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| **Contact:** | Tania Villa TrapalaMexico | Tel: +52 55 50154146E-mail: tania.villa@ift.org.mx |

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| **Abstract:** | In line with WTSA Resolution 1, this report provides updates about the SG12 lead study group activities. |

In the reporting period, SG12 held one study group meeting in January 2023 (attended by 191 participants from 57 countries) and one meeting of its Regional Group on QoS for the Africa Region (SG12RG-AFR) in March 2023 (attended by 43 participants from 22 countries) which preceded by a workshop on “Telecommunication Service Quality”.

The executive summary of the January 2023 meeting can be found at <https://www.itu.int/en/ITU-T/studygroups/2022-2024/12/Pages/2301-summary.aspx>.

## Lead study group on quality of service and quality of experience

Key achievements of the meeting included the adoption of the following Recommendations and other publications on:

– **Network performance evaluation:** New Recommendation G.1051 “Latency measurement and interactivity scoring under real application data traffic patterns” and updates on IP-based capacity parameters and measurement methods in Annex B of Recommendation Y.1540 “Internet protocol data communication service - IP packet transfer and availability performance parameters”

– **Audio quality assessment of terminals:** Revised Recommendations P.58 “Head and torso simulator for telephonometry”, P.381 “Technical requirements and test methods for analogue wired headsets/headphones and corresponding universal interface of terminals”, P.382 “Technical requirements and test methods for analogue wired multi-microphone headsets/headphones and corresponding universal interface of terminals” P.383 “Technical requirements and test methods for digital headsets/headphones and corresponding interfaces of terminals”.

– **Speech quality assessment:** New Recommendation P.836 “Simulating conversations for the prediction of speech quality” and Revised Recommendations P.810 “Modulated Noise Reference Unit (MNRU)” and G.107.2 “Fullband E-model”

– **Quality assessment for digital financial services** (in the context of WTSA-22 Res. 89): New Recommendation P.1503 “Extended methodology for cross-country and inter-operator digital financial services testing”

SG12 also provided a new release of the ITU-T Software Tool Library (Recommendation ITU-T G.191), [STL2023](https://github.com/openitu/STL), that incorporates recent updates made to Recommendations **ITU-T P.50** and **P.810**.

SG12 continues to produce supplements assisting in the implementation/ application/real life use of Recommendations, e.g., **ITU-T P.Sup29**, developed in cooperation with 3GPP SA4.

The SG12 work programme was also updated with the addition of twelve new work items: 3 draft new Technical Reports, 5 draft new Recommendations and the revision of Recommendations P.340, P.341, P.342 and P.910. The way forward for work items that had achieved stale status was also reviewed and 10 stale work items were discontinued.

In its role as lead study group on QoS and QoE, SG12 liaised ITU-internally with

– ITU-T SG13 – on general frameworks for the derivation of QoE influencing factors in relation to QoS,

– ITU-T SG16 – on quality assessment methods for object recognition surveillance video of autonomous driving, performance requirements for automatic speech recognition (ASR) in vehicles, performance evaluation of intelligent customer service systems and of voice assistant devices in smart speakers and,

– ITU-R SG6 – on subjective video quality assessment methods for multimedia applications.

and externally, including with the Broadband Forum, 3GPP, 5GAA, ETSI, IETF, IEC, IEEE, VQEG, WBA.

ITU-T Study Groups are encouraged to engage with SG12, at an early stage, on any ongoing or future work discussing QoS and QoE aspects.

## Lead study group on driver distraction and voice aspects of car communications

Work progressed on draft new Recommendation ITU-T P.ASR: Performance requirements for automatic speech recognition (ASR) in vehicles whose aim is to provide a test environment and test setups for performing ASR tests in a laboratory type environment while simulating relevant driving and operating conditions; and (b) to provide measurement procedures and performance requirements. SG12 informed SG16 about this progress.

ITU-T Study Groups are encouraged to engage with SG12, at an early stage, on new work items discussing driver distraction and voice aspects of car communications.

## Lead study group on quality assessment of video communications and applications

Work continues to progress on items related to quality assessment of video communications and applications mainly related to adaptive video streaming quality (P.NATS-ph3, P.MOSQUITO, P.DiAQoSE).

SG12 has adopted a series of foundational Recommendations related to quality evaluation of immersive technologies covering virtual reality (ITU-T G.1035); augmented reality (ITU-T G.1036); 360º video (ITU-T P.919); spatial audio (ITU-T P.1310); extended reality meetings (ITU-T P.1320). In the reporting period, new work was initiated in this area on test methods for subjective assessment of extended reality communications (P.IXC), subjective tests for evaluating the user experience for mobile AR applications (P.SMAR) and objective quality modelling for XR services (PSTR-OQMXR).

ITU-T Study Groups are encouraged to engage with SG12, at an early stage, on new work items discussing quality assessment of video communications and applications, including work on immersive media quality assessment.

SG12’s longstanding successful cooperation with the Video Quality Expert Group (VQEG) continues as showcased in the planned collaborative revision of **ITU-T P.910** and on new work related to immersive media quality (P.IXC).

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