
**Ergonomske zahteve za pisarniško delo s slikovno zaslonsko opremo - 15. del:
Dialog z uporabo ukazov (ISO 9241-15:1997)**

Ergonomic requirements for office work with visual display terminals (VDTs) - Part 15:
Command dialogues (ISO 9241-15:1997)

Ergonomische Anforderungen für Bürotätigkeiten mit Bildschirmgeräten - Teil 15:
Dialogführung mittels Kommandosprachen (ISO 9241-15:1997)

Exigences ergonomiques pour travail de bureau avec terminaux à écrans de visualisation
(TEV) - Partie 15: Dialogues de type langage de commande (ISO 9241-15:1997)

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Ta slovenski standard je istoveten z: EN ISO 9241-15:1997

ICS:

13.180	Ergonomija	Ergonomics
35.180	Terminalska in druga periferna oprema IT	IT Terminal and other peripheral equipment

SIST EN ISO 9241-15:2001

en

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 9241-15

December 1997

ICS 13.180; 35.180

Descriptors: see ISO document

English version

Ergonomic requirements for office work with visual display
terminals (VDTs) - Part 15: Command dialogues (ISO 9241-
15:1997)

Exigences ergonomiques pour travail de bureau avec
terminaux à écrans de visualisation (TEV) - Partie 15:
Dialogues de type langage de commande (ISO 9241-
15:1997)

This European Standard was approved by CEN on 4 January 1998.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Corrected 98-03-19

Foreword

The text of the International Standard ISO 9241-15:1997 has been prepared by Technical Committee ISO/TC 159 "Ergonomics" in collaboration with CEN/CS.

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an identical text or by endorsement, at the latest by month of June 1998, and conflicting national standards shall be withdrawn at the latest by June 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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Endorsement notice

The text of the International Standard ISO 9241-15:1997 has been approved by CEN as a European Standard without any modification.

[SIST EN ISO 9241-15:2001](https://standards.iteh.ai/catalog/standards/sist/en-iso-9241-15-2001)

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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Annex ZA (normative)
Normative references to international publications
with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 9241-10	1996	Ergonomic requirements for office work with visual display terminals (VDTs) - Part 10: Dialogue principals	EN ISO 9241-10	1996

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INTERNATIONAL STANDARD

ISO
9241-15

First edition
1997-12-15

Ergonomic requirements for office work with visual display terminals (VDTs) — Part 15: Command dialogues

iTeh STANDARD PREVIEW
*Exigences ergonomiques pour travail de bureau avec terminaux à écrans
de visualisation (TEV)*
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Partie 15 : Dialogues de type langage de commande

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Reference number
ISO 9241-15:1997(E)

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International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet central@iso.ch
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

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.

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

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International Standard ISO 9241-15 was prepared by Technical Committee ISO/TC 159, Ergonomics, Subcommittee 4, *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 Introduction
- 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 reflections
- Part 8: Requirements for displayed colours
- Part 9: Requirements for non-keyboard 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 and B of this part of ISO 9241 are for information only.

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Introduction

ISO 9241 covers both the hardware and software ergonomic aspects of the use of visual display terminals. The description of the individual parts of ISO 9241, their interrelationships, and a description of the expected users of the parts is described in ISO 9241-1.

ISO 9241-15 is concerned with the ergonomic design of command dialogues. In command dialogues, users input, by recall, either complete or abbreviated command phrases as required by the command language syntax, and the computer performs the actions associated with the commands and their parameters.

ISO 9241-15 serves the following types of user of this part of ISO 9241:

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- a) The user-interface designer, who will apply ISO 9241-15 during the development process.
 - b) The buyer, who will reference ISO 9241-15 during the product procurement process.
 - c) Evaluators responsible for ensuring that products meet the recommendations in ISO 9241-15.
 - d) Designers of user-interface development tools to be used by interface designers.
 - e) End-users who will gain from the potential benefits provided by this part of ISO 9241.

The ultimate beneficiary of this part of ISO 9241 will be the end-user at the VDT. It is the needs of these users that provide the ergonomic recommendations in ISO 9241-15. Although it is unlikely that the end-user will read this part of ISO 9241 or even know of its existence, its application should provide user interfaces that are more usable, consistent and that enable greater productivity.

In order to apply ISO 9241-15 within the overall context of the ergonomic requirements for human-system interaction, it is suggested that users be familiar with the following parts of 9241:

- | | |
|-------------|--|
| ISO 9241-1 | <i>Ergonomic requirements for office work with visual display terminals (VDTs) - Part 1: General introduction</i> |
| ISO 9241-2 | <i>Ergonomic requirements for office work with visual display terminals (VDTs) - Part 2: Guidance on task requirements</i> |
| ISO 9241-10 | <i>Ergonomic requirements for office work with visual display terminals (VDTs) - Part 10: Dialogue principles</i> |

ISO 9241-13 *Ergonomic requirements for office work with visual display terminals (VDTs) -Part 13: User guidance*

ISO 9241-15 consists of a number of recommendations, some of which are conditional, concerning command dialogues. Conditional recommendations are recommendations which should be met 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 for use by the interface designer and/or evaluator. Sources for the individual recommendations are listed in Annex B.

Designers and evaluators using ISO 9241-15 need to know that they are developing an interface that will meet the recommendations provided therein. Likewise, the buyer needs a means to determine how a product matches the recommendations in ISO 9241-15. The elements can be tailored due to the "if - then" structure in ISO 9241-15. Additionally, it is not the intent of ISO 9241-15 that every recommendation should be applied, only those that are relevant.

The application of this part of ISO 9241 is expected to improve the overall quality of the command language, but ISO 9241-15 (like any other standard) will not guarantee the quality of the interface. Quality depends on specific usability criteria as set by the user, buyer or other command-dialogue consumer which may include specifications based on this part of ISO 9241.

It should be noted that ISO 9241-10 describes dialogue principles that are relevant for the design of command dialogues. These principles should provide the designer and evaluator with additional information concerning the ergonomic rationale for the various recommendations in ISO 9241-15 and, therefore, assist in making tradeoffs. However, it may be necessary to base tradeoffs on other considerations as well.

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

Part 15: Command dialogues

1 Scope

This part of ISO 9241 provides recommendations for command dialogues used to accomplish typical office tasks using visual display terminals (VDTs). Command dialogues are sequences of instructions provided by the user to the system which, when processed, result in associated system actions. Users input (from recall, rather than selecting from a menu) complete or abbreviated command phrases (e.g. mnemonics, letters, function keys, hot keys in the order required by the command language syntax and the computer performs the activities initiated by the command(s) and their associated parameters.

Interface design depends upon the task, the user, the environment, and the available technology. Consequently, ISO 9241-15 cannot be applied without a knowledge of the design and use context of the interface and it is not intended to be used as a prescriptive set of rules to be applied in their entirety. Rather, it assumes that the designer has proper information available concerning task and user requirements and understands the use of available technology (this may require consultation with a qualified ergonomics professional as well as empirical testing with real users).

ISO 9241-15 applies to the use of command dialogues, either in conjunction with other dialogues (e.g. menus, direct manipulation) or as the primary dialogue technique (e.g. in the case of "dumb terminals" or where high speed is required in a particular application). In addition, this part of ISO 9241 provides recommendations for those "key" commands (i.e. function keys and hot keys) which represent commands within a command dialogue. If the command functions are evident from the nature of their representation (e.g. pictorial icons) and invoking these functions does not require memory on the part of the user, this would not be considered a command dialogue according to ISO 9241-15. Commands can be accessed through other dialogue techniques (e.g. menu options, forms, direct manipulation). However, these methods do not require recall on the part of the user and will be excluded from this part of the standard and will be dealt with in other parts. It also should be noted that ISO 9241-15 does not provide guidance for dialogues which use "natural" language.

2 Definitions

For the purposes of this part of ISO 9241, the following definitions apply:

2.1 argument

Independent variable (including object) used in a command phrase to modify or direct the action of a command.

NOTE Arguments often include parameters.

2.2 command

Whole word, abbreviation, or string of words representing actions requested of the system.