# ITU Workshop on Performance, QoS and QoE for Multimedia Services

Dakar, Senegal, 19-20 March 2018



# **Session 1: Overview of ITU, ITU-T and ITU-T Study Group 12**

#### **Takeaways and Conclusions**

- 1. ITU sectors and their key role
- 2. Major achievements
- ITU SG and their activities
- 4. Focus on the SG12: objectives, structures, activities, leadership and recent results
- 5. Study Group 12 is the key international venue to develop standards and discuss technical, operational, policy aspects of performance, QoS and QoE
- 6. The QSDG: Terms of reference, members, activities
- 7. Operational Aspects: Question 12/12 and relevant Recommandations of E and Y series
- 8. The work is undertaken jointly by operators, vendors, service providers, academia, and representatives from ITU's 193 Member States
- 9. Initiatives are underway to raise awareness on best practices and policies related to service quality

- 1. Join Study Group 12 at its next meeting in Geneva, 1-10 May 2018!
- 2. Use the ITU Manual on the QoS topics
- 3. Consumer protection is necessary
- 4. Training of people in charge of QoS mission is absolutely necessary
- 5. Participate in the work of the Study Groups with more contribution



# Session 2: QoS and QoE policy and regulatory aspects

## **Takeaways and Conclusions**

- 1. This session focused on presentation from ANATEL Brazil: QoS Assessment Strategies: Using Embedded Solutions For National QoS Measurement.
- 2. Many participants welcomed the presented methodology for measuring the QoS as:
  - Do not need volunteers;
  - No need for Additional Equipment -Probe Reduces Costs – Maintenance
  - Statistical Validity
  - Greater Perception Of User Experience
  - Etc.

#### **Suggestions to ITU-T SG12RG-AFR**

□ As way forward, we would like to request the speaker to prepare a contribution on the presented methodology: "Embedded Solution for QoS Measurement" for the next ITU-T SG12 meeting (May 2018).



## **Takeaways and Conclusions**

- 1. Une bonne QoS suppose un bon design des réseaux
- Pilotage de la QoS (réseau d'accès, cœur de réseau, optimisation, supervision, maintenance préventive, campagne de mesures)
- 3. Costumer Experience Management « et la voix du client »
- 4. Evaluation de la performance basée sur des alarmes
- 5. Relation entre QoS ans QoE
- 6. Campagnes de mesures de la QoS et QoE par la régulateur: gestion des événements et des incident

- ☐ Les opérateurs doivent se doter de moyens appropriés afin de mieux prendre en charge la QoE / QoS
- ☐ Certaines difficultés signalées par les opérateurs devraient être prises en charge par les entités de la Commission 12 : gestion des fréquences aux frontières, plan d'urbanisation des pays en développement (propagation dans les canyons et rues des grandes villes qui occasionne parfois des pertes de service et du signal,...)
- Les défauts de QoS ou de QoE doivent faire l'objet de sanction si ces défauts sont justifiés

## **Takeaways and Conclusions**

- Applicability of ITU-T G.VoLTE REC for effictive QoS assessment and compliance
- Perspectives on QoS Evaluation and Benchmarking
- 3. Tunisian regulator approach for measuring QoS/QoE mobile networks, especially the "Jawda Internet" app, the portal of results of 2015 2017 campaign and info-consommateur website



## Session 4: Effects of OTT bypass, SIM-boxing and counterfeit equipment on QoS and QoE

## **Takeaways and Conclusions**

- Most talking points were relating to revenue loss & legal issues as opposed to effects on QoS/QoE.
- Need to quantify the effect on QoS/QoE and focus more on this
- 3. Different countries have different approaches. In fact, sim-boxing in itself is legal in some jurisdictions
- Collaborations between regulators and service providers have added to reduction of fraud

- ☐ Conduct a study to have quantitative data on the effects of this on QoS
- □ Discourage talk about revenue in SG12 there is need to focus effort on 'SG12' focus area as opposed to general talk
- ☐ Consider liaison statement to relevant entities for revenue, legal and type approval.
- ☐Country cases



Session 5: QoS and QoE issues and requirements for digital financial services, popular OTTs and content subscription services

## **Takeaways and Conclusions**

- Two use cases of DFS (Use of feature phones and Use of smart phones) being modelled and tested. No Interoperability tests being carried out.
- 2. Customer protection critical for OTTs and DFS
- 3. The testing of OTT QoS and QoE has several impacting factors
- 4. OTT testing is challenging due to increased complexity and amount of data required for comprehensive tests
- 5. Need to address both economic and QoS impacts of OTT from a cooperative angle

- □ Different jurisdictions to decide on specific KPIs and targets that may be adopted for DFS. ITU-T will provide guidelines and measurement methodologies only
- ☐ Economic and policy issues on OTT should be addressed with SG3
- ☐ Quantitative contributions required on the impact of OTT on QoS and QoE
- ☐ Contributions required for testing methodologies of OTT QoS and QoE
- □Additional country cases on DFS and OTT are required

# Session 6: QoS and QoE measurement tools and strategies

## **Takeaways and Conclusions**

- Today's orchestration of the network performance imposes new requirements on testing
- A more holistic approach that integrates performance management, active/passive/ crowdsourcing testing and CRM information is required
- Standardized measurement methodologies should be used by vendors to provide reliable solutions

- ☐ Continue to work on the standardization of fixed and mobile broadband networks
- ☐ Encourage the countries to require standardized methodologies in the measurement solutions procurement process
- ☐ Invite regional vendors to join the international standardization debate in ITU and other SDOs



# Session 6bis: QoS and QoE measurement tools and strategies

## **Takeaways and Conclusions**

- 1. Measurement accuracy of QoS & QoE
- 2. The variety of approaches to measure QoS & QoE at mobile networks
- The needs of validated data
- 4. Where, when, how, why and what...must be answered before any measurement campaign







Union Internationale Télécommunication (UIT) / ART du Sénégal
Atelier de L'UIT "Qualité de Fonctionnement, qualité de service et qualité d'experience pour les services multimédias"
Réunion du Groupe des Rapporteurs pour la Question 12/12 "Aspects opérationnels de la qualité de service des reseaux de télécommunication"



Groupe rgional de la Commission d'études 12 de l'UIT - T sur la qualité de service pour la région Afrique