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User's quality of experience on multimedia conferencing services - Part 3: Measurement methods

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IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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User's quality of experience on multimedia conferencing services - Part 3: Measurement methods

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The text of this International Standard is based on the following documents:

Draft	Report on voting
100/4345/CDV	100/4396/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 63478 series, published under the general title *User's quality of experience on multimedia conferencing services*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

– reconfirmed,

– withdrawn, or

– revised.

INTRODUCTION

With the global COVID-19 pandemic, meetings for business and education purposes have shifted from face-to-face to virtual. Consequently, a range of multimedia conferencing services has been developed, enabling users to choose and enjoy conferencing services based on personal preferences. To ensure optimal user experience, it is essential to measure the quality of experience (QoE) for multimedia conferencing services. However, there is currently a lack of standardized methods for measuring a user's QoE in this context. Thus, it is increasingly important to provide guidelines for measuring and evaluating a user's QoE for multimedia conferencing services.

Traditionally, quality of service (QoS) has been measured for network data communication, represented by objective index values like delay, throughput, and jitter. In contrast, QoE represents a user's level of satisfaction with a specific service and reflects human emotional quality. As such, QoE is subject to overall service performance from the user's perspective. In the case of multimedia conferencing services, measuring QoE is challenging due to varying user preferences/requirements and service/application characteristics. Therefore, a unified framework is necessary to measure and evaluate a user's QoE for multimedia conferencing services.

This document aims to provide guidelines for enhancing a user's QoE for multimedia conferencing services. The IEC 63478 series specifies general considerations and requirements to enhance a user's QoE and measurement methods for associated QoE parameters.

The IEC 63478 series consists of the following parts:

– Part 1: General;

– Part 2: Requirements; and

– Part 3: Measurement methods.

IEC 63478-1 (Technical Report) describes general considerations to measure users’ QoE.

IEC 63478-2 (International Standard) describes the requirements to be considered to measure users’ QoE.

IEC 63478-3 (International Standard) describes the measurement methods for QoE parameters.

1 Scope

This part of IEC 63478 describes the measurement methods for users' quality of experience (QoE) parameters on multimedia conferencing services.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 63478-2, *User's quality of experience (QoE) on multimedia conferencing services - Part 2: Requirements*

3 Terms, definitions and abbreviated terms

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

– IEC Electropedia: available at https://www.electropedia.org/
– ISO Online browsing platform: available at https://www.iso.org/obp

3.1 Terms and definitions

No terms and definitions are listed in this document.

3.2 Abbreviated terms

The abbreviated terms are given in Table 1.

Table 1 – Abbreviated terms

Abbreviated term	Full term
API	Application programming interface
MCC	Multimedia conferencing client
MCS	Multimedia conferencing server
QMA	QoE measurement agent
QMM	QoE measurement manager
QoE	Quality of Experience
SDK	Software development kit
UI/UX	User interface / User eXperience