

Regulatory frameworks for QoS and QoE assessment and benchmarking for mobile networks

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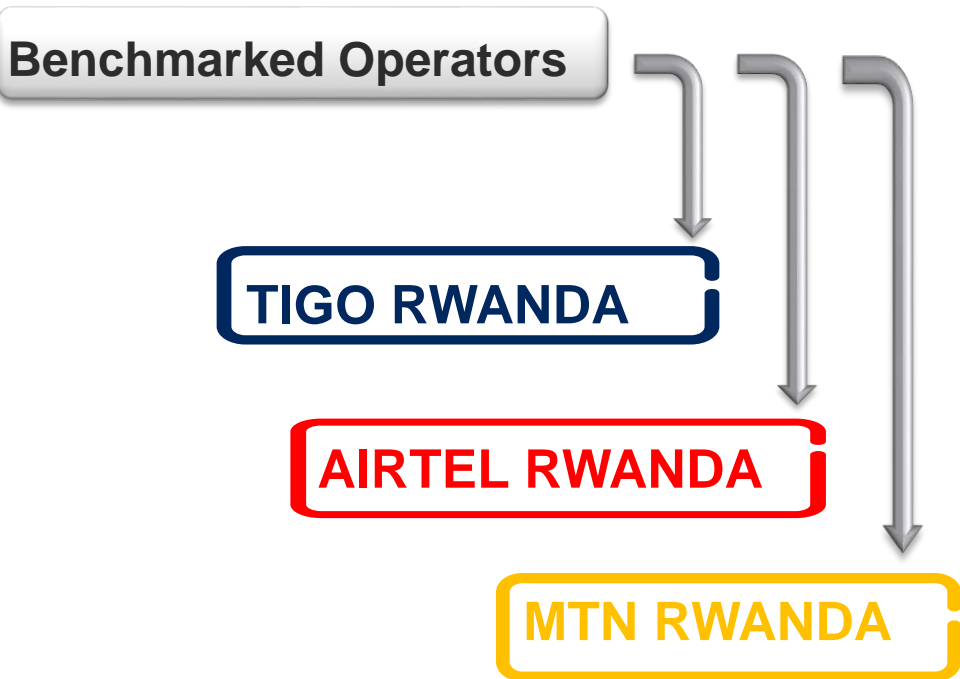
RURA has established The

“Regulations for Quality of Service of cellular mobile and fixed networks services”

Objectives of the Regulation

- To improve service quality;
- To maintain service quality, while recognizing environmental and operating conditions;
- To make QoS information available to Customers;
- To improve operation and performance of interconnected networks;
- To assist the development of related telecommunications markets.

Methodology for QoS and QoE assessment and benchmarking



- Drive Test measurements are conducted using Phones DUAL Mode.
- MOC and MTC devices are in the same car.
- The Drive Test is done in the following Modes:
 - IDLE Modes
 - Short calls in Dual Mode (90 Secs calls with 20 secs Interval)
 - Long Calls

QoS and QoE KPIs



Service	KPI	Threshold
2G/3G VOICE SERVICE (Mobile to Mobile)	Call set up time (CST)	≤ 9 sec in $\geq 98\%$ of the cases
	Call Setup Success Rate (CSSR)	$\geq 95\%$
	Call Drop Rate (CDR)	$\leq 2\%$
	Speech Quality (MOS)	For $\geq 75\%$ of cases ≥ 3 using MOS, POLQA WB algorithms
SMS SERVICE	SMS Send Success Rate	$\geq 96\%$
	SMS e2e Delivery Success Rate	$\geq 95\%$
	SMS Send time	3,5 seconds
	SMS end-to-end delivery time	6 seconds
CS FALL BACK LTE (Mobile to Mobile)	Call set up time (CST)	≤ 9 sec in $\geq 98\%$ of the cases.
	Call Setup Success Rate (CSSR)	$\geq 95\%$
	Call Drop Rate (CDR)	$\leq 2\%$
2G/3G PS DATA SERVICES	Application Throughput	80 % of Download ≥ 2.5 Mbit/s
	Round Trip Time RTT (Latency)	Median value ≤ 300 ms
NETWORK COVERAGE AND QUALITY	2G Signal Strength RxLev	≥ -95 dBm (98% area)
	3G Signal Strength RSCP	≥ -105 dBm (98% area)
	3G Signal Quality Ec/No	≥ -14 dBm (90% area)
	4G Signal Strength RSRP	≥ -115 dBm (98% area)
	4G Signal Quality RSRQ	≥ -15 dBm (90% area)

THANKS