

CMO	KPIS	HYDERABAD	JHELMUM	MALIR	NAWABSHAH	NUSHKI	QUETTA
ZonG	CCR	Yes	Yes	Yes	Yes	Yes	Yes
	MOS	Yes	Yes	Yes	Yes	Yes	Yes
	NA	Yes	Yes	Yes	Yes	Yes	Yes
	CSSR	Yes	Yes	Yes	Yes	No	No
	CCT	Yes	Yes	Yes	Yes	Yes	Yes
	CCR	Yes	Yes	Yes	Yes	Yes	Yes
	MOS	Yes	Yes	Yes	Yes	Yes	Yes

** Note Voice QoS KPIs: Network Accessibility (NA), Call Setup Success Rate (CSSR), Call Connection Time (CCT), Call Completion Ratio (CCR), Mean Opinion Score (MOS)*

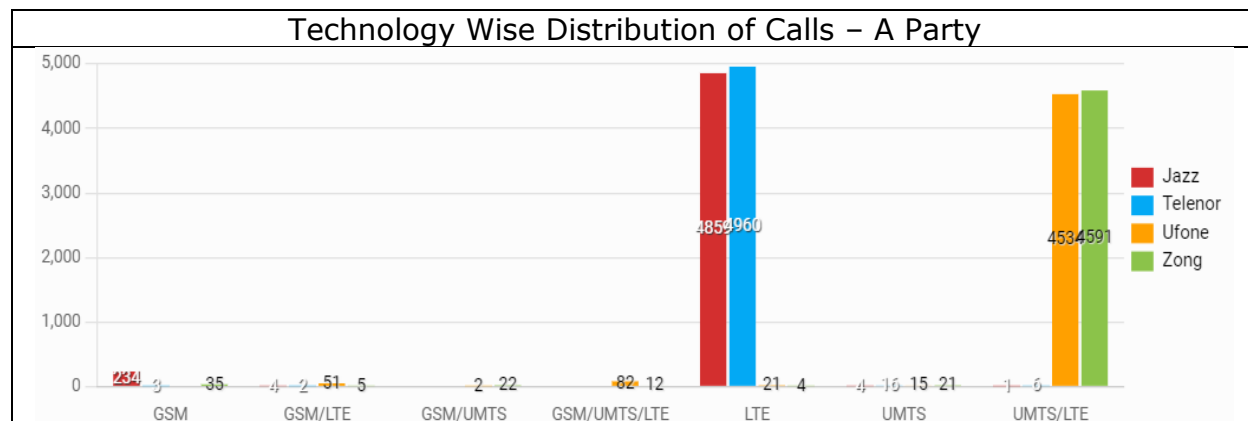
Table 9.3: Voice QoS KPIs Compliance Level

CMO	KPIS	CHUNIAN	SHARAQPUR	KOTRI	RAWALPINDI
Jazz	NA	Yes	Yes	Yes	Yes
	CSSR	Yes	Yes	Yes	Yes
	CCT	Yes	Yes	Yes	Yes
	CCR	Yes	Yes	Yes	Yes
	MOS	Yes	Yes	Yes	Yes
Telenor	NA	Yes	Yes	Yes	Yes
	CSSR	No	Yes	Yes	Yes
	CCT	Yes	Yes	Yes	Yes
	CCR	No	Yes	Yes	Yes
	MOS	Yes	Yes	Yes	Yes
Ufone	NA	Yes	Yes	Yes	Yes
	CSSR	No	Yes	Yes	Yes
	CCT	Yes	Yes	Yes	Yes
	CCR	No	Yes	No	Yes
	MOS	Yes	Yes	Yes	Yes
ZonG	NA	Yes	Yes	Yes	Yes
	CSSR	Yes	Yes	Yes	Yes
	CCT	Yes	Yes	Yes	Yes
	CCR	Yes	Yes	Yes	Yes
	MOS	Yes	Yes	Yes	Yes

** Note Voice QoS KPIs: Network Accessibility (NA), Call Setup Success Rate (CSSR) > 98%, Call Connection Time (CCT), Call Completion Ratio (CCR), Mean Opinion Score (MOS)*

Table 9.4: Voice QoS KPIs Compliance Level

Overall survey results of Voice Services for each Mobile Operator are shown in the below graphs.



10. SMS SERVICE

A total of 20,433 SMS sending attempts were conducted, out of which 20,372 SMS were successfully transmitted by A-Party while 20,203 SMS were successfully received at B-Party. The 2 x SMS QoS KPIs (i.e. Success Rate and Delivery Time) have been measured while testing SMS services in the surveyed cities. Company wise SMS statistics are shown in Table 10.1: SMS Statistics, while the compliance in each surveyed city is shown in Table 10.2: SMS QoS KPIs Compliance Level.

Description	Jazz	Telenor	Ufone	Zong
SMS Send Request	5109	5021	4720	4702
SMS Successfully Transmitted	5092	4986	4706	4697
SMS Successfully Received	5062	4836	4679	4661
SMS Receive Success Rate (%)	99.08	96.32	99.13	99.13
End-To-End Delivery Time (Sec)	3.54	4.09	2.51	2.58

Table 10.1: SMS Statistics

Operator		Jazz		Telenor		Ufone		ZonG	
SMS KPI		SR	DT	SR	DT	SR	DT	SR	DT
Surveyed Cities	BAHWALNAGAR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	D.I KHAN	Yes	Yes	No	Yes	Yes	Yes	No	Yes
	LAHORE	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
	MARDAN	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
	SAMUNDARI	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
	SHIKARPUR	Yes	Yes	No	Yes	No	Yes	No	Yes
	HYDERABAD	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
	JHELUM	No	Yes	No	Yes	Yes	Yes	Yes	Yes
	KARACHI MALIR	No	Yes	No	Yes	No	Yes	Yes	Yes
	NAWABSHAH	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	NUSHKI	No	Yes	No	Yes	Yes	Yes	Yes	Yes
	QUETTA	Yes	Yes	No	Yes	No	Yes	No	Yes
	RAWALPINDI	Yes	Yes	No	Yes	Yes	Yes	No	Yes
	CHUNIAN	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SHARAQPUR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	KOTRI	No	Yes	No	Yes	Yes	Yes	Yes	Yes

* Note SMS QoS KPIs: Success Rate (SR), Delivery Time (DT)

Table 10.2: SMS QoS KPIs Compliance Level

Overall survey results of SMS Services for each Mobile Operator are shown in the below graphs.