Ookla Download Throughput (Mbps)	Ookla Upload Throughput (Mbps)

Ookla Download Throughput (Mbps)
- Jazz: 34.691
- Telenor: 7.99
- Ufone: 11.679
- Zong: 35.729

Ookla Upload Throughput (Mbps)
- Jazz: 24.288
- Telenor: 6.612
- Ufone: 19.831
- Zong: 24.185

Automode Latency (milliseconds)
- Jazz: 110.5
- Telenor: 77.4
- Ufone: 70
- Zong: 84.1

Ookla Latency (milliseconds)
- Jazz: 34.5
- Telenor: 42.7
- Ufone: 36.9
- Zong: 21.6

Webpage Loading Time Per Website (seconds)

discord.com
- Jazz: 3.4
- Telenor: 3.8
- Ufone: 3.6
- Zong: 3

www.express.com.pk
- Jazz: 5.1
- Telenor: 6.5
- Ufone: 7.2
- Zong: 5

www.olx.com.pk
- Jazz: 4
- Telenor: 4.3
- Ufone: 3.9
- Zong: 3.3

www.pakwheels.com
- Jazz: 3.7
- Telenor: 4.6
- Ufone: 3.6
- Zong: 3.3

9. VOICE SERVICE

A total of 20,485 Call attempts were made and out of which 339 were failed attempts. In 20,146 successful call attempts, 143 calls dropped prior to completion of two minutes duration, whereas, 20,003 calls remained connected for the complete duration of two minutes. The 5 x QoS KPIs (i.e. Network Accessibility, Call Setup Success Rate, Call Setup Time, Call Completion Rate and Mean Opinion Score) have been measured while testing voice services in the surveyed cities. Company wise call statistics is shown in Table 9.1: Call Statistics, while the compliance in each surveyed city is shown in Table 9.2: Voice QoS KPIs Compliance Level , Table 9.3: Voice QoS KPIs Compliance Level and Table 9.4: Voice QoS KPIs Compliance Level

CMO	KPIS	HYDERABAD	JHELUM	MALIR	NAWABSHAH	NUSHKI	QUETTA
	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**
ZonG	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
	NA	Yes	Yes	Yes	Yes
	CSSR	Yes	Yes	Yes	Yes
Jazz	CCT	Yes	Yes	Yes	Yes
	CCR	Yes	Yes	Yes	Yes
	MOS	Yes	Yes	Yes	Yes
	NA	Yes	Yes	Yes	Yes
	CSSR	**No**	Yes	Yes	Yes
Telenor	CCT	Yes	Yes	Yes	Yes
	CCR	**No**	Yes	Yes	Yes
	MOS	Yes	Yes	Yes	Yes
	NA	Yes	Yes	Yes	Yes
	CSSR	**No**	Yes	Yes	Yes
Ufone	CCT	Yes	Yes	Yes	Yes
	CCR	**No**	Yes	**No**	Yes
	MOS	Yes	Yes	Yes	Yes
	NA	Yes	Yes	Yes	Yes
	CSSR	Yes	Yes	Yes	Yes
ZonG	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.

Technology Wise Distribution of Calls – A Party