

BS EN 13710:2011



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European Ordering Rules — Ordering of characters from Latin, Greek, Cyrillic, Georgian and Armenian scripts

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee ICT/-/1, Information systems co-ordination.

A list of organizations represented on this committee can be obtained on request to its secretary.

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ICS 01.140.20; 35.040

Supersedes CR 14400:2001, ENV 13710:2000

English Version

**European Ordering Rules - Ordering of characters from Latin,
Greek, Cyrillic, Georgian and Armenian scripts**

Règles de classement européen - Classement des
caractères latins, grecs, cyrilliques, géorgiens et arméniens

Europäische Sortierregeln - Sortierung von lateinischen,
griechischen, kyrillischen, georgischen und armenischen
Schriftzeichen

This European Standard was approved by CEN on 5 February 2011.

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Foreword

This document (EN 13710:2011) has been prepared by Technical Committee CEN/TC 304 "Information and communications technologies - European localization requirements", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2011, and conflicting national standards shall be withdrawn at the latest by September 2011.

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.

This document supersedes ENV 13710:2000 and CR 14400:2001.

This edition incorporates the following main changes made with respect to the previous edition of ENV 13710:2000 mainly as follows:

- a) ENV 13170:2000 and CR 14400:2001 have been consolidated;
- b) the document has been partly revised and has been brought up to date.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

This European Standard provides rules for ordering multilingual lists into a well-defined and intuitive sequence. These rules are intended for data from different European languages that must be brought into a predictable order that makes it easy for users from multiple cultural backgrounds to find information. At the same time the standard is a basis for the definition of language-specific profiles taking the rules of a given language community into account at the same time as the total pan-European character set in a consistent, pan-European manner.

The rules have been tested and widely adopted in two predecessor specifications, ENV 13710:2000 *European Ordering Rules — Ordering of characters from the Latin, Greek and Cyrillic scripts* and its companion and extension specification CR 14400:2001 *European Ordering Rules - Ordering for Latin, Greek, Cyrillic, Georgian and Armenian scripts*. This European Standard consolidates these two documents into one technically largely upwards compatible standard.

This European Standard caters for two different target groups, software implementers on the one hand and users of ordering applications on the other.

Software implementers need unambiguous, machine-processable guidelines, which can readily be loaded into existing and future ordering applications. This goal can best be achieved by defining a european default ordering table in the syntaxes of two internationally relevant specifications in the field:

- the international ordering standard ISO/IEC 14651:2007 International string ordering and comparison — Method for comparing character strings and description of the common template tailorable ordering, of which the present standard is a “delta” (Clause 6);
- the Locale Data Markup Language (LDML) which is used to capture (amongst others) the collation data for the Unicode Common Locale Data Repository (CLDR). CLDR builds on the Unicode Collation Algorithm (UCA) which is technically a profile of ISO/IEC 14651:2007 (informative Annex G).

Users with no specific ICT background, however, need an explanation of the principles in a form more in line with existing national ordering standards or relevant practice. Tailoring tables can be difficult to read for human readers, so an explanation of the principles behind that table is given in the informative annexes. Users not familiar with the formal syntax of the tailoring table are advised to consult those annexes first.

The normative main part of this European Standard specifies letter-by-letter ordering of character strings. Informative Annex A presents equivalent information in a more human-oriented way. Informative Annex B deals with word-by-word ordering as a special form of ordering with multiple keys. Informative Annex C explains the use of further ordering criteria. Informative Annex D presents a widely used alternative to the main part, namely the amalgamation of several scripts in one index via implicit transliteration. Informative Annex E gives guidance on the use of this European Standard as the basis for expressing national deltas. Informative Annex F lists the underlying character repertoire for ease of reference. Informative Annex G expresses the formal delta in the LDML syntax.

Following the practice of ISO/IEC 14651 characters are referenced as UXXXX where X stands for any hexadecimal digit and refers to the code position of that character in ISO/IEC 10646. This convention is used throughout this European Standard.

1 Scope

This European Standard specifies the order between two character strings composed of characters from the *Modern European Scripts* (MES) collection of ISO/IEC 10646:2003 or subsets of it.

NOTE Collection 283 *Modern European Scripts* (MES) of ISO/IEC 10646:2003 was originally specified in CEN Workshop Agreement 13873:2000 *Multilingual European Subsets of ISO/IEC 10646* as *Multilingual European Subset Number 3* and was subsequently incorporated as a collection in Annex A of ISO/IEC 10646:2003 alongside its sister collections MES-1 and MES-2.

The ordering rules specified in this European Standard are only applicable for lists of data in more than one European language and when this data is intended for a multicultural audience. They complement existing national standards or practices in the field.

2 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/IEC 10646:2003, *Information technology — Universal Multi-Octet Coded Character Set (UCS)*

ISO 12199:2000, *Alphabetical ordering of multilingual terminological and lexicographical data represented in the Latin alphabet*

ISO/IEC 14651:2007, *Information technology — International string ordering and comparison — Method for comparing character strings and description of the common template tailorable ordering*

3 Terms and definitions

For the purposes of this document, the following terms and definitions of ISO/IEC 10646:2003 and of ISO/IEC 14651:2007 apply.

3.1

character

member of a set of elements used for the organisation, control, or representation of data
[ISO/IEC 10646:2003]

3.2

character string

sequence of characters considered as a single object
[ISO/IEC 14651:2007]

3.3

collating symbol

symbol used to specify weights assigned to a collating element
[ISO/IEC 14651:2007]

3.4

collating element

sequence of one or more characters that are considered a single entity for ordering
[ISO/IEC 14651:2007]

3.5

collation table

mapping from collating elements to weighting elements
[ISO/IEC 14651:2007]

NOTE A special collation table is the Common Template Table (CTT) used in Annex A of ISO/IEC 14651 to express the default mapping from collating elements to weighting elements.

3.6

delta

list of the differences between a given collation table and another one
[ISO/IEC 14651]

NOTE The given collation table, together with a given delta, forms a new collation table. Unless otherwise specified in the European Standard, the term "delta" always refers to differences from the Common Template Table as defined in ISO/IEC 14651.

3.7

ordering

process by which, given two strings, it is determined whether the first one is less than, equal to, or greater than the second one
[ISO/IEC 14651:2007]

3.8

sorting

presentation of information in a structured way

NOTE Sorting may include the subdivision of information by subject matters, e.g. by having several registers in a book, by splitting a phone book into several sections, one for each town that falls into its purview or by having multiple indices in a library. Ordering is in most circumstances an integral part of this procedure.

4 Conformance

In order to be conformant to this European Standard an application shall meet the requirements prescribed in ISO/IEC 14651:2007, Clause 6 and its Common Template Table ISO14651_2006_TABLE1 after the application of the EOR delta table specified in Clause 6 of this European Standard. An equivalent description of the resulting tailored table shall equally conform to this European Standard.

5 Tailorability

The European Ordering Rules defined in this European Standard can be taken as a default template which can be tailored to the needs of any European country in the manner specified by ISO/IEC 14651 (cf. also informative Annex E).

This European Standard is not meant to influence national standards or traditions in the field of ordering, its scope being the ordering of multilingual data. Nonetheless, national standards are encouraged to express their national ordering rules on this European Standard by declaring a formalized set of deviation rules ("delta"), as explained in Informative Annex E. This way, the respective ordering rules are automatically machine-processable and can be incorporated into international repositories of locale data, allowing for more widespread support of national ordering standards across software products.

6 EOR Delta Table

NOTE For the syntax of the table please consult ISO/IEC 14651.

```

%% EOR's EORDeltaTable
%
%% European Ordering Rules.
%
% EOR delta for MES-3 from ISO/IEC 14651:2007's CTT (ISO14651_2006_TABLE1_en.txt).
%
% EOR uses four levels for comparison

reorder-after <BASE> % Introduce the LIG weight.
collating-symbol <LIG>
<LIG>
reorder-end

reorder-after <VRNT3> %Introduce more variants
collating-symbol <VRNT4>
collating-symbol <VRNT5>
collating-symbol <VRNT6>
collating-symbol <VRNT7>
collating-symbol <VRNT8>
collating-symbol <VRNT9>
<VRNT4>
<VRNT5>
<VRNT6>
<VRNT7>
<VRNT8>
<VRNT9>
reorder-end

reorder-after <S0584> %Introduce a weight for U0587 ARMENIAN SMALL LIGATURE ECH YIWN
collating-symbol <ECH-YIWN>
<ECH-YIWN>
reorder-end

reorder-after <SFFFF>

order_start forward;forward;forward;forward

% Non-alphanumeric characters (including some modifier letters):

% The DRACHMA SIGN is already in ISO14651_2006 ignorable on levels 1-3
<U0024> IGNORE;IGNORE;IGNORE;<U0024> % DOLLAR SIGN
<U00A2> IGNORE;IGNORE;IGNORE;<U00A2> % CENT SIGN
<U00A3> IGNORE;IGNORE;IGNORE;<U00A3> % POUND SIGN
<U00A4> IGNORE;IGNORE;IGNORE;<U00A4> % CURRENCY SIGN
<U00A5> IGNORE;IGNORE;IGNORE;<U00A5> % YEN SIGN
<U20A0> IGNORE;IGNORE;IGNORE;<U20A0> % EURO-CURRENCY SIGN

```

<U20A1> IGNORE:IGNORE:IGNORE:<U20A1> % COLON SIGN
 <U20A2> IGNORE:IGNORE:IGNORE:<U20A2> % CRUZEIRO SIGN
 <U20A3> IGNORE:IGNORE:IGNORE:<U20A3> % FRENCH FRANC SIGN
 <U20A4> IGNORE:IGNORE:IGNORE:<U20A4> % LIRA SIGN
 <U20A5> IGNORE:IGNORE:IGNORE:<U20A5> % MILL SIGN
 <U20A6> IGNORE:IGNORE:IGNORE:<U20A6> % NAIRA SIGN
 <U20A7> IGNORE:IGNORE:IGNORE:<U20A7> % PESETA SIGN
 <U20A8> IGNORE:IGNORE:IGNORE:<U20A8> % RUPEE SIGN
 <U20A9> IGNORE:IGNORE:IGNORE:<U20A9> % WON SIGN
 <U20AA> IGNORE:IGNORE:IGNORE:<U20AA> % NEW SHEQEL SIGN
 <U20AB> IGNORE:IGNORE:IGNORE:<U20AB> % DONG SIGN
 <U20AC> IGNORE:IGNORE:IGNORE:<U20AC> % EURO SIGN
 <U20AD> IGNORE:IGNORE:IGNORE:<U20AD> % KIP SIGN
 <U20AE> IGNORE:IGNORE:IGNORE:<U20AE> % TUGRIK SIGN
 <U20AF> IGNORE:IGNORE:IGNORE:<U20AF> % DRACHMA SIGN
 <U20B0> IGNORE:IGNORE:IGNORE:<U20B0> % GERMAN PENNY SIGN
 <U20B1> IGNORE:IGNORE:IGNORE:<U20B1> % PESO SIGN
 <U20B2> IGNORE:IGNORE:IGNORE:<U20B2> % GUARANI SIGN
 <U20B3> IGNORE:IGNORE:IGNORE:<U20B3> % AUSTRAL SIGN
 <U20B4> IGNORE:IGNORE:IGNORE:<U20B4> % HRYVNIA SIGN
 <U20B5> IGNORE:IGNORE:IGNORE:<U20B5> % CEDI SIGN

% Modifier letters that are not ignorable in ISO14651_2006_TABLE1_en.txt

<U02B0> IGNORE:IGNORE:IGNORE:<U02B0> % MODIFIER LETTER SMALL H
 <U02B1> IGNORE:IGNORE:IGNORE:<U02B1> % MODIFIER LETTER SMALL H WITH HOOK
 <U02B2> IGNORE:IGNORE:IGNORE:<U02B2> % MODIFIER LETTER SMALL J
 <U02B3> IGNORE:IGNORE:IGNORE:<U02B3> % MODIFIER LETTER SMALL R
 <U02B4> IGNORE:IGNORE:IGNORE:<U02B4> % MODIFIER LETTER SMALL TURNED R
 <U02B5> IGNORE:IGNORE:IGNORE:<U02B5> % MODIFIER LETTER SMALL TURNED R WITH HOOK
 <U02B6> IGNORE:IGNORE:IGNORE:<U02B6> % MODIFIER LETTER SMALL CAPITAL INVERTED R
 <U02B7> IGNORE:IGNORE:IGNORE:<U02B7> % MODIFIER LETTER SMALL W
 <U02B8> IGNORE:IGNORE:IGNORE:<U02B8> % MODIFIER LETTER SMALL Y
 <U02BB> IGNORE:IGNORE:IGNORE:<U02BB> % MODIFIER LETTER TURNED COMMA
 <U02BC> IGNORE:IGNORE:IGNORE:<U02BC> % MODIFIER LETTER APOSTROPHE
 <U02BD> IGNORE:IGNORE:IGNORE:<U02BD> % MODIFIER LETTER REVERSED COMMA
 <U02BE> IGNORE:IGNORE:IGNORE:<U02BE> % MODIFIER LETTER RIGHT HALF RING
 <U02BF> IGNORE:IGNORE:IGNORE:<U02BF> % MODIFIER LETTER LEFT HALF RING
 <U02C0> IGNORE:IGNORE:IGNORE:<U02C0> % MODIFIER LETTER GLOTTAL STOP
 <U02C1> IGNORE:IGNORE:IGNORE:<U02C1> % MODIFIER LETTER REVERSED GLOTTAL STOP
 <U02D0> IGNORE:IGNORE:IGNORE:<U02D0> % MODIFIER LETTER TRIANGULAR COLON
 <U02D1> IGNORE:IGNORE:IGNORE:<U02D1> % MODIFIER LETTER HALF TRIANGULAR COLON
 <U02E0> IGNORE:IGNORE:IGNORE:<U02E0> % MODIFIER LETTER SMALL GAMMA
 <U02E1> IGNORE:IGNORE:IGNORE:<U02E1> % MODIFIER LETTER SMALL L
 <U02E2> IGNORE:IGNORE:IGNORE:<U02E2> % MODIFIER LETTER SMALL S
 <U02E4> IGNORE:IGNORE:IGNORE:<U02E4> % MODIFIER LETTER SMALL REVERSED GLOTTAL STOP
 <U02EE> IGNORE:IGNORE:IGNORE:<U02EE> % MODIFIER LETTER DOUBLE APOSTROPHE

<U0294> IGNORE:IGNORE:IGNORE:<U0294> % LATIN LETTER GLOTTAL STOP
 <U0295> IGNORE:IGNORE:IGNORE:<U0295> % LATIN LETTER PHARYNGEAL VOICED FRICATIVE
 <U0296> IGNORE:IGNORE:IGNORE:<U0296> % LATIN LETTER INVERTED GLOTTAL STOP
 <U0298> IGNORE:IGNORE:IGNORE:<U0298> % LATIN LETTER BILABIAL CLICK
 <U02A1> IGNORE:IGNORE:IGNORE:<U02A1> % LATIN LETTER GLOTTAL STOP WITH STROKE

<U02A2> IGNORE:IGNORE:IGNORE:<U02A2> % LATIN LETTER REVERSED GLOTTAL STOP WITH STROKE

%%

% Latin

% Almost all changes here result from CEN/TC304's resolution

% for the Latin script part of the Modern European Scripts / MES-3 to

% treat only the letters a to z and thorn as distinct on the first

% level and treat other combinations as variants or ligatures

<U0250> <S0061>:"<BASE><VRNT1>";<MIN><MIN>";<U0250> % LATIN SMALL LETTER TURNED A

<U0251> <S0061>:"<BASE><VRNT2>";<MIN><MIN>";<U0251> % LATIN SMALL LETTER ALPHA

<U0252> <S0061>:"<BASE><VRNT3>";<MIN><MIN>";<U0252> % LATIN SMALL LETTER TURNED ALPHA

<U0299> <S0062>:"<BASE><VRNT1>";<MIN><MIN>";<U0299> % LATIN LETTER SMALL CAPITAL B

<U0180> <S0062>:"<BASE><VRNT2>";<MIN><MIN>";<U0180> % LATIN SMALL LETTER B WITH STROKE

<U0243> <S0062>:"<BASE><VRNT2>";<CAP><MIN>";<U0243> % LATIN CAPITAL LETTER B WITH STROKE

<U0253> <S0062>:"<BASE><VRNT3>";<MIN><MIN>";<U0253> % LATIN SMALL LETTER B WITH HOOK

<U0181> <S0062>:"<BASE><VRNT3>";<CAP><MIN>";<U0181> % LATIN CAPITAL LETTER B WITH HOOK

<U0183> <S0062>:"<BASE><VRNT4>";<MIN><MIN>";<U0183> % LATIN SMALL LETTER B WITH TOPBAR

<U0182> <S0062>:"<BASE><VRNT4>";<CAP><MIN>";<U0182> % LATIN CAPITAL LETTER B WITH TOPBAR

<U0188> <S0063>:"<BASE><VRNT1>";<MIN><MIN>";<U0188> % LATIN SMALL LETTER C WITH HOOK

<U0187> <S0063>:"<BASE><VRNT1>";<CAP><MIN>";<U0187> % LATIN CAPITAL LETTER C WITH HOOK

<U0255> <S0063>:"<BASE><VRNT2>";<MIN><MIN>";<U0255> % LATIN SMALL LETTER C WITH CURL

<U0297> <S0063>:"<BASE><VRNT3>";<MIN><MIN>";<U0297> % LATIN LETTER STRETCHED C

% <VRNT1> is used for U00F0 LATIN SMALL LETTER ETH (already in CTT)

<U0256> <S0064>:"<BASE><VRNT2>";<MIN><MIN>";<U0256> % LATIN SMALL LETTER D WITH TAIL

<U0189> <S0064>:"<BASE><VRNT2>";<CAP><MIN>";<U0189> % LATIN CAPITAL LETTER AFRICAN D

<U0257> <S0064>:"<BASE><VRNT3>";<MIN><MIN>";<U0257> % LATIN SMALL LETTER D WITH HOOK

<U018A> <S0064>:"<BASE><VRNT3>";<CAP><MIN>";<U018A> % LATIN CAPITAL LETTER D WITH HOOK

<U018C> <S0064>:"<BASE><VRNT4>";<MIN><MIN>";<U018C> % LATIN SMALL LETTER D WITH TOPBAR

<U018B> <S0064>:"<BASE><VRNT4>";<CAP><MIN>";<U018B> % LATIN CAPITAL LETTER D WITH TOPBAR

<U0221> <S0064>:"<BASE><VRNT5>";<MIN><MIN>";<U0221> % LATIN SMALL LETTER D WITH CURL

<U018D> <S0064>:"<BASE><VRNT6>";<MIN><MIN>";<U018D> % LATIN SMALL LETTER TURNED DELTA

<U02A5> "<S0064><S007A>";<BASE><BASE><VRNT4>";<COMPAT><COMPAT><COMPAT>";<U02A5> % LATIN SMALL LETTER DZ DIGRAPH WITH CURL

<U02A4> "<S0064><S007A>";<BASE><BASE><VRNT5>";<COMPAT><COMPAT><COMPAT>";<U02A4> % LATIN SMALL LETTER DEZH DIGRAPH

<U01DD> <S0065>:"<BASE><VRNT1>";<MIN><MIN>";<U01DD> % LATIN SMALL LETTER TURNED E

<U018E> <S0065>:"<BASE><VRNT1>";<CAP><MIN>";<U018E> % LATIN CAPITAL LETTER REVERSED E

<U0259> <S0065>:"<BASE><VRNT2>";<MIN><MIN>";<U0259> % LATIN SMALL LETTER SCHWA

<U018F> <S0065>:"<BASE><VRNT2>";<CAP><MIN>";<U018F> % LATIN CAPITAL LETTER SCHWA

<U025B> <S0065>:"<BASE><VRNT3>";<MIN><MIN>";<U025B> % LATIN SMALL LETTER OPEN E

<U0190> <S0065>:"<BASE><VRNT3>";<CAP><MIN>";<U0190> % LATIN CAPITAL LETTER OPEN E

<U0258> <S0065>:"<BASE><VRNT4>";<MIN><MIN>";<U0258> % LATIN SMALL LETTER REVERSED E

<U025A> <S0065>:"<BASE><VRNT5>";<MIN><MIN>";<U025A> % LATIN SMALL LETTER SCHWA WITH HOOK

<U025C> <S0065>:"<BASE><VRNT6>";<MIN><MIN>";<U025C> % LATIN SMALL LETTER REVERSED OPEN E

<U025D> <S0065>:"<BASE><VRNT7>";<MIN><MIN>";<U025D> % LATIN SMALL LETTER REVERSED OPEN E WITH HOOK

<U025E> <S0065>:"<BASE><VRNT8>";<MIN><MIN>";<U025E> % LATIN SMALL LETTER CLOSED REVERSED OPEN E

<U029A> <S0065>;" <BASE><VRNT9>;" <MIN><MIN>;" <U029A> % LATIN SMALL LETTER CLOSED OPEN E

<U0192> <S0066>;" <BASE><VRNT1>;" <MIN><MIN>;" <U0192> % LATIN SMALL LETTER F WITH HOOK
<U0191> <S0066>;" <BASE><VRNT1>;" <CAP><MIN>;" <U0191> % LATIN CAPITAL LETTER F WITH HOOK

<U0261> <S0067>;" <BASE><VRNT1>;" <MIN><MIN>;" <U0261> % LATIN SMALL LETTER SCRIPT G
<U0262> <S0067>;" <BASE><VRNT2>;" <MIN><MIN>;" <U0262> % LATIN LETTER SMALL CAPITAL G
<U01E5> <S0067>;" <BASE><VRNT3>;" <MIN><MIN>;" <U01E5> % LATIN SMALL LETTER G WITH STROKE
<U01E4> <S0067>;" <BASE><VRNT3>;" <CAP><MIN>;" <U01E4> % LATIN CAPITAL LETTER G WITH STROKE
<U0260> <S0067>;" <BASE><VRNT4>;" <MIN><MIN>;" <U0260> % LATIN SMALL LETTER G WITH HOOK
<U0193> <S0067>;" <BASE><VRNT4>;" <CAP><MIN>;" <U0193> % LATIN CAPITAL LETTER G WITH HOOK
<U029B> <S0067>;" <BASE><VRNT5>;" <MIN><MIN>;" <U029B> % LATIN LETTER SMALL CAPITAL G WITH HOOK
<U0263> <S0067>;" <BASE><VRNT6>;" <MIN><MIN>;" <U0263> % LATIN SMALL LETTER GAMMA
<U0194> <S0067>;" <BASE><VRNT6>;" <CAP><MIN>;" <U0194> % LATIN CAPITAL LETTER GAMMA
<U0264> <S0067>;" <BASE><VRNT7>;" <MIN><MIN>;" <U0264> % LATIN SMALL LETTER RAMS HORN
<U01A3> <S0067>;" <BASE><VRNT8>;" <MIN><MIN>;" <U01A3> % LATIN SMALL LETTER OI
<U01A2> <S0067>;" <BASE><VRNT8>;" <CAP><MIN>;" <U01A2> % LATIN CAPITAL LETTER OI

<U029C> <S0068>;" <BASE><VRNT1>;" <MIN><MIN>;" <U029C> % LATIN LETTER SMALL CAPITAL H
<U0266> <S0068>;" <BASE><VRNT2>;" <MIN><MIN>;" <U0266> % LATIN SMALL LETTER H WITH HOOK
<U0267> <S0068>;" <BASE><VRNT3>;" <MIN><MIN>;" <U0267> % LATIN SMALL LETTER HENG WITH HOOK
<U0265> <S0068>;" <BASE><VRNT4>;" <MIN><MIN>;" <U0265> % LATIN SMALL LETTER TURNED H
<U02AE> <S0068>;" <BASE><VRNT5>;" <MIN><MIN>;" <U02AE> % LATIN SMALL LETTER TURNED H WITH FISHHOOK
<U02AF> <S0068>;" <BASE><VRNT6>;" <MIN><MIN>;" <U02AF> % LATIN SMALL LETTER TURNED H WITH FISHHOOK AND TAIL

<U0195> " <S0068><S0076>;" <BASE><BASE>;" <MIN><MIN>;" <U0195> % LATIN SMALL LETTER HV
<U01F6> " <S0068><S0076>;" <BASE><BASE>;" <CAP><MIN>;" <U01F6> % LATIN CAPITAL LETTER HWAIR

<U0131> <S0069>;" <BASE><VRNT1>;" <MIN><MIN>;" <U0131> % LATIN SMALL LETTER DOTLESS I
<U026A> <S0069>;" <BASE><VRNT2>;" <MIN><MIN>;" <U026A> % LATIN LETTER SMALL CAPITAL I
<U0268> <S0069>;" <BASE><VRNT3>;" <MIN><MIN>;" <U0268> % LATIN SMALL LETTER I WITH STROKE
<U0197> <S0069>;" <BASE><VRNT3>;" <CAP><MIN>;" <U0197> % LATIN CAPITAL LETTER I WITH STROKE
<U0269> <S0069>;" <BASE><VRNT4>;" <MIN><MIN>;" <U0269> % LATIN SMALL LETTER IOTA
<U0196> <S0069>;" <BASE><VRNT4>;" <CAP><MIN>;" <U0196> % LATIN CAPITAL LETTER IOTA

<U029D> <S006A>;" <BASE><VRNT1>;" <MIN><MIN>;" <U029D> % LATIN SMALL LETTER J WITH CROSSED-TAIL
<U025F> <S006A>;" <BASE><VRNT2>;" <MIN><MIN>;" <U025F> % LATIN SMALL LETTER DOTLESS J WITH STROKE
<U0284> <S006A>;" <BASE><VRNT3>;" <MIN><MIN>;" <U0284> % LATIN SMALL LETTER DOTLESS J WITH STROKE AND HOOK

<U0199> <S006B>;" <BASE><VRNT1>;" <MIN><MIN>;" <U0199> % LATIN SMALL LETTER K WITH HOOK
<U0198> <S006B>;" <BASE><VRNT1>;" <CAP><MIN>;" <U0198> % LATIN CAPITAL LETTER K WITH HOOK
<U0138> <S006B>;" <BASE><VRNT2>;" <MIN><MIN>;" <U0138> % LATIN SMALL LETTER KRA
<U029E> <S006B>;" <BASE><VRNT3>;" <MIN><MIN>;" <U029E> % LATIN SMALL LETTER TURNED K

% <VRNT1> is used for U0140 LATIN SMALL LETTER L WITH MIDDLE DOT (already in CTT)
<U029F> <S006C>;" <BASE><VRNT2>;" <MIN><MIN>;" <U029F> % LATIN LETTER SMALL CAPITAL L
<U019A> <S006C>;" <BASE><VRNT3>;" <MIN><MIN>;" <U019A> % LATIN SMALL LETTER L WITH BAR
<U023D> <S006C>;" <BASE><VRNT3>;" <CAP><MIN>;" <U023D> % LATIN CAPITAL LETTER L WITH BAR
<U026B> <S006C>;" <BASE><VRNT4>;" <MIN><MIN>;" <U026B> % LATIN SMALL LETTER L WITH MIDDLE TILDE
<U026C> <S006C>;" <BASE><VRNT5>;" <MIN><MIN>;" <U026C> % LATIN SMALL LETTER L WITH BELT
<U026D> <S006C>;" <BASE><VRNT6>;" <MIN><MIN>;" <U026D> % LATIN SMALL LETTER L WITH RETROFLEX HOOK
<U0234> <S006C>;" <BASE><VRNT7>;" <MIN><MIN>;" <U0234> % LATIN SMALL LETTER L WITH CURL

<U019B> <S006C>;"<BASE><VRNT8>;"<MIN><MIN>;<U019B> % LATIN SMALL LETTER LAMBDA WITH STROKE

<U026E> "<S006C><S007A>;"<BASE><BASE><VRNT5>;"<MIN><MIN><MIN>;<U026E> % LATIN SMALL LETTER LEZH

<U0271> <S006D>;"<BASE><VRNT1>;"<MIN><MIN>;<U0271> % LATIN SMALL LETTER M WITH HOOK

<U026F> <S006D>;"<BASE><VRNT2>;"<MIN><MIN>;<U026F> % LATIN SMALL LETTER TURNED M

<U019C> <S006D>;"<BASE><VRNT2>;"<CAP><MIN>;<U019C> % LATIN CAPITAL LETTER TURNED M

<U0270> <S006D>;"<BASE><VRNT3>;"<MIN><MIN>;<U0270> % LATIN SMALL LETTER TURNED M WITH LONG LEG

<U0149> <S006E>;"<BASE><VRNT1>;"<MIN><MIN>;<U0149> % LATIN SMALL LETTER N PRECEDED BY APOSTROPHE

<U0274> <S006E>;"<BASE><VRNT2>;"<MIN><MIN>;<U0274> % LATIN LETTER SMALL CAPITAL N

<U0272> <S006E>;"<BASE><VRNT3>;"<MIN><MIN>;<U0272> % LATIN SMALL LETTER N WITH LEFT HOOK

<U019D> <S006E>;"<BASE><VRNT3>;"<CAP><MIN>;<U019D> % LATIN CAPITAL LETTER N WITH LEFT HOOK

<U019E> <S006E>;"<BASE><VRNT4>;"<MIN><MIN>;<U019E> % LATIN SMALL LETTER N WITH LONG RIGHT LEG

<U0220> <S006E>;"<BASE><VRNT4>;"<CAP><MIN>;<U0220> % LATIN CAPITAL LETTER N WITH LONG RIGHT LEG

<U0273> <S006E>;"<BASE><VRNT5>;"<MIN><MIN>;<U0273> % LATIN SMALL LETTER N WITH RETROFLEX HOOK

<U0235> <S006E>;"<BASE><VRNT6>;"<MIN><MIN>;<U0235> % LATIN SMALL LETTER N WITH CURL

<U014B> <S006E>;"<BASE><VRNT7>;"<MIN><MIN>;<U014B> % LATIN SMALL LETTER ENG

<U014A> <S006E>;"<BASE><VRNT7>;"<CAP><MIN>;<U014A> % LATIN CAPITAL LETTER ENG

% <VRNT1> is used for U0153 LATIN SMALL LIGATURE OE (already in CTT)

<U0254> <S006F>;"<BASE><VRNT2>;"<MIN><MIN>;<U0254> % LATIN SMALL LETTER OPEN O

<U0186> <S006F>;"<BASE><VRNT2>;"<CAP><MIN>;<U0186> % LATIN CAPITAL LETTER OPEN O

<U0275> <S006F>;"<BASE><VRNT3>;"<MIN><MIN>;<U0275> % LATIN SMALL LETTER BARRED O

<U019F> <S006F>;"<BASE><VRNT3>;"<CAP><MIN>;<U019F> % LATIN CAPITAL LETTER O WITH MIDDLE TILDE

<U0277> <S006F>;"<BASE><VRNT4>;"<MIN><MIN>;<U0277> % LATIN SMALL LETTER CLOSED OMEGA

<U0223> <S006F>;"<BASE><VRNT5>;"<MIN><MIN>;<U0223> % LATIN SMALL LETTER OU

<U0222> <S006F>;"<BASE><VRNT5>;"<CAP><MIN>;<U0222> % LATIN CAPITAL LETTER OU

<U0276> "<S006F><S0065>;"<BASE><VRNT1><BASE>;"<COMPAT><COMPAT><COMPAT>;<U0276> % LATIN LETTER SMALL CAPITAL OE

<U01A5> <S0070>;"<BASE><VRNT1>;"<MIN><MIN>;<U01A5> % LATIN SMALL LETTER P WITH HOOK

<U01A4> <S0070>;"<BASE><VRNT1>;"<CAP><MIN>;<U01A4> % LATIN CAPITAL LETTER P WITH HOOK

<U0278> <S0070>;"<BASE><VRNT2>;"<MIN><MIN>;<U0278> % LATIN SMALL LETTER PHI

<U02A0> <S0071>;"<BASE><VRNT1>;"<MIN><MIN>;<U02A0> % LATIN SMALL LETTER Q WITH HOOK

<U0280> <S0072>;"<BASE><VRNT1>;"<MIN><MIN>;<U01A6> % LATIN LETTER SMALL CAPITAL R

<U01A6> <S0072>;"<BASE><VRNT1>;"<CAP><MIN>;<U01A6> % LATIN LETTER YR

<U0279> <S0072>;"<BASE><VRNT2>;"<MIN><MIN>;<U0279> % LATIN SMALL LETTER TURNED R

<U027A> <S0072>;"<BASE><VRNT3>;"<MIN><MIN>;<U027A> % LATIN SMALL LETTER TURNED R WITH LONG LEG

<U027B> <S0072>;"<BASE><VRNT4>;"<MIN><MIN>;<U027B> % LATIN SMALL LETTER TURNED R WITH HOOK

<U027C> <S0072>;"<BASE><VRNT5>;"<MIN><MIN>;<U027C> % LATIN SMALL LETTER R WITH LONG LEG

<U027D> <S0072>;"<BASE><VRNT6>;"<MIN><MIN>;<U027D> % LATIN SMALL LETTER R WITH TAIL

<U027E> <S0072>;"<BASE><VRNT7>;"<MIN><MIN>;<U027E> % LATIN SMALL LETTER R WITH FISHHOOK

<U027F> <S0072>;"<BASE><VRNT8>;"<MIN><MIN>;<U027F> % LATIN SMALL LETTER REVERSED R WITH FISHHOOK

<U0281> <S0072>;"<BASE><VRNT9>;"<MIN><MIN>;<U0281> % LATIN LETTER SMALL CAPITAL INVERTED R

% <VRNT1> is used for U00DF LATIN SMALL LETTER SHARP S (already in CTT)

% <VRNT2> is used for U017F LATIN SMALL LETTER LONG S (already in CTT)

<U0282> <S0073>;"<BASE><VRNT3>;"<MIN><MIN>;<U0282> % LATIN SMALL LETTER S WITH HOOK

<U0283> <S0073>:"<BASE><VRNT4>";"<MIN><MIN>";<U0283> % LATIN SMALL LETTER ESH
<U01A9> <S0073>:"<BASE><VRNT4>";"<CAP><MIN>";<U01A9> % LATIN CAPITAL LETTER ESH
<U01AA> <S0073>:"<BASE><VRNT5>";"<MIN><MIN>";<U01AA> % LATIN LETTER REVERSED ESH LOOP
<U0285> <S0073>:"<BASE><VRNT6>";"<MIN><MIN>";<U0285> % LATIN SMALL LETTER SQUAT REVERSED ESH
<U0286> <S0073>:"<BASE><VRNT7>";"<MIN><MIN>";<U0286> % LATIN SMALL LETTER ESH WITH CURL

<U0167> <S0074>:"<BASE><VRNT1>";"<MIN><MIN>";<U0167> % LATIN SMALL LETTER T WITH STROKE
<U0166> <S0074>:"<BASE><VRNT1>";"<CAP><MIN>";<U0166> % LATIN CAPITAL LETTER T WITH STROKE
<U01AB> <S0074>:"<BASE><VRNT2>";"<MIN><MIN>";<U01AB> % LATIN SMALL LETTER T WITH PALATAL HOOK
<U01AD> <S0074>:"<BASE><VRNT3>";"<MIN><MIN>";<U01AD> % LATIN SMALL LETTER T WITH HOOK
<U01AC> <S0074>:"<BASE><VRNT3>";"<CAP><MIN>";<U01AC> % LATIN CAPITAL LETTER T WITH HOOK
<U0288> <S0074>:"<BASE><VRNT4>";"<MIN><MIN>";<U0288> % LATIN SMALL LETTER T WITH RETROFLEX HOOK
<U01AE> <S0074>:"<BASE><VRNT4>";"<CAP><MIN>";<U01AE> % LATIN CAPITAL LETTER T WITH RETROFLEX HOOK
<U0236> <S0074>:"<BASE><VRNT5>";"<MIN><MIN>";<U0236> % LATIN SMALL LETTER T WITH CURL
<U0287> <S0074>:"<BASE><VRNT6>";"<MIN><MIN>";<U0287> % LATIN SMALL LETTER TURNED T

<U02A8> "<S0074><S0063>";"<BASE><BASE><VRNT2>";"<COMPAT><COMPAT><COMPAT>";<U02A8> % LATIN SMALL LETTER TC DIGRAPH WITH CURL

<U0289> <S0075>:"<BASE><VRNT1>";"<MIN><MIN>";<U0289> % LATIN SMALL LETTER U BAR
<U0244> <S0075>:"<BASE><VRNT1>";"<CAP><MIN>";<U0244> % LATIN CAPITAL LETTER U BAR
<U028A> <S0075>:"<BASE><VRNT2>";"<MIN><MIN>";<U028A> % LATIN SMALL LETTER UPSILON
<U01B1> <S0075>:"<BASE><VRNT2>";"<CAP><MIN>";<U01B1> % LATIN CAPITAL LETTER UPSILON

<U028B> <S0076>:"<BASE><VRNT1>";"<MIN><MIN>";<U028B> % LATIN SMALL LETTER V WITH HOOK
<U01B2> <S0076>:"<BASE><VRNT1>";"<CAP><MIN>";<U01B2> % LATIN CAPITAL LETTER V WITH HOOK
<U028C> <S0076>:"<BASE><VRNT2>";"<MIN><MIN>";<U028C> % LATIN SMALL LETTER TURNED V
<U0245> <S0076>:"<BASE><VRNT2>";"<CAP><MIN>";<U0245> % LATIN CAPITAL LETTER TURNED V

<U028D> <S0077>:"<BASE><VRNT1>";"<MIN><MIN>";<U028D> % LATIN SMALL LETTER TURNED W
<U01BF> <S0077>:"<BASE><VRNT2>";"<MIN><MIN>";<U01BF> % LATIN LETTER WYNN
<U01F7> <S0077>:"<BASE><VRNT2>";"<CAP><MIN>";<U01F7> % LATIN CAPITAL LETTER WYNN

<U028F> <S0079>:"<BASE><VRNT1>";"<MIN><MIN>";<U028F> % LATIN LETTER SMALL CAPITAL Y
<U01B4> <S0079>:"<BASE><VRNT2>";"<MIN><MIN>";<U01B4> % LATIN SMALL LETTER Y WITH HOOK
<U01B3> <S0079>:"<BASE><VRNT2>";"<CAP><MIN>";<U01B3> % LATIN CAPITAL LETTER Y WITH HOOK
<U028E> <S0079>:"<BASE><VRNT3>";"<MIN><MIN>";<U028E> % LATIN SMALL LETTER TURNED Y
<U021D> <S0079>:"<BASE><VRNT4>";"<MIN><MIN>";<U021D> % LATIN SMALL LETTER YOGH
<U021C> <S0079>:"<BASE><VRNT9>";"<CAP><MIN>";<U021C> % LATIN CAPITAL LETTER YOGH

<U01B6> <S007A>:"<BASE><VRNT1>";"<MIN><MIN>";<U01B6> % LATIN SMALL LETTER Z WITH STROKE
<U01B5> <S007A>:"<BASE><VRNT1>";"<CAP><MIN>";<U01B5> % LATIN CAPITAL LETTER Z WITH STROKE
<U0225> <S007A>:"<BASE><VRNT2>";"<MIN><MIN>";<U0225> % LATIN SMALL LETTER Z WITH HOOK
<U0224> <S007A>:"<BASE><VRNT2>";"<CAP><MIN>";<U0224> % LATIN CAPITAL LETTER Z WITH HOOK
<U0290> <S007A>:"<BASE><VRNT3>";"<MIN><MIN>";<U0290> % LATIN SMALL LETTER Z WITH RETROFLEX HOOK
<U0291> <S007A>:"<BASE><VRNT4>";"<MIN><MIN>";<U0291> % LATIN SMALL LETTER Z WITH CURL
<U0292> <S007A>:"<BASE><VRNT5>";"<MIN><MIN>";<U0292> % LATIN SMALL LETTER EZH
<U01B7> <S007A>:"<BASE><VRNT5>";"<CAP><MIN>";<U01B7> % LATIN CAPITAL LETTER EZH
<U01EF> <S007A>:"<BASE><VRNT5><CARON>";"<MIN><MIN><MIN>";<U01EF> % LATIN SMALL LETTER EZH WITH CARON
<U01EE> <S007A>:"<BASE><VRNT5><CARON>";"<CAP><MIN><MIN>";<U01EE> % LATIN CAPITAL LETTER EZH WITH CARON
<U01B9> <S007A>:"<BASE><VRNT6>";"<MIN><MIN>";<U01B9> % LATIN SMALL LETTER EZH REVERSED

<U01B8> <S007A>;"<BASE><VRNT6>";"<CAP><MIN>";<U01B8> % LATIN CAPITAL LETTER EZH REVERSED
<U01BA> <S007A>;"<BASE><VRNT7>";"<MIN><MIN>";<U01BA> % LATIN SMALL LETTER EZH WITH TAIL
<U0293> <S007A>;"<BASE><VRNT8>";"<MIN><MIN>";<U0293> % LATIN SMALL LETTER EZH WITH CURL

% Greek

% ISO14651_2006_TABLE1_en.txt now contains the tailorings of CR 14400 in its CTT

% Full conformance with GOST requirements for Cyrillic letters

<U0453> <S0452>;"<BASE><VRNT1>";"<MIN><MIN>";<U0453> % CYRILLIC SMALL LETTER GJE

<U0403> <S0452>;"<BASE><VRNT1>";"<CAP><MIN>";<U0403> % CYRILLIC CAPITAL LETTER GJE

<U045C> <S045B>;"<BASE><VRNT1>";"<MIN><MIN>";<U045C> % CYRILLIC SMALL LETTER KJE

<U040C> <S045B>;"<BASE><VRNT1>";"<CAP><MIN>";<U040C> % CYRILLIC CAPITAL LETTER KJE

% Georgian: Identical to ISO14651_2006_TABLE1_en.txt

% Armenian:

<U0587> <ECH-YIWN>;<BASE>;<CAP>;<U0587> % ARMENIAN SMALL LIGATURE ECH YIWN

reorder-end %% for EOR's EORDeltaTable

Annex A (informative)

Principles behind the European Ordering Rules

A.0 Introduction

This annex aims to present the information inherent in Clause 6 in a more accessible form for those who are interested in the principles guiding the composition of the table. Those readers not concerned with implementation details may take this more traditional treatment of the matter as an authoritative interpretation of the body of this European Standard.

A.1 Terms and definitions

For the purpose of this annex, the following terms and definitions apply in addition to those in the body of this European Standard (see Clause 3).

A.1.1

digit

any of the characters

0 (U0030), 1 (U0031), 2 (U0032), 3 (U0033), 4 (U0034), 5 (U0035), 6 (U0036), 7 (U0037),
8 (U0038), 9 (U0039)

A.1.2

letter

character used to represent (either alone or in combination) sounds or sequences of sounds of a natural language in writing

NOTE Here equivalent to all characters of the *Multilingual European Subset No 3* whose name contains one of the words LETTER or LIGATURE.

A.1.3

first level letter

character that is a member of the following list of letters:

Latin script:

a (U0061),	A (U0041),	b (U0062),	B (U0042),	c (U0063),	C (U0043),	d (U0064),	D (U0044),
e (U0065),	E (U0045),	f (U0066),	F (U0046),	g (U0067),	G (U0047),	h (U0068),	H (U0048),
i (U0069),	I (U0049),	j (U006A),	J (U004A),	k (U006B),	K (U004B),	l (U006C),	L (U004C),
m (U006D),	M (U004D),	n (U006E),	N (U004E),	o (U006F),	O (U004F),	p (U0070),	P (U0050),
q (U0071),	Q (U0051),	r (U0072),	R (U0052),	s (U0073),	S (U0053),	t (U0074),	T (U0054),
u (U0075),	U (U0055),	v (U0076),	V (U0056),	w (U0077),	W (U0057),	x (U0078),	X (U0058),

γ (U0079), Υ (U0059), ζ (U007A), Ζ (U005A), þ (U00FE), Þ (U00DE)

Greek script:

α (U03B1), Α (U0391), β (U03B2), Β (U0392), γ (U03B3), Γ (U0393), δ (U03B4), Δ (U0394),
ε (U03B5), Ε (U0395), Ϝ (U03DC), Ϛ (U03DA), Ϝ (U03B6), Ζ (U0396), η (U03B7), Η (U0397),
θ (U03B8), Θ (U0398), ι (U03B9), Ι (U0399), κ (U03BA), Κ (U039A), λ (U03BB), Λ (U039B),
μ (U03BC), Μ (U039C), ν (U03BD), Ν (U039D), ξ (U03BE), Ξ (U039E), ο (U03BF), Ο (U039F),
π (U03C0), Π (U03A0), Ϸ (U03DE), ϱ (U03C1), Ρ (U03A1), σ (U03C3), Σ (U03A3), τ (U03C4),
Τ (U03A4), υ (U03C5), Υ (U03A5), ϕ (U03C6), Φ (U03A6), χ (U03C7), Χ (U03A7), ψ (U03C8),
Ψ (U03A8), ω (U03C9), Ω (U03A9), Ϸ (U03E0)

NOTE 1 Stigma Ϛ (U03DA / U03DB), Koppa / Qoppa Ϸ (U03DE / U03DF) and Sampi Ϸ (U03E0 / U03E1) are archaic letters that are currently used to designate numerals. Digamma Ϝ (U03DC) is not used in any modern language.

NOTE 2 Through collection 9 "Greek Symbols and Coptic" of ISO/IEC 10646:2003 MES contains also a number of Coptic letters. Their order is specified in ISO/IEC 14651.

Cyrillic script:

а (U0430), А (U0410), ә (U04D1), Ă (U04D0), ä (U04D3), Ä (U04D2), ə (U04D9), Ə (U04D8),
ä (U04DB), Ă (U04DA), æ (U04D5), Æ (U04D4), б (U0431), Б (U0411), в (U0432), В (U0412),
г (U0433), Г (U0413), ґ (U0493), Ґ (U0492), ҕ (U0495), Ҫ (U0494), д (U0434), Д (U0414),
ђ (U0452), Ѓ (U0402), ҙ (U0499), Җ (U0498), е (U0435), Е (U0415), ё (U04D7), Ё (U04D6),
є (U0454), Є (U0404), ж (U0436), Ж (U0416), җ (U04DD), Ӗ (U04DC), җ (U0497), Ӗ (U0496),
з (U0437), З (U0417), ӓ (U04DF), Ӗ (U04DE), s (U0455), S (U0405), ӓ (U04E1), Ӗ (U04E0),
и (U0438), И (U0418), ӓ (U04E5), Ӗ (U04E4), i (U0456), I (U0406), ӓ (U0457), Ӗ (U0407),
й (U0439), Ё (U0419), ӓ (U048B), Ӗ (U048A), j (U0458), J (U0408), к (U043A), К (U041A),
қ (U049B), Қ (U049A), ҕ (U04C4), Ӗ (U04C3), ӓ (U04A1), Ӗ (U04A0), ӓ (U049F), Ӗ (U049E),
к (U049D), К (U049C), л (U043B), Л (U041B), ӓ (U04C6), Ӗ (U04C5), ӓ (U0459), Ӗ (U0409),
м (U043C), М (U041C), ӓ (U04CE), Ӗ (U04CD), н (U043D), Н (U041D), ӓ (U04CA), Ӗ (U04C9),