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First edition

Assistive products — Accessibility guidelines and requirements to survey the needs of persons with sensory disabilities for assistive products and services

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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 document 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 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 173, *Assistive products*, Subcommittee SC 7, *Assistive products for persons with impaired sensory functions*.

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.

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Introduction

Surveying the needs of users of assistive products has increased in importance, as the range of disabilities that can be assisted by the products has been widened since the publication of the International Classification of Functioning, Disability and Health (ICF) by the World Health Organization (WHO) in 2001 and the United Nations (UN) Convention on the Rights of Persons with Disabilities in 2006. Recent advancement in information communication technology (ICT) have led to the development of new technological solutions for assisting persons with various disabilities to improve or facilitate their performance in a variety of activities. Information concerning user needs are necessary for policymakers, manufacturers and research institutes developing new assistive products, and user groups proposing development and improvement of assistive products.

This document was developed to meet the increasing demand for developing information on user needs of assistive products. Various methods and techniques have been developed for surveying user needs in market, opinion and social survey.

Surveyors encounter difficulties in conducting the survey on persons with sensory disabilities, because special considerations for accessibility are needed when communicating with them.

Guidelines for accessible communication, specially informed consent and ethical guidelines, are summarized in this document. The protection of privacy and personal data are regulated by legal provisions.

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Assistive products — Accessibility guidelines and requirements to survey the needs of persons with sensory disabilities for assistive products and services

1 Scope

This document provides guidelines and requirements for surveying the user needs for assistive products and services of persons with sensory disabilities related to seeing and hearing.

This document does not provide guidelines or requirements for other disabilities such as physical, mental or cognitive. The methods described in the document do not reflect all possible methods for surveying, but are those most frequently used for assessing user needs.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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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:

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

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

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3.1
accessibility
extent to which products, *systems* (3.24), services, environments and facilities can be used by people from a population with the widest range of *user* (3.27) needs, characteristics and capabilities to achieve identified goals in identified contexts of use

Note 1 to entry: Context of use includes direct use or use supported by *assistive products* (3.2).

[SOURCE: ISO 9241-11:2018, 3.2.2, modified — In the Note 1 to entry, “technologies” has been changed to “products”.]

3.2
assistive product
product that optimizes a person’s functioning and reduces disability

[SOURCE: ISO 9999:2022, 3.3, modified — Notes to entry have been deleted.]

3.3
consent
freely given agreements based on adequate information obtained prior to the collection or use of *participant* (3.15) data

[SOURCE: ISO 20252:2019, 3.20]

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3.4
closed-ended question
question requiring *participants* (3.15) to select from a predetermined list of possible answers

[SOURCE: ISO 11136:2014, 3.2, modified — "Respondents" has been replaced with "participants".]

3.5
context of use
combination of *users* (3.27), goals and *tasks* (3.25), resources, and environment

Note 1 to entry: The "environment" in a context of use includes the technical, physical, social, cultural and organizational environments.

[SOURCE: ISO 9241-11:2018, 3.1.15]

3.6
data collection instrument
tool created for the purpose of gathering data from *participants* (3.15)

EXAMPLE Questionnaire, discussion guide, biometric device, web scraping technology, camera.

[SOURCE: ISO 20252:2019, 3.24]

3.7
effectiveness
accuracy and completeness with which *users* (3.27) achieve specified goals

[SOURCE: ISO 9241-11:2018, 3.1.12]

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3.8
efficiency
resources used in relation to the results achieved

Note 1 to entry: Typical resources include time, human effort, costs and materials.

[SOURCE: ISO 9241-11:2018, 3.1.13]

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3.9
focus group interview
open discussion with a small number of selected *participants* (3.15) conducted by a *moderator* (3.13)

Note 1 to entry: Focus groups can be conducted face-to-face, by telephone, online or by a combination of these. Online focus groups can be synchronous or real-time (e.g. chat sessions), or asynchronous over an extended period of time (e.g. message or bulletin boards).

[SOURCE: ISO 20252:2019, 3.42, modified — "interview" has been added to term; preferred term "group discussion" has been removed.]

3.10
impairment
problem in body function or structure related to a significant deviation or loss

Note 1 to entry: Impairments can be temporary or permanent; progressive, regressive or static; intermittent or continuous.

[SOURCE: ICF 2001, WHO]

3.11
interview
oral questioning technique which results in a transfer of information from the interviewee to an *interviewer* (3.12) or surveyor

Note 1 to entry: This technique obtains direct reactions to questions, in contrast to written *questionnaires* (3.20) or self-assessment (self-recording).

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Note 2 to entry: Interviews can be subdivided according to the number of interviewees into one-to-one interviews and group interviews.

Note 3 to entry: Interviews can be structured, semi-structured or unstructured.

Note 4 to entry: Where semi-structured or unstructured interviews are used with a group of respondents, these are usually described as focus groups or group discussions.

[SOURCE: ISO 16439:2014, 3.30, modified — In the term, "researcher" has been changed to "surveyor".]

3.12
interviewer
person involved in the collection of data for market, opinion and social *survey* (3.23)

Note 1 to entry: Interviewers include, but are not limited to, face-to-face and telephone interviewers, recruiters for qualitative or other survey, and other people carrying out data collection by observation, and persons collecting data from retail outlets, following instructions from the surveyor.

[SOURCE: ISO 20252:2019, 3.40, modified — "Fieldworker" has been removed as preferred term, and "interviewer" changed from admitted to preferred term. In the Note 1 to entry, "research" has been changed to "survey" and "service provider" has been changed to "surveyor".]

3.13
moderator
individual responsible for facilitating the interactions among *participants* (3.15) of a focus group or other qualitative forums

[SOURCE: ISO 20252:2019, 3.53]

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3.14
open-ended question
type of question where *participants* (3.15) are asked to answer in their own words

[SOURCE: ISO 20252:2019, 3.59, modified — Preferred term "open-ended response" has been removed.]

3.15
participant
respondent
subject
person or organisation from whom or about whom data are collected for a *survey* (3.23)

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[SOURCE: ISO 20252:2019, 3.62, modified — Preferred term "data subject" has been replaced with "subject". In the definition, "research" has been changed to "survey".]

3.16
personal data
information relating to a natural living person that can be used to identify an individual

Note 1 to entry: The identification can be made for example by reference to direct identifiers (e.g. name, specific geographic location, telephone number, picture, sound, video recording or biometric data) or indirectly by reference to an individual's physical, physiological, mental, economic, cultural or social characteristics.

[SOURCE: ISO 20252:2019, 3.65]

3.17
qualitative data
data describing, but not measuring the attributes or properties of an object, in particular the reasons for human actions

Note 1 to entry: The attributes can be categorized into classes that may be assigned numeric values.

[SOURCE: ISO 16439:2014, 3.52]

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3.18
qualitative survey
analysis of motivations, patterns of thought, opinion, attitude, assessment or behaviour, via *survey* (3.23) techniques such as focus groups, depth *interviews* (3.11), discourse content analysis and qualitative observational survey

[SOURCE: ISO 20252:2019, 3.72, modified — "Research" was changed to "survey" in the term and in the definition.]

3.19
quantitative data
data in numerical form expressing a certain quantity, amount or range, amenable to statistical manipulation

Note 1 to entry: Quantitative data are usually expressed in measurement units, e.g. number of loans, percentage of interviewees.

3.20
questionnaire
structured or partly structured tool or instrument for collecting data, consisting of a series of questions

Note 1 to entry: Questionnaires can be self-completion or administered by a surveyor.

[SOURCE: ISO 20252:2019, 3.74, modified — In the Note 1 to entry, "fieldworker" has been changed to "surveyor".]

3.21
sample
subset of the target population from which data are collected

[SOURCE: ISO 20252:2019, 3.86]

3.22
satisfaction
extent to which the *user's* (3.27) physical, cognitive and emotional responses that result from the use of a *system* (3.24), product or service meet the user's needs and expectations

Note 1 to entry: Satisfaction includes the extent to which the user experience that results from actual use meets the user's needs and expectations.

Note 2 to entry: Anticipated use can influence satisfaction with actual use.

[SOURCE: ISO 9241-11:2018, 3.1.14]

3.23
survey
data collection from a *sample* (3.21) of a target population to which inferences can be made

[SOURCE: ISO 20252:2019, 3.98]

3.24
system
product, service, or built environment or any combination of them with which the *user* (3.27) interacts

[SOURCE: ISO/IEC Guide 71:2014, 2.1]

3.25
task
activities required to achieve a goal

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