

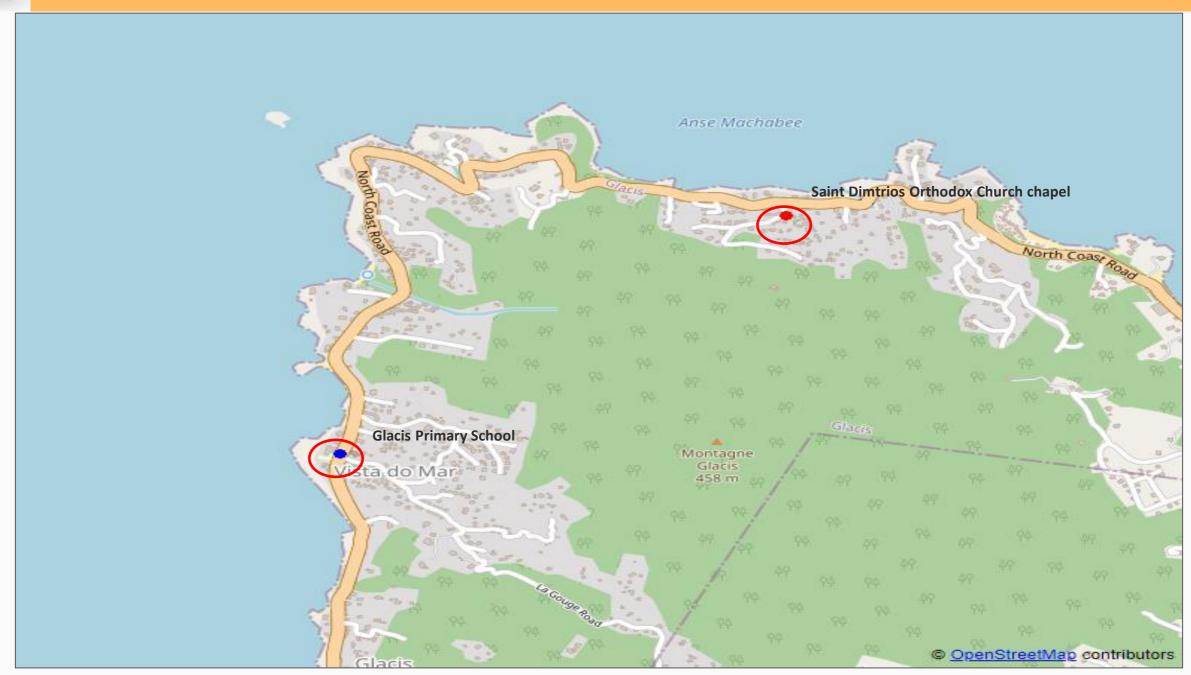


# **VOICE TEST METHODOLOGY**

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

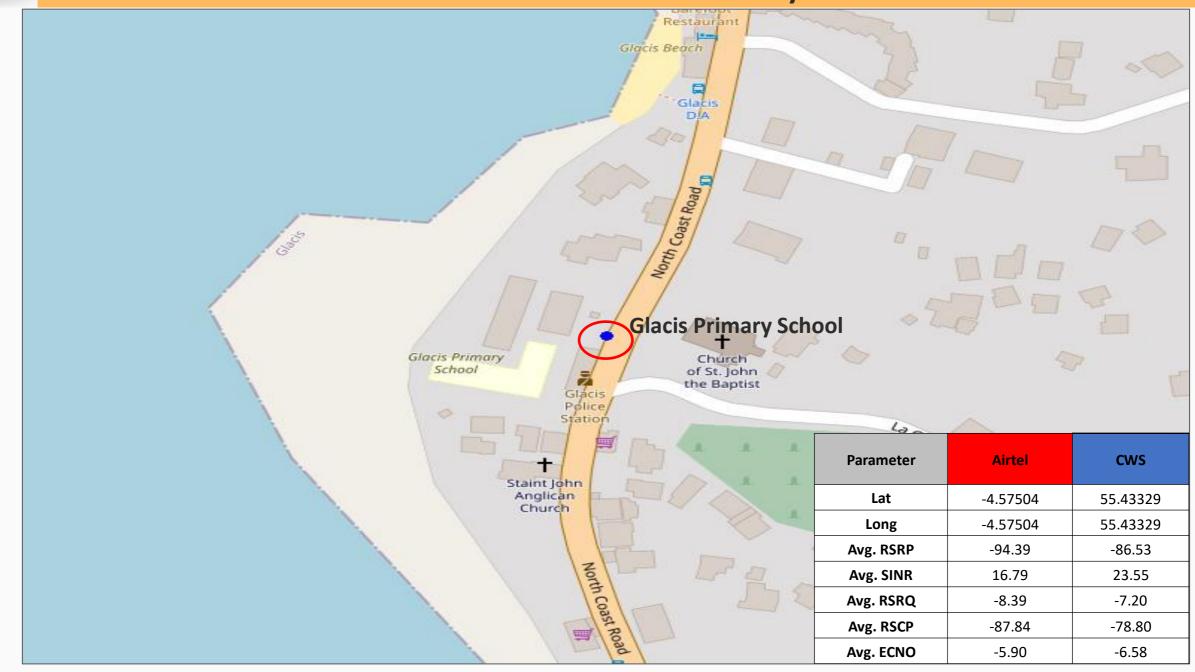


## **Static Points Location – Cluster Glacis**





# **Static Point Location 1 - Glacis Primary School**





#### **4G PREFERRED DATA TEST – EXECUTIVE SUMMARY**

#### **4G Preferred Data Findings:**

- Airtel SFTP DL is (16.23 Mbps), while SFTP UL is (7.07 Mbps), CWS SFTP DL is (9.70 Mbps), while SFTP UL is (4.22 Mbps)
- Airtel HTTP DL is (23.65 Mbps), HTTP Capacity DL is (74.29 Mbps), HTTP UL is (10.49 Mbps), and HTTP Capacity UL is (17.93 Mbps).
- CWS HTTP DL is (13.36 Mbps), HTTP Capacity DL is (90.33 Mbps), HTTP UL is (7.02 Mbps), and HTTP Capacity UL is (14.20 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (6.43s), <u>www.nbs.gov.sc</u> took (16.45s), and <u>www.sbc.sc</u> took (16.35s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (5.83s), <u>www.nbs.gov.sc</u> took (15.99s), and <u>www.sbc.sc</u> took (12.99s) on CWS.
- On static browsing, Kepler Webpage took (3.85s), and Kepler Mobile took (1.63s) on Airtel.
- On static browsing, Kepler Webpage took (4.13s), and Kepler Mobile took (2.53s) on CWS.
- YouTube average resolution in Airtel is (1046.24) pixels.
- YouTube average resolution in CWS is (1046.89) pixels.
- Airtel scored 40.00% in Carrier Aggregation (CA).
- CWS scored 25.00% in Carrier Aggregation (CA).



#### **3G PREFERRED DATA TEST - EXECUTIVE SUMMARY**

#### **3G Preferred Data Test Findings:**

- Airtel SFTP DL is (6.41 Mbps), while SFTP UL is (1.33 Mbps), CWS SFTP DL is (3.74 Mbps), while SFTP UL is (1.29 Mbps)
- Airtel HTTP DL is (6.86 Mbps), HTTP Capacity DL is (11.44 Mbps), HTTP UL is (1.75 Mbps), and HTTP Capacity UL is (3.82 Mbps).
- CWS HTTP DL is (3.58 Mbps), HTTP Capacity DL is (8.85 Mbps), HTTP UL is (2.59 Mbps), and HTTP Capacity UL is (5.91 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (7.91s), <u>www.nbs.gov.sc</u> took (10.08s), and <u>www.sbc.sc</u> took (12.16s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (8.91s), <u>www.nbs.gov.sc</u> took (7.82s), and <u>www.sbc.sc</u> took (9.25s) on CWS.
- On static browsing, Kepler Webpage took (3.05s), and Kepler Mobile took (1.55s) on Airtel.
- On static browsing, Kepler Webpage took (4.87s), and Kepler Mobile took (2.25s) on CWS.
- YouTube average resolution in Airtel is (1047.27) pixels.
- YouTube average resolution in CWS is (1039.89) 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)	6.41	3.74	1	2	16.23	9.70	1	2
<b>&amp;</b>	SFTP UL(Mbps)	1.33	1.29	1	2	7.07	4.22	1	2
ANSFI	HTTP DL(Mbps)	6.86	3.58	1	2	23.65	13.36	1	2
FILE TRANSFER	HTTP UL(Mbps)	1.75	2.59	2	1	10.49	7.02	1	2
置	HTTP Capacity DL(Mbps)	11.44	8.85	1	2	74.29	90.33	2	1
	HTTP Capacity UL(Mbps)	3.82	5.91	2	1	17.93	14.20	1	2
	Overall Browser DL Time (s)	7.05	6.62	2	1	9.02	8.29	2	1
	Kepler Webpage DL Time (s)	3.05	4.87	1	2	3.85	4.13	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.55	2.25	1	2	1.63	2.53	1	2
BRO\	www.shein.com Webpage DL Time (s)	7.91	8.91	1	2	6.43	5.83	2	1
	www.nbs.gov.sc Webpage DL Time (s)	10.08	7.82	2	1	16.45	15.99	2	1
	www.sbc.sc Webpage DL Time (s)	12.16	9.25	2	1	16.35	12.99	2	1
LATENCY	Avg Latency (ms)	276.06	233.08	2	1	257.30	166.28	2	1
LATE	Median Latency (ms)	393	197	2	1	138	189	1	2
3E	YouTube Access Time (s)	3.08	1.82	2	1	5.25	1.35	2	1
YOUTUBE	YouTube Average Resolution (pixels)	1047.27	1039.89	1	2	1046.24	1046.89	2	1
YO	YouTube Success Ratio [%]	100.00	100.00	1	1	100.00	100.00	1	1



# **4G PREFERRED THROUGHPUT COMPARISON**

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
CETP DI	Success	13	13	100.00	100.00
SFTP DL	Failure	0	0	0.00	0.00
CETTOLII	Success	13	13	100.00	100.00
SFTP UL	Failure	0	0	0.00	0.00
HTTD DI	Success	13	13	100.00	100.00
HTTP DL	Failure	0	0	0.00	0.00
HTTP UL	Success	13	13	100.00	100.00
HIIPOL	Failure	0	0	0.00	0.00
HTTD Consoity DI	Success	12	12	100.00	100.00
HTTP Capacity DL	Failure	0	0	0.00	0.00
HTTD Conneith: III	Success	12	12	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)	16.23	9.70	1	2
	SFTP UL(Mbps)	7.07	4.22	1	2
TRANSFER	HTTP DL(Mbps)	23.65	13.36	1	2
FILE TRA	HTTP UL(Mbps)	10.49	7.02	1	2
	HTTP Capacity DL(Mbps)	74.29	90.33	2	1
	HTTP Capacity UL(Mbps)	17.93	14.20	1	2



## **4G PREFERRED BROWSING COMPARISON**

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
Vanlar	Success	12	12	92.31	100.00
Kepler	Failure	1	0	7.69	0.00
Mahila Kanlar	Success	12	12	100.00	100.00
Mobile Kepler	Failure	0	0	0.00	0.00
	Success	13	12	100.00	100.00
www.shein.com	Failure	0	0	0.00	0.00
	Success	13	12	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
www.sbc.sc	Success	12	12	92.31	100.00
	Failure	1	0	7.69	0.00

	DATA Scenario	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
	Overall Browser DL Time (s)	9.02	8.29	2	1
	Kepler Webpage DL Time (s)	3.85	4.13	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.63	2.53	1	2
	www.shein.com Webpage DL Time (s)	6.43	5.83	2	1
	www.nbs.gov.sc Webpage DL Time (s)	16.45	15.99	2	1
	www.sbc.sc Webpage DL Time (s)	16.35	12.99	2	1



## **4G PREFERRED LATENCY & YOUTUBE COMPARISON**

	Latency KPIs	Airtel 4G	CWS 4G
	Sample Count [32 bytes]	25	25
	Average Latency [ms]	252.04	170.48
	Median Latency [ms]	126	189
Overall Latency	Ping session status: Successful	25	25
	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]	396.67	144.17
	Median Latency [ms]	397	142
	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]  Average 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]	12	12
www.googie.com	Ping session status: Failed [Socket error]	0	0
	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]  Median Latency [ms]  Ping session status: Successful  Ping session status: Successful  Ping session status: Successful  Ping session status: Failed [Socket error]	0	0
		0.00	0.00
	Average Latency [ms]	118.54	194.77
	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: Failed [Socket error]  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error timeout]	118	194
Average Latency [ms]  Median Latency [ms]  Ping session status: Successful  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error  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  Packet Loss<1%  Average Latency [ms]  Median Latency [ms]  Median Latency [ms]  Median Latency [ms]  Ping session status: Successful  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error	Ping session status: Successful	13	13
102.133.176.104	Ping session status: Failed [Socket error]	0	0
Average Latency [ms]  Median Latency [ms]  Ping session status: Successful  Ping session status: Failed [Socket error]  Ping session status: Failed [Protocol error time  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 time	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00

LTE YOUTUBE Success Ratio						
KPIs	Airtel Data 4G	CWS Data 4G				
Attempt(Count)	13	13				
Success(Count)	13	13				
Failure(Count)	0	0				
YouTube Access Time (s)	5.25	1.35				
YouTube Average Resolution (pixels)	1046.24	1046.89				
YouTube Success Ratio [%]	100.00	100.00				



# **3G PREFERRED THROUGHPUT COMPARISON**

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
SFTP DL	Success	11	11	100.00	100.00
SFIP DL	Failure	0	0	0.00	0.00
CETD III	Success	11	10	100.00	90.91
SFTP UL	Failure	0	1	0.00	9.09
LITTO DI	Success	11	11	100.00	100.00
HTTP DL	Failure	0	0	0.00	0.00
HTTD III	Success	11	11	100.00	100.00
HTTP UL	Failure	0	0	0.00	0.00
LITTO Compains DI	Success	10	10	100.00	100.00
HTTP Capacity DL	Failure	0	0	0.00	0.00
	Success	10	10	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)	6.41	3.74	1	2
INSFER	SFTP UL(Mbps)	1.33	1.29	1	2
	HTTP DL(Mbps)	6.86	3.58	1	2
FILE TRANSFER	HTTP UL(Mbps)	1.75	2.59	2	1
	HTTP Capacity DL(Mbps)	11.44	8.85	1	2
	HTTP Capacity UL(Mbps)	3.82	5.91	2	1



# **3G PREFERRED BROWSING COMPARISON**

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Vanlor	Success	11	10	100.00	100.00
Kepler	Failure	0	0	0.00	0.00
Mobile Kepler	Success	10	10	100.00	100.00
	Failure	0	0	0.00	0.00
.1	Success	11	10	100.00	100.00
www.shein.com	Failure	0	0	0.00	0.00
	Success	11	10	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
	Success	11	10	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)	7.05	6.62	2	1
/SER	Kepler Webpage DL Time (s)	3.05	4.87	1	2
	Mobile Kepler Webpage DL Time (s)	1.55	2.25	1	2
BROWSER	www.shein.com Webpage DL Time (s)	7.91	8.91	1	2
	www.nbs.gov.sc Webpage DL Time (s)	10.08	7.82	2	1
	www.sbc.sc Webpage DL Time (s)	12.16	9.25	2	1



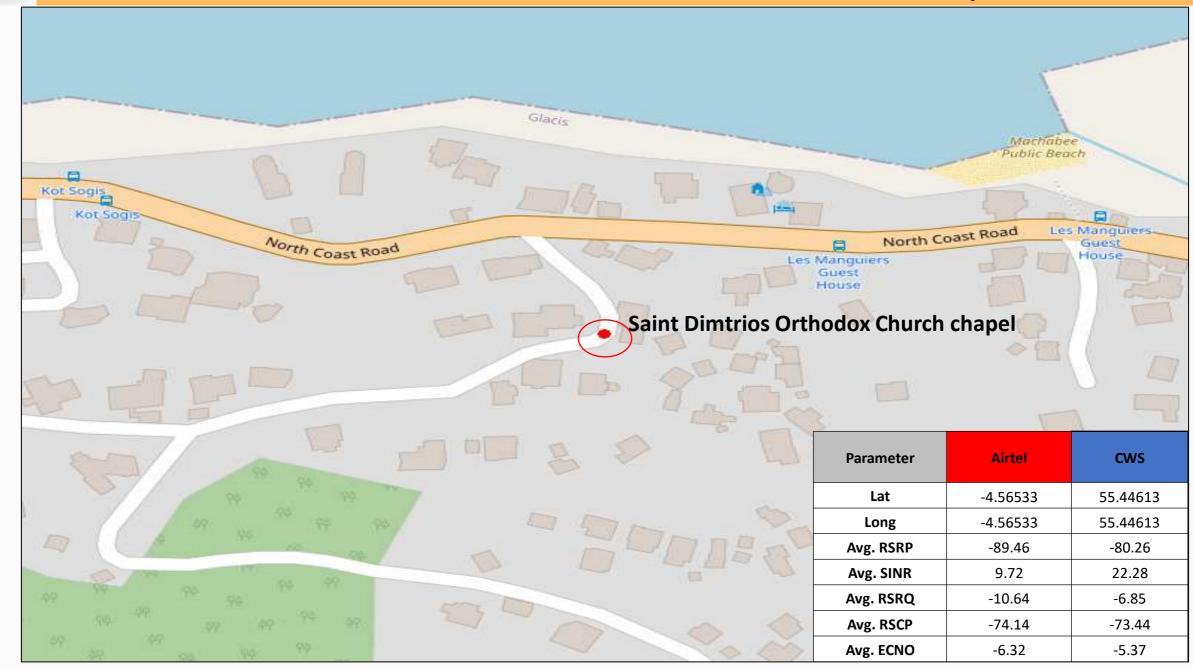
## **3G PREFERRED LATENCY & YOUTUBE COMPARISON**

	Latency KPIs	Airtel 3G	CWS 3G
	Sample Count [32 bytes]	15	19
	Average Latency [ms]	316.73	226.00
	Median Latency [ms]	399	139
Overall Latency	Ping session status: Successful	15	19
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	6	2
	Packet Loss<1%	28.57	9.52
	Average Latency [ms]	411.40	138.10
	Median Latency [ms]	409	138
	Ping session status: Successful	10	10
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]	127.40	323.67
	Median Latency [ms]	118	349
102 122 176 104	Ping session status: Successful	5	9
102.133.176.104	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	6	2
	Packet Loss<1%	54.55	18.18

UMTS YOUTUBE Success Ratio						
KPIs	Airtel 3G	CWS 3G				
Attempt(Count)	11	11				
Success(Count)	11	11				
Failure(Count)	0	0				
YouTube Access Time (s)	3.08	1.82				
YouTube Average Resolution (pixels)	1047.27	1039.89				
YouTube Success Ratio [%]	100.00	100.00				



# **Static Point Location 2 - Saint Dimtrios Orthodox Church chapel**





#### **4G PREFERRED DATA TEST – EXECUTIVE SUMMARY**

#### **4G Preferred Data Findings:**

- Airtel SFTP DL is (16.67 Mbps), while SFTP UL is (9.94 Mbps), CWS SFTP DL is (7.36 Mbps), while SFTP UL is (4.36 Mbps)
- Airtel HTTP DL is (26.40 Mbps), HTTP Capacity DL is (85.61 Mbps), HTTP UL is (18.29 Mbps), and HTTP Capacity UL is (41.66 Mbps).
- CWS HTTP DL is (8.61 Mbps), HTTP Capacity DL is (75.22 Mbps), HTTP UL is (9.25 Mbps), and HTTP Capacity UL is (53.14 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (6.21s), <u>www.nbs.gov.sc</u> took (16.24s), and <u>www.sbc.sc</u> took (14.52s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (6.48s), <u>www.nbs.gov.sc</u> took (16.85s), and <u>www.sbc.sc</u> took (12.50s) on CWS.
- On static browsing, Kepler Webpage took (3.66s), and Kepler Mobile took (1.61s) on Airtel.
- On static browsing, Kepler Webpage took (4.94s), and Kepler Mobile took (2.79s) on CWS.
- YouTube average resolution in Airtel is (1048.81) pixels.
- YouTube average resolution in CWS is (1047.23) pixels.
- Airtel scored 51.85% in Carrier Aggregation (CA).
- CWS scored 20.00% in Carrier Aggregation (CA).



#### **3G PREFERRED DATA TEST - EXECUTIVE SUMMARY**

#### **3G Preferred Data Test Findings:**

- Airtel SFTP DL is (7.09 Mbps), while SFTP UL is (2.04 Mbps), CWS SFTP DL is (4.31 Mbps), while SFTP UL is (1.33 Mbps)
- Airtel HTTP DL is (6.06 Mbps), HTTP Capacity DL is (10.12 Mbps), HTTP UL is (3.18 Mbps), and HTTP Capacity UL is (6.04 Mbps).
- CWS HTTP DL is (4.19 Mbps), HTTP Capacity DL is (9.49 Mbps), HTTP UL is (2.79 Mbps), and HTTP Capacity UL is (5.66 Mbps).
- On live web page testing for browsing, <u>www.shein.com</u> took (8.50s), <u>www.nbs.gov.sc</u> took (10.30s), and <u>www.sbc.sc</u> took (9.25s) on Airtel.
- On live web page testing for browsing, <u>www.shein.com</u> took (8.30s), <u>www.nbs.gov.sc</u> took (7.52s), and <u>www.sbc.sc</u> took (7.65s) on CWS.
- On static browsing, Kepler Webpage took (3.37s), and Kepler Mobile took (1.53s) on Airtel.
- On static browsing, Kepler Webpage took (4.91s), and Kepler Mobile took (2.29s) on CWS.
- YouTube average resolution in Airtel is (1047.27) pixels.
- YouTube average resolution in CWS is (1042.37) pixels.



# **DRIVE TEST KPI STATISTICS**

		3G Preferred				4G Pre	eferred		
	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)	7.09	4.31	1	2	16.67	7.36	1	2
<b>8</b>	SFTP UL(Mbps)	2.04	1.33	1	2	9.94	4.36	1	2
ANSFI	HTTP DL(Mbps)	6.06	4.19	1	2	26.40	8.61	1	2
FILE TRANSFER	HTTP UL(Mbps)	3.18	2.79	1	2	18.29	9.25	1	2
置	HTTP Capacity DL(Mbps)	10.12	9.49	1	2	85.61	75.22	1	2
	HTTP Capacity UL(Mbps)	6.04	5.66	1	2	41.66	53.14	2	1
	Overall Browser DL Time (s)	6.51	6.15	2	1	8.44	8.70	1	2
	Kepler Webpage DL Time (s)	3.37	4.91	1	2	3.66	4.94	1	2
BROWSER	Mobile Kepler Webpage DL Time (s)	1.53	2.29	1	2	1.61	2.79	1	2
BROV	www.shein.com Webpage DL Time (s)	8.50	8.30	2	1	6.21	6.48	1	2
	www.nbs.gov.sc Webpage DL Time (s)	10.30	7.52	2	1	16.24	16.85	1	2
	www.sbc.sc Webpage DL Time (s)	9.25	7.65	2	1	14.52	12.50	2	1
LATENCY	Avg Latency (ms)	282.46	211.92	2	1	277.24	267.18	2	1
LATE	Median Latency (ms)	392	194	2	1	147	203	1	2
3E	YouTube Access Time (s)	3.17	1.66	2	1	5.22	1.59	2	1
YOUTUBE	YouTube Average Resolution (pixels)	1047.27	1042.37	1	2	1048.81	1047.23	1	2
λ	YouTube Success Ratio [%]	100.00	100.00	1	1	100.00	100.00	1	1



# **4G PREFERRED THROUGHPUT COMPARISON**

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
CETP DI	Success	13	12	100.00	100.00
SFTP DL	Failure	0	0	0.00	0.00
SFTP UL	Success	13	12	100.00	100.00
SFIP OL	Failure	0	0	0.00	0.00
LITTO DI	Success	13	12	100.00	100.00
HTTP DL	Failure	0	0	0.00	0.00
HTTP UL	Success	13	12	100.00	100.00
HIIPOL	Failure	0	0	0.00	0.00
HTTP Capacity DL	Success	12	11	100.00	100.00
HITE Capacity DE	Failure	0	0	0.00	0.00
	Success	12	11	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)	16.67	7.36	1	2
	SFTP UL(Mbps)	9.94	4.36	1	2
FILE TRANSFER	HTTP DL(Mbps)	26.40	8.61	1	2
FILE TR/	HTTP UL(Mbps)	18.29	9.25	1	2
	HTTP Capacity DL(Mbps)	85.61	75.22	1	2
	HTTP Capacity UL(Mbps)	41.66	53.14	2	1



## **4G PREFERRED BROWSING COMPARISON**

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
<b>Wandari</b>	Success	13	12	100.00	100.00
Kepler	Failure	0	0	0.00	0.00
Mahila Kaulan	Success	13	12	100.00	100.00
Mobile Kepler	Failure	0	0	0.00	0.00
	Success	13	12	100.00	100.00
www.shein.com	Failure	0	0	0.00	0.00
	Success	13	12	100.00	100.00
www.nbs.gov.sc	Failure	0	0	0.00	0.00
www.sbc.sc	Success	13	12	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)	8.44	8.70	1	2
	Kepler Webpage DL Time (s)	3.66	4.94	1	2
VSER	Mobile Kepler Webpage DL Time (s)	1.61	2.79	1	2
BROWSER W	www.shein.com Webpage DL Time (s)	6.21	6.48	1	2
	www.nbs.gov.sc Webpage DL Time (s)	16.24	16.85	1	2
	www.sbc.sc Webpage DL Time (s)	14.52	12.50	2	1



## **4G PREFERRED LATENCY & YOUTUBE COMPARISON**

	Latency KPIs	Airtel 4G	CWS 4G
	Sample Count [32 bytes]	23	24
	Average Latency [ms]	256.09	272.25
	Median Latency [ms]	147	215
Overall Latency	Ping session status: Successful	23	24
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	2	0
	Packet Loss<1%	8.00	0.00
	Average Latency [ms]	419.00	180.33
	Median Latency [ms]	416	153
www.google.co	Ping session status: Successful	10	12
m	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	2	0
	Packet Loss<1%	16.67	0.00
	Average Latency [ms]	130.77	364.17
	Median Latency [ms]	137	350
102.133.176.104	Ping session status: Successful	13	12
102.133.176.104	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00

LTE YOUTUBE Success Ratio						
KPIs	Airtel Data 4G	CWS Data 4				
Attempt(Count)	13	12				
Success(Count)	13	12				
Failure(Count)	0	0				
YouTube Access Time (s)	5.22	1.59				
YouTube Average Resolution (pixels)	1048.81	1047.23				
YouTube Success Ratio [%]	100.00	100.00				

Latency 250ms



# **3G PREFERRED THROUGHPUT COMPARISON**

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
SFTP DL	Success	11	11	100.00	100.00
SFIP DL	Failure	0	0	0.00	0.00
CETD III	Success	11	11	100.00	100.00
SFTP UL	Failure	0	0	0.00	0.00
HTTP DL	Success	11	11	100.00	100.00
	Failure	0	0	0.00	0.00
LITTO LIL	Success	11	11	100.00	100.00
HTTP UL	Failure	0	0	0.00	0.00
LITTO Compains DI	Success	10	11	100.00	100.00
HTTP Capacity DL	Failure	0	0	0.00	0.00
HTTP Capacity UL	Success	10	9	100.00	90.00
	Failure	0	1	0.00	10.00

DATA Scenario		Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
	SFTP DL (Mbps)	7.09	4.31	1	2
	SFTP UL(Mbps)	2.04	1.33	1	2
FILE TRANSFER	HTTP DL(Mbps)	6.06	4.19	1	2
FILE TR/	HTTP UL(Mbps)	3.18	2.79	1	2
	HTTP Capacity DL(Mbps)	10.12	9.49	1	2
	HTTP Capacity UL(Mbps)	6.04	5.66	1	2



# **3G PREFERRED BROWSING COMPARISON**

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Vanlor	Success	11	11	100.00	100.00
Kepler	Failure	0	0	0.00	0.00
Mahila Kanlar	Success	11	10	100.00	100.00
Mobile Kepler	Failure	0	0	0.00	0.00
	Success	11	11	100.00	100.00
www.shein.com	Failure	0	0	0.00	0.00
	Success	11	10	100.00	90.91
www.nbs.gov.sc	Failure	0	1	0.00	9.09
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)
BROWSER	Overall Browser DL Time (s)	6.51	6.15	2	1
	Kepler Webpage DL Time (s)	3.37	4.91	1	2
	Mobile Kepler Webpage DL Time (s)	1.53	2.29	1	2
	www.shein.com Webpage DL Time (s)	8.50	8.30	2	1
	www.nbs.gov.sc Webpage DL Time (s)	10.30	7.52	2	1
	www.sbc.sc Webpage DL Time (s)	9.25	7.65	2	1



## **3G PREFERRED LATENCY & YOUTUBE COMPARISON**

	Latency KPIs	Airtel 3G	CWS 3G
	Sample Count [32 bytes]	18	21
	Average Latency [ms]	407.28	215.38
	Median Latency [ms]	402	196
Overall Latency	Ping session status: Successful	18	21
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	4	0
	Packet Loss<1%	18.18	0.00
	Average Latency [ms]	406.45	138.70
	Median Latency [ms]	404	139
www.google.c	Ping session status: Successful	11	10
om	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]	408.57	285.09
	Median Latency [ms]	273	215
102.133.176.10	Ping session status: Successful	7	11
4	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	4	0
	Packet Loss<1%	36.36	0.00

UMTS YOUTUBE Success Ratio						
KPIs	Airtel 3G	CWS 3G				
Attempt(Count)	11	11				
Success(Count)	11	11				
Failure(Count)	0	0				
YouTube Access Time (s)	3.17	1.66				
YouTube Average Resolution (pixels)	1047.27	1042.37				
YouTube Success Ratio [%]	100.00	100.00				



# **THANKS**