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Information technology -- Keyboard layouts for text and office systems -- Part 1: General principles governing keyboard layouts

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Technologies de l'information -- Disposition des claviers conçus pour la bureautique -- Partie 1: Principes généraux pour la disposition des claviers

Ta slovenski standard je istoveten z: ISO/IEC 9995-1:2006

ICS:

35.180	Terminalska in druga periferna oprema IT	IT Terminal and other peripheral equipment
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**Information technology — Keyboard
layouts for text and office systems —**

Part 1:

**General principles governing keyboard
layouts**

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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. ISO and IEC technical committees collaborate in fields of mutual interest. 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. 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.

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

ISO/IEC 9995-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 35, *User interfaces*.

This second edition cancels and replaces the first edition (ISO/IEC 9995-1:1994), which has been technically revised.

ISO/IEC 9995 consists of the following parts, under the general title *Information technology — Keyboard layouts for text and office systems*:

- *Part 1: General principles governing keyboard layouts*
- *Part 2: Alphanumeric section*
- *Part 3: Complementary layouts of the alphanumeric zone of the alphanumeric section*
- *Part 4: Numeric section*
- *Part 5: Editing section*
- *Part 6: Function section*
- *Part 7: Symbols used to represent functions*
- *Part 8: Allocation of letters to the keys of a numeric keypad*

Introduction

In the years prior to the existence of ISO/IEC 9995 the keyboard layout of information technology equipment (ITE) such as personal computers, workstations and computer terminals was determined by standards which were originally intended for typewriters, adding machines and the like. This led to the fact that designers of office machine keyboards had to choose from the sometimes inconsistent standards, which in turn led to the existence of widely dissimilar keyboard layouts.

ISO/IEC 9995 defines a framework for the layout of keyboards for ITE. The functions to be performed by keyboards are grouped into four categories that correspond to the four physical sections of the keyboard.

Application of ISO/IEC 9995 in the design of keyboards will provide the user with a unified, predictable interface between the user and office machines by dividing the keyboard into functional areas and sections, and allocating functions to keys. One of the major tasks is to accommodate the larger and/or multiple sets of characters required by the various applications for which keyboards are used today. This was achieved by permitting the allocation of more than one graphic character or control function to each of the keys of a keyboard, predominantly in the alphanumeric section.

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Information technology — Keyboard layouts for text and office systems —

Part 1: General principles governing keyboard layouts

1 Scope

ISO/IEC 9995 specifies various characteristics of keyboards used by information technology equipment (ITE), e.g.

- a) personal computers, workstations, computer terminals, VDTs (visual display terminals), typewriters, etc., having an alphanumeric keyboard;
- b) calculators, telephones and automated teller machines having a numeric keypad.

The keyboard defined in ISO/IEC 9995 is the conventional linear keyboard, which is physically divided into sections and the sections into zones (within which the keys are laid out).

In this part of ISO/IEC 9995, the sections of the keyboard are identified and the general shape and relative placement of the sections are specified. Spacing of keys and physical characteristics are covered in this part of ISO/IEC 9995, as are the principles governing the placement of characters and symbols on keys.

This part of ISO/IEC 9995 specifies a key numbering system which applies to all types of numeric, alphanumeric and composite keyboards of ITE.

This part of ISO/IEC 9995 specifies the principles governing the placement of characters and symbols on keys used on all types of numeric, alphanumeric and composite keyboards of ITE. Although the keyboard defined by ISO/IEC 9995 may be used for different languages, the specifications are written as applying to Latin languages with a character path from left to right and a line progression from top to bottom.

The primary layout within the alphanumeric zone is established in most countries by a national standard or by national usage. Allocation guidelines are provided in ISO/IEC 9995-2. Complementary layouts are specified in ISO/IEC 9995-3.

This part of ISO/IEC 9995 defines characteristics related to interface 1 in Figure 1.

ISO/IEC 9995 specifies the allocation of functions (graphic characters and/or control functions) to keys. The graphic characters and the control functions have been given common names intended to be familiar to the users of a keyboard. In general, keyboards are not expected to generate coded control functions, but the operation of a control function key may cause a number of coded control functions to appear in data interchange to achieve the desired effect.

The effects of those keys that affect keyboard states are specified in other parts of ISO/IEC 9995.

2 Conformance

2.1 Conformance with ISO/IEC 9995-1

Equipment is in conformance with this part of ISO/IEC 9995 if it meets the requirements of clauses 5 to 9. Depending on the intended purpose of the equipment, not all of the described sections and zones need to be implemented.

2.2 General conformance requirement

A keyboard which claims conformance with ISO/IEC 9995 shall at minimum conform to this part of ISO/IEC 9995 and to all other parts which are relevant to that particular model of keyboard.

Conformance with ISO/IEC 9995-7 does not require conformance with any other part of ISO/IEC 9995.

Conformance with ISO/IEC 9995-8 does not require conformance with any other part of ISO/IEC 9995.

2.3 Claims of conformance

Any claim of conformance with ISO/IEC 9995 shall list the parts of ISO/IEC 9995 with which conformance is claimed.

3 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9241-4:1998, *Ergonomic requirements for office work with visual display terminals (VDTs) — Part 4: Keyboard requirements*

ISO 9241-4:1998/Cor.1:2000, *Ergonomic requirements for office work with visual display terminals (VDTs) — Part 4: Keyboard requirements — Technical Corrigendum 1*

4 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

4.1 active position

character position which is to image the graphic symbol representing the next graphic character or relative to which the next control function is to be executed

NOTE In general, the active position is indicated in a display by a cursor.

4.2 associated system

system to which the keyboard is attached, probably consisting of a processor and software to handle the keyboard and to run application programs

4.3 capitals lock state

state that, if activated, will result in the generation of the capital form of all graphic characters on the keyboard for which such a form exists

NOTE National standards or usage may determine which graphic characters are affected by this state.

4.4**control function**

action that affects the recording, processing, transmission, or interpretation of data

4.5**function key**

key whose primary purpose is the input of a control function

NOTE Function keys are found in all sections of the keyboard.

4.6**graphic character**

character, other than a control function, that has a visual representation normally handwritten, printed or displayed

4.7**graphic key**

key whose primary purpose is the input of a graphic character or of an element of a graphic character

NOTE Certain of these keys may also have a secondary purpose for input of a control function.

4.8**graphic symbol**

visual representation of a graphic character, a control function, or a combination of one or more graphic characters and/or control functions

4.9**group**

logical state of a keyboard providing access to a collection of graphic characters or elements of graphic characters

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NOTE 1 Usually these graphic characters or elements of graphic characters logically belong together and may be arranged on several levels within a group.

NOTE 2 The input of certain graphic characters, such as accented letters, may require access to more than one group.

4.10**group select**

function that, if activated, will change the keyboard state to produce characters from a different group

4.11**key effect**

effect that results when a key is actuated, depending on the level in force, and possibly by the concurrent operation of a qualifier key or keys

NOTE The key effect may be the generation of a graphic character or of a control function.

4.12**level**

logical state of a keyboard providing access to a collection of graphic characters or elements of graphic characters

NOTE 1 Usually these graphic characters or elements of graphic characters logically belong together, such as the capital forms of letters.

NOTE 2 In certain cases the level selected may also affect function keys.

4.13**level lock state**

state that, if activated, will result in the generation of the characters assigned to a specific level