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Simultaneous interpreting delivery platforms — Requirements and recommendations

*Plateformes de distribution d'interprétation simultanée — Exigences
et recommandations*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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. www.iso.org/directives

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

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For an explanation of 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 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.

Introduction

The use of simultaneous interpreting delivery platforms is a relatively new field of activities for interpreters. Parameters and conditions for using these services in settings where the interpreters are, or are not, in the same room as participants and speakers are still under development. Meanwhile, developers, providers and users need information about basic requirements and recommendations relating to these platforms.

Equipment and facilities for simultaneous interpreting are also covered in ISO 2603, ISO 4043, ISO 20108 and ISO 20109.

For certain settings and specializations, such as multilingual conference interpreting, additional specific provisions are applicable.

This document has been developed as a Publicly Available Specification, prior to the development of an International Standard on simultaneous interpreting delivery platforms. It is likely that the content of this document will form the basis of an ISO standard in due course.

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Simultaneous interpreting delivery platforms — Requirements and recommendations

1 Scope

This document specifies requirements and recommendations for using simultaneous interpreting delivery platforms in settings where the interpreters are, or are not, in the same room as participants and speakers at a communicative event.

In conjunction with ISO 20108, this document provides the relevant requirements and recommendations for the quality and transmission of sound and image to interpreters and from interpreters to participants, and for the configuration of the interpreter's working environment.

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 2603:2016, *Simultaneous interpreting — Permanent booths — Requirements*

ISO 4043:2016, *Simultaneous interpreting — Mobile booths — Requirements*

ISO 9241-410, *Ergonomics of human-system interaction — Part 410: Design criteria for physical input devices*

ISO 20108:2017, *Simultaneous interpreting — Quality and transmission of sound and image input — Requirements*

ISO 20109:2016, *Simultaneous interpreting — Equipment — Requirements*

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

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

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

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]

3.2

interpreter

person who *interprets* (3.1)

[SOURCE: ISO 18841:2018, 3.1.3]

3.3

interpreting

interpretation

rendering 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]

3.4

simultaneous interpreting

mode of *interpreting* (3.3) performed while a *speaker* (3.17) or *signer* (3.18) is still speaking or signing

[SOURCE: ISO 18841:2018, 3.1.13, modified – the words "or signer" have been added.]

3.5

simultaneous interpreting delivery platform

virtual environment that manages the processing of audio and video signals during the transmission of information from *speakers* (3.17) or *signers* (3.18) to *interpreters* (3.2) and thence to an *audience* (3.16) in *simultaneous interpreting* (3.4)

Note 1 to entry: Other equipment necessary in simultaneous interpreting, such as *interpreter interfaces* (3.6), *microphones* (3.9), *headphones* (3.10) and cameras, attach to the simultaneous interpreting delivery platform.

3.6

interpreter interface

equipment containing controls for listening and speaking used by the *interpreter* (3.2) to facilitate *simultaneous interpreting* (3.4)

3.7

interpreter console

individual hardware workstation containing physical controls for listening and speaking that facilitates *simultaneous interpreting* (3.4)

[SOURCE: ISO 20109:2016, 3.2, modified – the words "hardware" and "physical" have been added and the word "enables" has been changed to "facilitates".]

3.8

soft console

type of *interpreter interface* (3.6) which runs on an ordinary IT device and has onscreen controls

Note 1 to entry: Soft consoles can run on mobile phones, computers or tablets.

3.9

microphone

transducer that converts sound into an electrical signal

[SOURCE: ISO 22259:2019, 3.14]

3.10

headphone

transducer that converts an electrical signal into sound, designed to be worn close to the ear

[SOURCE: ISO 22259:2019, 3.17]

3.11**headset**

headphones (3.10) combined with a *microphone* (3.9)

[SOURCE: ISO 20109:2016, 3.5]

3.12**relay interpreting**

interpreting (3.3) that occurs when an *interpreter's* (3.2) input comes from another interpreter's rendition and not directly from the *speaker* (3.17) or *signer* (3.18)

[SOURCE: ISO 20109:2016, 3.7, modified – the words "or signer" have been added.]

3.13**distance interpreting**

remote interpreting

interpreting (3.3) of a *speaker* (3.17) or *signer* (3.18) in a different location from that of the *interpreter* (3.2), enabled by information and communications technology

[SOURCE: ISO 18841:2018, 3.1.10, modified – the words "or signer" have been added.]

3.14**communicative event**

encounter between two or more parties during which information is transmitted

[SOURCE: ISO 20228:2019, 3.1.22, modified – the "Note 1 to entry" has been deleted.]

3.15**participant**

person who takes an active part in an event

[SOURCE: ISO 22259:2019, 3.25]

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3.16**audience**

group of listeners or spectators at an event

[SOURCE: ISO 22259:2019, 3.28]

3.17**speaker**

person addressing others using spoken language

[SOURCE: ISO 18841:2018, 3.1.7, modified – the comma and the words "either" and "or sign language" have been removed.]

3.18**signer**

person addressing others using signed language

3.19**moderator**

person responsible for facilitating interaction between people at an event

3.20**latency**

<communications> time delay between the sending of a signal from one device and its reception by another device

[SOURCE: ISO/TS 27790:2009, 3.40]

4 Purpose and characteristics

A simultaneous interpreting delivery platform shall support the transmission of spoken and visual information from a speaker to an interpreter. Visual information can include slides and other materials projected live.

A simultaneous interpreting delivery platform shall also support the transmission of spoken information from an interpreter to an audience and from a speaker or signer to an audience at an event.

For signed language interpreting, supplementary requirements apply.

EXAMPLE AIIC Guidelines for the positioning of sign language interpreters in conferences, including webstreaming^[12], and AIIC Guidelines for Distance Interpreting^[11].

5 Provision of requirements to interpreters, speakers and participants

Providers of simultaneous interpreting delivery platforms shall supply interpreters, speakers and participants with information about the requirements of the equipment to be used in order to achieve compliance with the requirements included in this document.

6 Transmission

6.1 Connection

Data upload and download capacity at all connected points shall allow transmission of sound and image in accordance with ISO 20108:2017, 5.2 and Clause 6.

6.2 Latency

The propagation delay of the image and sound from the source to the interpreters and from the source directly to the audience shall not exceed 500 ms.

The propagation delay of the sound from the interpreters to the audience shall not exceed 500 ms.

7 Requirements relating to sound and image

7.1 Audio characteristics

The audio characteristics of the simultaneous interpreting delivery platform shall comply with the requirements in 7.1.1 to 7.1.7.

7.1.1 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. See Table 1.

Table 1 — Sound pressure level

Sound pressure level	Nominal	Maximum	Unit
at the microphone housing/capsule	80	110	dB_{spl}

7.1.2 System input and output

The nominal input and output of the system shall be -30 dBFS.

7.1.3 Frequency response

A simultaneous interpreting delivery platform and connected microphones and headphones should reproduce audio frequencies between 125 Hz and 15 000 Hz, with a variation of maximum +/-10 dB.

A simultaneous interpreting delivery platform shall transmit audio frequencies between 125 Hz and 15 000 Hz to interpreters, with a variation of maximum +/-3 dB. The same audio frequencies shall apply when the interpreter's input is an interpreted language channel, as is the case in relay interpreting.

A simultaneous interpreting delivery platform shall reproduce audio frequencies in the useful frequency range, with a variation of maximum +/-3 dB. Additionally, a high-pass filter shall attenuate the frequencies below 125 Hz with a slope of at least 12 dB per octave in order to improve speech intelligibility.

See [Table 2](#).

Table 2 — Audio frequencies

Parameter	Min.	Typical	Max.	Unit
Low frequency limit			125	Hz
High frequency limit	15 000			Hz
Amplitude variation in the useful frequency range (applies to the simultaneous interpreting delivery platform and connected microphones and headphone)			+/-10	dB
Amplitude variation in the useful frequency range (applies to the simultaneous interpreting platform only)			+/-3	dB
High-pass filter corner frequency		125		Hz
High-pass filter slope	12			dB _{Oct}

Microphones shall comply with IEC 60268-4. Headphones shall comply with IEC 60268-7.

7.1.4 Distortion

A simultaneous interpreting delivery platform shall be free of any perceptible audio distortion.

A simultaneous interpreting delivery platform and connected microphones shall exhibit a total harmonic distortion (THD) level below 1 % at any sound pressure levels up to 110 dB_{spl} at 1 kHz.

7.1.5 Noise and hum

A simultaneous interpreting delivery platform shall be free of perceptible noise and hum.

A simultaneous interpreting delivery platform and connected microphones shall exhibit a signal to noise ratio (SNR) of at least 90 dB at 1 kHz at the maximum sound pressure level.

7.1.6 Level consistency

The variation of the level of the headphones shall be no more than ±3 dB for each distributed interpreted language and distributed floor at an input level of 80 dB_{spl} ±12 dB.

7.1.7 Interference

A simultaneous interpreting delivery platform shall be immune to interference from any source, including nearby electromagnetic sources such as (but not limited to) mobile phones, wireless LANs and other conference systems. Audible artefacts resulting from interference or analogue-to-digital/digital-to-analogue conversion shall be at least 50 dB below the nominal level; system noise shall not be considered audible interference.