

5.3. The 7 x QoS KPIs (*i.e. Network Accessibility, Call Setup Success Rate, Call Setup Time, Call Completion Rate, Mean Opinion Score, Inter System Handover Success Rate & RAB Setup Success Rate*) have been measured while testing voice services in **9 x surveyed cities** of Pakistan. The compliance level of threshold values of voice QoS KPIs is shown in each **Table 5.1: Voice QoS KPIs Compliance Level**.

CMO	KPIs	Attock	Hafizabad	Rawalpindi	Hyderabad	Karachi East	Pakpattan	Khanpur	Lodhran	Wazirabad
Jazz	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CSSR	No	Yes	Yes	Yes	Yes	No	No	No	No
	CCT	Yes	N/A	Yes	N/A	N/A	N/A	N/A	N/A	Yes
	CCR	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MOS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	ISHO	Yes	N/A	No	Yes	Yes	N/A	N/A	N/A	Yes
	RSSR	Yes	Yes	Yes	Yes	Yes	Yes	N/A	N/A	No
Telenor	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CSSR	No	Yes	No	No	No	No	No	No	No
	CCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CCR	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes
	MOS	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	ISHO	N/A	N/A	Yes	N/A	N/A	N/A	N/A	N/A	N/A
	RSSR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ufone	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CSSR	No	Yes	Yes	No	Yes	Yes	No	Yes	No
	CCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CCR	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
	MOS	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	ISHO	Yes	Yes	No	Yes	N/A	Yes	Yes	No	Yes
	RSSR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Zong	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CSSR	No	Yes	No	No	Yes	Yes	Yes	Yes	Yes
	CCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CCR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MOS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	ISHO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	RSSR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 5.1: Voice QoS KPIs Compliance Level

SMS SERVICE

6.1. A total of **10,548 SMS sending attempts** were conducted, out of which **10,495 SMS** were **successfully transmitted** by A-Party while **10,310 SMS** were **successfully received** at B-Party. The company wise SMS Statistics are shown in **Table 6.1: SMS Statistics**

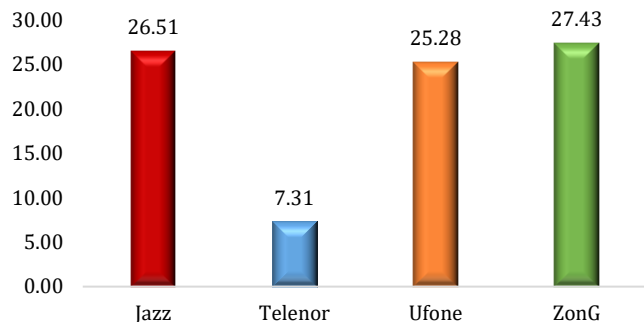
DESCRIPTION	JAZZ	TELENOR	UFONE	ZONG
<i>SMS SEND REQUEST</i>	2672	2556	2644	2676
<i>SMS SUCCESSFULLY TRANSMITTED</i>	2665	2523	2633	2674
<i>SMS SUCCESSFULLY RECEIVED</i>	2648	2380	2620	2662
<i>SMS RECEIVE SUCCESS RATE</i>	99.1 %	93.11 %	99.09 %	99.48 %
<i>END-TO-END DELIVERY TIME</i>	4.06	17.77	4.44	2.57

Table 6.1: SMS Statistics

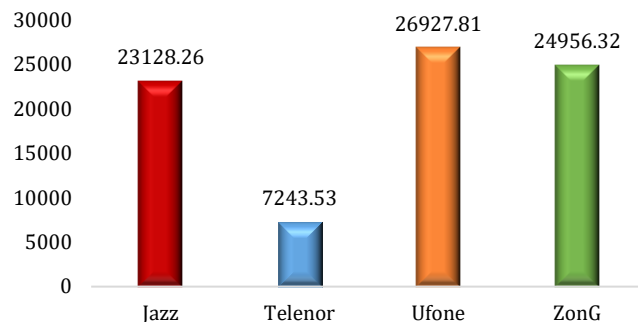
6.2. The SMS Send Request & Successful Reception by Technology, Average Success Rate & End to End Delivery Time and Delivery Duration by Technology are shown in the graphs.

QUALITY OF SERVICE SURVEY RESULTS (AUTOMODE) – WAZIRABAD

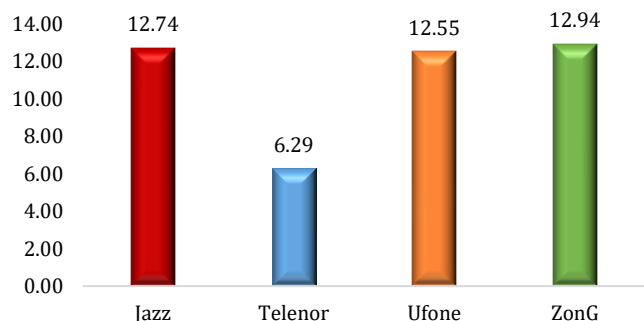
**User Data Throughput Download - Fixed Duration
> 2 Mbps**



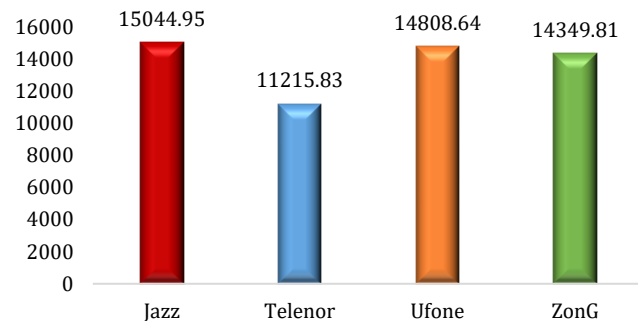
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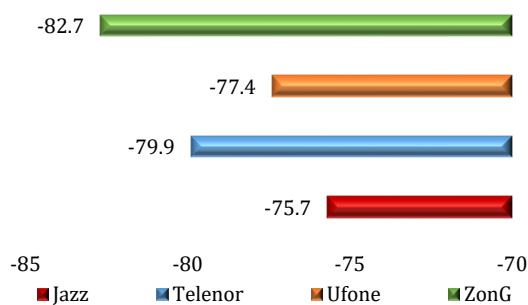
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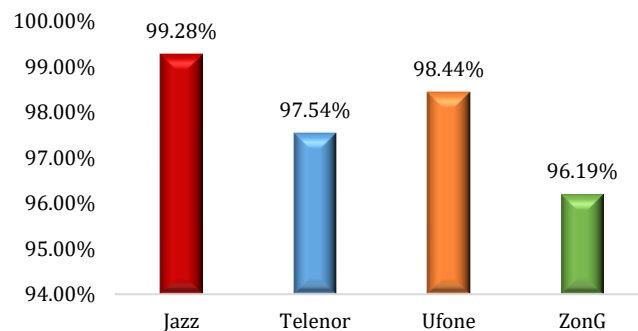
**User Data Throughput Upload - Fixed Size
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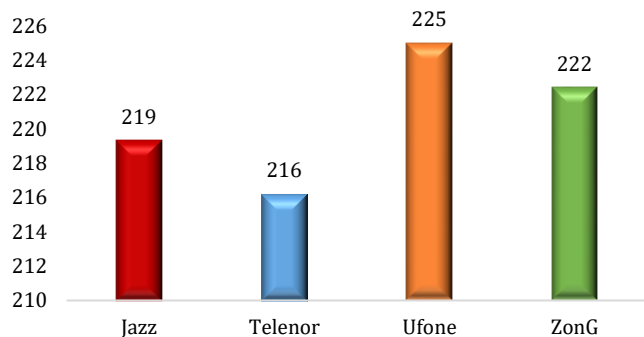
Signal Strength (RSRP) > -100dBm



Signal Strength (RSRP) Confidencel Level > 90%



Latency <75 ms



Webpage Loading Time < 5 Seconds

