



VOICE TEST METHODOLOGY

DATA	Test Type and Timeout	Technology 3G Preferred	Technology 4G Preferred
	POP always o	n. ICMP PAYLOAD PING 800 BYTES	
1	FILE TRANSFER DOWNLOAD	FTP DL (3MB)	FTP DL (5MB)
	135s	wait 10s	wait 10s
2	FILE TRANSFER UPLOAD	FTP UL (1MB)	FTP UL (3MB)
	135s	wait 10s	wait 10s
3	FILE TRANSFER DOWNLOAD	HTTP Get (3MB)	HTTP Get (5MB)
	135s	wait 10s	wait 10s
4	FILE TRANSFER UPLOAD	HTTP Put (1MB)	HTTP Put (3MB)
	135s	wait 10s	wait 10s
5	ICMP PING 32 BYTES	Ping (32 bytes) *5	Ping (32 bytes) *5
		wait 10s	wait 10s
6	YOUTUBE STREAMING	Video: YouTube 60sec	Video: YouTube 60sec
	95 seconds	wait 10s	wait 10s
7	KEPLER WEB BROWSING	HTTPS Browsing: Kepler	HTTPS Browsing: Kepler
	45s	wait 10s	wait 10s
8	LIVE WEB BROWSING	www.shein.com, www.nbs.gov.sc, www.sbc.sc	www.shein.com, www.nbs.gov.sc, www.sbc.sc
	45s	wait 10s	wait 10s
9	KEPLER MOBILE WEB BROWSING	HTTPS Browsing: Kepler Mobile	HTTPS Browsing: Kepler Mobile
	45s	wait 10s	wait 10s
10	ICMP PING 32 BYTES	Ping (32 bytes) 5 www.google.com	Ping (32 bytes) 5 www.google.com
		wait 10s	wait 10s
11	FILE TRANSFER-CAPACITY DOWNLOAD	HTTP Get (500MB) Multiple files	HTTP Get (500MB) Multiple files
	10s fixed duration	wait 10s	wait 10s
12	FILE TRANSFER-CAPACITY UPLOAD	HTTP Put (500MB)-Multiple Files	HTTP Put (500MB)-Multiple Files
	10s fixed duration	wait 10s	wait 10s

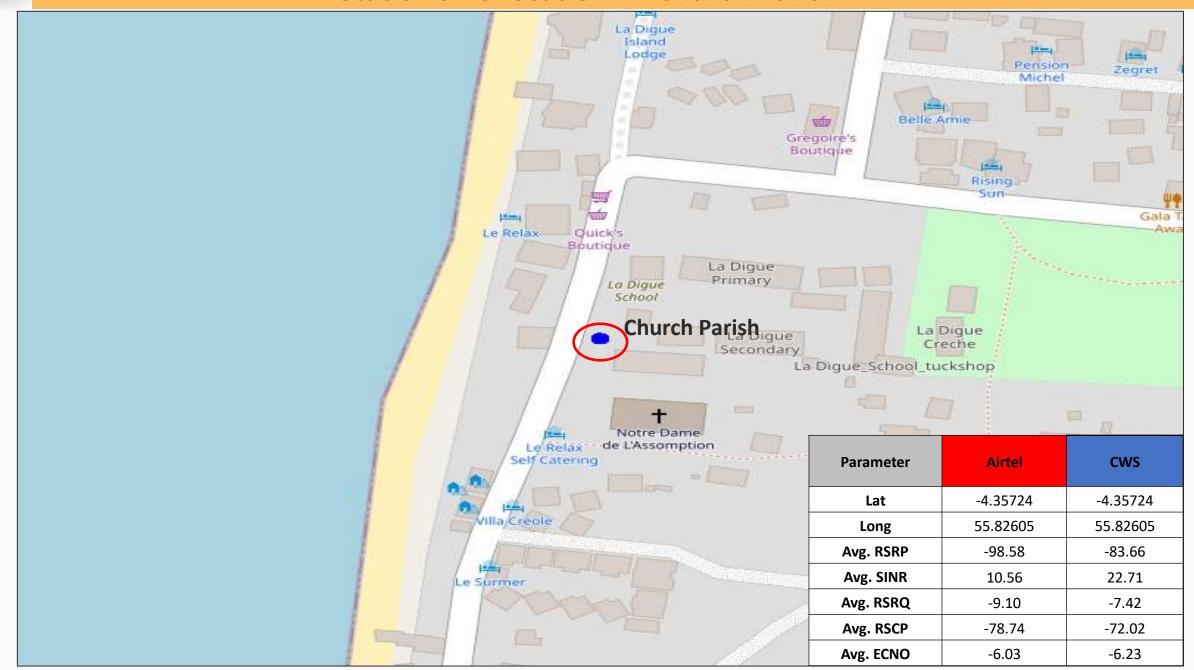


Static Points Location – Cluster La Digue





Static Point Location 1 - Church Parish





4G PREFERRED DATA TEST – EXECUTIVE SUMMARY

4G Preferred Data Findings:

- Airtel SFTP DL is (16.56 Mbps), while SFTP UL is (8.38 Mbps), CWS SFTP DL is (6.51 Mbps), while SFTP UL is (2.04 Mbps)
- Airtel HTTP DL is (26.30 Mbps), HTTP Capacity DL is (92.05 Mbps), HTTP UL is (14.17 Mbps), and HTTP Capacity UL is (28.46 Mbps).
- CWS HTTP DL is (9.38 Mbps), HTTP Capacity DL is (76.67 Mbps), HTTP UL is (3.20 Mbps), and HTTP Capacity UL is (21.10 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (6.23s), <u>www.nbs.gov.sc</u> took (17.33s), and <u>www.sbc.sc</u> took (15.41s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (6.69s), <u>www.nbs.gov.sc</u> took (17.03s), and <u>www.sbc.sc</u> took (18.02s) on CWS.
- On static browsing, Kepler Webpage took (4.08s), and Kepler Mobile took (1.66s) on Airtel.
- On static browsing, Kepler Webpage took (4.98s), and Kepler Mobile took (3.10s) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (1080.00) pixels.
- Airtel scored 25.00% in Carrier Aggregation (CA).
- CWS scored 55.56% in Carrier Aggregation (CA).



3G PREFERRED DATA TEST - EXECUTIVE SUMMARY

3G Preferred Data Test Findings:

- Airtel SFTP DL is (7.23 Mbps), while SFTP UL is (2.27 Mbps), CWS SFTP DL is (2.88 Mbps), while SFTP UL is (0.45 Mbps)
- Airtel HTTP DL is (6.37 Mbps), HTTP Capacity DL is (11.41 Mbps), HTTP UL is (3.28 Mbps), and HTTP Capacity UL is (6.23 Mbps).
- CWS HTTP DL is (2.77 Mbps), HTTP Capacity DL is (14.57 Mbps), HTTP UL is (1.03 Mbps), and HTTP Capacity UL is (3.85 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (8.09s), <u>www.nbs.gov.sc</u> took (10.55s), and <u>www.sbc.sc</u> took (11.24s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (6.78s), <u>www.nbs.gov.sc</u> took (7.60s), and <u>www.sbc.sc</u> took (8.99s) on CWS.
- On static browsing, Kepler Webpage took (3.40s), and Kepler Mobile took (1.59s) on Airtel.
- On static browsing, Kepler Webpage took (5.04s), and Kepler Mobile took (2.48s) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (1080.00) pixels.



DRIVE TEST KPI STATISTICS

		3G Preferred			4G Preferred				
	DATA Scenario	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
ER	SFTP DL (Mbps)	7.23	2.88	1	2	16.56	6.51	1	2
	SFTP UL(Mbps)	2.27	0.45	1	2	8.38	2.04	1	2
ANSFI	HTTP DL(Mbps)	6.37	2.77	1	2	26.30	9.38	1	2
FILE TRANSFER	HTTP UL(Mbps)	3.28	1.03	1	2	14.17	3.20	1	2
	HTTP Capacity DL(Mbps)	11.41	14.57	2	1	92.05	76.67	1	2
	HTTP Capacity UL(Mbps)	6.23	3.85	1	2	28.46	21.10	1	2
	Overall Browser DL Time (s)	7.07	6.15	2	1	9.01	10.09	1	2
	Kepler Webpage DL Time (s)	3.40	5.04	1	2	4.08	4.98	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.59	2.48	1	2	1.66	3.10	1	2
BROV	www.shein.com Webpage DL Time (s)	8.09	6.78	2	1	6.23	6.69	1	2
	www.nbs.gov.sc Webpage DL Time (s)	10.55	7.60	2	1	17.33	17.03	2	1
	www.sbc.sc Webpage DL Time (s)	11.24	8.99	2	1	15.41	18.02	1	2
LATENCY	Avg Latency (ms)	278.13	218.00	2	1	265.56	327.28	1	2
LATE	Median Latency (ms)	400	158	2	1	266	341	1	2
3E	YouTube Access Time (s)	3.18	2.04	2	1	5.13	1.93	2	1
YOUTUBE	YouTube Average Resolution (pixels)	1080.00	1080.00	1	1	1080.00	1080.00	1	1
\ \	YouTube Success Ratio [%]	100.00	70.00	1	2	100.00	88.89	1	2



4G PREFERRED THROUGHPUT COMPARISON

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
CETP DI	Success	13	7	100.00	100.00
SFTP DL	Failure	0	0	0.00	0.00
SFTP UL	Success	13	5	100.00	62.50
SFIPUL	Failure	0	3	0.00	37.50
HTTP DL	Success	13	8	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP UL	Success	13	8	100.00	100.00
HIIPOL	Failure	0	0	0.00	0.00
HTTD Canacity DI	Success	13	8	100.00	100.00
HTTP Capacity DL	Failure	0	0	0.00	0.00
HTTD Canacity III	Success	12	8	100.00	57.14
HTTP Capacity UL	Failure	0	6	0.00	42.86

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	SFTP DL (Mbps)	16.56	6.51	1	2
	SFTP UL(Mbps)	8.38	2.04	1	2
ANSFER	HTTP DL(Mbps)	26.30	9.38	1	2
FILE TRANSFER	HTTP UL(Mbps)	14.17	3.20	1	2
	HTTP Capacity DL(Mbps)	92.05	76.67	1	2
	HTTP Capacity UL(Mbps)	28.46	21.10	1	2



4G PREFERRED BROWSING COMPARISON

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
Wandari	Success	12	7	92.31	87.50
Kepler	Failure	1	1	7.69	12.50
Mahila Kanlar	Success	13	8	100.00	100.00
Mobile Kepler	Failure	0	0	0.00	0.00
	Success	13	8	100.00	100.00
www.shein.com	Failure	0	0	0.00	0.00
ununu nha govica	Success	13	8	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
www.sbc.sc	Success	13	8	100.00	100.00
	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	Overall Browser DL Time (s)	9.01	10.09	1	2
	Kepler Webpage DL Time (s)	4.08	4.98	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.66	3.10	1	2
	www.shein.com Webpage DL Time (s)	6.23	6.69	1	2
	www.nbs.gov.sc Webpage DL Time (s)	17.33	17.03	2	1
	www.sbc.sc Webpage DL Time (s)	15.41	18.02	1	2



4G PREFERRED LATENCY & YOUTUBE COMPARISON

	Latency KPIs	Airtel 4G	CWS 4G
	Sample Count [32 bytes]	26	15
	Average Latency [ms]	261.96	303.93
	Median Latency [ms]	261	266
Overall Latency	Average Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout] Packet Loss<1% Average Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout] Packet Loss<1% Average Latency [ms] Median Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error] Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout]	26	15
www.google.com	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	1
	Sample Count [32 bytes] Average Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout] Packet Loss<1% Average Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout] Packet Loss<1% Average Latency [ms] Median Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Successful Ping session status: Successful Ping session status: Failed [Socket error]	0.00	6.25
www.google.com	Average Latency [ms]	404.08	231.88
	Median Latency [ms]	402	163
	Ping session status: Successful	13	8
www.googie.com	Average Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout] Packet Loss<1% Average Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout] Packet Loss<1% Average Latency [ms] Median Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Protocol error timeout] Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout]	0	0
		0	0
		0.00	0.00
	Average Latency [ms]	119.85	386.29
Average Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout] Packet Loss<1% Average Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error]	Median Latency [ms]	119	399
	13	7	
102.155.176.104	Average Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout] Packet Loss<1% Average Latency [ms] Median Latency [ms] Ping session status: Successful Ping session status: Failed [Socket error] Ping session status: Failed [Protocol error timeout]	0	0
102.133.176.104	Ping session status: Failed [Protocol error timeout]	0	1
	Packet Loss<1%	0.00	12.50

LTE YOUTUBE Success Ratio						
KPIs	Airtel Data 4G	CWS Data 4G				
Attempt(Count)	13	9				
Success(Count)	13	8				
Failure(Count)	0	1				
YouTube Access Time (s)	5.13	1.93				
YouTube Average Resolution (pixels)	1080.00	1080.00				
YouTube Success Ratio [%]	100.00	88.89				



3G PREFERRED THROUGHPUT COMPARISON

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
CETD DI	Success	11	7	100.00	100.00
SFTP DL	Failure	0	0	0.00	0.00
CETTELL	Success	11	8	100.00	100.00
SFTP UL	Failure	0	0	0.00	0.00
	Success	11	8	100.00	100.00
HTTP DL	Failure	0	0	0.00	0.00
HTTP UL	Success	11	8	100.00	100.00
HIIPOL	Failure	0	0	0.00	0.00
LITTE Connecity DI	Success	10	9	100.00	100.00
HTTP Capacity DL	Failure	0	0	0.00	0.00
HTTP Canacity III	Success	10	5	100.00	38.46
HTTP Capacity UL	Failure	0	8	0.00	61.54

	DATA Scenario	Airtel 3G	rtel 3G CWS 3G		CWS 3G (Rank)
	SFTP DL (Mbps)		2.88	1	2
	SFTP UL(Mbps)	2.27	0.45	1	2
ANSFER	HTTP DL(Mbps)	6.37	2.77	1	2
FILE TRANSFER	HTTP UL(Mbps)	3.28	1.03	1	2
	HTTP Capacity DL(Mbps)	11.41	14.57	2	1
	HTTP Capacity UL(Mbps)	6.23	3.85	1	2



3G PREFERRED BROWSING COMPARISON

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Wanlau	Success	11	8	100.00	100.00
Kepler	Failure	0	0	0.00	0.00
Mahila Kanlar	Success	10	9	100.00	100.00
Mobile Kepler	Failure	0	0	0.00	0.00
	Success	11	8	100.00	100.00
www.shein.com	Failure	0	0	0.00	0.00
	Success	11	8	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
	Success	11	9	100.00	100.00
www.sbc.sc	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
	Overall Browser DL Time (s)	7.07	6.15	2	1
	Kepler Webpage DL Time (s)	3.40	5.04	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.59	2.48	1	2
	www.shein.com Webpage DL Time (s)	8.09	6.78	2	1
	www.nbs.gov.sc Webpage DL Time (s)	10.55	7.60	2	1
	www.sbc.sc Webpage DL Time (s)	11.24	8.99	2	1



3G PREFERRED LATENCY & YOUTUBE COMPARISON

	Latency KPIs	Airtel 3G	CWS 3G
	Sample Count [32 bytes]	12	13
	Average Latency [ms]	375.58	167.00
	Median Latency [ms]	415	154
Overall Latency	Ping session status: Successful	12	13
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	9	4
	Packet Loss<1%	42.86	23.53
	Average Latency [ms]	423.30	145.22
	Median Latency [ms]	423	141
www.google.com	Ping session status: Successful	10	9
www.google.com	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
	Average Latency [ms]	137.00	216.00
	Median Latency [ms]	137	216
102.133.176.104	Ping session status: Successful	2	4
102.155.176.104	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	9	4
	Packet Loss<1%	81.82	50.00

UMTS YOUTUBE Success Ratio					
KPIs	Airtel 3G	CWS 3G			
Attempt(Count)	11	10			
Success(Count)	11	7			
Failure(Count)	0	3			
YouTube Access Time (s)	3.18	2.04			
YouTube Average Resolution (pixels)	1080.00	1080.00			
YouTube Success Ratio [%]	100.00	70.00			



Static Point Location 2 - La Passe/Jetty





4G PREFERRED DATA TEST – EXECUTIVE SUMMARY

4G Preferred Data Findings:

- Airtel SFTP DL is (13.65 Mbps), while SFTP UL is (3.77 Mbps), CWS SFTP DL is (6.91 Mbps), while SFTP UL is (1.32 Mbps)
- Airtel HTTP DL is (17.97 Mbps), HTTP Capacity DL is (31.07 Mbps), HTTP UL is (5.18 Mbps), and HTTP Capacity UL is (10.61 Mbps).
- CWS HTTP DL is (11.27 Mbps), HTTP Capacity DL is (63.35 Mbps), HTTP UL is (1.04 Mbps), and HTTP Capacity UL is (8.58 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (6.29s), <u>www.nbs.gov.sc</u> took (18.19s), and <u>www.sbc.sc</u> took (16.17s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (5.83s), <u>www.nbs.gov.sc</u> took (17.71s), and <u>www.sbc.sc</u> took (18.27s) on CWS.
- On static browsing, Kepler Webpage took (4.22s), and Kepler Mobile took (1.78s) on Airtel.
- On static browsing, Kepler Webpage took (4.82s), and Kepler Mobile took (2.96s) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (1080.00) pixels.
- Airtel scored 40.00% in Carrier Aggregation (CA).
- CWS scored 40.00% in Carrier Aggregation (CA).



3G PREFERRED DATA TEST - EXECUTIVE SUMMARY

3G Preferred Data Test Findings:

- Airtel SFTP DL is (4.88 Mbps), while SFTP UL is (1.64 Mbps), CWS SFTP DL is (3.15 Mbps), while SFTP UL is (0.63 Mbps)
- Airtel HTTP DL is (5.53 Mbps), HTTP Capacity DL is (7.30 Mbps), HTTP UL is (1.95 Mbps), and HTTP Capacity UL is (4.80 Mbps).
- CWS HTTP DL is (2.85 Mbps), HTTP Capacity DL is (17.05 Mbps), HTTP UL is (1.15 Mbps), and HTTP Capacity UL is (4.36 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (8.56s), <u>www.nbs.gov.sc</u> took (10.78s), and <u>www.sbc.sc</u> took (12.19s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (5.91s), <u>www.nbs.gov.sc</u> took (7.43s), and <u>www.sbc.sc</u> took (8.17s) on CWS.
- On static browsing, Kepler Webpage took (3.63s), and Kepler Mobile took (1.79s) on Airtel.
- On static browsing, Kepler Webpage took (5.22s), and Kepler Mobile took (2.57s) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (1080.00) pixels.



DRIVE TEST KPI STATISTICS

		3G Preferred			4G Preferred				
	DATA Scenario	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	SFTP DL (Mbps)	4.88	3.15	1	2	13.65	6.91	1	2
8	SFTP UL(Mbps)	1.64	0.63	1	2	3.77	1.32	1	2
ANSFI	HTTP DL(Mbps)	5.53	2.85	1	2	17.97	11.27	1	2
FILE TRANSFER	HTTP UL(Mbps)	1.95	1.15	1	2	5.18	1.04	1	2
분	HTTP Capacity DL(Mbps)	7.30	17.05	2	1	31.07	63.35	2	1
	HTTP Capacity UL(Mbps)	4.80	4.36	1	2	10.61	8.58	1	2
	Overall Browser DL Time (s)	7.31	5.86	2	1	9.52	9.91	1	2
	Kepler Webpage DL Time (s)	3.63	5.22	1	2	4.22	4.82	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.79	2.57	1	2	1.78	2.96	1	2
BROV	www.shein.com Webpage DL Time (s)	8.56	5.91	2	1	6.29	5.83	2	1
	www.nbs.gov.sc Webpage DL Time (s)	10.78	7.43	2	1	18.19	17.71	2	1
	www.sbc.sc Webpage DL Time (s)	12.19	8.17	2	1	16.71	18.27	1	2
NCY	Avg Latency (ms)	282.85	175.55	2	1	263.86	175.17	2	1
LATENCY	Median Latency (ms)	401	200	2	1	136	173	1	2
36	YouTube Access Time (s)	3.24	1.84	2	1	5.16	1.48	2	1
YOUTUBE	YouTube Average Resolution (pixels)	1080.00	1080.00	1	1	1080.00	1080.00	1	1
Q V	YouTube Success Ratio [%]	100.00	100.00	1	1	92.31	100.00	2	1



4G PREFERRED THROUGHPUT COMPARISON

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
	Success	13	10	100.00	100.00
SFTP DL	Failure	0	0	0.00	0.00
SFTP UL	Success	13	1	100.00	10.00
SFIP OL	Failure	0	9	0.00	90.00
HTTP DL	Success	13	9	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP UL	Success	13	4	100.00	44.44
HITPOL	Failure	0	5	0.00	55.56
HTTP Capacity DL	Success	12	9	100.00	100.00
HITE Capacity DL	Failure	0	0	0.00	0.00
HTTD Canacity III	Success	12	9	100.00	100.00
HTTP Capacity UL	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	SFTP DL (Mbps)	13.65	6.91	1	2
	SFTP UL(Mbps)	3.77	1.32	1	2
FILE TRANSFER	HTTP DL(Mbps)	17.97	11.27	1	2
FILE TR/	HTTP UL(Mbps)	5.18	1.04	1	2
_	HTTP Capacity DL(Mbps)	31.07	63.35	2	1
	HTTP Capacity UL(Mbps)	10.61	8.58	1	2



4G PREFERRED BROWSING COMPARISON

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
Vanla	Success	11	9	91.67	100.00
Kepler	Failure	1	0	8.33	0.00
Nabila Kanlan	Success	12	9	100.00	100.00
Mobile Kepler	Failure	0	0	0.00	0.00
	Success	12	9	100.00	100.00
www.shein.com	Failure	0	0	0.00	0.00
	Success	12	9	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
www.sbc.sc	Success	12	9	100.00	100.00
	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	Overall Browser DL Time (s)	9.52	9.91	1	2
	Kepler Webpage DL Time (s)	4.22	4.82	1	2
VSER	Mobile Kepler Webpage DL Time (s) www.shein.com Webpage DL Time (s)	1.78	2.96	1	2
BROV		6.29	5.83	2	1
	www.nbs.gov.sc Webpage DL Time (s)	18.19	17.71	2	1
	www.sbc.sc Webpage DL Time (s)	16.71	18.27	1	2



4G PREFERRED LATENCY & YOUTUBE COMPARISON

	Latency KPIs	Airtel 4G	CWS 4G
	Sample Count [32 bytes]	25	16
	Average Latency [ms]	263.12	174.75
	Median Latency [ms]	159	167
Overall Latency	Ping session status: Successful	25	16
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	2
	Packet Loss<1%	0.00	11.11
	Average Latency [ms]	414.33	152.78
	Median Latency [ms]	413	151
	Ping session status: Successful	12	9
www.google.com	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
	Average Latency [ms]	123.54	203.00
	Median Latency [ms]	120	203
102 122 176 104	Ping session status: Successful	13	7
102.133.176.104	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	2
	Packet Loss<1%	0.00	22.22

Latency 250ms

LTE YOUTUBE Success Ratio						
KPIs	Airtel Data 4G	CWS Data 4G				
Attempt(Count)	13	9				
Success(Count)	12	9				
Failure(Count)	1	0				
YouTube Access Time (s)	5.16	1.48				
YouTube Average Resolution (pixels)	1080.00	1080.00				
YouTube Success Ratio [%]	92.31	100.00				



3G PREFERRED THROUGHPUT COMPARISON

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
CETD DI	Success	11	10	100.00	100.00
SFTP DL	Failure	0	0	0.00	0.00
CETTELL	Success	11	10	100.00	100.00
SFTP UL	Failure	0	0	0.00	0.00
HTTP DL	Success	11	10	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP UL	Success	11	6	100.00	60.00
HIIPOL	Failure	0	4	0.00	40.00
LITTE Connecity DI	Success	10	9	100.00	100.00
HTTP Capacity DL	Failure	0	0	0.00	0.00
HTTP Canacity III	Success	10	9	100.00	100.00
HTTP Capacity UL	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
	SFTP DL (Mbps)	4.88	3.15	1	2
	SFTP UL(Mbps)	1.64	0.63	1	2
NSFER	HTTP DL(Mbps)	5.53	2.85	1	2
FILE TRANSFER	HTTP UL(Mbps)	1.95	1.15	1	2
"	HTTP Capacity DL(Mbps)	7.30	17.05	2	1
	HTTP Capacity UL(Mbps)	4.80	4.36	1	2



3G PREFERRED BROWSING COMPARISON

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Konlor	Success	11	9	100.00	100.00
Kepler	Failure	0	0	0.00	0.00
Mobile Kepler	Success	10	9	100.00	100.00
	Failure	0	0	0.00	0.00
	Success	10	9	100.00	100.00
www.shein.com	Failure	0	0	0.00	0.00
	Success	10	9	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
www.sbc.sc	Success	10	9	100.00	100.00
	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
	Overall Browser DL Time (s)	7.31	5.86	2	1
	Kepler Webpage DL Time (s)	3.63	5.22	1	2
VSER	Mobile Kepler Webpage DL Time (s)		2.57	1	2
Wowshei	www.shein.com Webpage DL Time (s)	8.56	5.91	2	1
	www.nbs.gov.sc Webpage DL Time (s)	10.78	7.43	2	1
	www.sbc.sc Webpage DL Time (s)	12.19	8.17	2	1



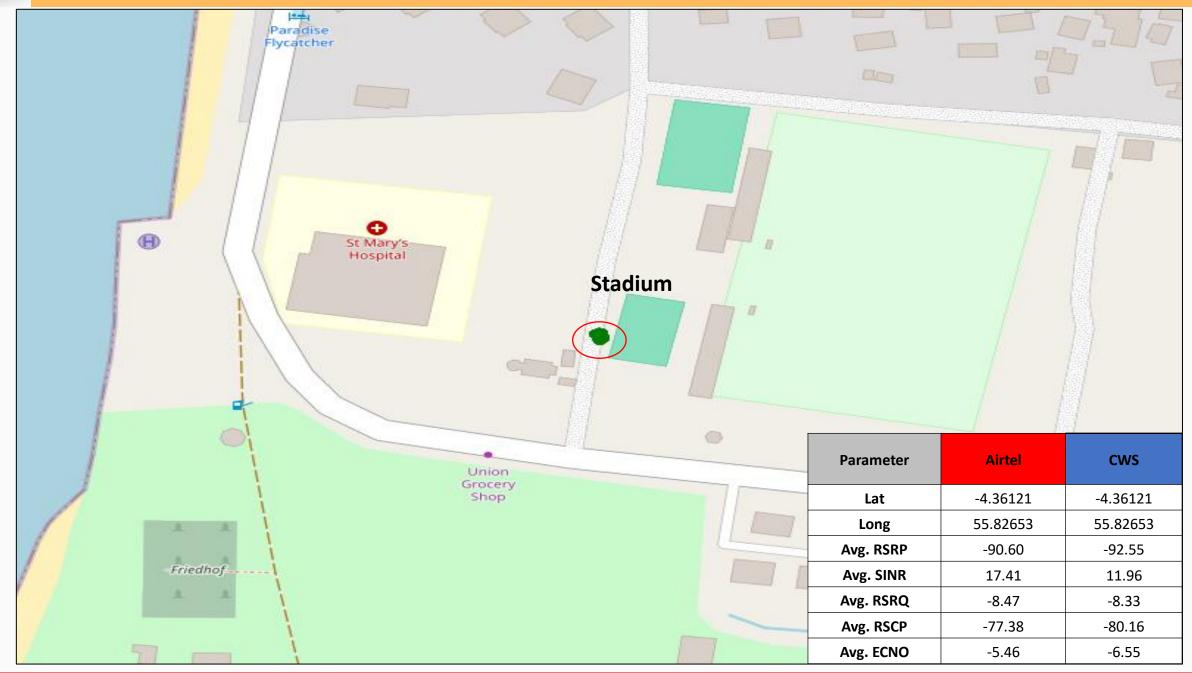
3G PREFERRED LATENCY & YOUTUBE COMPARISON

	Latency KPIs	Airtel 3G	CWS 3G
	Sample Count [32 bytes]	15	18
	Average Latency [ms]	338.53	176.06
	Median Latency [ms]	417	172
Overall Latency	Ping session status: Successful	15	18
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	6	1
	Packet Loss<1%	28.57	5.26
	Average Latency [ms]	425.30	138.67
	Median Latency [ms]	427	139
ununu googlo som	Ping session status: Successful	10	9
www.google.com	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
	Average Latency [ms]	165.00	213.44
	Median Latency [ms]	137	210
102.133.176.104	Ping session status: Successful	5	9
102.155.176.104	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	6	1
	Packet Loss<1%	54.55	10.00

UMTS YOUTUBE Success Ratio						
KPIs	Airtel 3G	CWS 3G				
Attempt(Count)	11	10				
Success(Count)	11	10				
Failure(Count)	0	0				
YouTube Access Time (s)	3.24	1.84				
YouTube Average Resolution (pixels)	1080.00	1080.00				
YouTube Success Ratio [%]	100.00	100.00				



Static Point Location 3 - Stadium





4G PREFERRED DATA TEST – EXECUTIVE SUMMARY

4G Preferred Data Findings:

- All tests failed for the 4G CWS operator.
- Airtel SFTP DL is (15.95 Mbps), while SFTP UL is (8.81 Mbps), CWS SFTP DL is (0.00 Mbps), while SFTP UL is (0.00 Mbps)
- Airtel HTTP DL is (27.17 Mbps), HTTP Capacity DL is (98.95 Mbps), HTTP UL is (15.63 Mbps), and HTTP Capacity UL is (34.31 Mbps).
- CWS HTTP DL is (0.00 Mbps), HTTP Capacity DL is (0.00 Mbps), HTTP UL is (0.00 Mbps), and HTTP Capacity UL is (0.00 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (6.27s), <u>www.nbs.gov.sc</u> took (16.41s), and <u>www.sbc.sc</u> took (14.94s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (N/As), <u>www.nbs.gov.sc</u> took (N/As), and <u>www.sbc.sc</u> took (N/As) on CWS.
- On static browsing, Kepler Webpage took (3.82s), and Kepler Mobile took (1.65s) on Airtel.
- On static browsing, Kepler Webpage took (N/As), and Kepler Mobile took (N/As) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (N/A) pixels.
- Airtel scored 35.29% in Carrier Aggregation (CA).
- CWS scored 26.09% in Carrier Aggregation (CA).



3G PREFERRED DATA TEST - EXECUTIVE SUMMARY

3G Preferred Data Test Findings:

- Airtel SFTP DL is (6.11 Mbps), while SFTP UL is (2.21 Mbps), CWS SFTP DL is (4.16 Mbps), while SFTP UL is (1.20 Mbps)
- Airtel HTTP DL is (5.62 Mbps), HTTP Capacity DL is (9.06 Mbps), HTTP UL is (3.27 Mbps), and HTTP Capacity UL is (6.31 Mbps).
- CWS HTTP DL is (3.13 Mbps), HTTP Capacity DL is (11.21 Mbps), HTTP UL is (2.16 Mbps), and HTTP Capacity UL is (4.80 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (8.75s), <u>www.nbs.gov.sc</u> took (10.29s), and <u>www.sbc.sc</u> took (10.75s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (6.77s), <u>www.nbs.gov.sc</u> took (6.26s), and <u>www.sbc.sc</u> took (9.62s) on CWS.
- On static browsing, Kepler Webpage took (3.43s), and Kepler Mobile took (1.62s) on Airtel.
- On static browsing, Kepler Webpage took (4.94s), and Kepler Mobile took (2.31s) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (1080.00) pixels.



DRIVE TEST KPI STATISTICS

		3G Preferred			4G Preferred				
	DATA Scenario	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	SFTP DL (Mbps)	6.11	4.16	1	2	15.95	0.00	1	2
~	SFTP UL(Mbps)	2.21	1.20	1	2	8.81	0.00	1	2
ANSF	HTTP DL(Mbps)	5.62	3.13	1	2	27.17	0.00	1	2
FILE TRANSFER	HTTP UL(Mbps)	3.27	2.16	1	2	15.63	0.00	1	2
臣	HTTP Capacity DL(Mbps)	9.06	11.21	2	1	98.95	0.00	1	2
	HTTP Capacity UL(Mbps)	6.31	4.80	1	2	34.31	0.00	1	2
	Overall Browser DL Time (s)	6.96	5.95	2	1	8.69	N/A	1	2
	Kepler Webpage DL Time (s)	3.43	4.94	1	2	3.82	N/A	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.62	2.31	1	2	1.65	N/A	1	2
BRO\	www.shein.com Webpage DL Time (s)	8.75	6.77	2	1	6.27	N/A	1	2
	www.nbs.gov.sc Webpage DL Time (s)	10.29	6.26	2	1	16.41	N/A	1	2
	www.sbc.sc Webpage DL Time (s)	10.75	9.62	2	1	14.94	N/A	1	2
LATENCY	Avg Latency (ms)	273.56	209.65	2	1	259.74	N/A	1	2
LATE	Median Latency (ms)	400	148	2	1	128	N/A	1	2
BE	YouTube Access Time (s)	3.24	1.87	2	1	5.22	N/A	1	2
YOUTUBE	YouTube Average Resolution (pixels)	1080.00	1080.00	1	1	1080.00	N/A	1	2
λ (YouTube Success Ratio [%]	100.00	81.82	1	2	100.00	N/A	1	2



4G PREFERRED THROUGHPUT COMPARISON

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
SFTP DL	Success	13	0	100.00	0.00
2FTP DL	Failure	0	0	0.00	0.00
SFTP UL	Success	13	0	100.00	0.00
SFIP OL	Failure	0	0	0.00	0.00
	Success	13	0	100.00	0.00
HTTP DL	Failure	0	0	0.00	0.00
HTTP UL	Success	13	0	100.00	0.00
HITPOL	Failure	0	5	0.00	100.00
HTTP Capacity DL	Success	12	0	100.00	0.00
HITE Capacity DL	Failure	0	0	0.00	0.00
	Success	12	0	100.00	0.00
HTTP Capacity UL	Failure	0	4	0.00	100.00

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	SFTP DL (Mbps)	15.95	0.00	1	2
	SFTP UL(Mbps)	8.81	0.00	1	2
FILE TRANSFER	HTTP DL(Mbps)	27.17	0.00	1	2
FILE TR	HTTP UL(Mbps)	15.63	0.00	1	2
	HTTP Capacity DL(Mbps)	98.95	0.00	1	2
	HTTP Capacity UL(Mbps)	34.31	0.00	1	2



4G PREFERRED BROWSING COMPARISON

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
Wandari	Success	12	0	100.00	0.00
Kepler	Failure	0	0	0.00	0.00
Mahila Kaulan	Success	13	0	100.00	0.00
Mobile Kepler	Failure	0	0	0.00	0.00
	Success	13	0	100.00	0.00
www.shein.com	Failure	0	0	0.00	0.00
	Success	13	0	100.00	0.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
	Success	13	0	100.00	0.00
www.sbc.sc	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	Overall Browser DL Time (s)	8.69	N/A	1	2
	Kepler Webpage DL Time (s)	3.82	N/A	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.65	N/A	1	2
	www.shein.com Webpage DL Time (s)	6.27	N/A	1	2
	www.nbs.gov.sc Webpage DL Time (s)	16.41	N/A	1	2
	www.sbc.sc Webpage DL Time (s)	14.94	N/A	1	2



4G PREFERRED LATENCY & YOUTUBE COMPARISON

	Latency KPIs	Airtel 4G	CWS 4G
	Sample Count [32 bytes]	25	N/A
	Average Latency [ms]	255.08	N/A
	Median Latency [ms]	125	N/A
Overall Latency	Ping session status: Successful	25	N/A
	Ping session status: Failed [Socket error]	0	N/A
	Ping session status: Failed [Protocol error timeout]	0	N/A
	Packet Loss<1%	0.00	N/A
	Average Latency [ms]	402.58	N/A
	Median Latency [ms]	400	N/A
www.google.com	Ping session status: Successful	12	N/A
www.google.com	Ping session status: Failed [Socket error]	0	N/A
	Ping session status: Failed [Protocol error timeout]	0	N/A
	Packet Loss<1%	0.00	N/A
	Average Latency [ms]	118.92	N/A
	Median Latency [ms]	119	N/A
102.133.176.104	Ping session status: Successful	13	N/A
102.133.176.104	Ping session status: Failed [Socket error]	0	N/A
	Ping session status: Failed [Protocol error timeout]	0	N/A
	Packet Loss<1%	0.00	N/A

Latency 250ms

LTE YOUTUBE Success Ratio					
KPIs	Airtel Data 4G	CWS Data 4G			
Attempt(Count)	13	5			
Success(Count)	13	0			
Failure(Count)	0	5			
YouTube Access Time (s)	5.22	0.00			
YouTube Average Resolution (pixels)	1080.00	0.00			
YouTube Success Ratio [%]	100.00	0.00			



3G PREFERRED THROUGHPUT COMPARISON

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
SFTP DL	Success	11	10	100.00	100.00
SFIPDL	Failure	0	0	0.00	0.00
SFTP UL	Success	11	10	100.00	100.00
SFIP OL	Failure	0	0	0.00	0.00
	Success	11	11	100.00	100.00
HTTP DL	Failure	0	0	0.00	0.00
HTTP UL	Success	11	9	100.00	81.82
HITPOL	Failure	0	2	0.00	18.18
HTTD Conneity DI	Success	11	10	100.00	100.00
HTTP Capacity DL	Failure	0	0	0.00	0.00
HTTD Canacity III	Success	10	9	100.00	90.00
HTTP Capacity UL	Failure	0	1	0.00	10.00

	DATA Scenario	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
	SFTP DL (Mbps)	6.11	4.16	1	2
	SFTP UL(Mbps)	2.21	1.20	1	2
ANSFER	HTTP DL(Mbps)	5.62	3.13	1	2
FILE TRANSFER	HTTP UL(Mbps)	3.27	2.16	1	2
	HTTP Capacity DL(Mbps)	9.06	11.21	2	1
	HTTP Capacity UL(Mbps)	6.31	4.80	1	2



3G PREFERRED BROWSING COMPARISON

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Wayley	Success	11	11	100.00	100.00
Kepler	Failure	0	0	0.00	0.00
Mobile Kepler	Success	11	10	100.00	100.00
	Failure	0	0	0.00	0.00
www.shein.com	Success	11	10	100.00	100.00
	Failure	0	0	0.00	0.00
www.nbs.gov.sc	Success	11	10	100.00	100.00
	Failure	0	0	0.00	0.00
www.sbc.sc	Success	11	10	100.00	100.00
	Failure	0	0	0.00	0.00

	DATA Scenario	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
	Overall Browser DL Time (s)	6.96	5.95	2	1
	Kepler Webpage DL Time (s)	3.43	4.94	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.62	2.31	1	2
	www.shein.com Webpage DL Time (s)	8.75	6.77	2	1
	www.nbs.gov.sc Webpage DL Time (s)	10.29	6.26	2	1
	www.sbc.sc Webpage DL Time (s)	10.75	9.62	2	1



3G PREFERRED LATENCY & YOUTUBE COMPARISON

	Latency KPIs	Airtel 3G	CWS 3G
Overall Latency	Sample Count [32 bytes]	20	18
	Average Latency [ms]	290.15	179.11
	Median Latency [ms]	402	142
	Ping session status: Successful	20	18
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	2	2
	Packet Loss<1%	9.09	10.00
www.google.com	Average Latency [ms]	431.64	139.60
	Median Latency [ms]	418	140
	Ping session status: Successful	11	10
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
102.133.176.104	Average Latency [ms]	117.22	228.50
	Median Latency [ms]	118	201
	Ping session status: Successful	9	8
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	2	2
	Packet Loss<1%	18.18	20.00

UMTS YOUTUBE Success Ratio				
KPIs	Airtel 3G	CWS 3G		
Attempt(Count)	11	11		
Success(Count)	11	9		
Failure(Count)	0	2		
YouTube Access Time (s)	3.24	1.87		
YouTube Average Resolution (pixels)	1080.00	1080.00		
YouTube Success Ratio [%]	100.00	81.82		



THANKS