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Ergonomics of human-system interaction —

Part 125: Guidance on visual presentation of information

Ergonomie de l'interaction homme-système —

Partie 125: Recommandations relatives à la présentation visuelle d'informations

Reference number
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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 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 WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 159, *Ergonomics*, Subcommittee SC 4, *Ergonomics of human–system interaction*.

This first edition of ISO 9241-125, together with ISO 9241-112, cancels and replaces ISO 9241-12:1998, which has been technically revised with the following changes:

— specific guidance relating to the presentation of visual information has been updated and extended (recommendations for presentation of information in other modalities will be addressed in future parts of ISO 9241);

— the characteristics of presented information have been elaborated with respect to ISO 9241-112;

— textual descriptions of the figures (alt text) have been added to enhance accessibility for sight-impaired users (in PDF, these are “pop-ups” which appear when the cursor is passed over the figure).

A list of all parts in the ISO 9241 series can be found on the ISO website.

Introduction

ISO 9241 is a multi-part International Standard that deals with both the hardware and software ergonomic aspects of human-system interaction.

ISO 9241-125 is intended for use by the following types of users:

a) the user interface designer, who will apply it during the development process.

b) the buyer, who will reference it during the product procurement process, and whose end users will gain from the potential benefits it provides.

c) project managers who are responsible for managing development processes.

d) designers of user interface development tools to be used by interface designers.

e) writers of software industry user-interface guidelines to be used by interface designers, e.g. “interface style guides”.

Guidance relating to presenting information provided in International Standards is intended to be applied to user-interface guidelines published by industry sources.

The ultimate beneficiary of this document will be the end user of the presented information. Although it is unlikely that the end user will read the standard or even know of its existence, its application by designers, buyers, and evaluators should provide user interfaces that are more usable, consistent and that enable greater productivity.

This document consists of general recommendations and conditional recommendations concerning presentation of information. General recommendations apply to most users, tasks, environments, and technology. In contrast, conditional recommendations are recommendations that apply only within the specific context for which they are relevant (e.g. particular kinds of users, tasks, environments, technology). Conditional recommendations have an “if-then” structure. The recommendations were developed primarily by reviewing the existing relevant literature and empirical evidence, then generalizing and formulating this work into recommendations for use by the interface designer and/or evaluator.

Ergonomics of human-system interaction —

Part 125:
Guidance on visual presentation of information

1 Scope

This document provides guidance for the visual presentation of information controlled by software, irrespective of the device. It includes specific properties such as the syntactic or semantic aspects of information, e.g. coding techniques, and gives provisions for the organization of information taking account of human perception and memory capabilities. Those of its provisions that do not apply to specific types of visual interfaces clearly indicate any limitations to their applicability. It does not address specific details of charts, graphs or information visualization.

This document can be utilized throughout the design process (e.g. as specification and guidance for designers during design or as a basis for heuristic evaluation). Its provisions for the presentation of information depend upon the visual design approach, the task, the user, the environment and the single or multiple technologies that might be used for presenting the information. Consequently, this document cannot be applied without knowledge of the context of use. It is not intended to be used as a prescriptive set of rules to be applied in its entirety but rather assumes that the designer has proper information available concerning task and user requirements and understands the use of available technology.

Some of the provisions of this document are based on Latin-based language usage and might not apply, or might need to be modified, for use with languages that use other alphabets. In applying those that assume a specific language base (e.g. alphabetic ordering of coding information, items in a list), it is important that care is taken to follow its intent of the standard when translation is required to a different language.

This document does not address auditory or tactile/haptic presentation of information or modality shifting for the presentation of visual information in other modalities.

NOTE ISO 9241-112 provides high-level ergonomic guidance that applies to all modalities.

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 9241-171:2008, *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 terminological databases for use in standardization at the following addresses:

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

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