

Operator Assisted Drive Test Report

ERODE SSA FEBRUARY 2023

(RO, HYDERABAD)

<u>Key Performance Indicators:</u> All TSPs have met the Drop Call Rate (DCR) benchmark of 2%. All TSPs have met the Call Setup Success Rate (CSSR) of 95%.

The Operator Assisted Drive Test has been carried out by Regional Office, Hyderabad with the help of Service Providers in Erode City and surrounding areas Kangayam, Vellakoil, Perundurai, Bhavani including important National Highway and State Highways from 9:00 AM to 8:00 PM during 28th February to 3rd March 2023. The drive test covered drive route of 400 KMs & 6 hotspots over a period of 4 days. Approximately 505+ calls were made for each of the 8 networks: three 2G networks, two 3G networks and Three LTE network covering four TSPs.



Voice Summary

Overview

Regional Office, TRAI conducted Operator Assisted Drive Test from 28th Feb to 03rd Mar. 2023 covering various locations in Erode City & surrounding regions Kangeyam, Vellakovil Perunthurai and Bhavani.The performance of Airtel, BSNL, Vodafone Idea and Jio 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 394 KMs over a period of 3 days from 28th Feb to 03rd Mar. 2023. Approximately 530 calls were made for 2G (Lock Mode) 3G (Free Mode) and Volte(Free Mode) network.

Data Tests:

1.Dynamic data test was conducted for 394 kms over a period of 3 days for download throughput for 4G technologies.

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

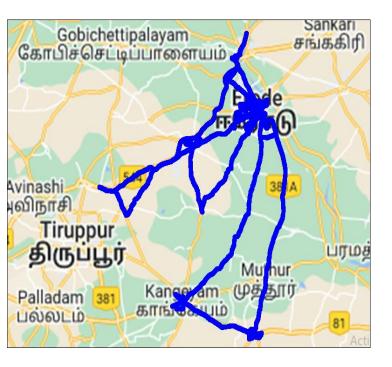
* For Voice and Data KPI's, 2G measurement is done with UE locked mode ,3G Done With 3G preferred Mode and 4G measurement is done with UE in Free Mode.

* 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(Locked) 20MB ,4G (Free) - 40 MB |
| Upload | 2G (Locked) - 100KB, 3G(Locked) 5Mb ,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 |

Overview

Voice & Dynamic Data Test Drive Route



| Areas Covered- Erode Town (Day 1) | | | | | | |
|-----------------------------------|---------------------|--|--|--|--|--|
| Town hall | Surampatti | | | | | |
| Karungalpalayam | Muthampalayam | | | | | |
| Agraharam | Rangamapalayam | | | | | |
| Lakshimi Nagar | Senathipathipalayam | | | | | |
| Chithode | Nadarmedu | | | | | |
| Veerapanchathiram | Kasipalayam | | | | | |
| Govt Hospital | Kumaran Nagar | | | | | |
| Villarasampatti | Solar pirivu | | | | | |
| Thindal | Railway station | | | | | |

| Areas Covered- Erode Outer (Day 2) | | | | | |
|------------------------------------|----------------|--|--|--|--|
| Solar Pirivu Kangeyam Tow | | | | | |
| Nanjai Uthukuzli | Nattar Palayam | | | | |
| Modakunruchi | Nathakadaiur | | | | |
| Elumathur | Vadapalani | | | | |
| Vilakkethi | Arachalur | | | | |
| Muthur | Avalpoonthurai | | | | |
| Ayyampalayam | Kaspapettai | | | | |
| Vellakovil Town | Mullamparappu | | | | |

| Areas Covered- Erode Outer (Day 3) | | | | | |
|------------------------------------|---------------------|--|--|--|--|
| Erode Arts College | Uthukuzli RS | | | | |
| Kavundachipalayam | Nanjai Uthukuzli | | | | |
| Vellode | Nasiyanur | | | | |
| Channimalai Tawn | Chithode Outer Bye | | | | |
| Chennimalai Town | Pass | | | | |
| Perundurai Town | Bhavani Town | | | | |
| Thindal Ring Road | Karundevanpalayam | | | | |
| Sipcot | Mettur Road | | | | |
| Vijayamangalam | Lakshimi Nagar Town | | | | |
| Chengapalli | Kalingarayanpalayam | | | | |

| Ctatia | Locations |
|--------|-----------|
| SIGUE | LOCALIONS |

Texvalley Mall- Erode

Medical College- Perundurai

Railway Junction- Erode

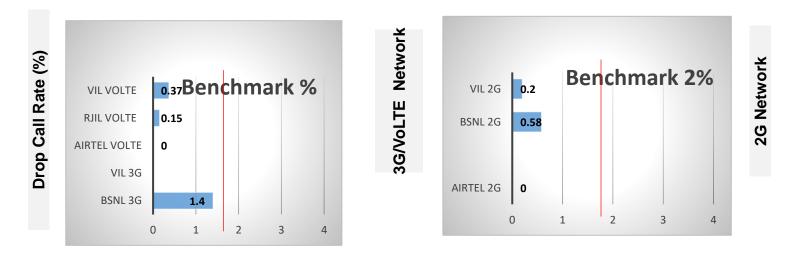
Central Bus Stand- Erode

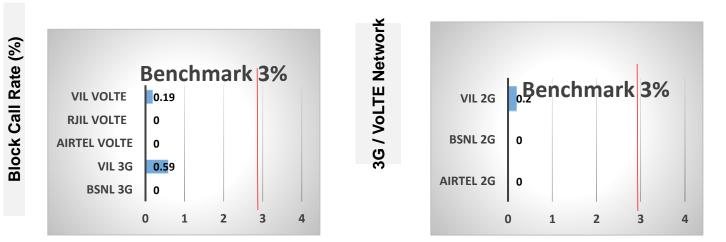
VOC Park- Erode

MG Market- Erode

Voice Calls

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





| | 2G | | 3G/4G | 3G | VoLTE | | | |
|-------------------|--------|------|-------|------|-------|--------|------|------|
| KPIs | Airtel | BSNL | VIL | BSNL | VI | Airtel | RJIL | VIL |
| Drop Call Rate % | 0 | 0.58 | 0.20 | 0 | 0.20 | 0 | 0 | 0.19 |
| Block Call Rate % | 0 | 0 | 0.20 | 0 | 0.59 | 0 | 0 | 0.19 |

- 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 $2G \ge -85$ dBm.

| TODO | 2G | | | | |
|------------|--------|-------|-------|--|--|
| TSPS | Airtel | BSNL | VIL | | |
| Coverage % | 93.00 | 89.65 | 92.11 | | |

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

| TEDa | 36 | i | Volte | | |
|------------|-------|-------|--------|-----|-------|
| TSPs | BSNL | VIL | Airtel | JIO | VIL |
| Coverage % | 94.85 | 95.49 | 99.96 | 100 | 98.60 |

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

| | 3G | Volte | | | |
|-----------------------|------|-------|--------|-----|------|
| TSPs | BSNL | VIL | Airtel | JIO | VIL |
| Time Spent on 3G/4G % | 100 | 97 | 100 | 100 | 98.3 |

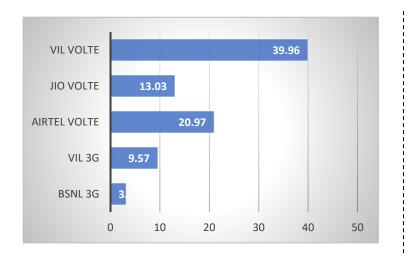
Data Services Static

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 delay (Flipkart, Amazon, PayTm)

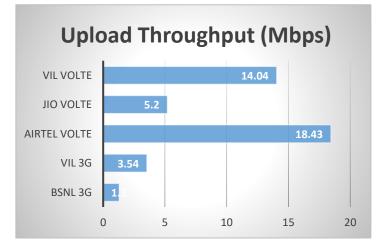
Data Download and Upload Performance (Mbps)

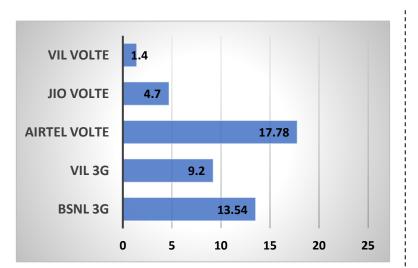
3G/4G/ Network:



Download Throughput (Mbps)

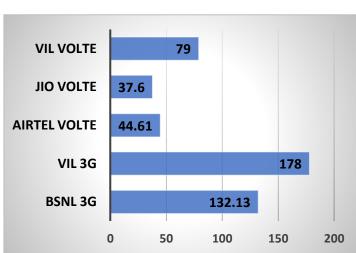
Upload Throughput (Mbps)





Web Browsing delay (Sec)

Latency (ms)



Data Summary

Data Services Dynamic

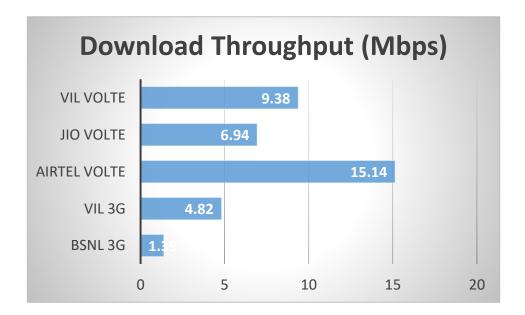
Dynamic Data was tested for 398 Kms. Download Throughput was tested.

Key

Observations

Data Download Performance (kbps) - Dynamic

3G/4G/ Network:



| Data Services Static | | 3G/VoLTE | | | | | |
|-------------------------------|---------|----------|-----------------|-----------|-----------|--|--|
| Dynamic | BSNL 3G | VIL 3G | Airtel VoLTE | JIO VoLTE | VIL VoLTE | | |
| Download Throughput (Mbps) | 1.39 | 4.82 | 15.14 | 6.94 | 9.38 | | |

Summary

SSA Level Summary-Voice

| Voice Call | 2G | | | | | |
|--------------------------|--------|-------|-------|--|--|--|
| | Airtel | BSNL | VIL | | | |
| Call Attempt | 513 | 508 | 507 | | | |
| Blocked Call Rate (%) | 0.00 | 0 | 0.20 | | | |
| CSSR% (Accessibility) | 100 | 100 | 99.80 | | | |
| Drop Call Rate (%) | 0.00 | 0.58 | 0.20 | | | |
| Mobility HOSR (%) | 98.50 | 98.85 | 98.5 | | | |
| Rx Quality (%) | 96.80 | 98.82 | 99.4 | | | |

| Voice Call | 3G/VoLTE | | | | | | |
|--------------------------|-------------|--------|--------------|--------------|--------------|--|--|
| | BSN L 3G | VIL 3G | Airtel VoLTE | JIO VoLTE | VIL VoLTE | | |
| Call Attempt | 488 | 505 | 532 | 505 | 528 | | |
| Blocked Call Rate (%) | 0 | 0.59 | 0.00 | 0.00 | 0.19 | | |
| CSSR% (Accessibility) | 100 | 99.40 | 100 | 100 | 99.81 | | |
| Drop Call Rate (%) | 0 | 0.20 | 0.00 | 0.00 | 0.19 | | |
| Mobility HOSR (%) | 94.56 | 96.3 | 99.70 | 98.81 | 99.6 | | |
| Rx Quality (%) | 94.85 | 97.5 | 84.00 | 92.87 | 95.84 | | |

Summary

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

| Doto Comisso Ctatio | 2G | | | |
|----------------------------|--------|--------|--------|--|
| Data Services Static | Airtel | BSNL | VIL | |
| Download Throughput (kbps) | 169.67 | 143.82 | 191.00 | |
| Upload Throughput (kbps) | 84.50 | 75.57 | 94.00 | |
| Web Browsing Delay (sec) | 18.30 | 113.30 | 37.00 | |
| Latency (msec) | 360.30 | 444.70 | 438.00 | |

| | | | 3G/VoLTE | | | |
|-------------------------------|---------|--------|-----------------|--------------|--------------|--|
| Data Services Static | BSNL 3G | VIL 3G | Airtel VoLTE | JIO VoLTE | VIL VoLTE | |
| Download Throughput (Mbps) | 3.18 | 9.57 | 20.97 | 13.03 | 39.96 | |
| Upload Throughput (Mbps) | 1.30 | 3.54 | 18.43 | 5.20 | 14.04 | |
| Web Browsing Delay (sec) | 13.54 | 9.2 | 17.78 | 4.7 | 1.4 | |
| Latency (msec) | 132.13 | 178 | 44.61 | 37.6 | 79 | |

Data Services Static

SSA Level Summary

| Texvalley Mall- Erode | Airtel | 2G BSNL | VIL |
|-------------------------------|--------|------------|--------|
| Download Throughput (kbps) | 131.53 | 143.07 | 165.4 |
| Upload Throughput (kbps) | 73.43 | 97.65 | 60.5 |
| Web Browsing Delay (sec) | 19.0 | 97.24 | 41.8 |
| Latency (msec) | 297.66 | 458.33 | 487 |
| | | 2G | |
| Medical College- Perundurai | Airtel | BSNL | VIL |
| Download Throughput (kbps) | 222.83 | 174.5 | 204.7 |
| Upload Throughput (kbps) | 66.1 | 62.98 | 103.7 |
| Web Browsing Delay (sec) | 14.64 | 98.18 | 31.2 |
| Latency (msec) | 351.33 | 606.4 | 461.0 |
| Erode Railway Station | | 2G | |
| | Airtel | BSNL | VIL |
| Download Throughput (kbps) | 182.83 | 66.69 | 66.69 |
| Upload Throughput (kbps) | 81.9 | 21.95 | 21.95 |
| Web Browsing Delay (sec) | 17.20 | 133.75 | 133.75 |
| Latency (msec) | 232.33 | 633 | 633 |
| Erode Bus Stand | Airtel | 2G BSNL | VIL |
| Download Throughput (kbps) | 147.6 | 156.84 | 214.4 |
| Upload Throughput (kbps) | 120.4 | 95.36 | 115.8 |
| Web Browsing Delay (sec) | 18.10 | 103.73 | 32.6 |
| Latency (msec) | 392.33 | 250 | 451 |
| VOC Park | | 2G | |
| | Airtel | BSNL | VIL |
| Download Throughput (kbps) | 114.16 | 134.69 | 179.9 |
| Upload Throughput (kbps) | 71.56 | 84.18 | 113.4 |
| Web Browsing Delay (sec) | 20.09 | 125.89 | 40.2 |
| Latency (msec) | 453 | 302.33 | 418 |
| Mahatma Gandhi Textile Market | Airtel | 2G BSNL | VIL |
| Download Throughput (kbps) | 219.1 | 187.14 | 225.8 |
| Upload Throughput (kbps) | 93.6 | 108.90 | 116.7 |
| Web Browsing Delay (sec) | 20.74 | 121.02 | 30.4 |
| Latency (msec) | 435 | 417.12 | 463.5 |

Data Services static

Web Browsing Delay (sec)

Web Browsing Delay (sec)

Latency (msec)

SSA Level Summary(contd.)

4.60

4.74

37

| Tex Valley, Gangapuram | 3G | 3G | LTE | | |
|-----------------------------|--------|-------|--------|-------|-------|
| i ox ranoy, cangaparan | BSNL | VIL | Airtel | JIO | VIL |
| Download Throughput (Mbps) | 2.85 | 10.56 | 13.69 | 15.81 | 54.80 |
| Upload Throughput (Mbps) | 1.3 | 3.53 | 20.11 | 3.00 | 17.52 |
| Web Browsing Delay (sec) | 13.36 | 9.5 | 12.36 | 4.59 | 0.9 |
| Latency (msec) | 125.35 | 166 | 49.0 | 38 | 77 |
| | | | | | |
| | 3G | 3G | | LTE | |
| Medical college, perundurai | BSNL | VIL | Airtel | JIO | VIL |
| Download Throughput (Mbps) | 1.34 | 10.36 | 18.76 | 11.31 | 51.67 |
| Upload Throughput (Mbps) | 0.49 | 3.50 | 11.81 | 5.95 | 11.79 |

| Latency (msec) | 125.35 | 168 | 33.33 | 40 | 83 |
|----------------------------|--------|------|--------|-------|-------|
| | | | | | |
| | 3G | 3G | | LTE | |
| Erode railway Station | BSNL | VIL | Airtel | JIO | VIL |
| Download Throughput (Mbps) | 3,54 | 8.60 | 22.85 | 11.52 | 15.25 |
| Upload Throughput (Mbps) | 1.58 | 3.19 | 21.00 | 561 | 12.05 |
| Web Browsing Delay (sec) | 14.69 | 10.1 | 10.11 | 4.59 | 1.7 |
| Latency (msec) | 107.16 | 290 | 48.00 | 38 | 83 |

11.92

10.1

13,36

12.21

106.66

| | 3G | 3G | | LTE | | |
|----------------------------|--------|-------|--------|-------|-------|--|
| Erode Bus Stand | BSNL | VIL | Airtel | JIO | VIL | |
| Download Throughput (Mbps) | 2.73 | 8.58 | 25.45 | 12.02 | 17.52 | |
| Upload Throughput (Mbps) | 1.7 | 3.77 | 13.84 | 5.50 | 7.47 | |
| Web Browsing Delay (sec) | 13.29 | 9.0 | 11.63 | 4.94 | 1.6 | |
| Latency (msec) | 106.40 | 321 | 39.66 | 34 | 75 | |
| | 3G | 3G | | LTE | | |
| VOC park | BSNL | VIL | Airtel | JIO | VIL | |
| Download Throughput (Mbps) | 3.76 | 10.35 | 29.12 | 11.20 | 69.57 | |
| Upload Throughput (Mbps) | 1.41 | 3.22 | 18.67 | 5.65 | 19.57 | |

| | 3G | 3G | | LTE | |
|-------------------------------|-------|------|--------|-------|-------|
| Mahatma Gandhi Textile Market | BSNL | VIL | Airtel | JIO | VIL |
| Download Throughput (Mbps) | 4.9 | 8.95 | 15.95 | 16.31 | 30.96 |
| Upload Throughput (Mbps) | 1.39 | 4.04 | 25.138 | 5.50 | 15.86 |
| Web Browsing Delay (sec) | 8.99 | 8.7 | 17.17 | 4.87 | 1.0 |
| Latency (msec) | 106.4 | 157 | 55.33 | 39.0 | 90.3 |

7.8

169

13.48

42.33

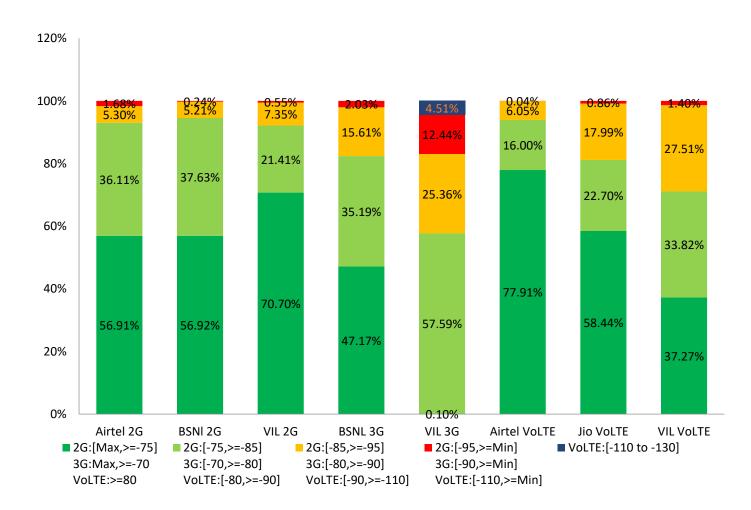
2.0

68

0.9

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

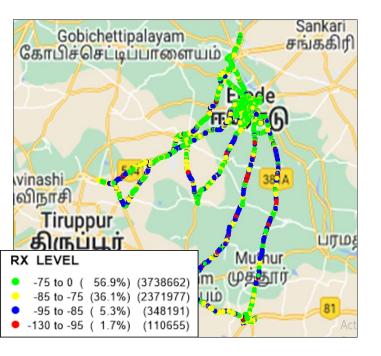
| TSP | Coverage Rate % |
|--------------|-----------------|
| Airtel 2G | 93.00 |
| BSNI 2G | 91.84 |
| VIL 2G | 92.11 |
| BSNL 3G | 91.69 |
| VIL 3G | 95.49 |
| Airtel VoLTE | 99.96 |
| Jio VoLTE | 99.14 |
| VIL VoLTE | 98.60 |



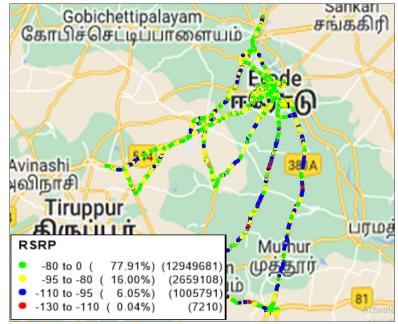
AIRTEL

| TSP | Coverage Rate % |
|--------------|-----------------|
| Airtel 2G | 93.00 |
| Airtel VoLTE | 99.96 |

2G



| V | ol | | Ξ |
|---|----|--|---|
| | | | |

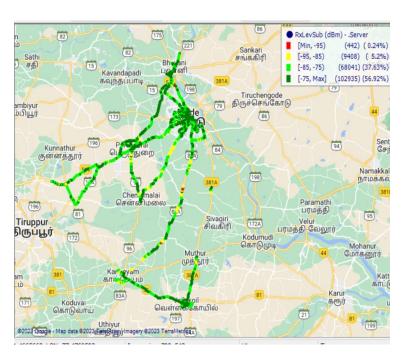


| Overall Rx Level | # Samples | % PDF |
|---------------------|--------------|--------|
| [Max, >=-75] | 3738662 | 56.91% |
| [-75, >=-85) | 2371977 | 36.11% |
| [-85, >=-95) | 348191 | 5.30% |
| [-95, >=Min) | 110655 | 1.68% |
| Total | 6569485 | 100% |

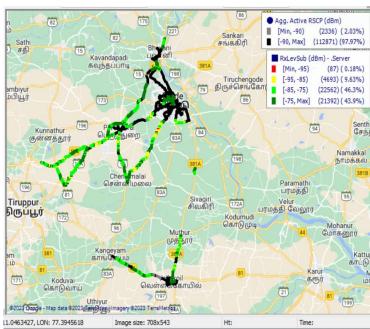
| Overall RSRP | # Samples | % PDF |
|-----------------|-----------|--------|
| [Max, >=-80] | 12949681 | 77.91% |
| [-80, >=-90) | 2659108 | 16.00% |
| [-90, >=-110) | 1005791 | 6.05% |
| [-110, >=Min) | 7210 | 0.04% |
| Total | 16621790 | 100% |

| BSNL | | |
|------------|-----------------|--|
| Technology | Coverage Rate % | |
| 2G | 91.84 | |
| 3G | 70.27 | |

2G



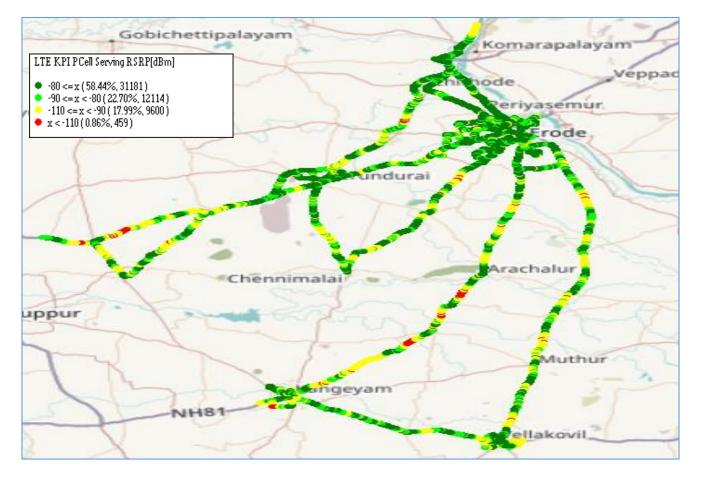
3G/VoLTE



| 2G | | |
|-----------------|-----------|--------|
| Overall RxLevel | # Samples | % PDF |
| [Max, >=-75] | 102935 | 56.92% |
| [-75, >=-85) | 68041 | 37.63% |
| [-85, >=-95) | 9408 | 5.21% |
| [-95, >=Min) | 442 | 0.24% |
| Total | 180826 | 100% |

| 3G | | | |
|--------------|--------------|--------|--|
| Overall RSCP | # Samples | % PDF | |
| [Max, >=-70] | 54345 | 47.17% | |
| [-70, >=-80) | 40546 | 35.19% | |
| [-80, >=-90) | 17980 | 15.61% | |
| [-90, >=Min) | 2336 | 2.03% | |
| Total | 115207 | 100 % | |

| JIO | | |
|------------|-----------------|--|
| Technology | Coverage Rate % | |
| VoLTE | 99.14 | |

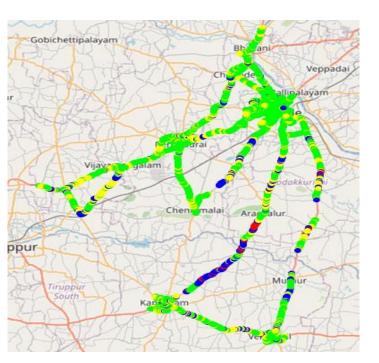


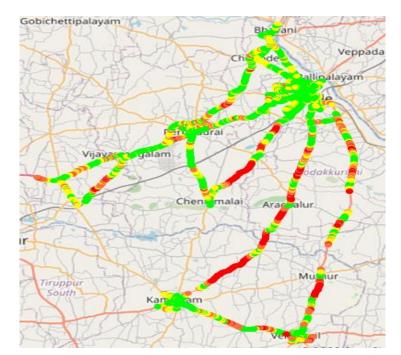
| | VoLTE | |
|---------------|-----------|--------|
| Overall RSRP | # Samples | % |
| [Max, >=-80] | 31181 | 58.44% |
| [-80, >=-90) | 12114 | 22.70% |
| [-90, >=-110) | 9600 | 17.99% |
| [-110, >=Min) | 459 | 0.86% |
| Total | 53354 | 100% |

| Technology | Coverage Rate % |
|------------|-----------------|
| 2G | 92.11 |
| 3G | 95.49 |

2G

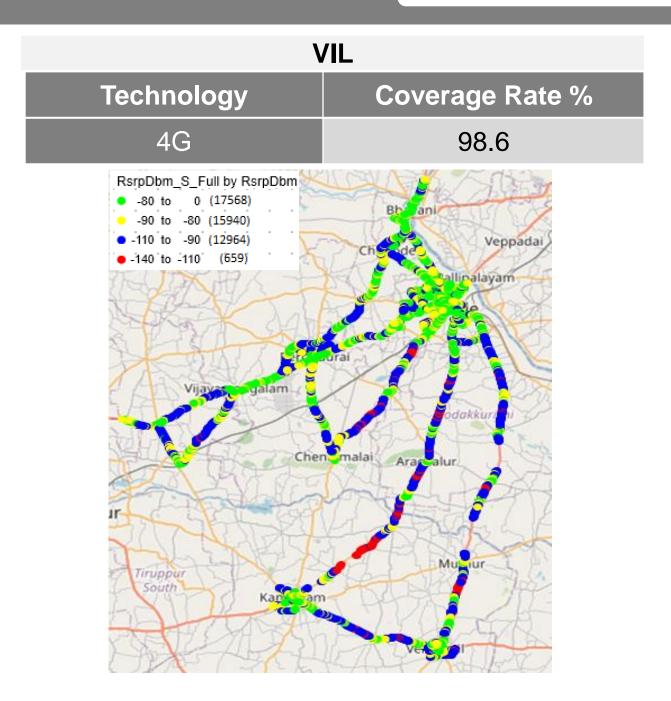






| Overall Rx Level | # Samples | % PDF |
|------------------|-----------|--------|
| [Max, >=-75] | 20225 | 70.70% |
| [-75, >=-85) | 6124 | 21.41% |
| [-85, >=-95) | 2102 | 7.35% |
| [-95, >=Min) | 156 | 0.55% |
| Total | 28607 | 100.00 |

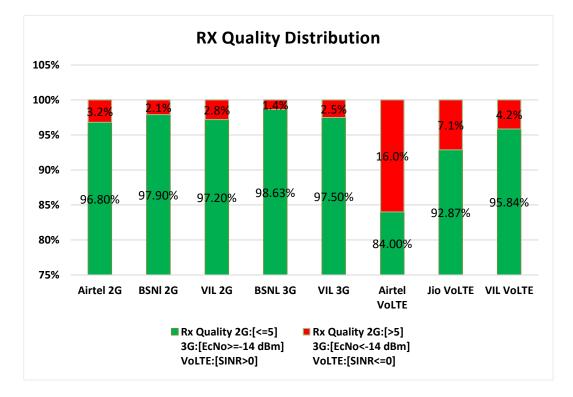
| Overall RSCP | # Samples | % PDF |
|--------------|-----------|--------|
| [Max,>-40] | 47 | 0.10% |
| [-40,>=-70] | 26567 | 57.59% |
| [-70,>=-80] | 11698 | 25.36% |
| [-80,>=-90] | 5739 | 12.44% |
| [-90,>=Min] | 2079 | 4.51% |
| Total | 46130 | 100.00 |



| Overall RSRP | # Samples | % PDF |
|---------------|-----------|--------|
| [Max, >=-80] | 17568 | 37.27% |
| [-80, >=-90) | 15940 | 33.82% |
| [-90, >=-110) | 12964 | 27.51% |
| [-110, >=Min) | 659 | 1.40% |
| Total | 47131 | 100 |

For measuring voice quality, as per the QoS norms, Rx Qual <=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 | 96.80% | | |
| BSNI 2G | 97.9% | | |
| VIL 2G | 97.2% | | |
| BSNL 3G | 98.63% | | |
| VIL 3G | 97.5% | | |
| Airtel VoLTE | 84.0% | | |
| Jio VoLTE | 92.87 % | | |
| VIL VoLTE | 95.84% | | |

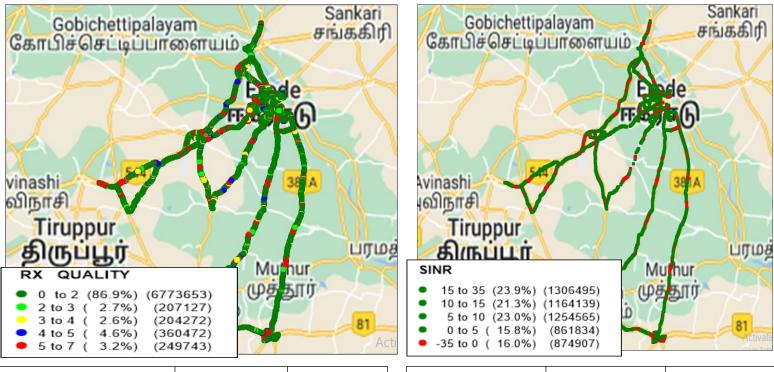


Airtel

| Technology | Rx Quality % | |
|------------|--------------|--|
| 2G | 96.80 | |
| VoLTE | 84.00 | |

2G

VoLTE



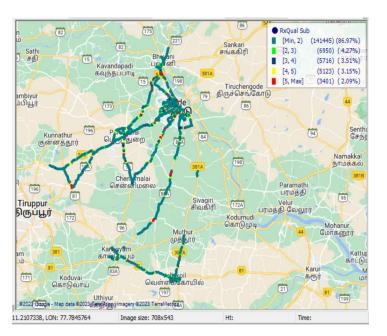
| Overall Rx Quality | # Samples | % PDF |
|-----------------------|-----------|---------|
| (Min, <=2) | 6773653 | 86.89% |
| (2, <=3) | 207127 | 2.66% |
| (3 , <=4) | 204272 | 2.62% |
| (4 , <=5) | 360472 | 4.62% |
| (5 , <=Max) | 249743 | 3.20% |
| Total | 7795267 | 100.00% |

| Overall SINR | # Samples | % PDF |
|--------------|-----------|--------|
| (Min, <=0) | 874907 | 16.02% |
| (0, <=5) | 861834 | 15.78% |
| (5, <=10) | 1254565 | 22.97% |
| (10, <=15) | 1164139 | 21.31% |
| (15, <=Max) | 1306495 | 23.92% |
| Total | 5461940 | 100% |

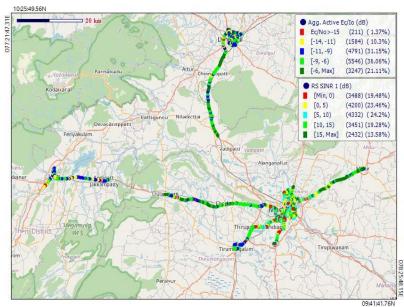
BSNL

| Technology | Rx Quality % |
|------------|--------------|
| 2G | 97.9 |
| 3G | 98.63 |

2G



3G

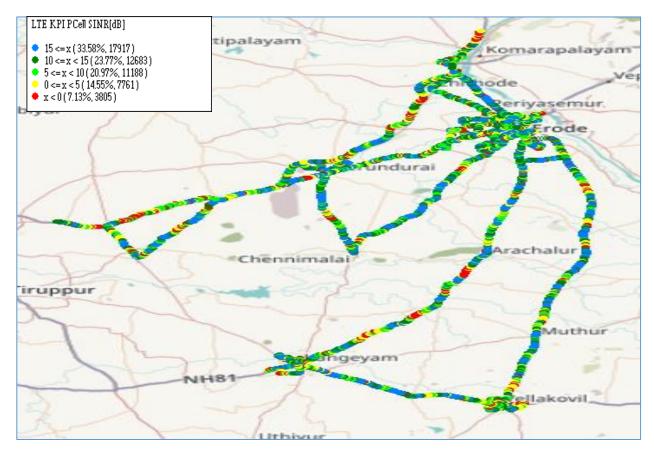


| Overall Rx Quality | # Samples | % PDF |
|--------------------|-----------|--------|
| (Min, <=2) | 141445 | 86.97% |
| (2, <=3) | 6950 | 4.27% |
| (3 , <=4) | 5716 | 3.51% |
| (4 , <=5) | 5123 | 3.16% |
| (5 , <=Max) | 3401 | 2.09% |
| Total | 162635 | 100% |

| Overall EcNo | # Samples | % PDF |
|---------------|-----------|--------|
| (Max, <=-6) | 3247 | 21.11% |
| (-6, <=-9) | 5546 | 36.06% |
| (-9, <=-11) | 4791 | 31.15% |
| (-11, <=-14) | 1584 | 10.3% |
| (-14, <= Min) | 211 | 1.37% |
| Total | 28210 | 100% |

Quality Details

| JIO | |
|------------|--------------|
| Technology | Rx Quality % |
| VoLTE | 92.87 |



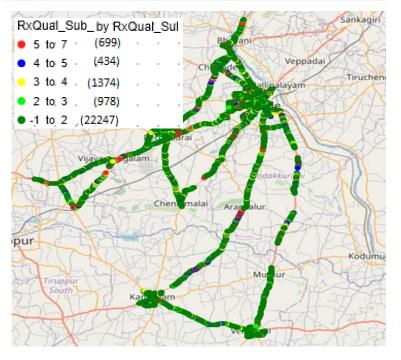
| | VoLTE | | |
|--------------|-----------|--------|--|
| Overall SINR | # Samples | % | |
| (Min, <=0) | 3805 | 7.13% | |
| (0, <=5) | 7761 | 14.55% | |
| (5, <=10) | 11188 | 20.97% | |
| (10, <=15) | 12683 | 23.77% | |
| (15, <=Max) | 17917 | 33.58% | |
| Total | 53354 | 100% | |

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 \ge 95%.

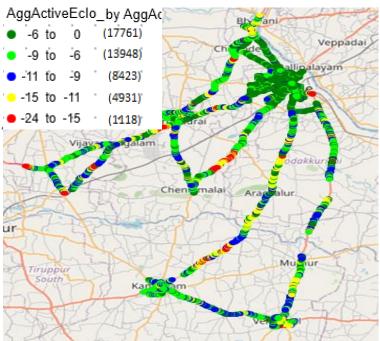
VIL

| Technology | Rx Quality % |
|------------|--------------|
| 2G | 97.2 |
| 3G | 97.50 |

2**G**

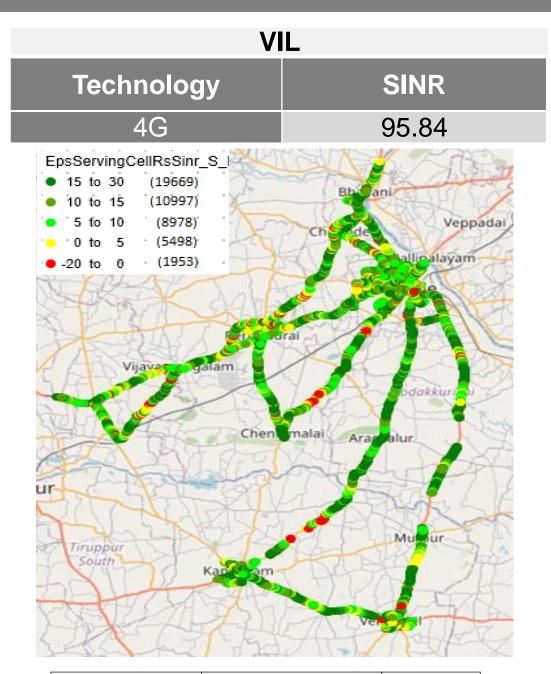


3G



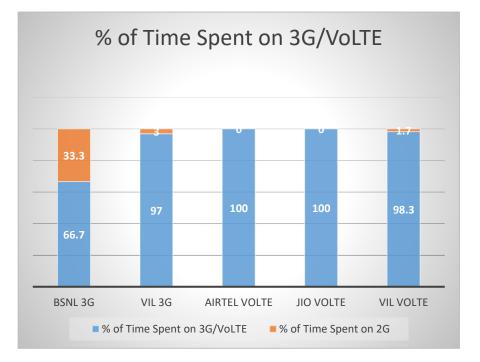
| Overall Rx Quality | # Samples | % PDF |
|--------------------|-----------|--------|
| (Min, <=2) | 22247 | 86.46 |
| (2, <=3) | 978 | 3.80 |
| (3 , <=4) | 1374 | 5.34 |
| (4 , <=5) | 434 | 1.69 |
| (5 , <=Max) | 699 | 2.72 |
| Total | 25732 | 100.00 |

| Overall EcNo | # Samples | % PDF |
|--------------|-----------|-------|
| [Max,<=-6] | 17761 | 38.46 |
| [-6,<=-9] | 13948 | 30.20 |
| [-9,<=-11] | 8423 | 18.24 |
| [-11,<=-14] | 4931 | 10.68 |
| [-14,<=Min] | 1118 | 2.42 |
| Total | 46181 | 100 |



| Overall SINR | # Samples | % PDF |
|--------------|-----------|--------|
| (Min, <=0) | 1953 | 4.15 |
| (0, <=5) | 5498 | 11.67 |
| (5, <=10) | 8978 | 19.06 |
| (10, <=15) | 10997 | 23.35 |
| (15, <=Max) | 19669 | 41.76 |
| Total | 47095 | 100.00 |

| TSP | % of Time Spent on 3G/VoLTE |
|--------------|--------------------------------|
| BSNL 3G | 66.7 |
| VIL 3G | 97 |
| Airtel VoLTE | 100 |
| Jio VoLTE | 100 |
| VIL VoLTE | 98.30 |



Airtel

| Technology | Time Spent on 4G |
|------------|------------------|
| 4G | 100% |

BSNL

| Technology | Time Spent on 3G/4G |
|------------|---------------------|
| 3G | 66.7% |

JIO

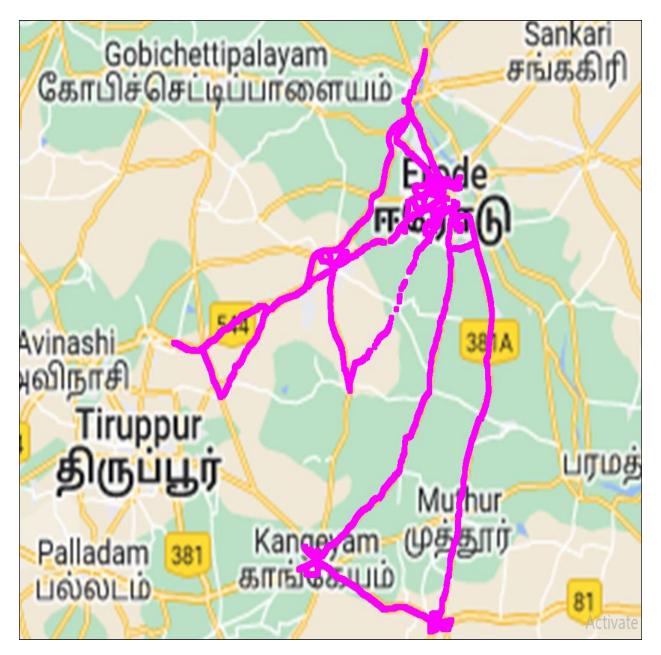
| Technology | Time Spent on 4G |
|------------|------------------|
| 4G | 100% |

VIL

| Technology | Time Spent on 3G/4G |
|------------|---------------------|
| 3G/4G | 97/98.30 |

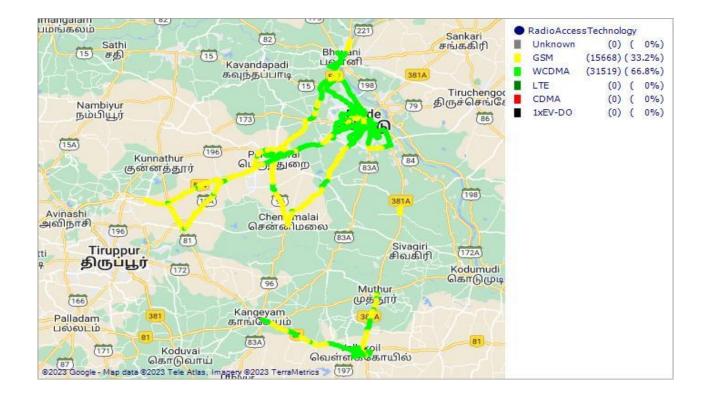
Airtel

| Technology | Time Spent on 4G |
|------------|------------------|
| 4G | 100% |

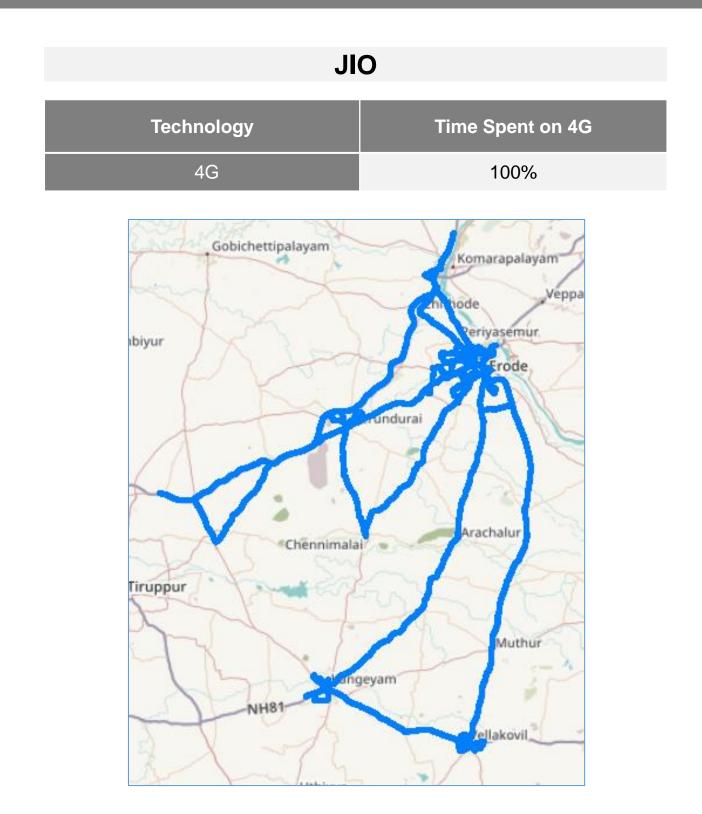


BSNL

| Technology | Time Spent on 3G |
|------------|------------------|
| 3G | 66.8% |



III. Technology Details

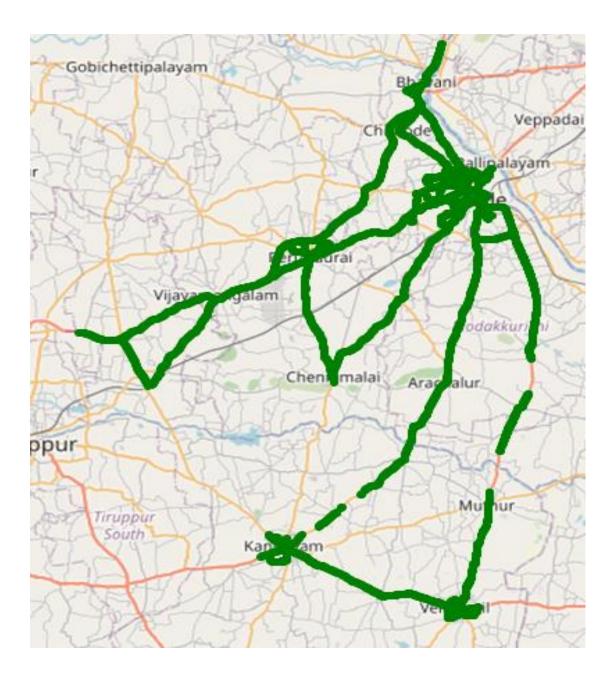


III. Technology Details VIL 3G Technology **Time Spent on 3G** 3G 97.0% 1.42 Gobichettipalayam Bh Vani Veppada de Chi allinalayam 400 Jurai galam Vijavar odakkuri hí Cheni malai Arac Jalur. ur Muthur Tiruppur South Kan am Ver

III. Technology Details

VIL

| Technology | Time Spent on 4G |
|------------|------------------|
| 4G | 98.73 |



IV. Dynamic Data Test-4G DL Details

Airtel

Data Statistics - Dynamic Complete SSA - - 397 Kms

| Data KPIs – Overall | 4G |
|----------------------------|-------|
| Download Throughput (Mbps) | 15.14 |



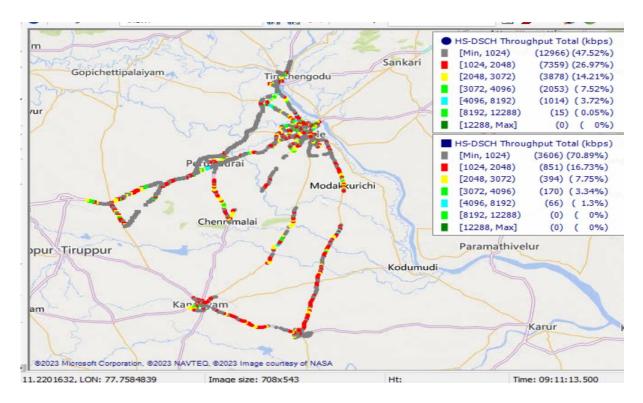
| DL throughput | No of Sample | % |
|---------------|--------------|-------|
| 0 to 1 Mbps | 244550 | 2.34 |
| 1 to 2 Mbps | 177062 | 1.70 |
| 2 to 3 Mbps | 241129 | 2.31 |
| 3 to 4 Mbps | 247627 | 2.37 |
| 4 to 8 Mbps | 738795 | 7.08 |
| 8 to 12 Mbps | 5854773 | 56.08 |
| >12 Mbps | 2936588 | 28.13 |
| Total | 10440524 | 100 |

IV. Dynamic Data Test-3G DL Details

BSNL

Data Statistics - Dynamic Complete SSA 398 Kms

| Data KPIs - Overall | 3G |
|----------------------------|------|
| Download Throughput (Mbps) | 1.39 |

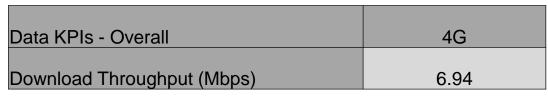


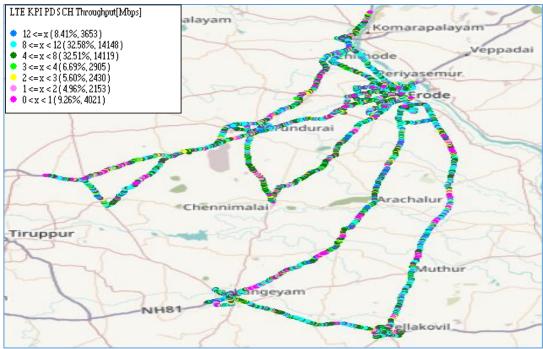
| DL throughput | No of Sample | % |
|---------------|--------------|-------|
| 0 to 1 Mbps | 16572 | 51.19 |
| 1 to 2 Mbps | 8210 | 25.36 |
| 2 to 3 Mbps | 4272 | 13.20 |
| 3 to 4 Mbps | 2223 | 6.87 |
| 4 to 8 Mbps | 1080 | 3.34 |
| 8 to 12 Mbps | 15 | 0.05 |
| >12 Mbps | 0 | 0 |
| Total | 13265 | 100 |

IV. Dynamic Data Test-4G DL Details

JIO

Data Statistics - Dynamic Complete SSA - 400 Kms





| DL throughput | No. of samples | % |
|---------------|----------------|-------|
| 0 to 1 Mbps | 4021 | 9.26 |
| 1 to 2 Mbps | 2153 | 4.96 |
| 2 to 3 Mbps | 2430 | 5.60 |
| 3 to 4 Mbps | 2905 | 6.69 |
| 4 to 8 Mbps | 14119 | 32.51 |
| 8 to 12 Mbps | 14148 | 32.58 |
| >12 Mbps | 3653 | 8.41 |
| Total | 43429 | 100 |

IV. Dynamic Data Test-4G DL Details

VIL

Data Statistics - Dynamic Complete SSA - 394 Kms

| Data KPIs - Overall | 4G |
|---|------------------|
| Download Throughput (Mbps) | 9.38 |
| Gobichettipalayam ur Brirendirai PPUR Kanakam | acralur Muhur |

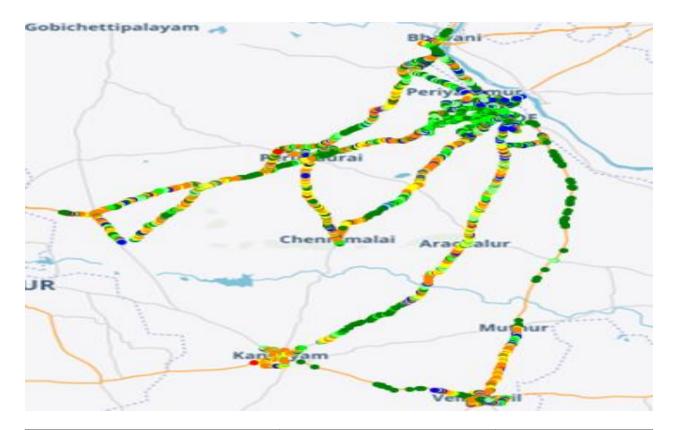
| DL throughput | No of Sample | % | |
|---------------|--------------|-----|--|
| 0 to 1 Mbps | 22859 | 59 | |
| 1 to 2 Mbps | 701 | 2 | |
| 2 to 3 Mbps | 662 | 2 | |
| 3 to 4 Mbps | 555 | 1 | |
| 4 to 8 Mbps | 2223 | 6 | |
| 8 to 12 Mbps | 2468 | 6 | |
| >12 Mbps | 9059 | 24 | |
| Total | 38527 | 100 | |

IV. Dynamic Data Test- 4G DL Details

VIL

Data Statistics - Dynamic Complete SSA - 394 Kms

| Data KPIs – Overall | 3G |
|----------------------------|------|
| Download Throughput (Mbps) | 4.82 |



| DL throughput | No of Sample | % | |
|---------------|--------------|-----|--|
| 0 to 1 Mbps | 3531 | 22 | |
| 1 to 2 Mbps | 1162 | 7 | |
| 2 to 3 Mbps | 1617 | 10 | |
| 3 to 4 Mbps | 1238 | 8 | |
| 4 to 8 Mbps | 4760 | 30 | |
| 8 to 12 Mbps | 2863 | 18 | |
| >12 Mbps | 759 | 5 | |
| Total | 15930 | 100 | |

V. TRAI MySpeed App

Airtel

| Technology- 4G | Texvalley Mall - Erode | Perundurai Medical College- Erode | Railway Station- Erode | Bus Stand- Erode | VOC Park- Erode | MG Market- Erode |
|---------------------|---------------------------|---|---------------------------|---------------------|--------------------|---------------------|
| Download Speed Mbps | 31.12 | 44.31 | 41.23 | 30.16 | 26.42 | 31.12 |
| Upload Speed Mbps | 33.66 | 2.76 | 42.97 | 30.03 | 30.62 | 33.66 |
| Latency Sec | | | Not captured in the App | | | |

BSNL

| Technology- 3G | Texvalley Mall - Erode | Perundurai Medical College- Erode | Railway Station- Erode | Bus Stand- Erode | VOC Park- Erode | MG Market- Erode |
|---------------------|---------------------------|---|---------------------------|---------------------|--------------------|---------------------|
| Download Speed Mbps | 5.13 | 5.26 | 1.37 | 1.37 | 3.71 | 6.81 |
| Upload Speed Mbps | 1.84 | 1.84 | 1.78 | 1.78 | 1.71 | 1.84 |
| Latency Sec | | | Not captured in the App | | | |

JIO

| Technology- 4G | Texvalley Mall - Erode | Perundurai Medical College- Erode | Railway Station- Erode | Bus Stand- Erode | VOC Park- Erode | MG Market- Erode |
|---------------------|---------------------------|---|---------------------------|---------------------|--------------------|---------------------|
| Download Speed Mbps | 63.1 | 82.94 | 38.77 | 47.07 | 66.76 | 89.58 |
| Upload Speed Mbps | 8.48 | 8.44 | 10.31 | 9.61 | 9.95 | 25.57 |
| Latency Sec | 37.3 | 61 | 36.5 | 42.9 | 44.5 | 43.3 |

VIL

| Technology- 4G | Texvalley Mall - Erode | Perundurai Medical College- Erode | Railway Station- Erode | Bus Stand- Erode | VOC Park- Erode | MG Market- Erode |
|---------------------|---------------------------|---|---------------------------|---------------------|--------------------|---------------------|
| Download Speed Mbps | 165.92 | 68.88 | 31.42 | 30.16 | 26.42 | 31.12 |
| Upload Speed Mbps | 77.28 | 26.82 | 17.94 | 30.03 | 30.62 | 33.66 |
| Latency Sec | | | Not captured in the App | | | |

| Technology- 3G | Texvalley Mall - Erode | Perundurai Medical College- Erode | Railway Station- Erode | Bus Stand- Erode | VOC Park- Erode | MG Market- Erode |
|---------------------|---------------------------|---|---------------------------|---------------------|--------------------|---------------------|
| Download Speed Mbps | 15.01 | 13.41 | 9.20 | 14.64 | 15.10 | 9.74 |
| Upload Speed Mbps | 4.30 | 5.23 | 4.04 | 2.19 | 4.82 | 3.11 |
| Latency Sec | | | Not captured in the App | | | |

TRAI MySpeed App Test Details