TECHNICAL REPORT

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CEN ISO/TR 9241-100

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English Version

Ergonomics of human-system interaction - Part 100: Introduction to standards related to software ergonomics (ISO/TR 9241-100:2010)

Ergonomie de l'interaction homme-système - Partie 100: Introduction aux normes relatives à l'ergonomie des logiciels (ISO/TR 9241-100:2010)

Ergonomie der Mensch-System-Interaktion - Teil 100: Überblick über Normen zur Software-Ergonomie (ISO/TR 9241-100:2010)

This Technical Report was approved by CEN on 3 April 2011. It has been drawn up by the Technical Committee CEN/TC 122.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

The text of ISO/TR 9241-100:2010 has been prepared by Technical Committee ISO/TC 159 "Ergonomics" of the International Organization for Standardization (ISO) and has been taken over as CEN ISO/TR 9241-100:2011 by Technical Committee CEN/TC 122 "Ergonomics" the secretariat of which is held by DIN.

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

CEN ISO/TR 9241-100 is identical to ISO/TR 9241-100.

This part of EN ISO 9241 is an important introduction to the EN ISO 9241-100 subseries on software ergonomics and facilitates the take-up and use of these standards. CEN ISO/TR 9241-100 closes a gap in its subseries of European standards by providing an overview of relevant software ergonomics standards. Furthermore, additional standards related to software ergonomics such as parts of the EN ISO 9241-200 subseries are also introduced.

Endorsement notice

The text of ISO/TR 9241-100:2010 has been approved by CEN as a CEN ISO/TR 9241-100:2011 without any modification.

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Introduction

The ISO 9241 series covers both the hardware and software-ergonomics aspects of human-system interaction. The individual parts of ISO 9241, their interrelationships, and the expected users of the parts are described in ISO 9241-1.

As part of the revision of ISO 9241, the scope of ISO 9241 has been broadened from "office work with visual display terminals (VDTs)" to cover a wide range of interactive systems and the title of the series was changed to "Ergonomics of human-system interaction". In order to allow systematic integration of emerging standards into the ISO 9241 series, a structure and numbering scheme was introduced that allows standards to be grouped by subject area.

Ergonomics is the scientific discipline and systematic study concerned with the understanding of the interactions among human and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance. Software ergonomics, therefore, is the application of ergonomics to the software aspects of interactive systems.

The standards referred to in this part of ISO 9241 provide general guidance, principles, recommendations and requirements focusing on the interaction between human and system and also the processes and methods required to achieve usable and accessible interactive systems (e.g. ISO 9241 "200" subseries dealing with human-centred design).

NOTE   There are a number of software-ergonomics standards which are not yet part of the ISO 9241 "100" series (e.g. ISO 14915). These standards will be revised and are presented in this part of ISO 9241 in their intended position within the structure of the ISO 9241 "100" subseries.

There are numerous International Standards, related to user interface design, which can be applied to software ergonomics. These cover a wide range of needs of standards users including ergonomists, designers, project managers, managers, workers or their representatives, consumers/their representatives, procurers and certification bodies.

This part of ISO 9241 is designed to help the potential users of software-ergonomics standards identify which of these standards are relevant to their needs.

The principles, recommendations and requirements given in the software-ergonomics standards help prevent users from experiencing usability problems such as:

— additional unnecessary steps not required as part of the task;

— misleading information;

— insufficient and poor information on the user interface;

— unexpected response of the interactive system;

— navigational limitations during use;

— inefficient error recovery.

In addition, the application of the principles, recommendations and requirements contributes to increased levels of accessibility.

Ergonomics of human-system interaction —

Part 100:
Introduction to standards related to software ergonomics

1 Scope

This part of ISO 9241 enables users of standards related to software ergonomics to identify ergonomics standards particularly relevant to software development, gain an overview on the content of software-ergonomics standards, understand the role of software-ergonomics standards in specifying user requirements as well as designing and evaluating user interfaces and understand the relationship between the various standards.

The software-ergonomics standards are applicable to all those software components of an interactive system affecting usability, including:

— application software (including web-based applications);

— operating systems;

— embedded software;

— software development tools;

— assistive technologies.

The range of standards discussed in this part of ISO 9241 includes general International Standards relating to software ergonomics, International Standards for processes and methods related to software ergonomics and software-ergonomics standards.

This part of ISO 9241 provides summary information on standards relevant to the following professions:

— ergonomists;

— usability professionals;

— designers;

— project managers;

— managers;

— workers or their representatives;

— consumers or their representatives;

— procurers;

— certification bodies.