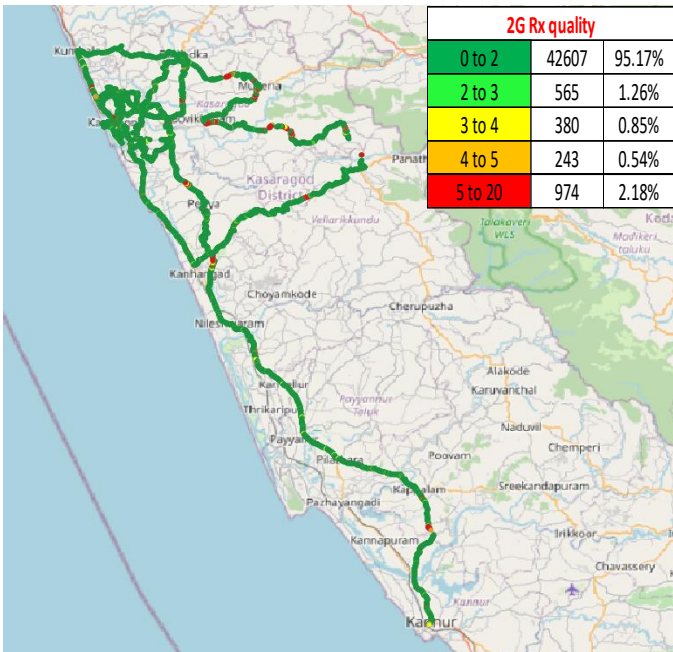


# II. Quality Details

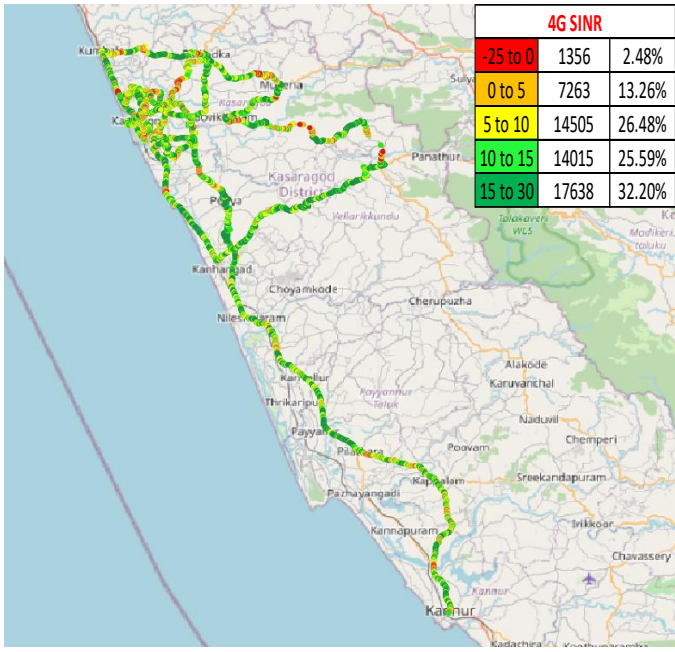
## Airtel

Technology	Rx Quality %
2G	97.82
4G	97.52

### 2G



### 4G



Overall Rx Quality	# Samples	% PDF
(Min, <=2)	42607	95.17%
(2, <=3)	565	1.26%
(3, <=4)	380	0.85%
(4, <=5)	243	0.54%
(5, <=Max)	974	2.18%
<b>Total</b>	<b>44769</b>	<b>100</b>

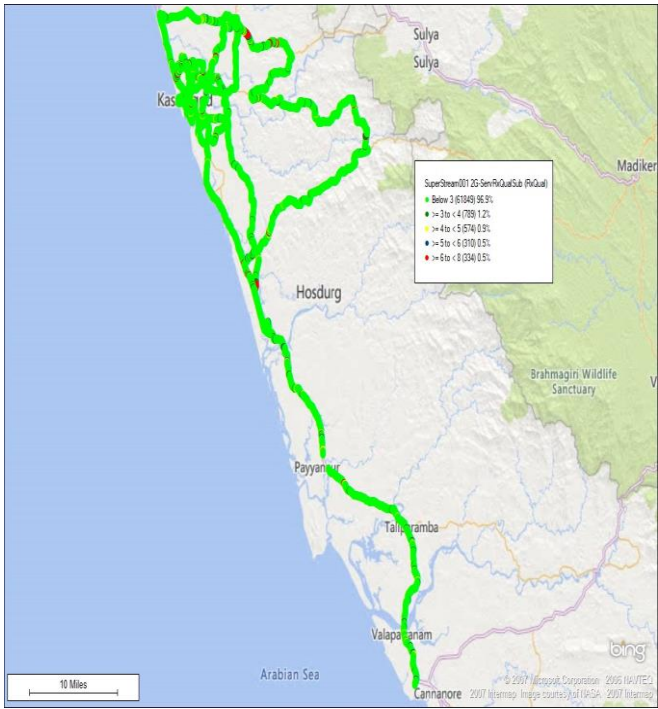
Overall SINR	# Samples	% PDF
(Min, <=0)	1356	2.48%
(0, <=5)	7263	13.26%
(5, <=10)	14505	26.48%
(10, <=15)	14015	25.59%
(15, <=Max)	17638	32.20%
<b>Total</b>	<b>54777</b>	<b>100</b>

# II. Quality Details

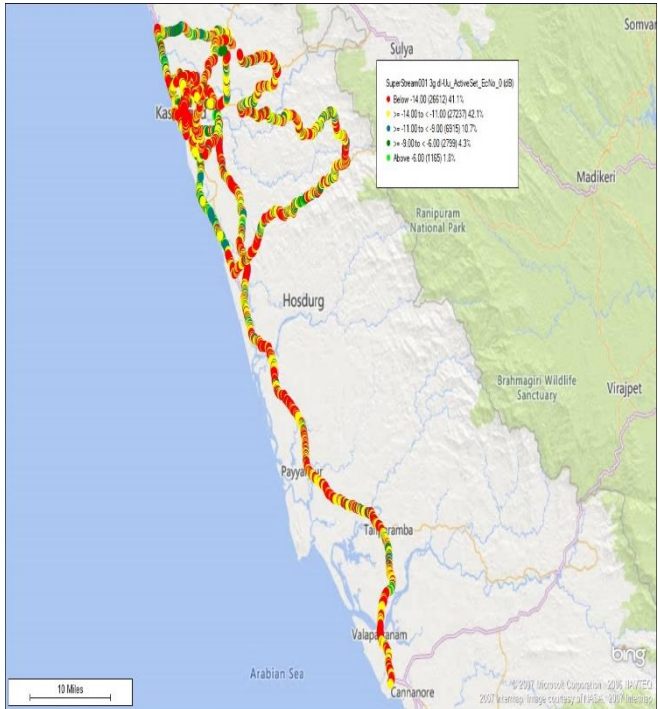
## BSNL

Technology	Rx Quality %
2G	99.5
3G	58.9

### 2G



### 3G



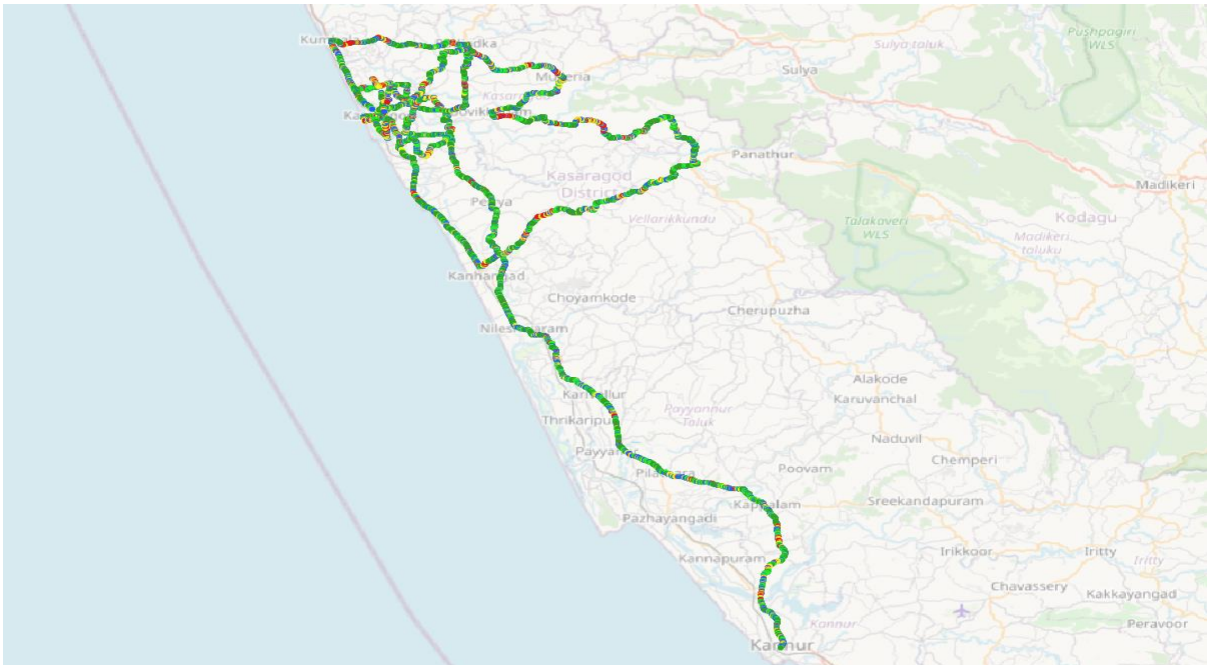
Overall Rx Quality	# Samples	% PDF
(Min, <=2)	61849	96.9
(2, <=3)	789	1.2
(3, <=4)	574	0.9
(4, <=5)	310	0.5
(5, <=Max)	334	0.5
<b>Total</b>	<b>63856</b>	<b>100</b>

Overall EcNo	# Samples	% PDF
(Max, <=-6)	1165	1.8
(-6, <=-9)	2799	4.3
(-9, <=-11)	6915	10.7
(-11, <=-14)	27237	42.1
(-14, <= Min)	26612	41.1
<b>Total</b>	<b>64728</b>	<b>100</b>

## II. Quality Details

### JIO

Technology	Rx Quality (%)
4G/4G	95.3



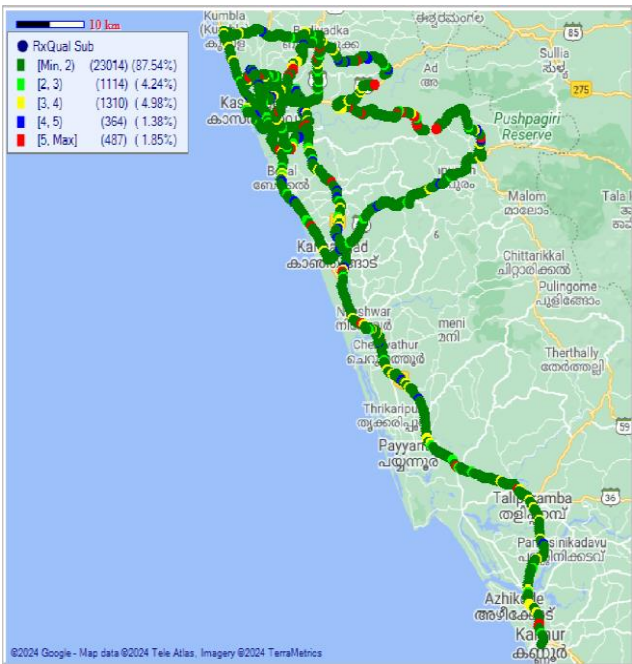
Overall SINR	# Samples	% PDF
(Min, <=0)	2992	4.7
(0, <=5)	7939	12.6
(5, <=10)	12287	19.5
(10, <=15)	14369	22.7
(15, <=Max)	25578	40.5
<b>Total</b>	<b>63165</b>	<b>100</b>

# II. Quality Details

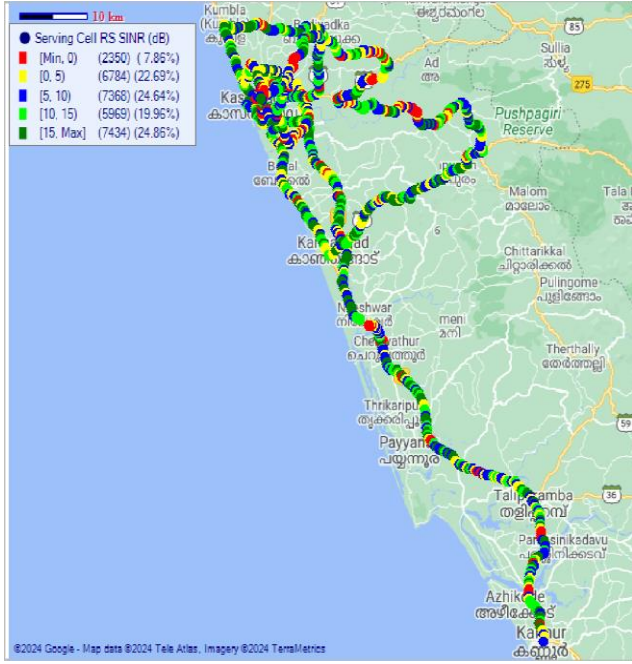
## VIL

Technology	Rx Quality %
2G	<b>98.15</b>
4G	<b>92.14</b>

### 2G



### 4G

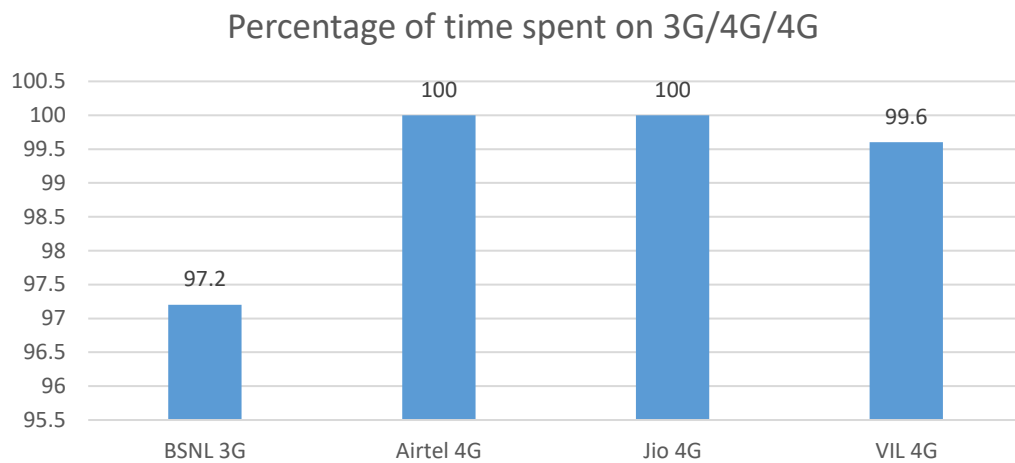


Overall Rx Quality	# Samples	% PDF
(Min, <=2)	23014	87.54
(2, <=3)	1114	4.24
(3, <=4)	1310	4.98
(4, <=5)	364	1.38
(5, <=Max)	487	1.85
<b>Total</b>	<b>26289</b>	<b>100.00</b>

Overall SINR	# Samples	% PDF
(Min, <=0)	2350	7.86
(0, <=5)	6784	22.69
(5, <=10)	7368	24.64
(10, <=15)	5969	19.96
(15, <=Max)	7434	24.86
<b>Total</b>	<b>29905</b>	<b>100</b>

### III. Technology Details

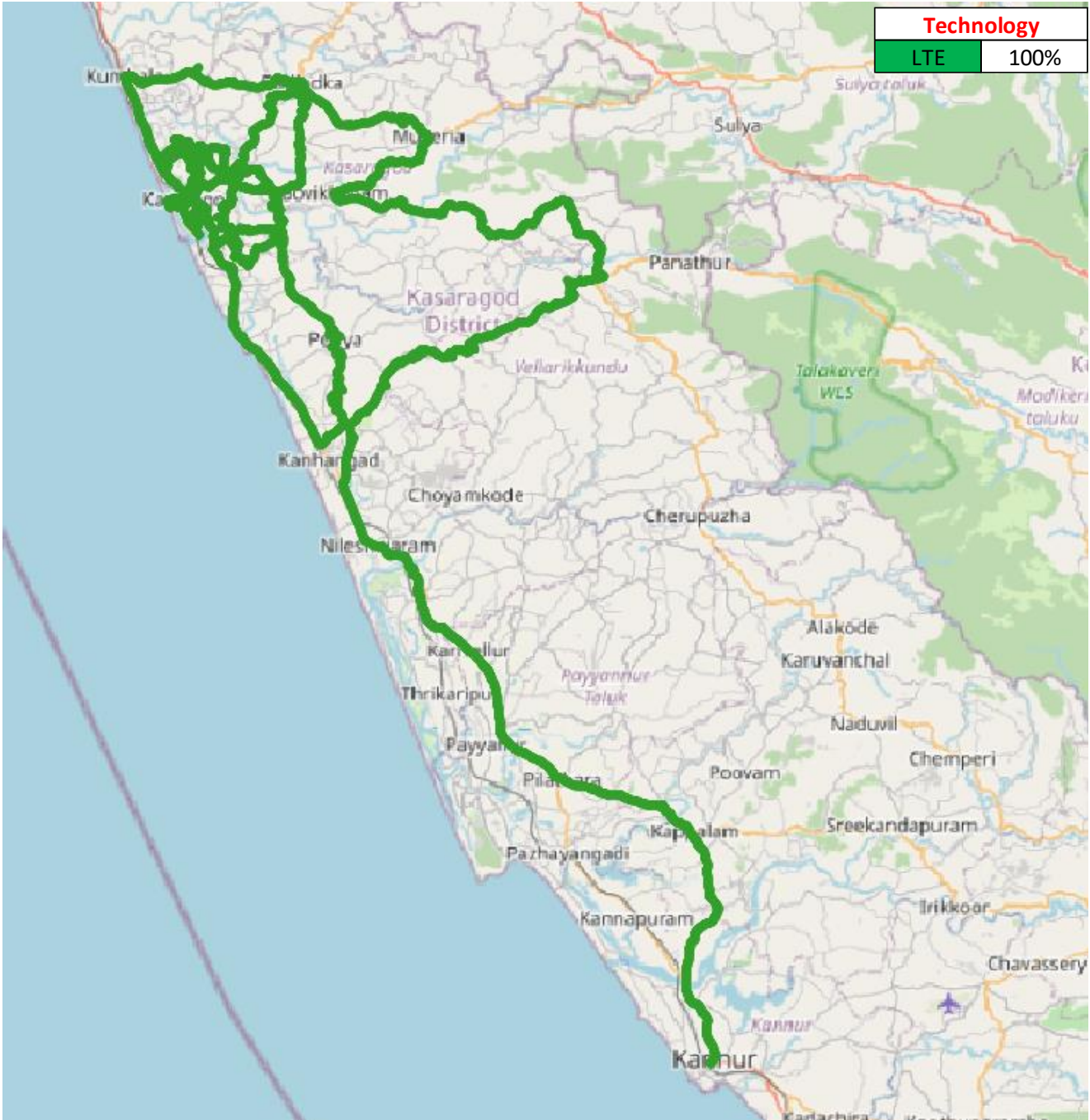
TSP	Time Spent on 3G/4G %
BSNL 3G	97.2
Airtel VoLTE	100
Jio VoLTE	100
VIL VoLTE	99.6



# III. Technology Details

## Airtel

Technology	Time Spent %
4G	100

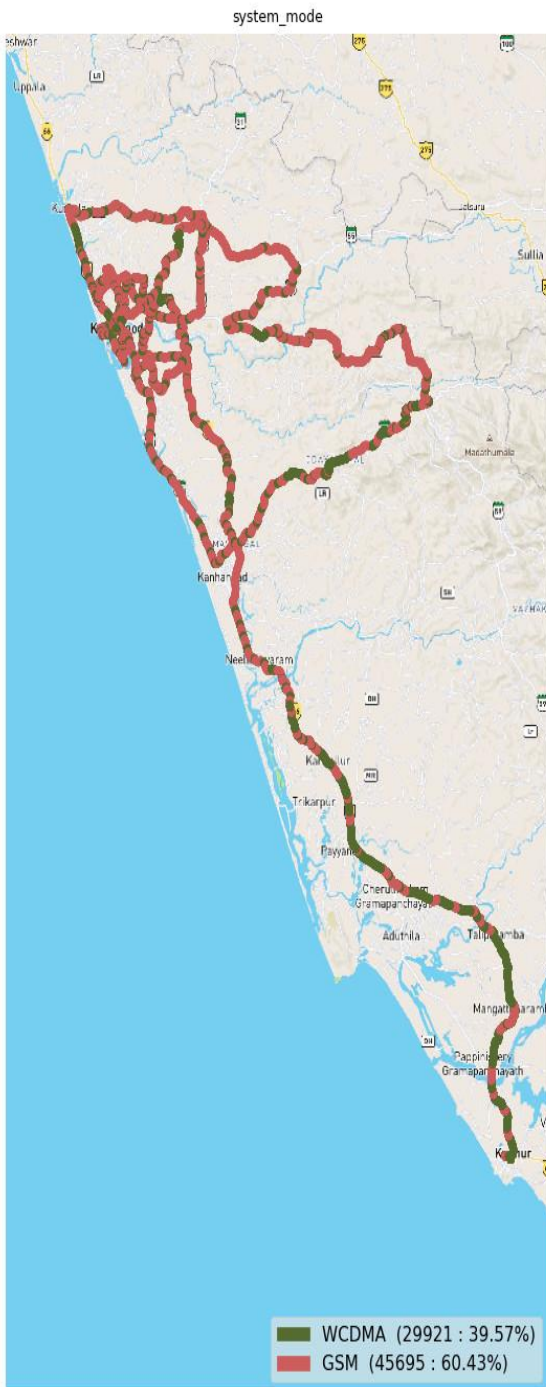


### III. Technology Details

#### BSNL

Technology	Time Spent %
3G	97.2

Technology Plot of complete SSA 34G)

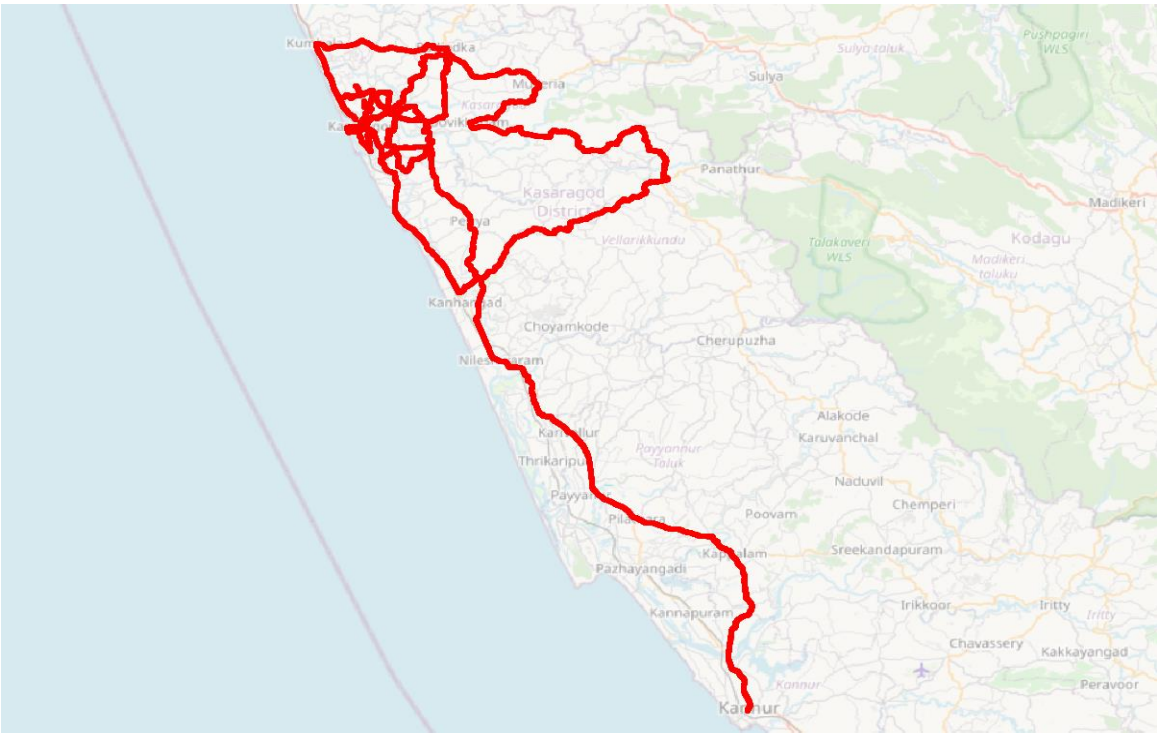




# III. Technology Details

## JIO

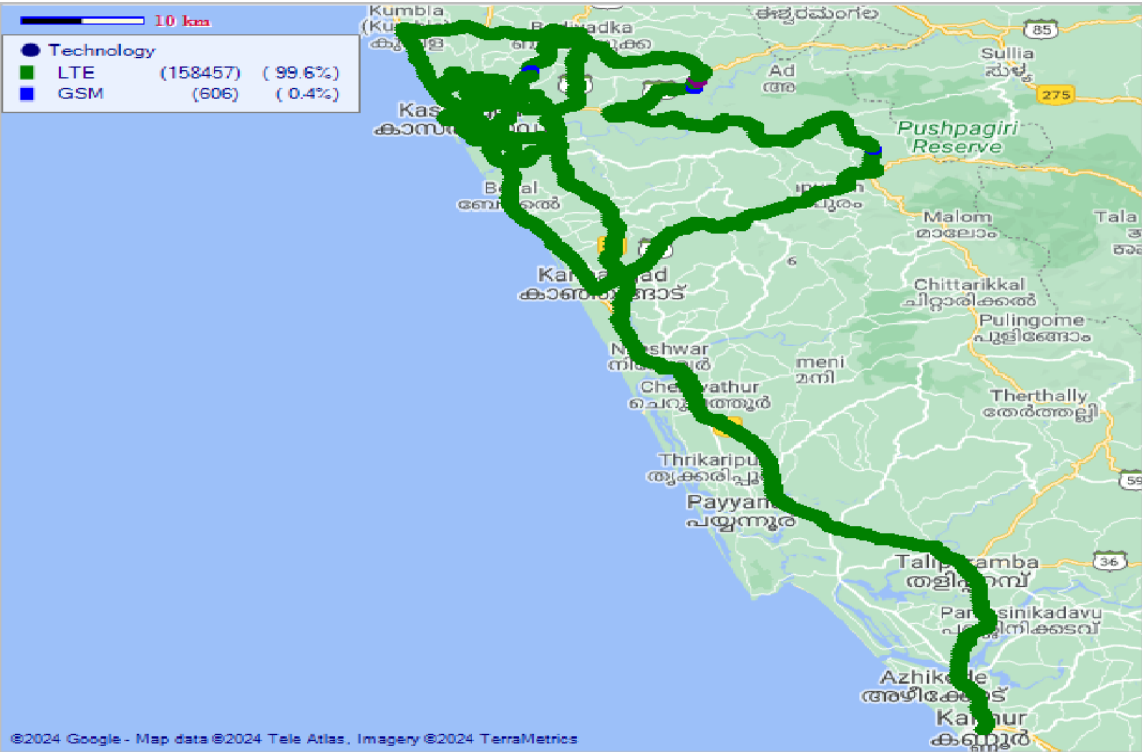
Technology	Time Spent %
4G	100



# III. Technology Details

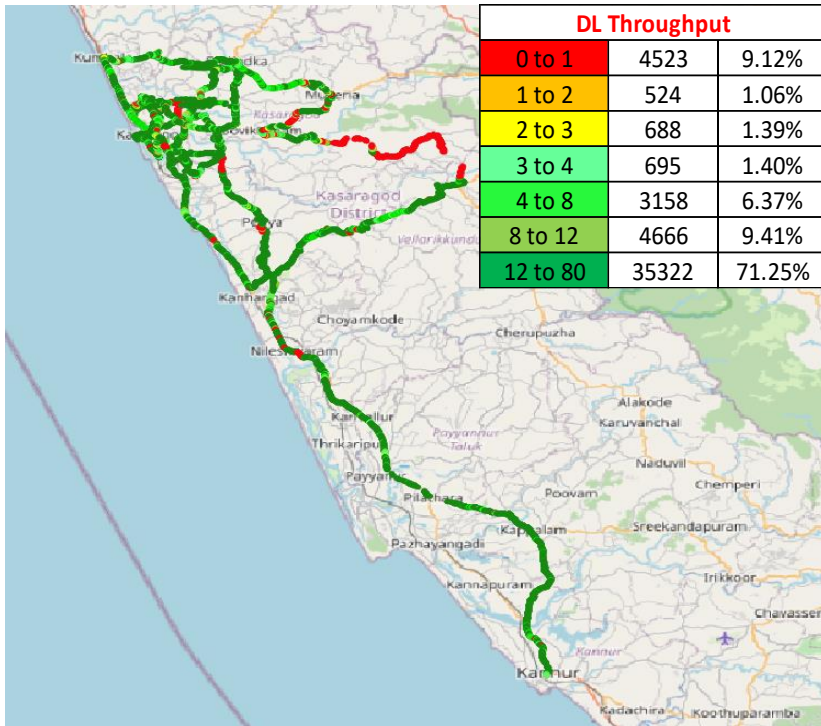
## VIL

Technology	Time Spent
4G	99.60

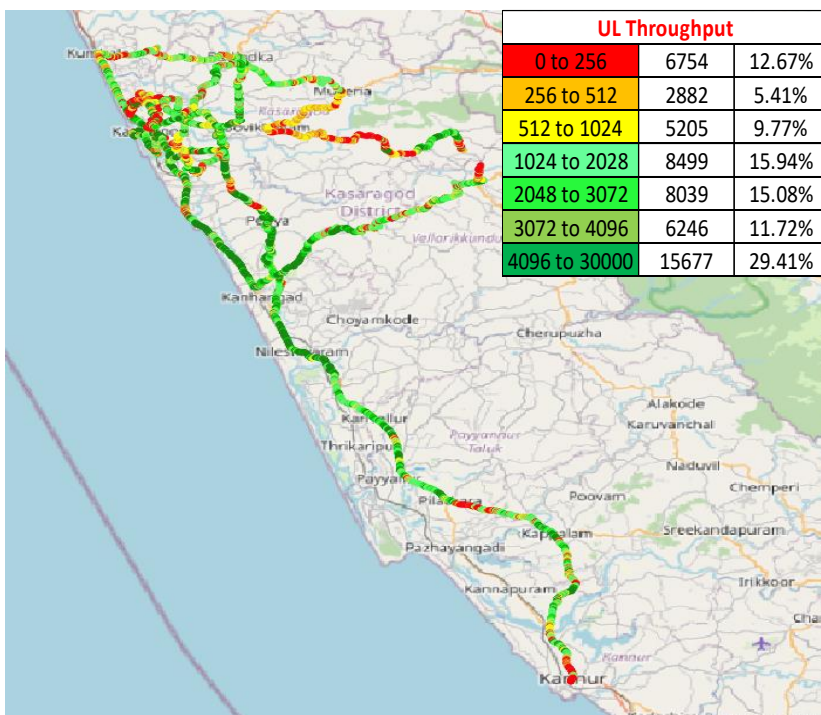


# IV. Dynamic Data Test (Data Test on Move) - 4G DL/UL Details

## Airtel



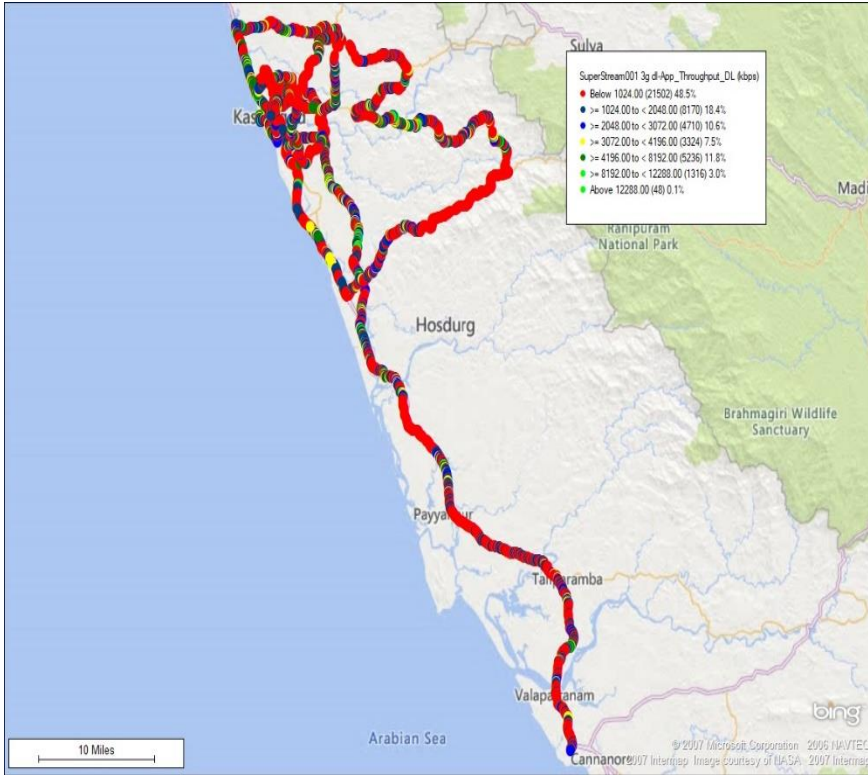
DL throughput	No. of Samples	%
0 to 1 Mbps	4523	9.12
1 to 2 Mbps	524	1.06
2 to 3 Mbps	688	1.39
3 to 4 Mbps	695	1.40
4 to 8 Mbps	3158	6.37
8 to 12 Mbps	4666	9.41
>12 Mbps	35322	71.25
Total	49576	100



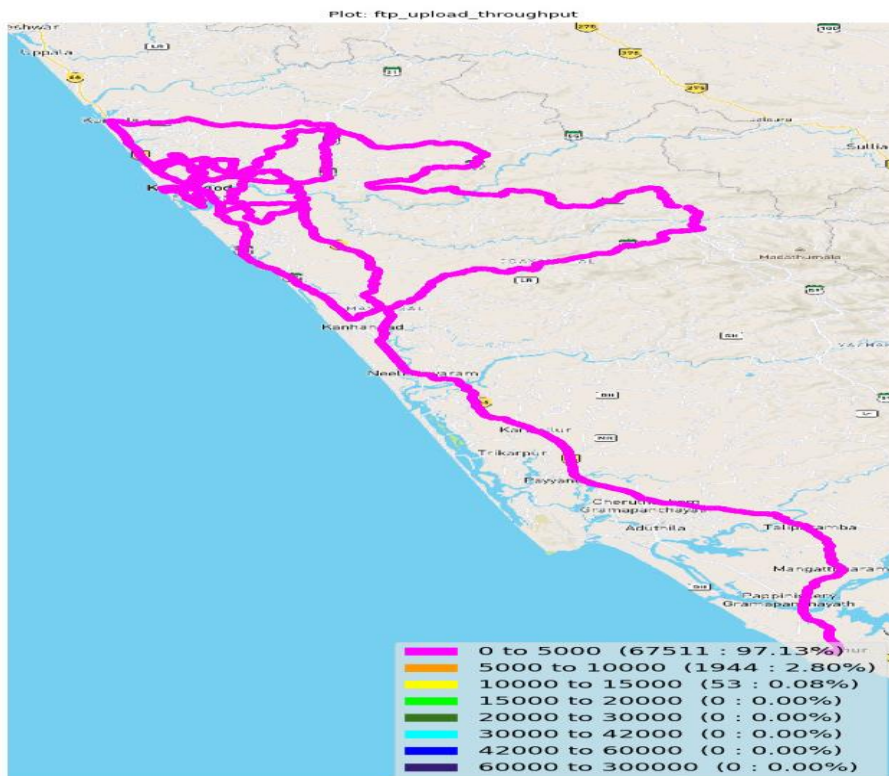
UL throughput	No. of samples	%
0 to 256 Kbps	6754	12.67
250 to 512 Kbps	2882	5.41
512 Kbps to 1 Mbps	5205	9.77
1 to 2 Mbps	8499	15.94
2 to 3 Mbps	8039	15.08
3 to 4 Mbps	6246	11.72
>4 Mbps	15677	29.41
Total	53302	

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

## BSNL



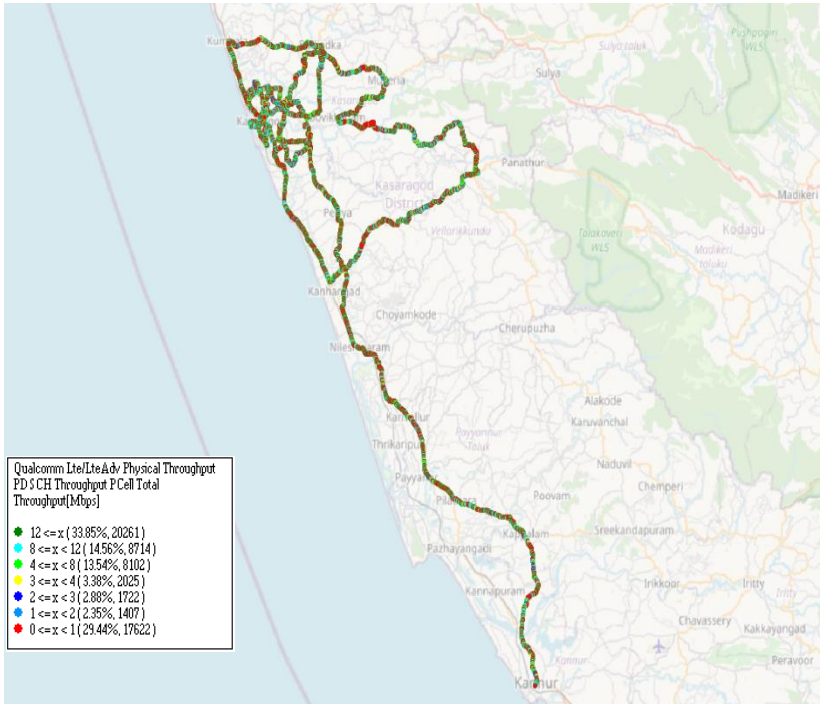
DL throughput	No. of Samples	%
0 to 1 Mbps	21502	48.5%
1 to 2 Mbps	8170	18.4
2 to 3 Mbps	4710	10.6
3 to 4 Mbps	3324	7.5
4 to 8 Mbps	5236	11.8
8 to 12 Mbps	1316	3
>12 Mbps	48	0.1
Total	44306	100



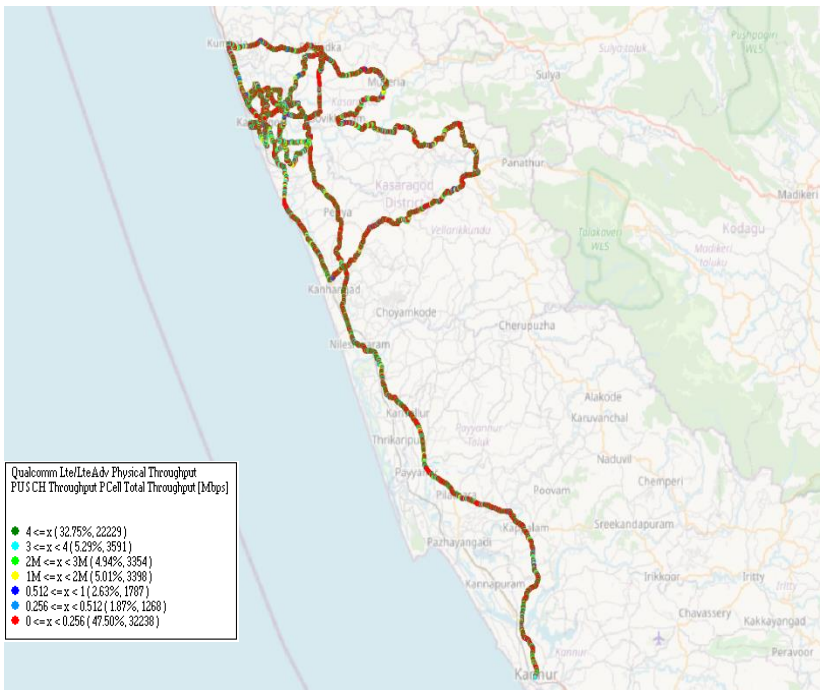
UL throughput	No. of Samples	%
0 to 1 Mbps	58	2.60
1 to 2 Mbps	44	1.97
2 to 3 Mbps	221	9.93
3 to 4 Mbps	1901	85.47
4 to 8 Mbps	0	0
8 to 12 Mbps	0	0
>12 Mbps	0	0
Total	2224	100

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

## JIO



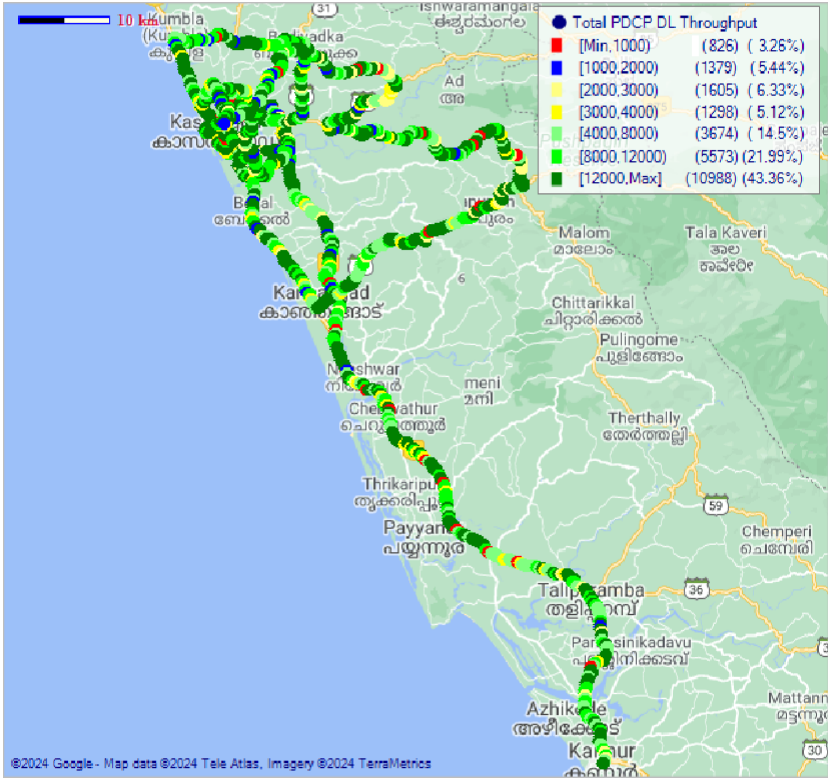
DL throughput	No. of Samples	%
0 to 1 Mbps	17622	29
1 to 2 Mbps	1407	2
2 to 3 Mbps	1722	3
3 to 4 Mbps	2025	3
4 to 8 Mbps	8102	14
8 to 12 Mbps	8714	15
>12 Mbps	20261	34
<b>Total</b>	<b>59853</b>	<b>100</b>



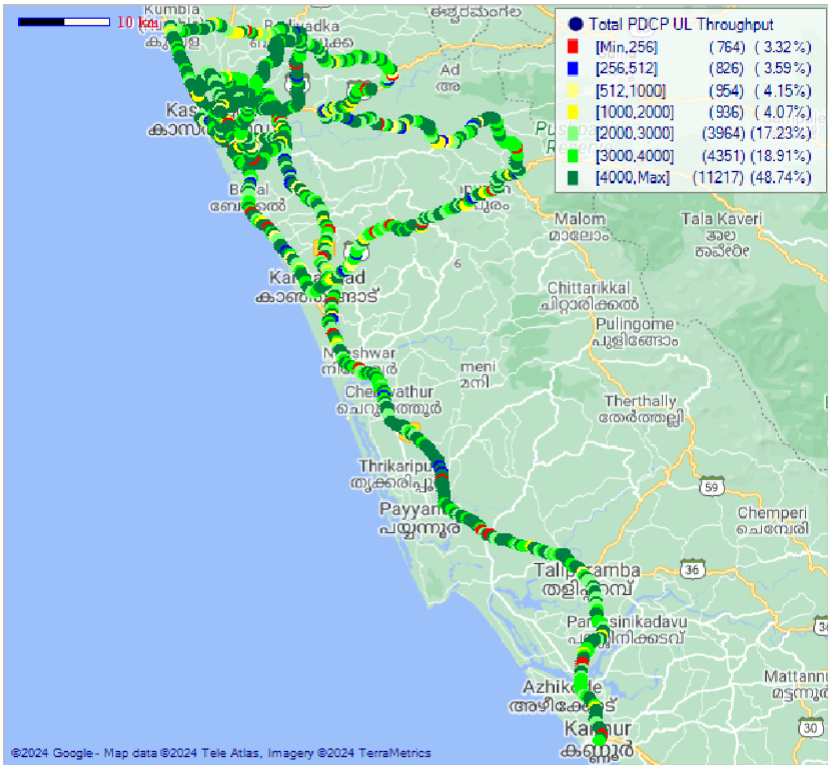
UL throughput	No. of samples	%
0 to 256 kbps Mbps	32238	47.50
256 to 512 kbps	1268	1.87
512 Kbps to 1 Mbps	1787	2.63
1 to 2 Mbps	3398	5.01
2 to 3 Mbps	3354	4.94
3 to 4 Mbps	3591	5.29
>4Mbps	22229	32.75
<b>Total</b>	<b>67865</b>	<b>100</b>

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

## VIL



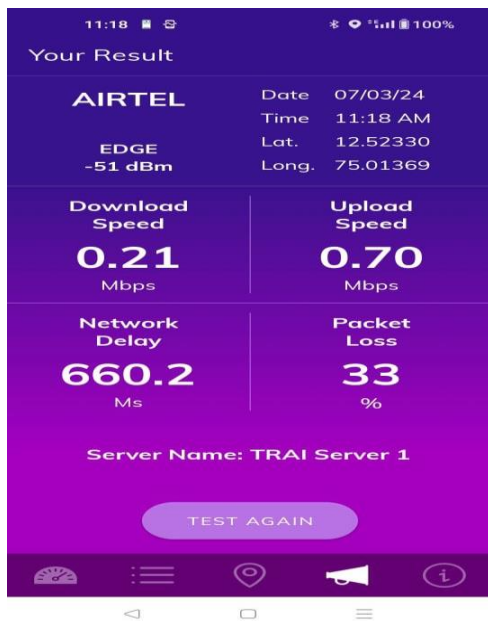
DL throughput	No. of Samples	%
0 to 1 Mbps	826	3.26
1 to 2 Mbps	1379	5.44
2 to 3 Mbps	1605	6.33
3 to 4 Mbps	1298	5.12
4 to 8 Mbps	3674	14.50
8 to 12 Mbps	5573	21.99
>12 Mbps	10988	43.36
Total	25343	100



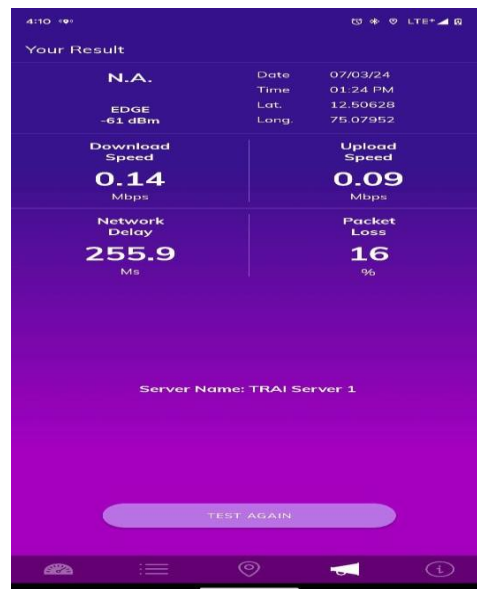
UL throughput	No. of samples	%
0 to 256 Kbps	764	3.32
250 to 512 Kbps	826	3.59
512 Kbps to 1 Mbps	954	4.15
1 to 2 Mbps	936	4.07
2 to 3 Mbps	3964	17.23
3 to 4 Mbps	4351	18.91
>4Mbps	11217	48.74
Total	23012	100

Techology-2G	Collectorate, Kasargod	LBS College of Engineering	ICAR	KIMS Hospital	Railway station	Bekal Fort
Download Speed (Mbps)	0.21	0.14	0.16	0.12	0.17	0.15
Upload Speed (Mbps)	0.70	0.09	0.14	0.12	0.16	0.12
Latency	660.2	255.9	462.2	379.3	848.0	227.0

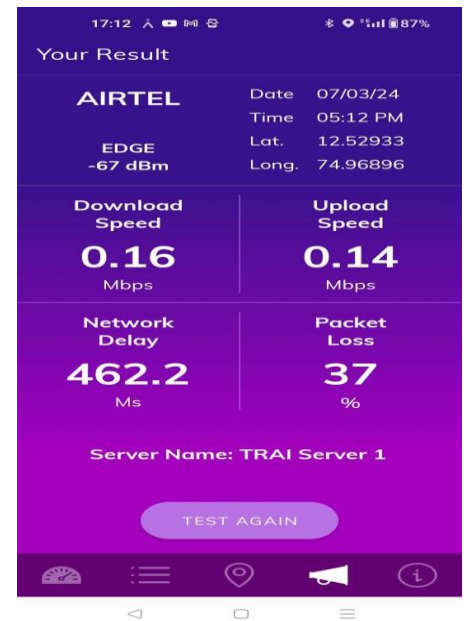
### Collectorate



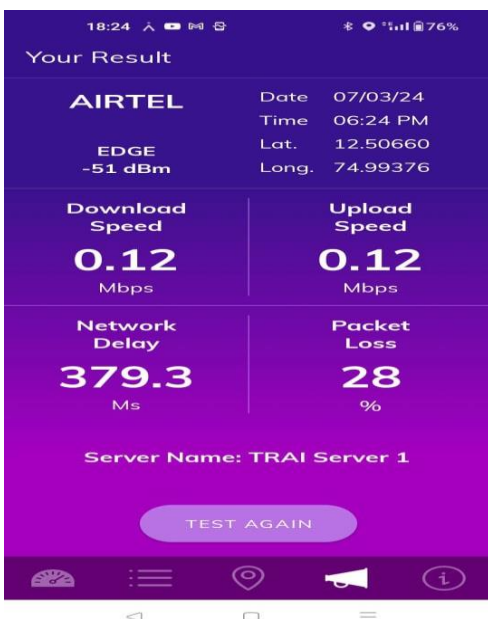
### LBS College of Engg



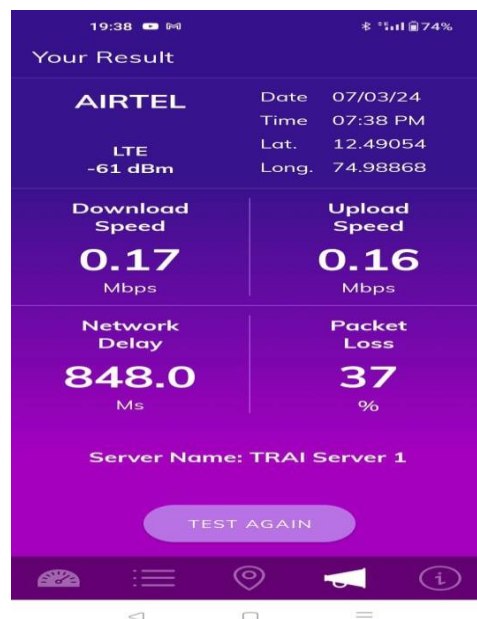
### ICAR



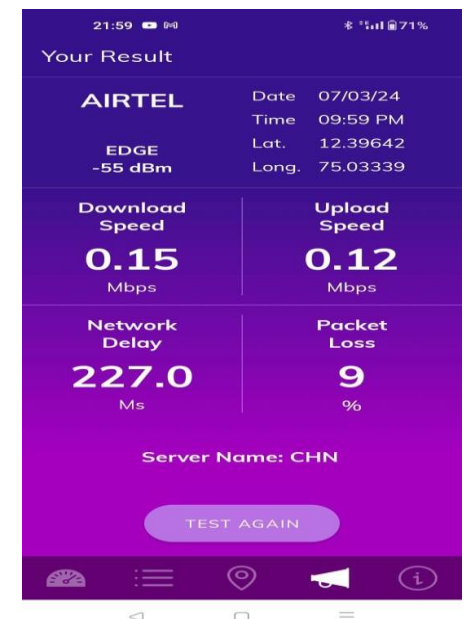
### KIMS



### Railway Station

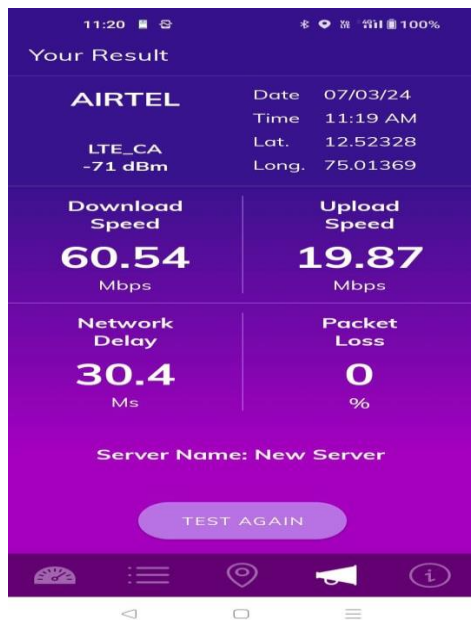


### Bekal Fort



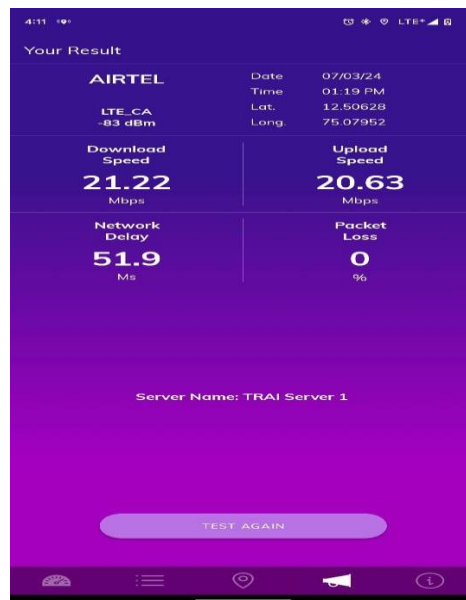
Techology-4G/VoLTE	Collectorate, Kasargod	LBS College of Engineering	ICAR	KIMS Hospital	Railway station	Bekal Fort
Download Speed (Mbps)	60.54	21.22	52.43	25.34	19.46	38.96
Upload Speed (Mbps)	19.87	2063	8.75	22.84	30.35	10.26
Latency	30.4	51.9	37.3	47.8	39.2	60.7

### Collectorate



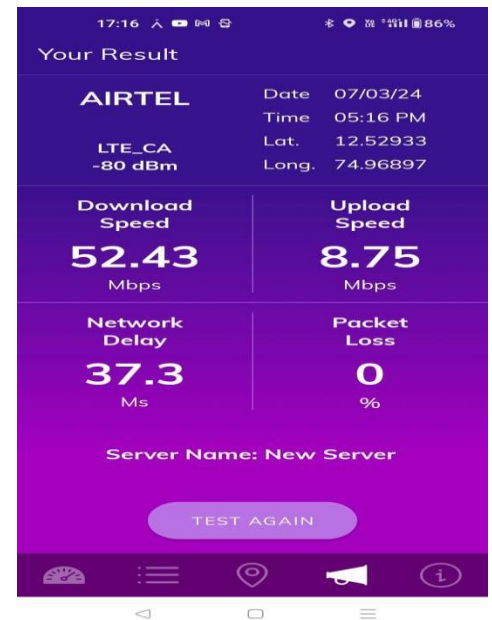
### KIMS

### LBS College of Engg

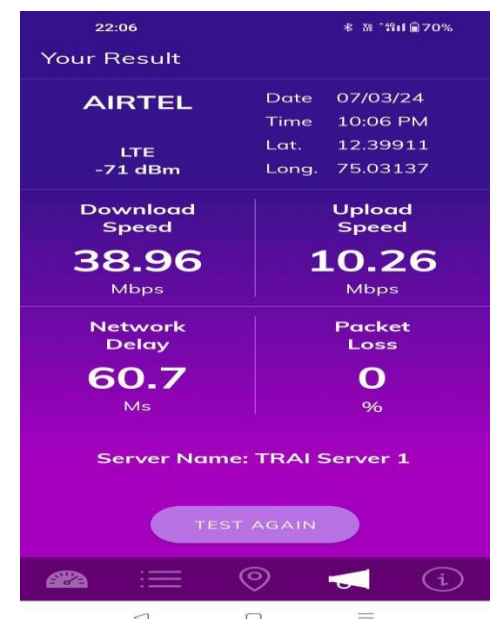
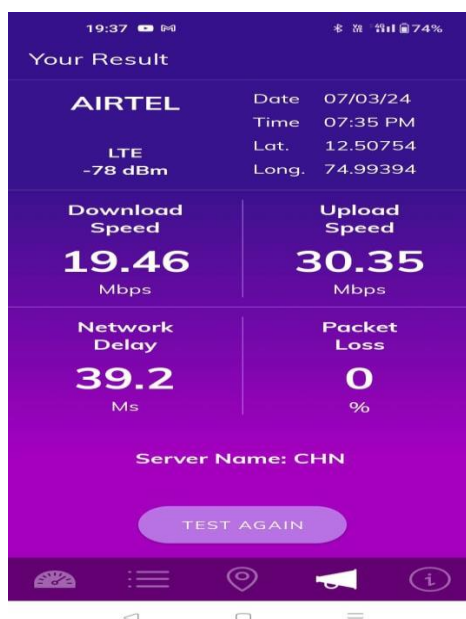
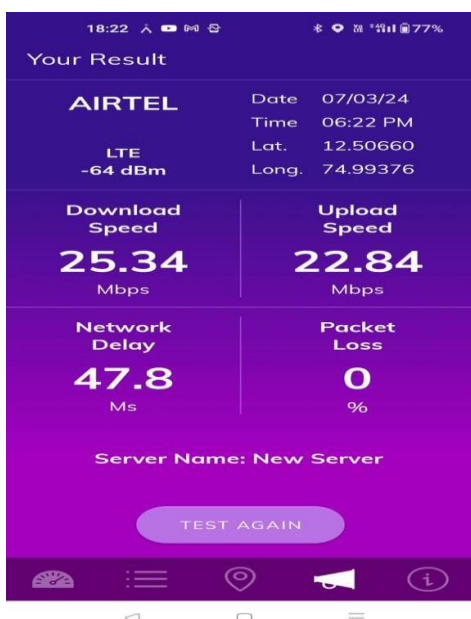


### Railway Station

### ICAR



### Bekal Fort

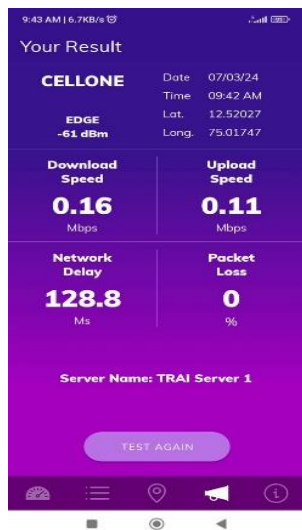




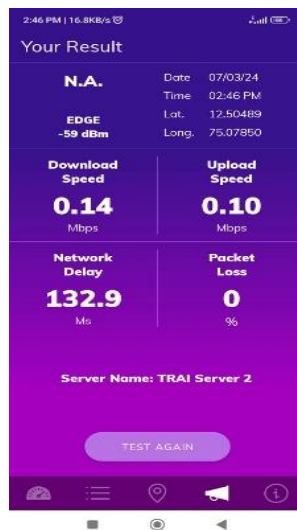
# V. TRAI MySpeed App Test Details-2G

Techology-2G	Collectorate, Kasargod	LBS College of Engineering	ICAR	KIMS Hospital	Railway station	Bekal Fort
Download Speed (Kbps)	0.16Mbps	0.14Mbps	0.12Mbps	0.12Mbps	0.16Mbps	0.20Mbps
Upload Speed (Kbps)	0.11Mbps	0.10Mbps	0.13Mbps	0.10Mbps	0.10Mbps	0.14Mbps
Latency(ms)	128.8msec	132.9msec	132.2msec	133.3msec	154.2msec	315.8msec

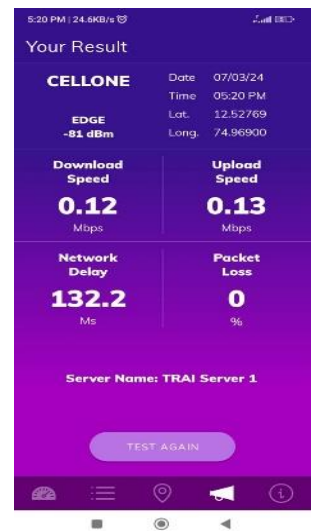
**Collectorate**



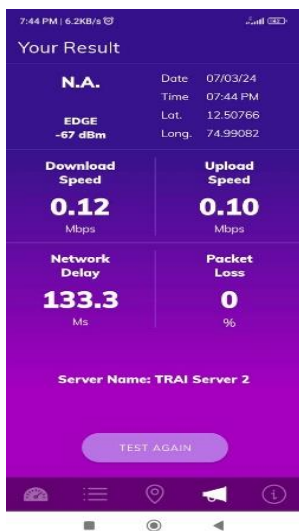
**LBS College of Engg**



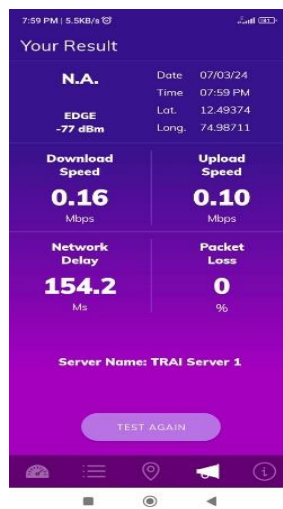
**ICAR**



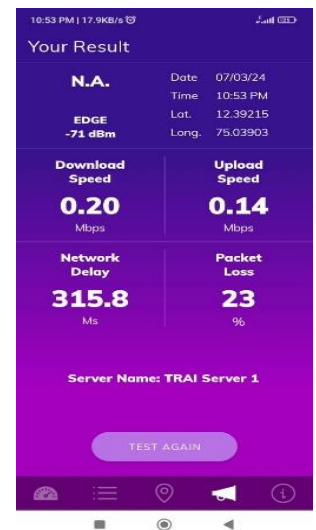
**KIMS**



**Railway Station**



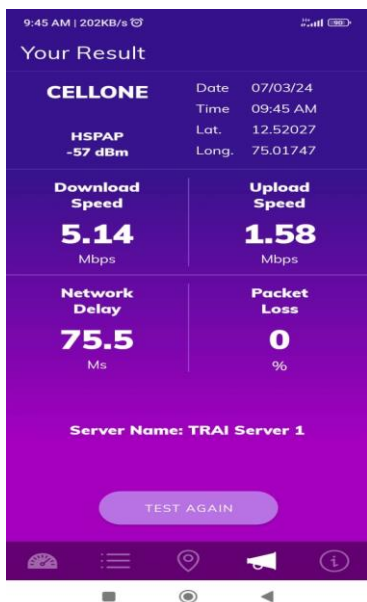
**Bekal Fort**



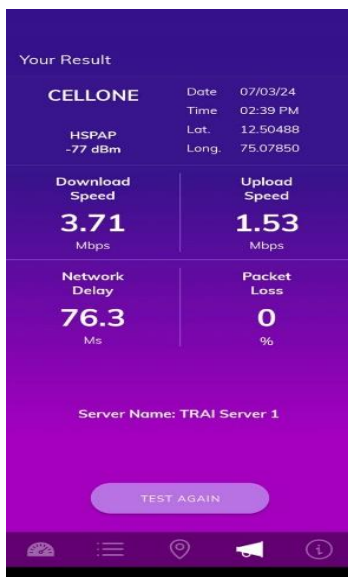
# V. TRAI MySpeed App Test Details-3G/4G

Techology-4G/VoLTE	Collectorate, Kasargod	LBS College of Engineering	ICAR	KIMS Hospital	Railway station	Bekal Fort
Download Speed (Mbps)	5.14	3.71	2.19	4.54	6.32	1.96
Upload Speed (Mbps)	1.58	1.53	1.73	1.83	1.85	1.92
Latency(ms)	75.5	76.3	76.1	62.9	71.5	68.6

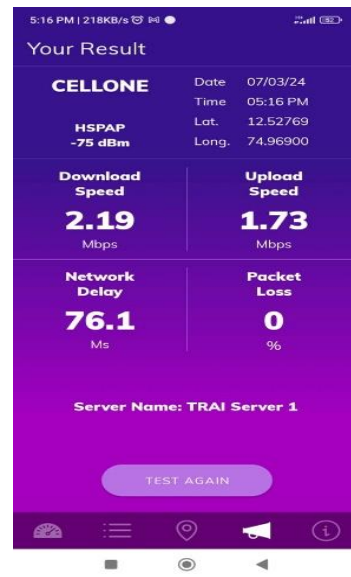
### Collectorate



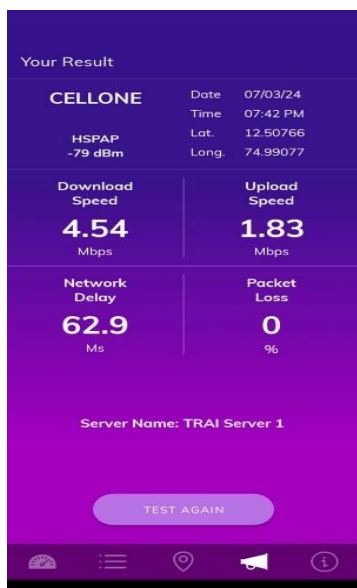
### LBS College of Engg



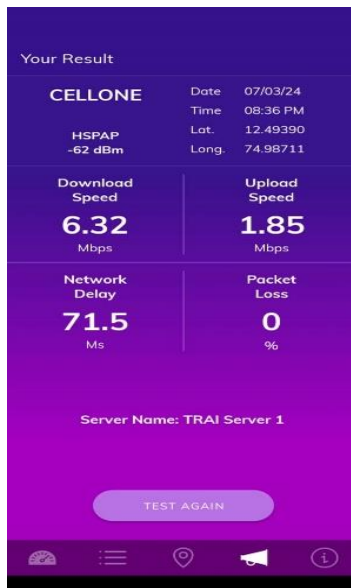
### ICAR



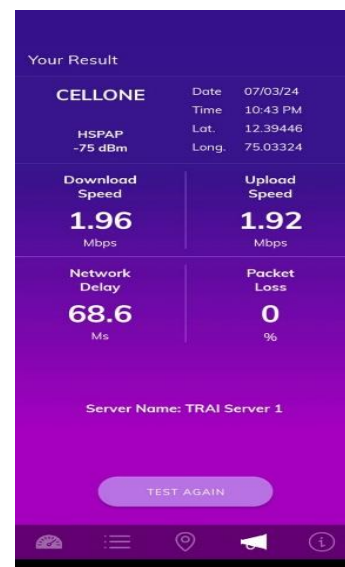
### KIMS



### Railway Station



### Bekal Fort



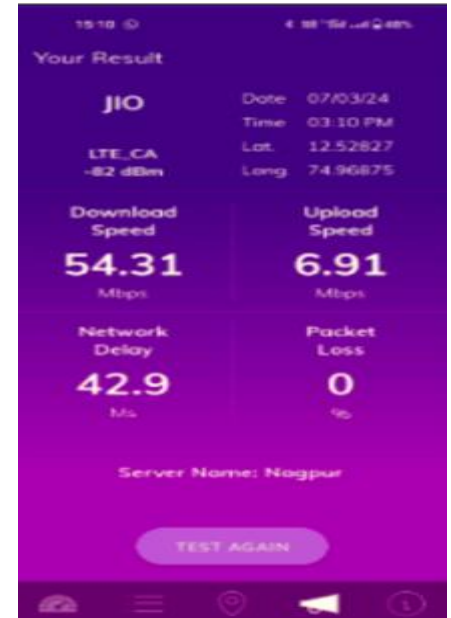
# V. TRAI MySpeed App Test Details-4G

Techology-4G	Collectorate, Kasargod	LBS College of Engineering	ICAR	KIMS Hospital	Railway station	Bekal Fort
Download Speed (Mbps)	48.78	29.36	54.31	35.40	29.64	38.43
Upload Speed (Mbps)	5.33	7.56	6.91	5.65	15.16	14.78
Latency	90.4	43.4	42.9	78.6	41.9	42.4

Collectorate

LBS College of Engg

ICAR



KIMS

Railway Station

Bekal Fort

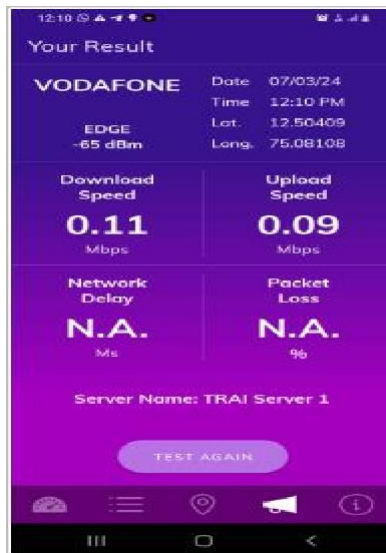


Techology-2G	Collectorate, Kasargod	LBS College of Engineering	ICAR	KIMS Hospital	Railway station	Bekal Fort
Download Speed (Mbps)	0.11	0.11	0.08	0.13	0.14	0.18
Upload Speed (Mbps)	0.05	0.09	0.05	0.09	0.10	0.06
Latency						

### Collectorate



### LBS College of Engg



### ICAR



### KIMS



### Railway Station



### Bekal Fort



Techology-4G/VoLTE	Collectorate, Kasargod	LBS College of Engineering	ICAR	KIMS Hospital	Railway station	Bekal Fort
Download Speed (Mbps)	20.96	30.36	30.72	32.09	41.82	19.10
Upload Speed (Mbps)	15.78	10.53	13.20	6.12	15.04	5.67
Latency	NA	NA	59.1	NA	NA	NA

### Collectorate



### LBS College of Engg



### ICAR



### KIMS



### Railway Station



### Bekal Fort

