

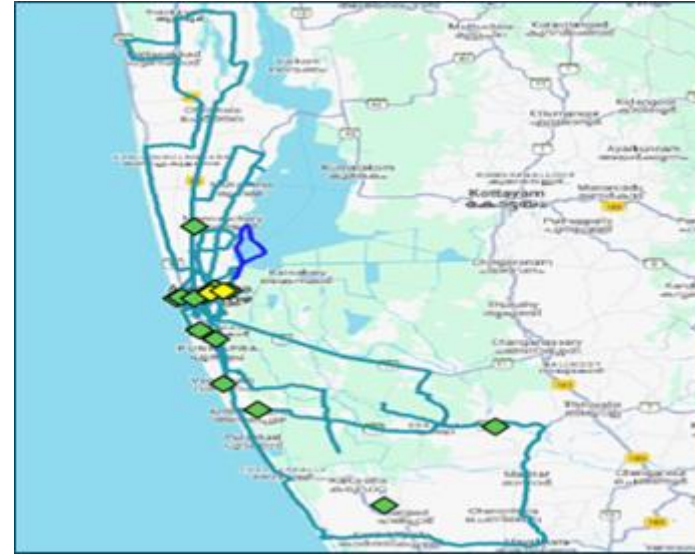
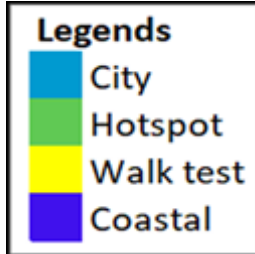
Annexure-A

1. Drive test route Map: (Alappuzha City & Alappuzha Backwaters- Kerala LSA)

This route map indicates the routes covered in independent drive test in Alappuzha & Alappuzha Backwaters under Kerala LSA.



Legends for the Drive Tests route & area are as below



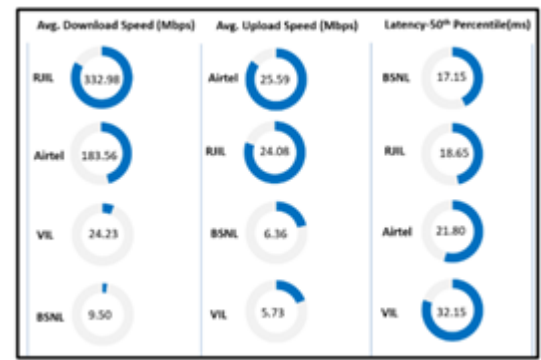
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2. Performance against key QoS parameters:

CSSR: Call setup success rate (in %), **CST:** Call setup time (in milli seconds), **DCR:** Drop call rate (in %) & **MOS:** Mean Opinion Score.



Summary-Voice Service

Call Setup Success Rate: Airtel, BSNL, RJIL and VIL have call setup success rate of 100.00%, 96.46%, 100.00% and 98.58% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 1.18, 1.27, 0.52 & 1.01 seconds respectively in Auto-selection mode (5G/4G/3G/2G).

Drop Call Rate: Airtel, BSNL, RJIL and VIL have drop call rate of 0.00%, 2.24%, 0.00% & 0.00% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate: Airtel, BSNL, RJIL and VIL have silence call rate 0.25%, 2.04%, 0.00% and 2.49% respectively in packet switched network (4G/5G).

Mean Opinion Score (MOS): Airtel, BSNL, RJIL and VIL have MOS Score of 4.06, 3.62, 3.94 & 4.51 respectively.

Summary-Data Service

Data Download performance (Dynamic): BSNL and VIL operating on 4G/3G technologies have average download speed of 9.50 Mbps and 24.23 Mbps respectively. Whereas Airtel and RJIL operating on 4G/ 5G technologies have average download speed of 183.56 Mbps and 332.98 Mbps respectively.

Data Upload performance (Dynamic): BSNL and VIL operating on 4G/3G technology have average upload speed of 6.36 Mbps and 5.73 Mbps respectively. Whereas Airtel and RJIL operating on 4G/5G technology have average upload speed of 25.59 Mbps and 24.08 Mbps respectively.

Data performance - Hotspots (in Mbps):

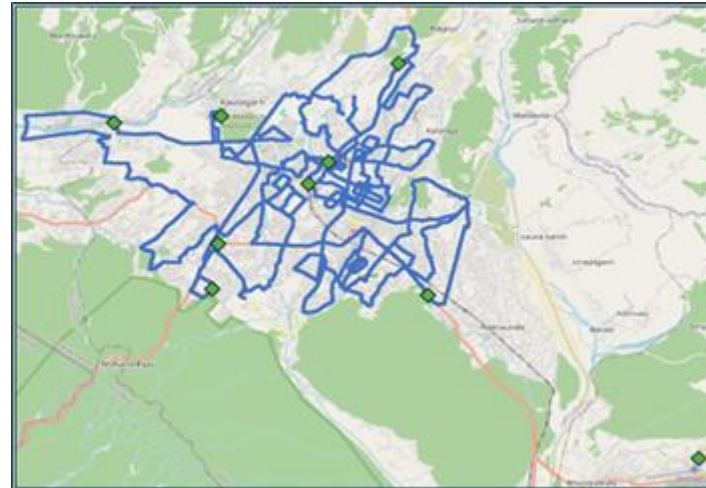
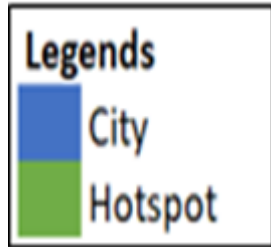
Airtel- 4G D/L: 53.63	4G U/L: 13.78
5G D/L: 233.59	5G U/L: 43.28
BSNL- 4G D/L: 7.76	4G U/L: 7.78
RJIL- 4G D/L: 34.28	4G U/L: 7.54
5G D/L: 347.79	5G U/L: 28.62
VIL- 4G D/L: 27.63	4G U/L: 6.98

Note- "D/L" Download speed, "U/L" Upload

Annexure-B

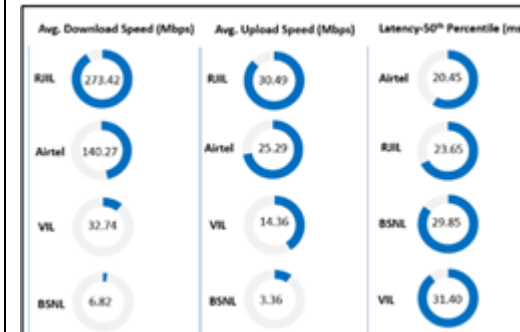
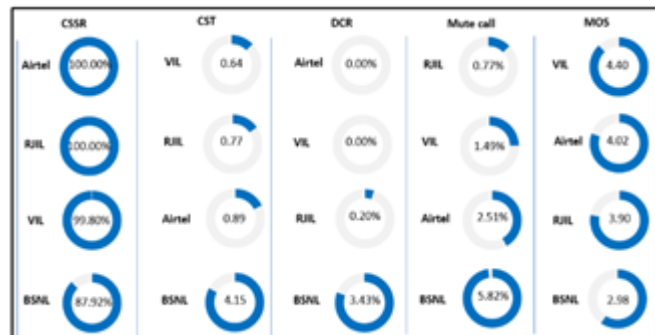
1. Drive test route Map: (Dehradun City- UP West LSA)

This route map indicates the routes covered in independent drive test in Dehradun City under UP West LSA. Legends for the Drive Tests route & area are as below



2. Performance against key QoS parameters:

CSSR: Call setup success rate (in %), **CST:** Call setup time (in milli seconds), **DCR:** Drop call rate (in %) & **MOS:** Mean Opinion Score.



Summary-Voice Service

Call Setup Success Rate : Airtel, BSNL, RJIL and VIL have call setup success rate of 100.00%, 87.92%, 100.00% and 99.80% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 0.89, 4.15, 0.77 & 0.64 seconds respectively in Auto - selection mode (5G/4G/3G/2G).

Drop Call Rate: Airtel, BSNL, RJIL and VIL have drop call rate of 0.00%, 3.43%, 0.20% and 0.00 % respectively in Auto selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate : Airtel, BSNL, RJIL and VIL have silence call rate of 2.51%, 5.82%, 0.77% & 1.49% respectively in packet switched network (4G/5G).

Mean Opinion Score (MOS): Airtel, BSNL, RJIL and VIL have MOS score of 4.02, 2.98, 3.90 & 4.40 respectively.

Summary-Data Service

Data Download performance (Dynamic): BSNL and VIL operating on 4G/3G technologies have average download speed of 6.82 Mbps and 32.74 Mbps respectively. Whereas Airtel and RJIL operating on 4G/ 5G technologies have average download speed of 140.27 Mbps and 273.42 Mbps respectively.

Data Upload performance (Dynamic): BSNL and VIL operating on 4G/3G technology have average upload speed of 3.36 and 14.36 Mbps, respectively. Whereas Airtel and RJIL operating on 4G/5G technology have average upload speed of 25.29 Mbps and 30.49 Mbps respectively.

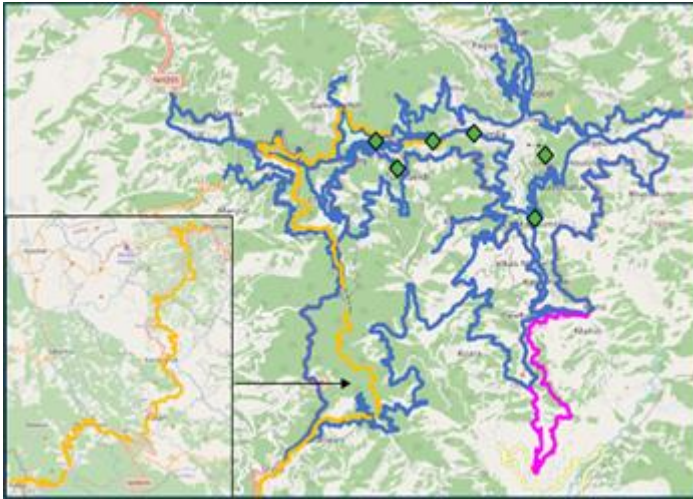
Data performance - Hotspots (in Mbps):

Airtel- 4G D/L:	3.96	4G U/L:	4.17	
	5G D/L:	143.97	5G U/L:	20.83
BSNL- 4G D/L:	5.79	4G U/L:	3.72	
RJIL- 4G D/L:	23.67	4G U/L:	4.78	
	5G D/L:	251.33	5G U/L:	27.54
VIL- 4G D/L:	21.12	4G U/L:	17.35	

Note- "D/L" Download speed, "U/L" Upload speed

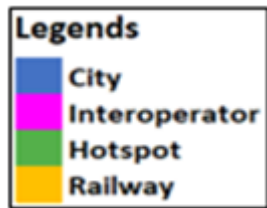
Annexure-C

1. **Drive test route Map:** (Shimla - Himachal Pradesh LSA)



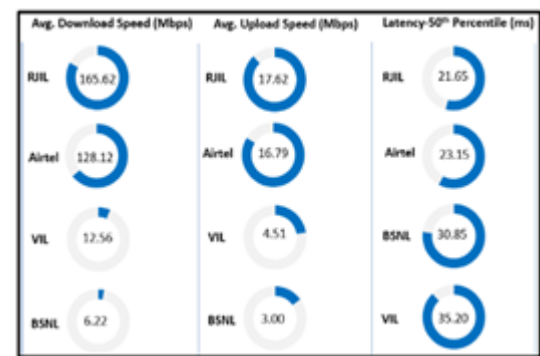
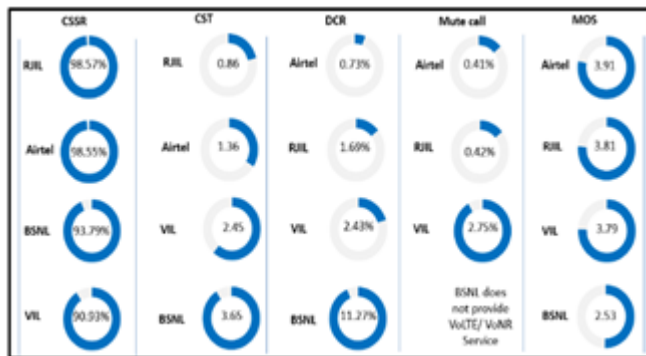
This route map indicates the routes covered in independent drive test in Shimla City and Railway route from Shimla to Jammu under Himachal Pradesh LSA.

Legends for the Drive Tests route & area are as below



2. Performance against key QoS parameters:

CSSR: Call setup success rate (in %), **CST:** Call setup time (in milli seconds), **DCR:** Drop call rate (in %) & **MOS:** Mean Opinion Score.



Summary-Voice Service

Call Setup Success Rate : Airtel, BSNL, RJIL and VIL have call setup success rate of 98.55%, 93.79%, 98.57% and 90.93% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 1.36, 3.65, 0.86, & 2.45 seconds in Auto-selection mode (5G/4G/3G/2G).

Drop Call Rate: Airtel, BSNL, RJIL and VIL have drop call rate of 0.73%, 11.27%, 1.69% and 2.43% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate Airtel, RJIL and VIL have silence call rate 0.41%, 0.42% & 2.75% respectively in packet switched network (4G/5G).

Mean Opinion Score (MOS) : Airtel, BSNL, RJIL and VIL have MOS score of 3.91, 2.53, 3.81 & 3.79 respectively.

Summary-Data Service

Data Download performance (Dynamic): BSNL and VIL operating on 4G/3G technologies have average download speed of 6.22 Mbps and 12.56 Mbps respectively. Whereas Airtel and RJIL operating on 4G/ 5G technologies have average download speed of 128.12 Mbps and 165.62 Mbps respectively.

Data Upload performance (Dynamic): BSNL and VIL operating on 4G/3G technology have average upload speed of 3.00 and 4.51 Mbps, respectively. Whereas Airtel and RJIL operating on 4G/5G technology have average upload speed of 16.79 Mbps and 17.62 Mbps respectively.

Data performance - Hotspots (in Mbps):

Airtel- 4G D/L: 57.30	4G U/L: 19.04
5G D/L: 224.11	5G U/L: 30.60
BSNL- 4G D/L: 7.58	4G U/L: 3.05
RJIL- 4G D/L: 23.12	4G U/L: 6.31
5G D/L: 194.12	5G U/L: 14.08
VIL- 4G D/L: 9.80	4G U/L: 3.12

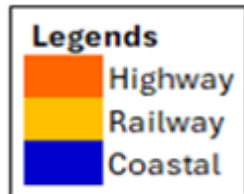
Note- "D/L" Download speed, "U/L" Upload speed

Annexure-D

Drive test route Map: (Visakhapatnam to Brahmapur Highway & Brahmapur to Bhubaneswar Railway Route & Paradeep Coastal area - Odisha LSA)

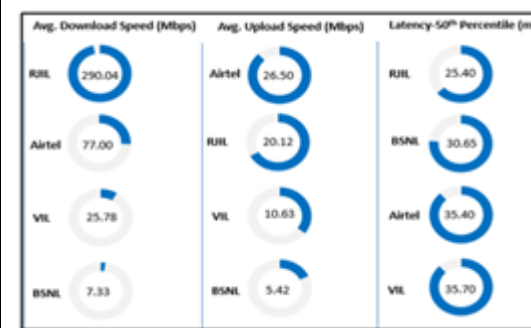
This route map indicates the routes covered in independent drive test in Visakhapatnam to Brahmapur Highway & Brahmapur to Bhubaneswar Railway Route & Paradeep Coast under Odisha LSA.

Legends for the Drive Tests route & area are as below



2. Performance against key QoS parameters:

CSSR: Call setup success rate (in %), **CST:** Call setup time (in milli seconds), **DCR:** Drop call rate (in %) & **MOS:** Mean Opinion Score.



Summary-Voice Service

Call Setup Success Rate : Airtel, BSNL, RJIL and VIL have call setup success rate of 97.89%, 87.44%, 97.41% and 95.05% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 3.55, 3.86, 1.13, & 1.20 seconds respectively in Auto-selection mode (5G/4G/3G/2G).

Drop Call Rate: Airtel, BSNL, RJIL and VIL have drop call rate of 0.54%, 12.23%, 0.53% and 4.69% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate : Airtel, BSNL, RJIL and VIL have silence call rate of 1.09%, 1.55%, 0.99% & 2.04% respectively in packet switched network (4G/5G).

Mean Opinion Score (MOS): Airtel, BSNL, RJIL and VIL have MOS score of Quality of 3.95, 2.75, 3.93 & 3.88 respectively.

Summary-Data Service

Data Download Performance (Dynamic): BSNL and VIL operating on 4G/3G technologies have average download speed of 7.33 Mbps and 25.78 Mbps respectively. Whereas Airtel and RJIL operating on 4G/ 5G technologies have average download speed of 77.00 Mbps and 290.04 Mbps respectively.

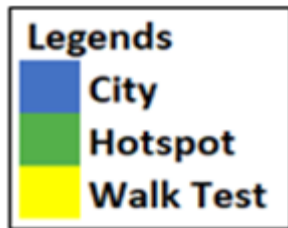
Data Upload Performance (Dynamic): BSNL and VIL operating on 4G/3G technology have average upload speed of 5.42 and 10.63 Mbps, respectively. Whereas Airtel and RJIL operating on 4G/5G technology have average upload speed of 26.50 Mbps and 20.12 Mbps respectively.

Annexure-E

1. Drive test route Map: (Hyderabad City- Andhra Pradesh LSA)

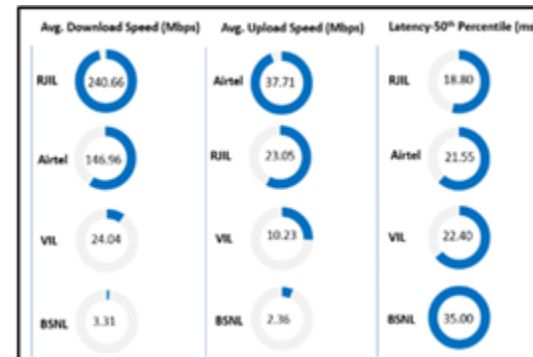
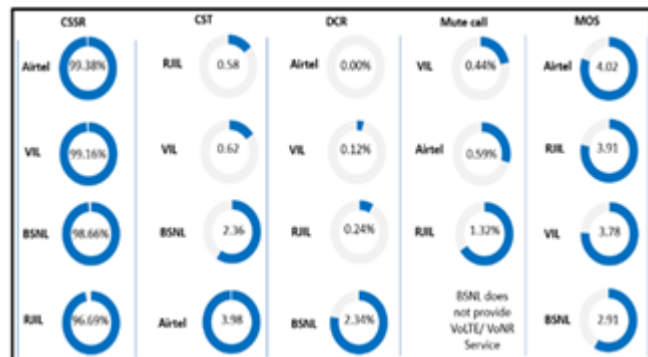


This route map indicates the routes covered in independent drive test in Hyderabad City under Andhra Pradesh LSA. Legends for the Drive Tests route & area are as below



2. Performance against key QoS parameters:

CSSR: Call setup success rate (in %), **CST:** Call setup time (in milli seconds), **DCR:** Drop call rate (in %) & **MOS:** Mean Opinion Score.



Summary-Voice Service

Call Setup Success Rate : Airtel, BSNL, RJIL and VIL have call setup success rate of 99.38%, 98.66%, 96.69% and 99.16% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 3.98, 2.36, 0.58, & 0.62 seconds respectively in Auto-selection mode (5G/4G/3G/2G).

Drop Call Rate: Airtel, BSNL, RJIL and VIL have drop call rate of 0.00%, 2.34%, 0.24% & 0.12 % respectively in Auto-selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate Airtel, RJIL and VIL have silence rate of 0.59%, 1.32 % & 0.44% respectively in packet switched network (4G/5G).

Mean Opinion Score (MOS) : Airtel, BSNL, RJIL and VIL have MOS score of 4.02, 2.91, 3.91, & 3.78 respectively

Summary-Data Service

Data Download performance (Dynamic) : BSNL and VIL operating on 4G/3G technologies have average download speed of 3.31 Mbps and 24.04 Mbps respectively. Whereas Airtel and RJIL operating on 4G/ 5G technologies have average download speed of 146.96 Mbps and 240.66 Mbps respectively.

Data Upload performance (Dynamic): BSNL and VIL operating on 4G/3G technology have average upload speed of 2.36 and 10.23 Mbps respectively. Whereas Airtel and RJIL operating on 4G/5G technology have average upload speed of 37.71 Mbps and 23.05 Mbps, respectively.

Data performance - Hotspots (in Mbps):

Airtel- 4G D/L:	35.18	4G U/L:	10.36
5G D/L:	118.77	5G U/L:	41.90
RJIL- 4G D/L:	36.22	4G U/L:	6.64
5G D/L:	232.09	5G U/L:	24.75
VIL- 4G D/L:	23.12	4G U/L:	16.70

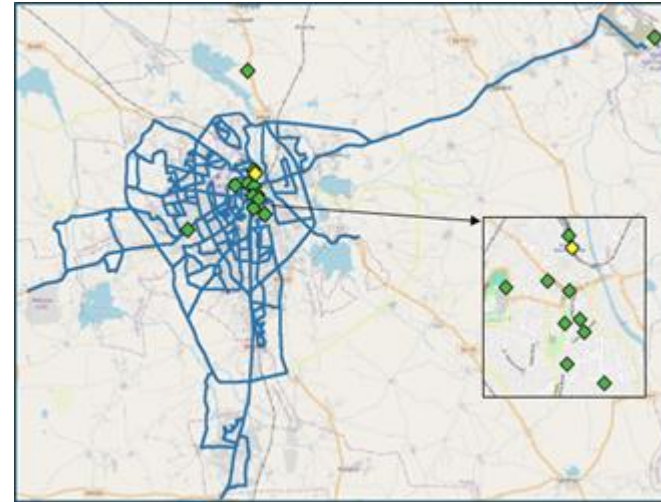
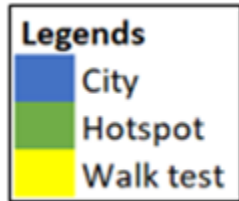
Note- "D/L" Download speed, "U/L" Upload speed

Annexure-F

1. Drive test route Map: (Rajkot City- Gujarat LSA)

This route map indicates the routes covered in independent drive test in Rajkot City under Gujarat LSA.

Legends for the Drive Tests route & area are as below



2. Performance against key QoS parameters:

CSSR: Call setup success rate (in %), **CST:** Call setup time (in milli seconds), **DCR:** Drop call rate (in %) & **MOS:** Mean Opinion Score.

Summary-Voice Service

Call Setup Success Rate: Airtel, BSNL, RJIL and VIL have call setup success rate of 99.85%, 91.75%, 99.86% and 100.00% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 1.25, 1.56, 0.72 & 0.77 seconds respectively in Auto-selection mode (5G/4G/3G/2G).

Drop Call Rate: Airtel, BSNL, RJIL and VIL have drop call rate of 0.00%, 0.90%, 0.14% & 0.15% respectively in Auto selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate: Airtel, BSNL, RJIL and VIL have silence rate of 0.00%, 6.95%, 0.56% & 0.56% respectively in packet switched network (4G/5G).

Mean Opinion Score (MOS): Airtel, BSNL, RJIL and VIL have MOS score of 4.02, 2.91, 3.91 & 4.53 respectively.



Summary-Voice Service

Call Setup Success Rate: Airtel, BSNL, RJIL and VIL have call setup success rate of 99.85%, 91.75%, 99.86% and 100.00% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 1.25, 1.56, 0.72 & 0.77 seconds respectively in Auto-selection mode (5G/4G/3G/2G).

Drop Call Rate: Airtel, BSNL, RJIL and VIL have drop call rate of 0.00%, 0.90%, 0.14% & 0.15 % respectively in Auto selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate: Airtel, BSNL, RJIL and VIL have silence rate of 0.00%, 6.95%, 0.56% & 0.56 % respectively in packet switched network (4G/5G).

Mean Opinion Score (MOS): Airtel, BSNL, RJIL and VIL have MOS score of 4.02, 2.91, 3.91 & 4.53 respectively

Summary-Data Service

Data Download performance (Dynamic): BSNL and VIL operating on 4G/3G technologies have average download speed of 7.10 Mbps and 36.49 Mbps respectively. Whereas Airtel and RJIL operating on 4G/ 5G technologies have average download speed of 171.24 Mbps and 174.46 Mbps respectively.

Data Upload performance (Dynamic): BSNL and VIL operating on 4G/3G technology have average upload speed of 3.93 and 18.84 Mbps respectively. Whereas Airtel and RJIL operating on 4G/5G technology have average upload speed of 26.94 Mbps and 32.91 Mbps, respectively.

Data performance - Hotspots (in Mbps):

Airtel- 4G D/L:	43.09	4G U/L:	8.96	
	5G D/L:	165.69	5G U/L:	23.15
BSNL- 4G D/L:	17.00	4G U/L:	10.97	
RJIL- 4G D/L:	30.79	4G U/L:	9.55	
	5G D/L:	141.79	5G U/L:	20.28
VIL- 4G D/L:	40.08	4G U/L:	22.29	

Note- "D/L" Download speed, "U/L" Upload speed