INTERNATIONAL STANDARD

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Information technology — User system interfaces — Dialogue interaction —

Part 1:
Cursor control for text editing

Technologies de l'information — Interfaces de systèmes de l'utilisateur — Interaction par le dialogue —
Partie 1: Commande du curseur pour l'édition de texte

Reference number
ISO/IEC 10741-1:1995(E)

Contents

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75% of the national bodies casting a vote.

International Standard ISO/IEC 10741-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology.*

ISO/IEC 10741 consists of the following parts under the general title *Information technology — User system interfaces — Dialogue interaction:*

Part 1: Cursor control for text editing

Part 2: Cursor control for spreadsheets

Annex A of this part of ISO/IEC 10741 is for information only.

Introduction

This part of ISO/IEC 10741 specifies how incremental cursor control is effected as a result of user interaction with a text editor. Cursor control in form filling and spread sheet applications, cursor control in editing other forms of text such as graphics, and cursor control in manipulating simple and complex documents are not covered in this part of ISO/IEC 10741.

The clauses in this part of ISO/IEC 10741 are basic to a set of proposed standards dealing with user/computer dialogue interaction.

The specifications in ISO/IEC 10741 are consistent with the three ways in which text editing data may be considered:

- the internal data structure (the internal computer storage),
- the displayed data (the interface presented by the computer system to the user), and
- the conceptual data structure (the user's interpretation of what is presented).

Cursor control identifies and changes the location of user/system interaction through a change in focus. The accurate and appropriate mapping of the user's focus and intent to the active position displayed by the system and the processing of the internal data structure is the objective of cursor display and control. The ease of changing the focus and the predictability of the results are central to the user's comfort level and sense of control.

Some text editors implement formatting controls that are part of the text string in the internal data structure and that are displayed or available to be displayed to the user as a part of the displayed data. Other text editors implement formatting control as a separate function that creates a template controlling the output of the text string. The specifications in this part of ISO/IEC 10741 permit both types of formatting control implementation.

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Information technology — User system interfaces — Dialogue interaction —

Part 1:
Cursor control for text editing

1 Scope

This part of ISO/IEC 10741 defines how a number of system capabilities for cursor control in text editing systems shall be initiated, controlled, and monitored by users by means of cursor control functions. It covers bounded linear text and open page text mode editing.

The scope of this part of ISO/IEC 10741 is limited to text editing of left-to-right writing styles by use of keyboard keys or other input devices, but the principles delineated may be applicable to text in other scripting styles. Cursor control in right-to-left and top-to-bottom writing styles may be the subject of future standardization.

This part of ISO/IEC 10741 applies only to information systems that display text to a user for editing on a screen. It concerns the human user of the application, but is intended to be used by those who design and develop computer applications. It will also assist procurers in specifying a harmonized and consistent user interface.

2 Conformance

An application claiming conformance to this part of ISO/IEC 10741 shall conform to clauses 5, 6, and 7.

3 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 10741. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 10741 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 9241-3:1992, *Ergonomic requirements for office work with visual display terminals (VDTs) — Part 3: Visual display requirements.*

ISO/IEC 9995-5:1994, *Information technology —Keyboard layouts for text and office systems —Part 5: Editing section.*

ISO/IEC 9995-7:1994, *Information technology — Keyboard layouts for text and office systems — Part 7: Symbols used to represent functions.*

4 Definitions

For the purposes of this part of ISO/IEC 10741, the following definitions apply.

4.1 active document: Document that contains the current cursor or selection marker. It is a (possibly empty) body of text that is ready to receive input.

4.2 active position: Character position that will display the graphic symbol representing the next graphic character, or relative to which the next control function [1] will be executed .

Note — The external indication of the active position in an active document is the cursor.

4.3 beginning of line: First position of the line that could be occupied by a graphic character.

4.4 between-objects cursor: Cursor that visibly identifies the boundary immediately prior to the active position.

4.5 bounded linear text mode: Mode in which it is only possible to move the cursor among existing characters or formatting or presentation indicators, within the active document. For example, the cursor cannot be moved beyond the last character of a line.

4.6 character: Member of a set of elements used for the organization, control, or representation of data [2].

4.7 character path: Sequential order of character positions along a line of presented data [2].

4.8 co-located cursor: Cursor that occupies the active position.

4.9 cursor: Special indicator used in a display to mark the active position.

Note - The word "cursor" should not be confused with "pointer," which is reserved for indicating the symbol controlled by the mouse or other input device to change the point of focus (for example, the cursor) on a graphical user interface [3].

4.10 editing: Modification of content or layout of text. Editing processes include creation, insertion, deletion, and re-arrangement of text.

4.11 end of line: 1) In bounded linear text mode the character position after the last graphic character or formatting or presentation indicator. If the line is empty, the end of line is the same as the beginning of line. 2) In open page text mode, the last position in the line that could be occupied by a graphic character.

Note - A carriage return, and a software carriage return that is automatically inserted by a text editing system for word wrapping, are special cases of formatting characters. A character cursor can move onto these characters but a between-objects cursor cannot move over them. That is, in bounded text mode, a between-objects cursor moves after visible or formatting characters but before a (software and/or hardware) carriage return. A character cursor can move to a (software and/or hardware) carriage return.