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Cognitive accessibility - Part 1: General guidelines (ISO 21801-1:2020)

Accessibilité cognitive - Partie 1: Lignes directrices générales (ISO 21801-1:2020)

Kognitive Zugänglichkeit - Teil 1: Allgemeiner Leitfaden (ISO 21801 1:2020)

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European foreword

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Cognitive accessibility —

Part 1: General guidelines

Accessibilité cognitive —

Partie 1: Lignes directrices générales

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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 (see 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 (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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*.

A list of all parts in the ISO 21801 series can be found on the ISO website.

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

Cognitive impairment can affect anyone. It can be temporary or permanent. Cognitive impairment might affect a person's ability to

— perceive information including visual, auditory and haptic (e.g. reduced visual perception which can cause problems recognizing words, pictures or other visual input),

— sustain, direct and divide attention (e.g. reduced ability to filter unwanted stimuli, such as light or sound, or difficulties multi-tasking),

— register and store information and retrieve it as needed, including: store and maintain new episodes, knowledge and skills, and retrieve and maintain former episodes, knowledge and skills,

— communicate, including understand and express oneself both verbally and non-verbally,

— orientate oneself, and navigate spatially and topographically,

— execute activities, including solve problems; organize; plan; hold on to a plan or strategy and change strategy when appropriate; initiate, carry out, and terminate activities appropriately,

— think and reason in an abstract manner (e.g. understand generalizations and associations and causal connections), or

— understand and manage numbers and time (e.g. calculate or comprehend concepts of money, size, or lapses of time).

Activity limitations and participation restrictions for people with cognitive impairment can be reduced significantly through the design of systems and the built environment. The adoption of Universal Design (UD) approaches in standards and policies is key to facilitate access to mainstream systems. Strategies and principles consistent with the UD approach strive to promote features in systems and the built environment that are functional and comfortable for everyone.

Mainstream systems are often considered to be more affordable and socially acceptable than assistive products. Unlimited access to mainstream technologies and systems, including information technologies, contributes to the inclusion of people with the widest range of cognitive needs, in the widest range of life situations. Knowledge about the widest range of cognitive needs and how activities and environmental factors can be modified to increase participation is extensive but not easy to comprehend and transfer to the design and delivery of systems. Designers and manufacturers of mainstream systems who are aware of those needs can significantly contribute to accessible and usable systems.

Although named cognitive 'accessibility', this document also adopts the concept of 'usability' to ensure that design principles are based on the unique experiences of users rather than on assumptions of human abilities.

This document is structured around three concepts, each presenting a set of guidelines:

— Motivation and focus;

— Representation and understanding;

— Action.

This document is a general guideline on cognitive accessibility for all systems. In a specific domain or in a specific context there, can be more detailed standards and guidelines addressing cognitive accessibility, see References [5] and [6].

It is important to engage people with cognitive impairments and their significant others, in the development of mainstream and assistive products for people with cognitive impairments.

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INTERNATIONAL STANDARD **ISO 21801-1:2020(E)**

Cognitive accessibility —

Part 1:
General guidelines

1 Scope

This document presents guidelines for the design and development of cognitively accessible systems, including products and services and built environments.

This document is relevant to mainstream systems as well as those designed specifically for people with disability.

Within the broad field of accessibility, this document is limited to guidance related to cognitive accessibility.

NOTE 1 It acknowledges, however, that diverse sensory perceptions can impact cognitive accessibility.

NOTE 2 While the following guidance in this document can benefit all users, it is included here because failure to follow it could lead to barriers that would prevent some potential users from being able to use the system at all.

This document is relevant to all types of systems. However, some particular recommendations can only be followed for some types of systems:

— Some of the guidance is relevant to a fixed system (e.g. a non-computerized consumer product or a user manual);

— Some of the guidance applies to systems containing some level of computer-based processing (e.g. a microwave oven or an ICT-system);

— Some of the guidance applies to systems that use advanced computer processing that supports individualization (e.g. an application in a smart phone);

— Some guidance applies to combinations of the above.

2 Normative references

There are no normative references in this document.

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