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Information technology — Keyboard layouts for office systems —

Part 11: Functionality and labelling of dead keys

Technologies de l'information — Dispositions de claviers bureautiques —

Partie 11: Fonctionnalité et identification des touches mortes

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Foreword

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This document 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 9995-11:2015), which has been technically revised.

The main changes are as follows:

— new subclause 4.3 “Alternative handling of dead keys in environments using ISO/IEC 10646”;

— new subclause 4.5 “Combination of a dead key with itself”, providing a way to enter combining characters directly in an ISO/IEC 10646 environment;

— new subclause 4.6 “Combinations of dead keys with digits and mathematical characters”, providing a way to enter superscript and subscript digits and mathematical characters;

— dropping some “peculiar character” combinations in Table 3 which conflict with the mechanism specified in the new subclause 4.5.

A list of all parts in the ISO/IEC 9995 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

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Information technology — Keyboard layouts for office systems —

Part 11: Functionality and labelling of dead keys

1 Scope

This document defines the functionality of dead keys and repertoires of characters entered by dead keys within the general scope described in ISO/IEC 9995-1.

This document is primarily intended for word-processing and text-processing applications.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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/IEC 9995-1, *Information technology — Keyboard layouts for text and office systems — Part 1: General principles governing keyboard layouts*

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

ISO/IEC 9995-10, *Information technology — Keyboard layouts for text and office systems — Part 10: Conventional symbols and methods to represent graphic characters not uniquely recognizable by their glyph on keyboards and in documentation*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 9995-1 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
dead key
key which, when it is actuated (according to the currently active group and level), changes the outcome of the following actuated key

Note 1 to entry: When a key does not act as a dead key with all possible group/level combinations of a specific keyboard layout, it is called "acting as a dead key" under the precondition that a group/level combination is active where it acts according to the definition of a "dead key" given here.

Note 2 to entry: The name "dead key" originates in the naming of comparable keys present on mechanical typewriters, which did not cause a horizontal advancement of the carriage as the keys used for typing ordinary letters did.

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3.2
peculiar character
graphic character listed in ISO/IEC 10646, which can be entered as a sequence of a combining character (as defined in that document) and another character, regardless of the existence of a canonical composition of these characters (according to Unicode normalization form C)

4 Functionality of dead keys, and relation to "combining characters" as defined in ISO/IEC 10646

4.1 General

The actuation of a dead key selects a graphic character, which, by the fact that the active position is not changed, shares its position with the graphic character entered subsequently. The outcome usually resembles an overlay of the graphic character entered by the dead key and the one entered by the subsequent keys. By entering sequences of dead keys, the result may be an overlay of more than two graphic characters.

NOTE This implies that dead keys usually are associated with diacritical marks, to produce an accented character by entering the basic letter subsequently.

In subclauses 4.5 to 4.7, this document identifies characters which represent such results where a physical overlay is not appropriate, by enumerating single characters or special combinations of characters by identifying these by their code points given in ISO/IEC 10646, for such dead keys which are associated with "combining characters" as defined in that document.

4.2 Recommended handling of dead keys in environments using ISO/IEC 10646

NOTE A characteristic of ISO/IEC 10646, unlike e.g. ISO/IEC 6937, is that combining characters are inserted into the text stream after the basic character to which they apply, thus reverting the input sequence given by dead keys.

In environments using ISO/IEC 10646, the function of dead keys should be as outlined by the following algorithm:

Step 1. If a combining character is entered by a dead key, it is buffered by the keyboard functional unit (i.e. the responsible combination of hardware/ firmware/driver software).

Step 2. If a character is entered while the keyboard functional unit is buffering characters, proceed as follows:

Step 2.1 If a “backspace” is entered while the keyboard functional unit is buffering characters and if this “backspace” does not cancel the selection of a group or a level, the buffered character sequence is dropped, and the buffering stops.

Step 2.2 Otherwise, if the combination of the last character previously buffered and the newly entered character is enumerated in Tables 1, 2 or 3 of this document, or any additional table contained in the definition of the keyboard layout, the last buffered character is replaced by the result character from the list.

Step 2.3: Otherwise, the newly entered character is appended to the sequence of buffered characters.

Step 3: If the last character in the buffered sequence is no longer a combining character, proceed as follows:

Step 3.1: The last character in the buffered character sequence is moved to the beginning of this sequence.

Step 3.2: The Unicode normalization form C (canonical composition) is applied to the buffered sequence.

Step 3.3: The resulting character sequence is output, and the buffering stops.

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