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Ergonomic requirements for office work with visual display terminals (VDTs) —

Part 14:
Menu dialogues

Exigences ergonomiques pour travail de bureau avec terminaux à écrans de visualisation (TEV) —

Partie 14: Dialogues de type menu

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Contents

Page

1 Scope ---- 1

2 Normative reference ---- 2

3 Definitions ---- 2

4 Application of ISO 9241-14 ---- 5

4.1 Appropriateness of menu dialogues ---- 5

4.2 Applying the recommendations ---- 6

4.3 Evaluation of products ---- 6

5 Menu structure ---- 6

5.1 Structuring into levels and menus (overall structure) ---- 6

5.2 Grouping options within a menu ---- 7

5.3 Sequencing of options within groups ---- 8

6 Menu navigation ---- 9

6.1 Navigational cues ---- 9

6.2 Rapid navigation ---- 10

7 Option selection and execution ---- 11

7.1 Selection methods ---- 11

7.2 Alphanumeric keyboard ---- 13

7.3 Function keys ---- 15

7.4 Cursor key selection ---- 15

7.5 Pointing ---- 16

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8 Menu presentation ----------18

8.1 Option accessibility and discrimination ----------18

8.2 Placement ----------20

8.3 Text option structure and syntax ----------23

8.4 Graphic option structure and syntax ----------25

8.5 Auditory option structure and syntax ----------25

Annex A (informative) Sample procedure for assessing applicability and adherence ----------27

Annex B (informative) Examples of applying ISO 9241-14 ----------46

Annex C (informative) Bibliography ----------48

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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.

Draft International Standards adopted by the technical committees are circulated to member bodies for voting. Publication as an International Standard requires approval by at least 75% of the member bodies casting a vote.

International Standard ISO 9241-14 was prepared by the Technical Committee ISO/TC159, *Ergonomics*, Subcommittee SC4, *Ergonomics of human-system interaction.*

ISO 9241 consists of the following parts, under the general title *Ergonomic requirements for office work with visual display terminals (VDTs)* -

Part 1: General

Part 2: Guidance on task requirements

Part 3: Visual display requirements

Part 4: Keyboard requirements

Part 5: Workstation layout and postural requirements

Part 6: Environmental requirements

Part 7: Requirements for display with reflection

Part 8: Requirements for displayed colours

Part 9: Requirements for nonkeyboard input devices

Part 10: Dialogue principles

Part 11: Guidance on usability

Part 12: Presentation of information

Part 13: User guidance

Part 14: Menu dialogues

Part 15: Command dialogues

Part 16: Direct manipulation dialogues

Part 17: Form-filling dialogues

Annexes A to C of this part of ISO 9241 are for information only.

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Introduction

International Standard ISO 9241 deals with several aspects of the use of VDTs. Currently, the individual parts can be grouped in the following categories:

ISO 9241-1: Introduction

ISO 9241-2: Guidance on task requirements

ISO 9241-5 and -6: Workstation and environment

ISO 9241-3,-4,- 7,- 8 and -9: Ergonomics pertaining to hardware

ISO 9241-10 through -17: Ergonomics pertaining to software interfaces

ISO 9241-14 is concerned with the ergonomic design of menu dialogues. In menu dialogues, the dialogue system presents one or more groups of options to the user, the user chooses one or more options, and the computer executes the desired process denoted by the option(s).

ISO 9241-14 serves the following types of user:

- the user interface designer, who will apply ISO 9241-14 during the development process;
- the buyer, who will reference ISO 9241-14 during the product procurement process;
- evaluators responsible for ensuring products meet the recommendations in ISO 9241-14,
- designers of user interface development tools to be used by interface designers;
- end users who will gain from the potential benefits provided by the standard.

ISO 9241-14 consists of a number of recommendations, some of which are conditional, concerning menus. Conditional recommendations are recommendations that should be met only within the specific context for which they are relevant (e.g., particular kinds of users, tasks, environments, technology). These recommendations were developed primarily by reviewing the existing relevant literature and empirical evidence, then generalizing and formulating this work into recommendations. The source of the evidence for the individual recommendations can be found in annex C.

Differences in the relative importance of the task, user, environment, and technology in the design process are inevitable and have led to the "if - then" structure of many of the conditional recommendations. For example, "If rapid search time is important, then place as many options and levels as possible on a single menu panel." This method provides practical, usable and unambiguous guidance during user interface design.

Designers and evaluators using ISO 9241-14 need to know that they are developing an interface that will meet the recommendations provided in this part. Likewise, the buyer needs a means to determine how a product matches the recommendations in ISO 9241-14. The elements can be tailored due to the "if - then" structure in ISO 9241-14. Additionally, it is not the intent of ISO 9241-14 that every recommendation should be applied, only those that are relevant.

The application of ISO 9241-14 is expected to improve the overall quality of the menus, but this standard (like any other standard) will not guarantee the quality of the interface. Quality depends on

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include specifications based on this standard.

It should be noted that ISO 9241-10 describes dialogue principles that are relevant for the design of menu dialogues. These principles should provide the designer and evaluator with additional information concerning the ergonomic rationale for the various recommendations in ISO 9241-14 and, therefore, assist in making tradeoffs. However, it may be necessary to base tradeoffs on other considerations as well.