

JOINT QUALITY OF SERVICE SURVEY OF 1ST QUARTER 2019

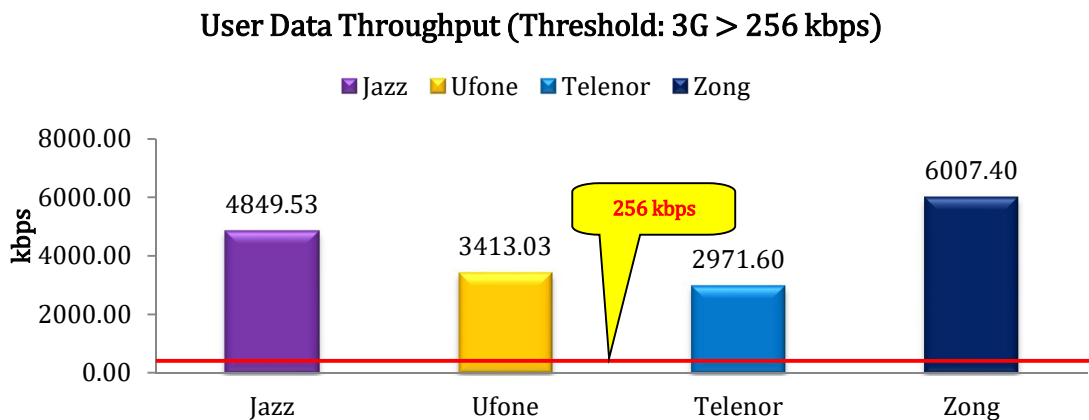
Pakistan Telecommunication Authority (PTA) has conducted joint Quality of Service (QoS) survey with Cellular Mobile Operators (CMOs), in 1st quarter of 2019, using NEMO automated QoS tool. During the period, a total of nine (9) cities of Punjab, Sindh and KPK have been surveyed. The names of these cities are as under:

S. #.	Name	S. #.	Name	S. #.	Name
1	D.I.Khan	4	Nawabshah	7	Sahiwal
2	Peshawar	5	Shikarpur	8	Bhakkar
3	Larkana	6	Jacobabad	9	Jhang

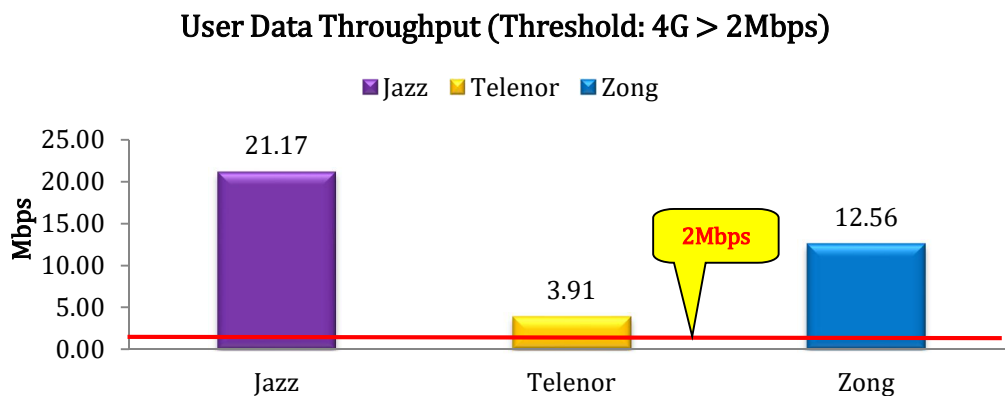
DATA – KEY PERFORMANCE INDICATORS (OVERALL RESULTS)

Data KPIs. The performance of data services of CMOs has been checked by measuring two Key Performance Indicators (KPIs) i.e. User Data Throughput and Signal Strength (Received Signal Code Power (RSCP) for 3G & Received Signal Receive Power (RSRP) for 4G).

User Data Throughput *This KPI defines user data rate (Internet speed) to be provided by NGMS operators to mobile users across the coverage areas. The data throughput results of all NGMS licensees are as under:*



User data "throughput" of 3G services found higher than the benchmark value of 256Kbps



User data "throughput" of 4G services found higher than the benchmark value of 2Mbps