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BSI Standards Publication

Ergonomics of human-system interaction

Part 112: Principles for the presentation of information

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee PH/9, Applied ergonomics.

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This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2025, and conflicting national standards shall be withdrawn at the latest by December 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 9241-112:2017.

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Endorsement notice

The text of ISO 9241-112:2025 has been approved by CEN as EN ISO 9241-112:2025 without any modification.

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Document Sharing Hub

Full document details: BS EN ISO 9241-112:2025

Contents

Page

Foreword ... **iv**
Introduction ... **v**
1 Scope ... **1**
2 Normative references ... **1**
3 Terms and definitions ... **1**
4 Introduction to the presentation of information ... **3**
4.1 Presentation of information within the ISO 9241 series and their relationship ... 3
4.2 Modalities and media ... 4
4.3 Accessibility ... 5
4.4 Action guidance ... 5
4.5 Information presentation and aesthetics ... 5
5 Introduction to the principles for presentation of information ... **5**
5.1 Overview ... 5
5.2 Relationship to other sets of principles in the ISO 9241-100 series ... 5
5.3 Relationship between individual principles ... 6
6 Principles and recommendations ... **6**
6.1 Detectability ... 6
6.1.1 Principle of detectability ... 6
6.1.2 Guidance related to using prominence ... 6
6.1.3 Guidance related to timely presentation of information ... 7
6.1.4 Guidance related to making user-interface elements detectable by the user ... 8
6.1.5 Guidance related to using continuity to aid detectability ... 8
6.2 Discriminability ... 9
6.2.1 Principle of discriminability ... 9
6.2.2 Guidance related to the structuring of presented information ... 9
6.2.3 Guidance related to using presentation attributes ... 9
6.2.4 Guidance related to grouping using proximity ... 10
6.2.5 Guidance related to using similarity ... 10
6.3 Conciseness ... 11
6.3.1 Principle of conciseness ... 11
6.3.2 Guidance related to conciseness of content ... 11
6.3.3 Guidance related to conciseness of actions ... 11
6.4 Unambiguous interpretability ... 12
6.4.1 Principle of unambiguous interpretability ... 12
6.4.2 Guidance related to ensuring comprehensibility ... 12
6.4.3 Guidance related to ensuring unambiguous meaning ... 12
6.4.4 Guidance related to using closure ... 13
6.4.5 Guidance related to textual coherence ... 14
6.4.6 Guidance related to selection and use of modality and media ... 14
6.4.7 Guidance related to temporal appropriateness ... 14
6.4.8 Guidance related to user capabilities ... 14
6.5 Freedom from distraction ... 15
6.5.1 Principle of freedom from distraction ... 15
6.5.2 Guidance on avoiding and minimizing distractions ... 15
6.6 Consistency (internal and external) ... 16
6.6.1 Principle of consistency ... 16
6.6.2 Guidance related to consistency across items of information ... 16
6.6.3 Guidance related to logical consistency ... 17
6.6.4 Guidance related to consistency with conventions known to the user ... 17
Bibliography ... **18**

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Document Sharing Hub
Full document details: BS EN ISO 9241-112:2025

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 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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This document was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 4, *Ergonomics of human-system interaction,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 122, *Ergonomics,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 9241-112:2017), which has been technically revised.

The main changes are as follows:

— the terms and definitions have been updated;

— the guidance has been updated.

A list of all parts in the ISO 9241 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

This document presents principles for the presentation of information that apply to the design and evaluation of user interfaces in addition to the interaction principles contained in ISO 9241-110.

The application and use of the principles and general recommendations presented in this document results in a variety of benefits to users of interactive user interfaces, including improvements in speed, accuracy, mental effort and user experience. They also help prevent users from experiencing usability problems with presented information. Examples of such problems include the following:

— users do not detect information, although the information is present;

— users are distracted from information they are focusing on by other information;

— users cannot discriminate between pieces of information, since they appear to be identical;

— users misinterpret information since the meaning of the information is ambiguous;

— users expend unnecessary time in understanding information since the information presented is unnecessarily lengthy;

— users do not understand information due to unknown conventions used in the information presented.

The principles and general recommendations covered in this document will help to avoid misinterpretations by providing guidance on the appropriate and effective presentation of information. The guidance in this document does not deal with the identification of the specific information to be presented.

This document contains general recommendations that apply across modalities. ISO 9241-125 provides detailed recommendations relating to the design and evaluation of visual user interfaces.

This document focuses on software aspects of the presentation of information and does not include guidance on the hardware-controlled physical characteristics of information presented in different modalities (such as those identified ISO 9241-303).

The guidance in this document for presenting information is aimed at helping the user to accomplish tasks. This guidance is not aimed at the presentation of information for other reasons (e.g. corporate branding or advertising).

It is intended for the following types of users:

— user interface designers, who will apply the guidance during the development process;

— software, system, and service developers, who will apply the guidance during the design and implementation of system functionality;

— evaluators, who are responsible for ensuring that products meet the recommendations;

— designers of user interface development tools and style guides to be used by user interface designers;

— project managers, who are responsible for managing development processes;

— buyers, who will reference this document during product procurement.

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Ergonomics of human-system interaction —

Part 112: Principles for the presentation of information

1 Scope

This document establishes ergonomic design principles for interactive systems related to the software-controlled presentation of information by user interfaces. It applies to the three main modalities (visual, auditory, tactile or haptic) typically used in information and communication technology (ICT). These principles apply to the perception and understanding of presented information. These principles are applicable in the analysis, design and evaluation of interactive systems. This document also provides recommendations corresponding to the principles. The recommendations for each of the principles are not exhaustive and are not necessarily independent from one another.

While this document is applicable to all types of interactive systems, it does not cover the specifics of particular application domains which require context-specific recommendations. This document also applies to outputs from interactive systems (such as printed documents and document exports in common computer formats, e.g. pdf, text and tabular formats).

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 9241-171, *Ergonomics of human-system interaction — Part 171: Guidance on software accessibility*

3 Terms and definitions

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/

3.1
user
person who interacts with a system, product or service

Note 1 to entry: Users of a system, product or service include people who operate the system, people who make use of the output of the system and people who support the system (including people who provide maintenance and training).

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