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STANDARD

ISO
9241-1

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

Part 1:
General introduction

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

Partie 1: Introduction générale

ISO

Reference number
ISO 9241-1:1997(E)

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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.

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.

International Standard ISO 9241-1 was prepared by Technical Committee ISO/TC 159, *Ergonomics,* Subcommittee SC 4, *Ergonomics of human system interaction.*

This second edition cancels and replaces the first edition (ISO 9241-1:1992), which has been technically revised.

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 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*

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— *Part 15: Command dialogues*

— *Part 16: Direct manipulation dialogues*

— *Part 17: Form-filling dialogues*

Annex A of this part of ISO 9241 is for information only.

Introduction

One of the main concerns of ergonomics is to ensure that products and systems are fit for human use. In general this involves matching the design of products or systems, including displays, input devices, software, workplace, working environment and tasks, to the characteristics, capabilities and limitations of potential users. Improving the ergonomic properties of systems will improve performance, reduce errors and discomfort, and minimize health and safety risks. Failure to take account of human capabilities is wasteful, will reduce efficiency and result in boring, tedious work.

In practice, all users of products or systems are different; it is important to understand in what ways they vary and to quantify the variation so that account can be taken of it in design. Both hardware and software can be used for many different tasks, and in a variety of working environments, and it is also important to take these factors into consideration in design. Good ergonomic design is important in any product or system designed for human use. It is especially important when :

— use is intensive;

— accuracy or speed of the user's performance is critical;

— user acceptance is critical.

Work with visual display terminals (VDTs) is often both intensive and a significant part of many office workers' jobs. The characteristics of both hardware and software can substantially affect the user's performance. Increasingly, users, their representatives and managers are concerned with ensuring that work with VDTs is designed to appropriate standards. What is appropriate in one set of circumstances may be inappropriate in a different context; when using VDT ergonomics standards it is important to recognize that the potential range of application is very broad. Therefore ergonomics standards often take the form of recommendations, or requirements, which are conditional upon certain defined circumstances.