ITU Workshop on Network Performance, Quality of Service and Quality of Experience

Kigali, 4-5 March 2019



Programme and presentation material available at

https://www.itu.int/en/ITU-T/Workshops-and-Seminars/qos/201903/Pages/Programme.aspx

- For a good implementation of 5G, regulators and operators must work together for efficient frequency planning and definition of KPIs that will be tracked for QoS
- 2. For QoS and QoE monitoring of mobile financial services, there must be close collaboration between telecom regulators and financial services regulators

- 1. Liaise with ITU-D to organize workshops on 5G for the sub-region in collaboration with the sub-regional regulators organizations
- 2. Advise on best practices for QoS tracking of mobile financial services
- 3. Assist regional organizations to work together to develop guidelines for 5G and financial mobile services QoS guidance



- 1. Mobile money QoS parameters should be set and measured on operators level.
- 2. Mechanisms of consumer complaints treatment need to be efficient and transparent to the end-users.
- 3. Tariffs of Mobile money services should be set as affordable as possible
- 4. The consumer protection organization should establish a periodic report related to Customer satisfaction for the Mobile money services.
- 5. Mobile money Agents and Consumers sensitization is necessary regarding the use of the Mobile money application/ services
- 6. QoS on Mobile Money services can be dependent on the services platform also. Not only limited to the network.
- 7. There are challenges in measuring the QoS of Mobile money services, from the Regulatory perspective. The relevant framework should be put in place on the Telecom Regulator Level.
- 8. The responsibility of Central Bank and Telecom regulator should be clarified regarding the Mobile Money services regulation and cordial relationship be establish to better regulate the mobile money eco system.
- 9. Standardization works related to QoS of Mobile Money services are in progress (indicators definition and methodology of measurement).

- 1. To put in place the standardization of the Mobile Money services QoS/QoE indicators and the Methodology of measurement.
- 2. Telecom regulator to establish MoU with Central bank.
- 3. Contributions are encouraged to enrich the content of the proposal document to be presented in the next SG12 meeting, in May 2019.



- 1. The legal tools needs to evolve as new services are introduced frequently. The regulations and laws should be updated frequently.
- 2. In order to increase the reliability of results , the QoS Monitoring Team of regulatory authority has to have necessary skills in Technology and Monitoring System. Training necessary from time to time in order to be updated.
- 3. Services and KPIs to be measured need to be clearly defined and agreed between Regulators and operators.
- 4. It is also confirmed and agreed that for proper QOS/QOE assessment and benchmarking it is good to make use of drive testing, Network Management and customer surveys.

- 1. There should be a systematic method of evaluating QoS issues prevalent in the African Sub-Region considering ITU definitions and standards.
- 2. There should be a synergy and working relationship between the 3 stake holders, i.e., policy makers, regulators and operators



Session 5: QoS and QoE aspects of OTTs; QoS and QoE assessment and benchmarking for mobile networks

Suggestions

Takeaways and Conclusions

- 1. The need to understand customers needs and data usage in order to provide minimum bit rate per second
- 2. Moving KPIs closer to the user experience, by unifying market, networks and systems in proactive feedback loops, in order to focus attention where it matters the most
- Revision and amendment of QOS frameworks to reflect the current technologies and networks
- 4. Combination of network and drive test probes for better results
- 5. Increase in Unscheduled monitoring exercise

- 5G testing roadmap will be in two phases namely Pre-5G and Post-5G Implementation testing
- 2. QoS KPI selection in 5G should be adaptive of specific application/use-cases .
- 3. Network Slicing constitute a key implementation feature for an end-to-end testing of QoS in 5G.
- 4. Regulators should open up for new advances in technology and create the right enabling environment for 5G investment and adoption within the subregion.

- Liaise with ITU-D on continuous capacity-building workshops on 5G for the sub-region.
- 2. Encourage participation in the ongoing work of ITU-T SG 12 on "QoS Aspects of IMT-2020 (5G)"



- 1. Statistical relevance (sample size) of stationery testing is still a grey area to some participants/workshop attendees
- 2. Highlighted SG12 based approaches to QoS measurement drive tests and network monitoring solutions
- 3. QoS can be measured, QoE only estimated
- 4. Should regulators wanting to fine underperforming MNOs consider "fineper-cell" solutions as opposed to global?
- 5. Workshop session time management to be revisited

- 1. Future workshop presenters to consider simplified explanation of E.802 Amd 1, etc (ETSI 202 057-4)
- 2. Need to sensitize workshop participants on current recommended QoS monitoring solutions
- 3. The difference between QoS and QoE, and if any is measurable – need to be more explicit and clear
- 4. Allocate more speaking time to vendors



Q12/12 Rapporteur Group Meeting on Operational aspects: 6-7 March

SG12 Regional Group for Africa: 7-8 March

Next meeting of ITU-T Study Group 12: Geneva, 7-16 May 2019



Web: https://itu.int/en/ITU-T/studygroups/2017-2020/12/

Thank You! Merci beaucoup! Murakoze!