| OOKLA LATENCY IN TECHNOLOGY AUTO DETECT MODE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| City | Latency [milliseconds] | | | | Compliant (Yes/No) | | | |
| | Jazz | Telenor | Ufone | ZonG | Jazz | Telenor | Ufone | ZonG |
| UPPER DIR | 42 | 55 | 74 | 90 | Yes | Yes | Yes | No |
| LARKANA | 26 | 51 | 34 | 32 | Yes | Yes | Yes | Yes |
| LAHORE | 33 | 20 | 36 | 18 | Yes | Yes | Yes | Yes |
| KHAIRPUR | 25 | 57 | 33 | 30 | Yes | Yes | Yes | Yes |
| SHAHKOT | 20 | 25 | 39 | 33 | Yes | Yes | Yes | Yes |
| GUJAR KHAN | 20 | 44 | 23 | 71 | Yes | Yes | Yes | Yes |
| WAH/ TAXILA | 21 | 33 | 22 | 32 | Yes | Yes | Yes | Yes |
| RAWALPINDI | 21 | 30 | 27 | 46 | Yes | Yes | Yes | Yes |
| BUNER | 67 | 43 | 41 | 81 | Yes | Yes | Yes | No |
| JACOBABAD | 35 | 39 | 41 | 34 | Yes | Yes | Yes | Yes |
| SUJAWAL | 24 | 26 | 25 | 24 | Yes | Yes | Yes | Yes |
| MITHI | 26 | 36 | 29 | 34 | Yes | Yes | Yes | Yes |
| ABBOTTABAD | 37 | 74 | 54 | 84 | Yes | Yes | Yes | No |
| SWABI | 32 | 56 | 48 | 39 | Yes | Yes | Yes | Yes |
| MURIDKE | 21 | 56 | 40 | 19 | Yes | Yes | Yes | Yes |

Table 4.11:  Ookla Latency in Technology Auto Detect Mode < 75 Milliseconds

4.6.	Overall results of Download and Upload Throughputs in Capacity Tests, Data Transfer Tests, Latency (overall) and Latency (Per Web Page), can be seen in attached graphs.



TECHNOLOGY AUTO DETECT MODE TESTING

CAPACITY TEST DOWNLOAD SPEED (Mbps) — Jazz 22.727, Telenor 6.379, Ufone 10.695, Zong 23.747

CAPACITY TEST UPLOAD SPEED (Mbps) — Jazz 22.341, Telenor 6.1, Ufone 17.565, Zong 19.809

DATA TRANSFER DOWNLOAD SPEED (Mbps) — Jazz 9.854, Telenor 5.617, Ufone 7.325, Zong 9.913

DATA TRANSFER UPLOAD SPEED (Mbps) — Jazz 5.802, Telenor 3.865, Ufone 5.578, Zong 5.718
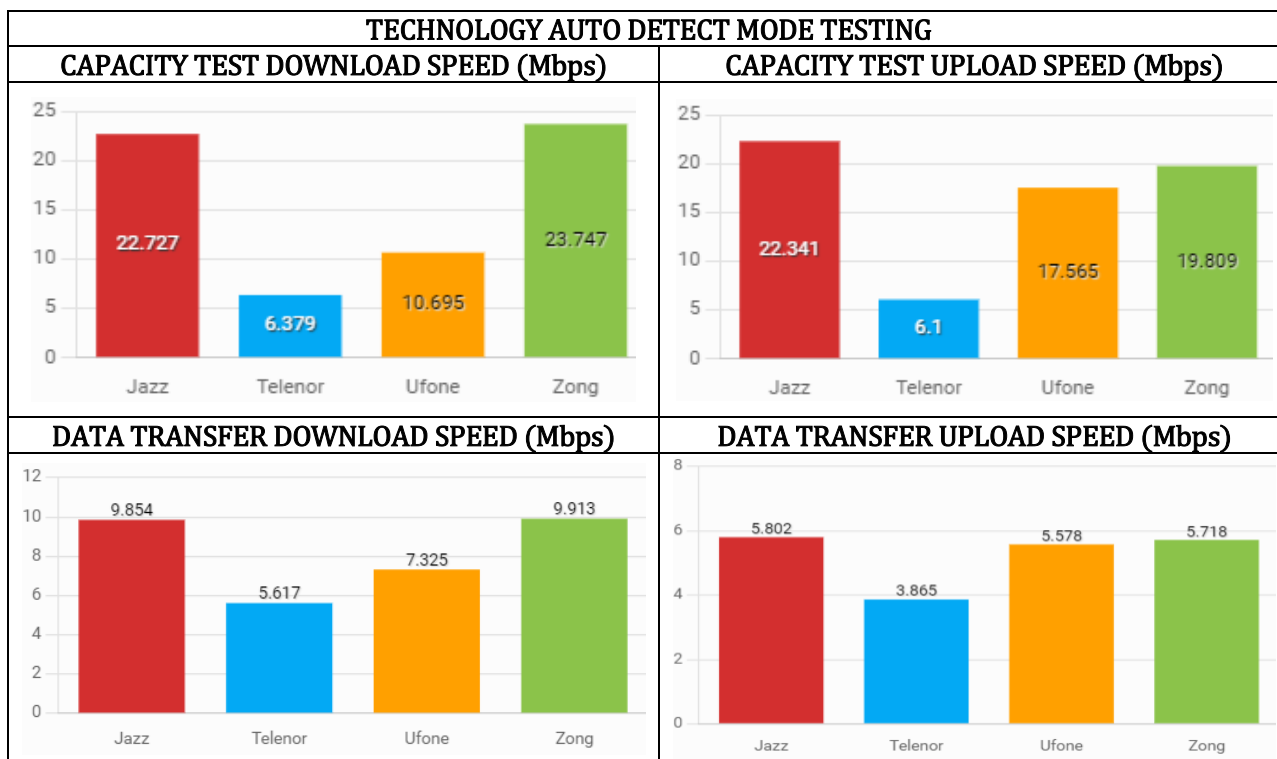
6.1.  A total of **20878 SMS sending attempts** were conducted, out of which **20751 SMS** were **successfully transmitted** by A-Party while **20609 SMS** were **successfully received** at B-Party. The company wise SMS Statistics are shown in **Table 6.1: SMS Statistics** while City wise compliance is shown in **Table 6.2: SMS QoS KPIs Compliance Level**

| DESCRIPTION | JAZZ | TELENOR | UFONE | ZONG |
|---|---|---|---|---|
| SMS SEND REQUEST | 5276 | 5234 | 5186 | 5182 |
| SMS SUCCESSFULLY TRANSMITTED | 5265 | 5215 | 5171 | 5100 |
| SMS SUCCESSFULLY RECEIVED | 5239 | 5168 | 5141 | 5061 |
| SMS RECEIVE SUCCESS RATE (%) | 99.3 % | **98.74 %** | 99.13 % | **97.66 %** |
| END-TO-END DELIVERY TIME (Sec) | 3.17 | 3.43 | 2.57 | 2.63 |

Table 6.1: SMS Statistics

| Operator | | Jazz | | Telenor | | Ufone | | ZonG | |
|---|---|---|---|---|---|---|---|---|---|
| SMS KPI | | Success Rate | Delivery Time | Success Rate | Delivery Time | Success Rate | Delivery Time | Success Rate | Delivery Time |
| Surveyed Cities | UPPER DIR | No | Yes | No | Yes | No | Yes | No | Yes |
| | LARKANA | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | LAHORE | Yes | Yes | No | Yes | Yes | Yes | No | Yes |
| | KHAIRPUR | Yes | Yes | Yes | Yes | Yes | Yes | No | Yes |
| | KAHROR PACCA | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes |
| | SHAHKOT | No | Yes | No | Yes | Yes | Yes | No | Yes |
| | GUJAR KHAN | No | Yes | No | Yes | Yes | Yes | Yes | Yes |
| | WAH/ TAXILA | Yes | Yes | No | Yes | Yes | Yes | No | Yes |
| | RAWALPINDI | Yes | Yes | No | Yes | Yes | Yes | No | Yes |
| | BUNER | No | Yes | No | Yes | Yes | Yes | Yes | Yes |
| | JACOBABAD | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | SUJAWAL | Yes | Yes | Yes | Yes | No | Yes | Yes | Yes |
| | MITHI | Yes | Yes | Yes | Yes | No | Yes | No | Yes |
| | ABBOTTABAD | Yes | Yes | No | Yes | Yes | Yes | Yes | Yes |
| | SHUJABAD | No | Yes | No | Yes | No | Yes | Yes | Yes |
| | SWABI | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | MURIDKE | Yes | Yes | No | Yes | Yes | Yes | No | Yes |

Table 6.2: SMS QoS KPIs Compliance Level

6.2.  The SMS Send Request & Successful Reception by Technology, Average Success Rate & End to End Delivery Time and Delivery Duration by Technology are shown in the graphs.



SMS SEND REQUEST BY TECHNOLOGY