SLOVENSKI STANDARD
SIST ISO 22259:2019

01-oktober-2019

Konferenčni sistemi - Oprema - Zahteve

Conference systems -- Equipment -- Requirements

Systèmes de conférence -- Équipement -- Exigences

Ta slovenski standard je istoveten z: **ISO 22259:2019**

ICS:

33.160.60	Večpredstavni (multimedijski) sistemi in oprema za telekonference	Multimedia systems and teleconferencing equipment
91.040.10	Javne stavbe	Public buildings

SIST ISO 22259:2019 **en,fr,de**

INTERNATIONAL STANDARD

ISO 22259

First edition
2019-04

Conference systems — Equipment — Requirements

Systèmes de conférence — Équipement — Exigences

Reference number
ISO 22259:2019(E)

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Published in Switzerland

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 37, *Language and terminology*, Subcommittee SC 5, *Translation, interpreting and related technology*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Conference systems — Equipment — Requirements

1 Scope

This document specifies requirements for typical conference systems, the parts they are composed of, the auxiliary devices necessary for their use (such as microphones, headphones, and sound reinforcement equipment) and the environment in which they are used. These requirements ensure interoperability and optimum performance under conditions of normal operation.

It is applicable to both wired and wireless systems.

The environment and areas where events are held are described in Annex A.

This document facilitates the determination of the quality of conference systems, the comparison of different systems and the assessment of their proper use by listing their characteristics. This document contains the technical backbone of ISO 20108 and ISO 20109.

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.

ISO 639-3, *Codes for the representation of names of languages — Part 3: Alpha-3 code for comprehensive coverage of languages*

ISO 20108, *Simultaneous interpreting — Quality and transmission of sound and image input — Requirements*

ISO 7000, *Graphical symbols for use on equipment — Registered symbols*

IEC 60118-4, *Electroacoustics — Hearing aids — Part 4: Induction-loop systems for hearing aid purposes — System performance requirements*

IEC 60268-4, *Sound system equipment — Part 4: Microphones*

IEC 60268-7, *Sound system equipment — Part 7: Headphones and earphones*

IEC 60417, *Graphical symbols for use on equipment*

IEC 61603-7, *Transmission systems of audio and/or video and related signals using infra-red radiation — Part 7: Digital audio signals for conference and similar applications*

IEC 62489-1, *Electroacoustics — Audio-frequency induction loop systems for assisted hearing — Part 1: Methods of measuring and specifying the performance of system components*

3 Terms and definitions

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

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
system
combination of interacting elements organized to achieve a given objective

[SOURCE: ISO/IEC 30111:2013, 3.6, modified — the wording “one or more stated purposes” is changed to “a given objective”.]

3.2
wired
employing cables and connectors for the transfer of *signals* (3.12) and data

3.3
wireless
without cables and connectors for the transfer of *signals* (3.12) and data

3.4
discussion system
system (3.1) that controls *discussion units* (3.23)

3.5
sound reinforcement system
speech reinforcement system
public address system
system (3.1) that amplifies *sound* (3.11)

3.6
conference system
system (3.1) that controls technical equipment used to conduct an event

3.7
language distribution
transmission of the *floor* (3.9) and *interpreted* (3.32) speech to *participants* (3.25) and *audience* (3.28)

3.8
interpreting system
combination of *interpreting* (3.33) equipment and *system* (3.1) for *language distribution* (3.7)

Note 1 to entry: An interpreting system can require the use of interpreting booths compliant with ISO 2603 or ISO 4043, equipped with interpreting consoles compliant with ISO 20109, or a portable interpreting system compliant with ISO 20109.

3.9
floor
audio output of *discussion system* (3.4) conveying *microphone* (3.14) input and *auxiliary input* (3.10)

3.10
auxiliary input
audio input other than that from *discussion system* (3.4) *microphones* (3.14)

3.11
sound
form of energy that moves through media in waves of pressure

[SOURCE: ISO/TS 16976-7:2013, 3.1.5]

3.12
signal
detectable transmitted energy that is used to carry information

[SOURCE: ISO/IEC 14776-153:2015, 3.1.87]

3.13
transducer
device that converts one type of energy to another

[SOURCE: ISO/TS 19130-2:2014, 4.78]

3.14
microphone
transducer (3.13) that converts *sound* (3.11) into an electrical *signal* (3.12)

[SOURCE: ISO 20109:2016, 3.3, modified — The word "device" is replaced by "transducer".]

3.15
loudspeaker
transducer (3.13) that converts an electrical *signal* (3.12) into *sound* (3.11) that is loud enough to be heard at a distance

3.16
amplifier
electronic device that converts a small *signal* (3.12) to a larger signal

[SOURCE: ISO 5577:2017, 5.1.5, modified — The word "which" is replaced by "that"; Note 1 to entry is removed.]

3.17
headphone
transducer (3.13) that converts an electrical *signal* (3.12) into *sound* (3.11), designed to be worn close to the ear

[SOURCE: ISO 20109:2016, 3.4, modified — the plural term "headphones" is replaced by the singular "headphone", the word "device" is replaced by "transducer".]

3.18
in-ear headphone
headphone (3.17) designed to be worn inside the ear

3.19
earclip headphone
earshell headphone
one-ear *headphone* (3.17) designed to be worn attached to the ear

3.20
induction loop
system (3.1) that transmits an audio *signal* (3.12) directly to a hearing aid

Note 1 to entry: The audio signal is transmitted via a magnetic field, greatly reducing background noise, competing sounds, reverberation and other acoustic distortions in order to improve the clarity of sound.

3.21
central controller
equipment that directs the operation of the *conference system* (3.6) and the *systems* (3.1) and devices connected to it

3.22
audio mixing device
equipment for combining, routing and changing the gain, volume, timbre and dynamics of analogue or digital *signals* (3.12), summing them to produce one or more combined output signals

3.23
discussion unit
electronic device serving a *participant* (3.25) to speak at an event

3.24
control booth
room from which technical equipment and audio and video *signal* (3.12) quality are managed

[SOURCE: ISO 2603:2016, 3.3, modified — The wording "where the control instruments are located, and" is deleted and "audio and video signal quality" added.]

3.25
participant
person who takes an active part in an event

3.26
chairperson
participant (3.25) who is in charge of conducting the proceedings at an event

3.27
speaker
participant (3.25) addressing others

[SOURCE: ISO 18841:2018, 3.1.7, modified — The word "person" is replaced by "participant"; the wording "using either spoken language or sign language" is removed.]

3.28
audience
group of listeners or spectators at an event

3.29
operator
person responsible for the operation of technical equipment

3.30
technician
person responsible for the availability and maintenance of technical equipment

3.31
webcasting
web streaming
transmitting audio and video data across a network to an *audience* (3.28)

3.32
interpret
render spoken or signed information from a source language to a target language in oral or signed form, conveying both the register and meaning of the source language content

[SOURCE: ISO 18841:2018, 3.1.1]

3.33
interpreting
interpretation
rendering of spoken or signed information from a source language to a target language in oral or signed form, conveying both the register and meaning of the source language content

[SOURCE: ISO 18841:2018, 3.1.2]

3.34
simultaneous interpreting
mode of *interpreting* (3.33) performed while a *speaker* (3.27) is still speaking or signing

[SOURCE: ISO 18841:2018, 3.1.13]

4 Overall conference system

4.1 General

A conference system consists of the technical equipment used to conduct an event. Its primary function is to amplify audio signals from participants and audio sources and delivering them to other participants.

A conference system shall at least consist of a discussion system, combined with a listening system and/or a sound reinforcement system.

A conference system shall have at least one primary floor output and one auxiliary input as described in Annex B.

A conference system can be extended with an interpreting system and a language distribution system.

A conference system may, among others, also include one or more of the following elements:

— a metadata system;

— a voting system;

— a camera system;

— a display system;

— an identification/sign-in system;

— an electronic nameplate system.

A conference system can, among others, be connected to one or more of the following elements:

— a conference control system;

— an audio and/or video recording/archiving system;

— a webcasting system;

— a teleconferencing system.

Audio and video signals generated by the conference system shall comply with ISO 20108.

Modes of mounting conference systems are described in Annex C.

4.2 Audio characteristics

4.2.1 Latency

The overall latency from input (microphone or audio input) to output (discussion unit loudspeaker, headphones or audio output) shall not exceed 20 ms.

4.2.2 Sound pressure level

All sound pressure levels (dB_{spl}) referred to in this document are based on a sinusoidal frequency of 1 kHz (unless specified otherwise) measured under free field conditions.

Sound pressure level	Nominal	Maximum	Units
at the microphone housing/capsule	80	110	dB_{spl}
at 50 cm from the discussion unit loudspeaker without causing audible artefacts	72		dB_{spl}