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**Revised proposal to incorporate the symbols of ISO/IEC 9995-7:2009 and its Amendment 1 into the UCS**

**SOURCE:** SC 35/WG 1 and Karl Pentzlin

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**Title: Revised proposal to incorporate the symbols of ISO/IEC 9995-7:2009  
and its Amendment 1 into the UCS**

**Source: ISO/IEC JTC1/SC35**

**Authors: ISO/IEC JTC1/SC35/WG1**

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ISO/IEC JTC1/SC2/WG2 N3897  
L2/10-351**

- *The set of proposed characters is essentially the same.*
- *One character is renamed, as the according ISO/IEC 9995-7 symbol was renamed in the voting process on its Amd1.*
- *Triangle-headed arrows are renamed as such, according to the principles developed for the DAM1 repertoire in WG2 N4244.*
- *In the following blocks, proposed code positions are shifted to places being still free considering the DAM1 repertoire as outlined in WG2 N4244:*
  - *Miscellaneous Technical*
  - *Miscellaneous Symbols and Arrows*

## 1. Introduction

The symbols devised in ISO/IEC 9995-7:2009 and its recent Amendment 1 (2012) are to be used not only as engraving on physical keyboards, but in the light of current technical developments also on on-screen keyboards.

Also, they are intended for use in plain text, especially instructions how to use a keyboard, or how to enter specific texts.

Therefore, software must have access to all these symbols. Thus, it is advisable to have all these symbols encoded in Unicode.

This was already done for the 1994 version of ISO/IEC 9995-7.

Since then, ISO/IEC 9995-7 was developed further. The last version of the complete standard dates from 2009. Thereafter, an amendment was released in 2012 with several new symbols reflecting the need of multilingual keyboards in support of the cultural diversity. Such keyboards are easily accessible especially when not being confined to physical keyboards with fixed engravings.

When the first version of this proposal was submitted to SC2/WG2, the Amendment 1 was in the FPDAM state. It was decided on the Helsinki meeting of SC2/WG2 in June 2011 that SC35 should resubmit the proposal when the amendment is published. This is now the case by resolution 2012.53 done 2012-08-31 on the Paris meeting of ISO/IEC JTC1/SC35.

Thus, by SC35 resolution 2012.63, an updated version of the proposal is submitted to SC2/WG2 herewith. As no substantial changes are done on ISO/IEC 9995-7:2009 Amd1 during the voting process, this proposal also contains no substantial changes regarding to the original one.



Fig. 1: Detail of a German standard keyboard according to DIN 2137-1:2012-06, showing some of the ISO/IEC 9995-7 symbols proposed here as Unicode characters.

## 1.1 The SC35/WG1 Public Domain font project

By resolutions 2010.47 and 2010.48 adopted at the Venice meeting in August 2010, SC35 decided to make all ISO/IEC 9995-7 symbols public by providing a publicly accessible document and a font released into the Public Domain (or equipped with an equivalent license), to enable everybody to freely use all these symbols (e.g. in keyboard descriptions).

To complete this project, and to avoid to have to resort to PUA codepoints in a public document issued by an ISO workgroup, it is necessary to have Unicode codepoints for all ISO/IEC 9995-7 symbols. This would be accomplished by encoding the characters included in this proposal.

## 2. Encoding Considerations

Until now, ISO/IEC 9995-7 symbols, which are not explicitly arrows, are contained in the "Miscellaneous Technical" block of Unicode. As this block is almost full now, this cannot be accomplished for all symbols new to Unicode proposed here.

Therefore, only two of the symbols are proposed for that block.

The "partial backward delete" is similar to other symbols in the same block, thus it is convenient to find them together in that block.

The "menu invocation" is more pictorial than the other symbols with their quite abstract appearance, thus it is akin to symbols like U+231A WATCH found in that block.

All symbols, which are keyboard symbols for (and thus visualizations of) invisible characters (or special uses or variants of visible characters) are placed in the "control pictures" block.

Symbols which are enclosed alphanumerics are consequently placed in the "Enclosed Alphanumeric Supplement" block.

The generic symbols which represent selections of specific groups and modes, which have to be augmented by a letter or character denoting that specific group or mode, are given as "enclosing diacritics".

All other symbols are placed in the "Miscellaneous Symbols and Arrows" block. Whenever horizontal and vertical versions of specific arrow forms occur, they are given in the usual groups of four, employing the four main directions to left, up, right, and down. Regarding the white double arrows, the gap in the group caused by one already encoded arrow is filled by a different character.

Two symbols, which can be given as combinations of existing Unicode characters (employing the "combining enclosing screen"), are proposed that way, employing the Unicode mechanism of "named sequences".

Thus, it is possible to give an 1:1 correspondence between ISO/IEC 9995-7 symbols and Unicode codepoints/sequences (see appendix).

Regarding the representative glyphs, they are derived from the original depictions contained in the ISO/IEC 9995-7 documents. According to principles devised when the original symbols of 1994 were encoded into Unicode, small arrowheads, which are hollow in ISO/IEC 9995-7, are shown filled in the representative glyphs for Unicode (and as it was decided for similar arrows from the Wingdings set, such arrows are named "triangle-headed" here).

### 3. Proposed Characters

#### ***Block: Combining Diacritical Marks for Symbols***

##### **Enclosing Keyboard symbols from ISO/IEC 9995-7**

The specific group or mode addressed is denoted by a character enclosed in the symbol.



U+20F1

COMBINING ENCLOSING SQUARE WITH ROUNDED CORNERS

= switch to specific group according to the enclosed letter

→ 25A2 white square with rounded corners



U+20F2

COMBINING ENCLOSING RIGHTWARDS WHITE SHORT ARROW

= latch to specific group according to the enclosed letter

→ 21E8 rightwards white arrow



U+20F3

COMBINING ENCLOSING DOUBLE SQUARE WITH ROUNDED CORNERS

= switch to specific mode according to the enclosed letter

#### ***Block: Miscellaneous Technical***

##### **Keyboard symbols from ISO/IEC 9995-7**



U+23FB

MENU INVOCATION



U+23FC

PARTIAL BACKWARD DELETE

→ 232B erase to the left

#### ***Block: Control Pictures***

##### **Keyboard symbols from ISO/IEC 9995-7**

Also intended for display of the symbolized characters in "controls visible mode", and for use in instruction texts



U+2427

SYMBOL FOR EN SPACE



U+2428

SYMBOL FOR EM SPACE



U+2429

SYMBOL FOR THREE-PER-EM SPACE

→ 2BBA space select symbol



U+242A

SYMBOL FOR FOUR-PER-EM SPACE



U+242B

SYMBOL FOR SIX-PER-EM SPACE

	U+242C	SYMBOL FOR FIGURE SPACE
	U+242D	SYMBOL FOR PUNCTUATION SPACE
	U+242E	SYMBOL FOR THIN OR NARROW SPACE
	U+242F	SYMBOL FOR HAIR SPACE
	U+2430	SYMBOL FOR ZERO WIDTH SPACE
	U+2431	SYMBOL FOR MEDIUM MATHEMATICAL SPACE
	U+2432	SYMBOL FOR NARROW NO-BREAK SPACE → 237D shouldered open box
	U+2433	SYMBOL FOR SOFT HYPHEN
	U+2434	SYMBOL FOR NON-BREAKING HYPHEN
	U+2435	SYMBOL FOR NON-STOPPING PERIOD · entering U+002E FULL STOP by a key marked such prevents automatic capitalization of the next letter entered
	U+2436	SYMBOL FOR LINE SEPARATOR
	U+2437	SYMBOL FOR PARAGRAPH SEPARATOR
	U+2438	SYMBOL FOR ZERO WIDTH NON-JOINER = nail
	U+2439	SYMBOL FOR ZERO WIDTH JOINER
	U+243A	SYMBOL FOR WORD JOINER
	U+243B	SYMBOL FOR COMBINING GRAPHEME JOINER
	U+243C	SYMBOL FOR LEFT-TO-RIGHT MARK
	U+243D	SYMBOL FOR RIGHT-TO-LEFT MARK

### **Block: Miscellaneous Symbols and Arrows**

#### **To be unified with a character proposed in DAM1 (SC2/WG2 N4244)**

*(The annotations are proposed additionally to those in SC2/WG2 N4244)*





	U+2BA0	DOWNWARDS TRIANGLE-HEADED ARROW WITH LONG TIP LEFTWARDS = return (new line) (ISO/IEC 9995-7) → 21B5 downwards arrow with corner leftwards → 23CE return symbol
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## Keyboard symbols from ISO/IEC 9995-7

	U+2BBA	SPACE SELECT SYMBOL → 2423 open box
	U+2BBB	WHITE SQUARE WITH RAYS = square sun = superselect → 25A1 white square → 263C white sun with rays · selects a special keyboard state where the next key selects the subsequent state
	U+2BBC	VERTICAL HALF WHITE SQUARE WITH RIGHT RAYS = secondary superselect



## Keyboard symbols from ISO/IEC 9995-7

	U+2BD2	LEFTWARDS TRIANGLE-HEADED ARROW THROUGH LEFT BRACKET = release margin left
	U+2BD3	RIGHTWARDS TRIANGLE-HEADED ARROW THROUGH RIGHT BRACKET = release margin right
	U+2BD4	LEFTWARDS WHITE DOUBLE ARROW → U+21EE upwards white double arrow
	U+2BD5	PAIR OF BRACKETS WITH OUTWARDS TRIANGLE-HEADED ARROWS = release margin right and left
	U+2BD6	RIGHTWARDS WHITE DOUBLE ARROW = special group 2 select
	U+2BD7	DOWNWARDS WHITE DOUBLE ARROW
	U+2BD8	LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR = backspace
	U+2BD9	UPWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR = line up
	U+2BDA	RIGHTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR
	U+2BDB	DOWNWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR = line down
	U+2BDC	LEFTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR = partial space left
	U+2BDD	UPWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR = partial line up

	U+2BDE	RIGHTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR = partial space right
	U+2BDF	DOWNWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR = partial line down
	U+2BE0	LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET = set margin left
	U+2BE1	RIGHTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET = set margin right
	U+2BE2	SUPERSCRIPIT APPLICATOR SYMBOL
	U+2BE3	SUBSCRIPT APPLICATOR SYMBOL
	U+2BE4	SUPERSCRIPIT AND SUBSCRIPT APPLICATOR SYMBOL
	U+2BE5	HORIZONTAL STROKE APPLICATOR SYMBOL
	U+2BE6	DIAGONAL SLASH APPLICATOR SYMBOL
	U+2BE7	OVERLAID TILDE APPLICATOR SYMBOL
	U+2BE8	HOOK BELOW APPLICATOR SYMBOL
	U+2BE9	HOOK ABOVE APPLICATOR SYMBOL
	U+2BEA	HOOK APPLICATOR SYMBOL

### ***Block: Enclosed Alphanumeric Supplement***

#### **Keyboard symbols from ISO/IEC 9995-7**

	U+1F10E	SANS-SERIF CAPITAL U ENCLOSING ZERO-NINE = switch to decimal Unicode mode
	U+1F10F	SANS-SERIF CAPITAL U ENCLOSING ZERO-F = switch to hexadecimal Unicode mode

#### **Keyboard symbol from ISO/IEC 9995-7**

	U+1F19B	SQUARED FN = function key
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## Properties:

20F1;COMBINING ENCLOSING SQUARE WITH ROUNDED CORNERS;Me;0;NSM;;;;;N;;;;;  
20F2;COMBINING ENCLOSING RIGHTWARDS WHITE SHORT ARROW;Me;0;NSM;;;;;N;;;;;  
20F3;COMBINING ENCLOSING DOUBLE SQUARE WITH ROUNDED CORNERS;Me;0;NSM;;;;;N;;;;;  
23FB;MENU INVOCATION;So;0;ON;;;;;N;;;;;  
23FC;PARTIAL BACKWARD DELETE;So;0;ON;;;;;N;;;;;  
2427;SYMBOL FOR EN SPACE;So;0;ON;;;;;N;;;;;  
2428;SYMBOL FOR EM SPACE;So;0;ON;;;;;N;;;;;  
2429;SYMBOL FOR THREE-PER-EM SPACE;So;0;ON;;;;;N;;;;;  
242A;SYMBOL FOR FOUR-PER-EM SPACE;So;0;ON;;;;;N;;;;;  
242B;SYMBOL FOR SIX-PER-EM SPACE;So;0;ON;;;;;N;;;;;  
242C;SYMBOL FOR FIGURE SPACE;So;0;ON;;;;;N;;;;;  
242D;SYMBOL FOR PUNCTUATION SPACE;So;0;ON;;;;;N;;;;;  
242E;SYMBOL FOR THIN OR NARROW SPACE;So;0;ON;;;;;N;;;;;  
242F;SYMBOL FOR HAIR SPACE;So;0;ON;;;;;N;;;;;  
2430;SYMBOL FOR ZERO WIDTH SPACE;So;0;ON;;;;;N;;;;;  
2431;SYMBOL FOR MEDIUM MATHEMATICAL SPACE;So;0;ON;;;;;N;;;;;  
2432;SYMBOL FOR NARROW NO-BREAK SPACE;So;0;ON;;;;;N;;;;;  
2433;SYMBOL FOR SOFT HYPHEN;So;0;ON;;;;;N;;;;;  
2434;SYMBOL FOR NON-BREAKING HYPHEN;So;0;ON;;;;;N;;;;;  
2435;SYMBOL FOR NON-STOPPING PERIOD;So;0;ON;;;;;N;;;;;  
2436;SYMBOL FOR LINE SEPARATOR;So;0;ON;;;;;N;;;;;  
2437;SYMBOL FOR PARAGRAPH SEPARATOR;So;0;ON;;;;;N;;;;;  
2438;SYMBOL FOR ZERO WIDTH NON-JOINER;So;0;ON;;;;;N;;;;;  
2439;SYMBOL FOR ZERO WITDH JOINER;So;0;ON;;;;;N;;;;;  
243A;SYMBOL FOR WORD JOINER;So;0;ON;;;;;N;;;;;  
243B;SYMBOL FOR COMBINING GRAPHEME JOINER;So;0;ON;;;;;N;;;;;  
243C;SYMBOL FOR LEFT-TO-RIGHT MARK;So;0;ON;;;;;N;;;;;  
243D;SYMBOL FOR RIGHT-TO-LEFT MARK;So;0;ON;;;;;N;;;;;  
2BA0;DOWNWARDS TRIANGLE-HEADED ARROW WITH LONG TIP LEFTWARDS;So;0;ON;;;;;N;;;;;  
2BBA;SPACE SELECT SYMBOL;So;0;ON;;;;;N;;;;;  
2BBB;WHITE SQUARE WITH RAYS;So;0;ON;;;;;N;;;;;  
2BBC;VERTICAL HALF WHITE SQUARE WITH RIGHT RAYS;So;0;ON;;;;;N;;;;;  
2BD2;LEFTWARDS TRIANGLE-HEADED ARROW THROUGH LEFT BRACKET;So;0;ON;;;;;N;;;;;  
2BD3;RIGHTWARDS TRIANGLE-HEADED ARROW THROUGH RIGHT BRACKET;So;0;ON;;;;;N;;;;;  
2BD4;LEFTWARDS WHITE DOUBLE ARROW;So;0;ON;;;;;N;;;;;  
2BD5;PAIR OF BRACKETS WITH OUTWARDS TRIANGLE-HEADED ARROWS;So;0;ON;;;;;N;;;;;  
2BD6;RIGHTWARDS WHITE DOUBLE ARROW;So;0;ON;;;;;N;;;;;  
2BD7;DOWNWARDS WHITE DOUBLE ARROW;So;0;ON;;;;;N;;;;;  
2BD8;LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR;So;0;ON;;;;;N;;;;;  
2BD9;UPWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR;So;0;ON;;;;;N;;;;;  
2BDA;RIGHTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR;So;0;ON;;;;;N;;;;;  
2BDB;DOWNWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR;So;0;ON;;;;;N;;;;;  
2BDC;LEFTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR;So;0;ON;;;;;N;;;;;  
2BDD;UPWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR;So;0;ON;;;;;N;;;;;  
2BDE;RIGHTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR;So;0;ON;;;;;N;;;;;  
2BDF;DOWNWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR;So;0;ON;;;;;N;;;;;  
2BE0;LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET;So;0;ON;;;;;N;;;;;  
2BE1;RIGHTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET;So;0;ON;;;;;N;;;;;  
2BE5;HORIZONTAL STROKE APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;  
2BE6;DIAGONAL SLASH APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;  
2BE7;OVERLAID TILDE APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;  
2BE8;HOOK BELOW APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;  
2BE9;HOOK ABOVE APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;  
2BEA;HOOK APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;  
2BE2;SUPERSCRIPT APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;  
2BE3;SUBSCRIPT APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;  
2BE4;SUPERSCRIPT AND SUBSCRIPT APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;  
1F10E;SANS-SERIF CAPITAL U ENCLOSING ZERO-NINE;So;0;ON;;;;;N;;;;;  
1F10F;SANS-SERIF CAPITAL U ENCLOSING ZERO-F;So;0;ON;;;;;N;;;;;  
1F19B;SQUARED FN;So;0;ON;;;;;N;;;;;




## 4. Named Sequences (composed of already encoded characters)


### Keyboard symbols from ISO/IEC 9995-7


 U+21F3 U+20E2    KEYBOARD SYMBOL SCROLLING


 U+2139 U+20E2    KEYBOARD SYMBOL HELP

## 5. Annotations to be changed for existing characters

 U+21B5    DOWNWARDS ARROW WITH CORNER LEFTWARDS  
*ADD:* → 2BA0 DOWNWARDS TRIANGLE-HEADED ARROW WITH LONG TIP LEFTWARDS

 U+21E9    DOWNWARDS WHITE ARROW  
*ADD:* • caps (capitals) lock (on some keyboards)  
*ADD:* • ISO/IEC 9995-7 uses U+21EC for capitals lock

 U+21EA    UPWARDS WHITE ARROW FROM BAR  
*Delete:* = caps lock  
*ADD:* • caps (capitals) lock (on some keyboards)  
*ADD:* • ISO/IEC 9995-7 uses U+21EC for capitals lock

 U+21EE    UPWARDS WHITE DOUBLE ARROW  
= level 3 select  
*ADD:* → U+2BD4 leftwards white double arrow

 U+23CE    RETURN SYMBOL  
*ADD:* → 2BA0 DOWNWARDS TRIANGLE-HEADED ARROW WITH LONG TIP LEFTWARDS

## 6. Appendix: Mapping of ISO/IEC 9995-7 symbols into Unicode

Numbers from 1 to 62 refer to ISO/IEC 9995-7:2009.

Numbers from 63 to 107 refer to ISO/IEC 9995-7:2009 Amendment 1.

*(alternatives, shown in parentheses in italics: appropriate after acceptance of ISO/IEC 10646 DAM1)*

1 ; 21E7 # UPWARDS WHITE ARROW  
2 ; 21EB # UPWARDS WHITE ARROW ON PEDESTAL  
3 ; 21EC # UPWARDS WHITE ARROW ON PEDESTAL WITH HORIZONTAL BAR  
4 ; 21ED # UPWARDS WHITE ARROW ON PEDESTAL WITH VERTICAL BAR  
5 ; 21EE # UPWARDS WHITE DOUBLE ARROW  
6 ; 21EF # UPWARDS WHITE DOUBLE ARROW ON PEDESTAL  
7 ; 21E8 # RIGHTWARDS WHITE ARROW  
8 ; 21F0 # RIGHTWARDS WHITE ARROW FROM WALL  
9 ; 2423 # OPEN BOX  
10 ; 237D # SHOULDERED OPEN BOX  
11 ; 2380 # INSERTION SYMBOL  
12 ; 2381 # CONTINUOUS UNDERLINE SYMBOL  
13 ; 2382 # DISCONTINUOUS UNDERLINE SYMBOL  
14 ; 2383 # EMPHASIS SYMBOL  
15 ; 2384 # COMPOSITION SYMBOL  
16 ; 2385 # WHITE SQUARE WITH CENTRE VERTICAL LINE  
17 ; 232B # ERASE TO THE LEFT  
18 ; 2425 # SYMBOL FOR DELETE FORM TWO  
19 ; 239A # CLEAR SCREEN SYMBOL  
20 ; 21F3 20E2 # KEYBOARD SYMBOL SCROLLING  
21 ; 2139 20E2 # KEYBOARD SYMBOL HELP  
22 ; 2399 # PRINT SCREEN SYMBOL  
23 ; 2BA0 # DOWNWARDS TRIANGLE-HEADED ARROW WITH LONG TIP LEFTWARDS  
24 ; 2386 # ENTER SYMBOL  
25 ; 2387 # ALTERNATIVE KEY SYMBOL  
26 ; 2388 # HELM SYMBOL  
27 ; 2389 # CIRCLED HORIZONTAL BAR WITH NOTCH  
28 ; 238A # CIRCLED TRIANGLE DOWN  
29 ; 238B # BROKEN CIRCLE WITH NORTHWEST ARROW  
30 ; 238C # UNDO SYMBOL  
31 ; 2191 # UPWARDS ARROW (*2B61 UPWARDS TRIANGLE-HEADED ARROW*)  
32 ; 2193 # DOWNWARDS ARROW (*2B63 DOWNWARDS TRIANGLE-HEADED ARROW*)  
33 ; 2190 # LEFTWARDS ARROW (*2B60 LEFTWARDS TRIANGLE-HEADED ARROW*)  
34 ; 2192 # RIGHTWARDS ARROW (*2B62 RIGHTWARDS TRIANGLE-HEADED ARROW*)  
35 ; 219F # UPWARDS TWO HEADED ARROW  
36 ; 21A1 # DOWNWARDS TWO HEADED ARROW  
37 ; 219E # LEFTWARDS TWO HEADED ARROW  
38 ; 21A0 # RIGHTWARDS TWO HEADED ARROW  
39 ; 21F1 # NORTH WEST ARROW TO CORNER  
40 ; 21F2 # SOUTH EAST ARROW TO CORNER  
41 ; 2397 # PREVIOUS PAGE  
42 ; 2398 # NEXT PAGE  
43 ; 21E4 # LEFTWARDS ARROW TO BAR (*2B70 LEFTWARDS TRIANGLE-HEADED ARROW TO BAR*)  
44 ; 21E5 # RIGHTWARDS ARROW TO BAR (*2B72 RIGHTWARDS TRIANGLE-HEADED ARROW TO BAR*)  
45 ; 2BD9 # UPWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR  
46 ; 2BDB # DOWNWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR  
47 ; 2BD8 # LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR  
48 ; 2BDD # UPWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR  
49 ; 2BDF # DOWNWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR  
50 ; 2BDC # LEFTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR  
51 ; 2BDE # RIGHTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR  
52 ; 2BE0 # LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET

53 ; 2BE1 # RIGHTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET  
54 ; 2BD2 # LEFTWARDS TRIANGLE-HEADED ARROW THROUGH LEFT BRACKET  
55 ; 2BD3 # RIGHTWARDS TRIANGLE-HEADED ARROW THROUGH RIGHT BRACKET  
56 ; 2BD5 # PAIR OF BRACKETS WITH OUTWARDS TRIANGLE-HEADED ARROWS  
57 ; 002B # PLUS SIGN  
58 ; 002D # HYPHEN-MINUS  
59 ; 00D7 # MULTIPLICATION SIGN  
60 ; 00F7 # DIVISION SIGN  
61 ; 003D # EQUALS SIGN  
62 ; 238C # DECIMAL SEPARATOR KEY SYMBOL  
63 ; 2427 # SYMBOL FOR EN SPACE  
64 ; 2428 # SYMBOL FOR EM SPACE  
65 ; 2429 # SYMBOL FOR THREE-PER-EM SPACE  
66 ; 242A # SYMBOL FOR FOUR-PER-EM SPACE  
67 ; 242B # SYMBOL FOR SIX-PER-EM SPACE  
68 ; 242C # SYMBOL FOR FIGURE SPACE  
69 ; 242D # SYMBOL FOR PUNCTUATION SPACE  
70 ; 242E # SYMBOL FOR THIN OR NARROW SPACE  
71 ; 242F # SYMBOL FOR HAIR SPACE  
72 ; 2430 # SYMBOL FOR ZERO WIDTH SPACE  
73 ; 2431 # SYMBOL FOR MEDIUM MATHEMATICAL SPACE  
74 ; 2432 # SYMBOL FOR NARROW NO-BREAK SPACE  
75 ; 2BBA # SPACE SELECT SYMBOL  
76 ; 2433 # SYMBOL FOR SOFT HYPHEN  
77 ; 2434 # SYMBOL FOR NON-BREAKING HYPHEN  
78 ; 2435 # SYMBOL FOR NON-STOPPING PERIOD  
79 ; 2436 # SYMBOL FOR LINE SEPARATOR  
80 ; 2437 # SYMBOL FOR PARAGRAPH SEPARATOR  
81 ; 2438 # SYMBOL FOR ZERO WIDTH NON-JOINER  
82 ; 2439 # SYMBOL FOR ZERO WIDTH JOINER  
83 ; 243A # SYMBOL FOR WORD JOINER  
84 ; 243B # SYMBOL FOR COMBINING GRAPHEME JOINER  
85 ; 243C # SYMBOL FOR LEFT-TO-RIGHT MARK  
86 ; 243D # SYMBOL FOR RIGHT-TO-LEFT MARK  
87 ; 2BE5 # HORIZONTAL STROKE APPLICATOR SYMBOL  
88 ; 2BE6 # DIAGONAL SLASH APPLICATOR SYMBOL  
89 ; 2BE7 # OVERLAID TILDE APPLICATOR SYMBOL  
90 ; 2BE8 # HOOK BELOW APPLICATOR SYMBOL  
91 ; 2BE9 # HOOK ABOVE APPLICATOR SYMBOL  
92 ; 2BEA # HOOK APPLICATOR SYMBOL  
93 ; 2BE2 # SUPERSCRIPT APPLICATOR SYMBOL  
94 ; 2BE3 # SUBSCRIPT APPLICATOR SYMBOL  
95 ; 2BE4 # SUPERSCRIPT AND SUBSCRIPT APPLICATOR SYMBOL  
96 ; 23FC # PARTIAL BACKWARD DELETE  
97 ; 1F19B # SQUARED FN  
98 ; 23FB # MENU INVOCATION  
99 ; 2318 # PLACE OF INTEREST SIGN  
100 ; 2BBB # WHITE SQUARE WITH RAYS  
101 ; 2BBC # VERTICAL HALF WHITE SQUARE WITH RIGHT RAYS  
102 ; 2BD6 # RIGHTWARDS WHITE DOUBLE ARROW  
103 ; 1F10E # SANS-SERIF CAPITAL U ENCLOSING ZERO-NINE  
104 ; 1F10F # SANS-SERIF CAPITAL U ENCLOSING ZERO-F  
105 ; 20F1 # COMBINING ENCLOSING SQUARE WITH ROUNDED CORNERS  
106 ; 20F2 # COMBINING ENCLOSING RIGHTWARDS WHITE SHORT ARROW  
107 ; 20F3 # COMBINING ENCLOSING DOUBLE SQUARE WITH ROUNDED CORNERS

**ISO/IEC JTC 1/SC 2/WG 2  
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS  
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646<sup>1</sup>**

**Please fill all the sections A, B and C below.**

Please read Principles and Procedures Document (P & P) from <http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

**A. Administrative**

1. Title: *Proposal to incorporate the symbols of ISO/IEC 9995-7:2009 and its Amendment 1 into the UCS*
2. Requester's name: *ISO/IEC JTC1/SC35*
3. Requester type (Member body/Liaison/Individual contribution): *Liaison Contribution*
4. Submission date: *2010-08-27, revised 2012-09-03*
5. Requester's reference (if applicable):
6. Choose one of the following:
- This is a complete proposal:  Yes
- (or) More information will be provided later:

**B. Technical – General**

1. Choose one of the following:
- a. This proposal is for a new script (set of characters):  No
- Proposed name of script:
- b. The proposal is for addition of character(s) to an existing block:  Yes
- Name of the existing block: *several (mainly Miscellaneous Symbols and Arrows)*
2. Number of characters in proposal: *60 + 2 Named Sequences*
3. Proposed category (select one from below - see section 2.2 of P&P document):
- |                                       |                                     |   |                          |                                    |                          |
|---------------------------------------|-------------------------------------|---|--------------------------|------------------------------------|--------------------------|
| A-Contemporary                        | <input checked="" type="checkbox"/> | B.1-Specialized (small collection)      | <input type="checkbox"/> | B.2-Specialized (large collection) | <input type="checkbox"/> |
| C-Major extinct                       | <input type="checkbox"/>            | D-Attested extinct                      | <input type="checkbox"/> | E-Minor extinct                    | <input type="checkbox"/> |
| F-Archaic Hieroglyphic or Ideographic | <input type="checkbox"/>            | G-Obscure or questionable usage symbols | <input type="checkbox"/> |                                    |                          |
4. Is a repertoire including character names provided?  Yes
- a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?  Yes
- b. Are the character shapes attached in a legible form suitable for review?  Yes
5. Fonts related:
- a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard? *The co-editor of ISO/IEC 9995-7 Amd1 (Karl Pentzlin), on request*
- b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.): *The font will be in the Public Domain according to SC35 resolution 2010.48*
6. References:
- a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?  Yes
- b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?  Yes
7. Special encoding issues:
- Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?  No

**8. Additional Information:**

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see <http://www.unicode.org/Public/UNIDATA/UCD.html> and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

<sup>1</sup> Form number: N3702-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11)

**C. Technical - Justification**

1. Has this proposal for addition of character(s) been submitted before? If YES explain	No <i>(except one character which also is proposed as a member of the Wingdings set, now in DAM1)</i>
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)? If YES, with whom? If YES, available relevant documents:	Yes <i>Members of SC35</i> <i>ISO/IEC 9995-7:2009 + Amd1 (2012)</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:	Yes <i>All users of keyboards compliant to the ISO/IEC 9995 series</i>
4. The context of use for the proposed characters (type of use; common or rare) Reference:	<i>common</i> <i>see above</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	Yes <i>see text</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference:	<i>Partially</i> Yes <i>To keep them in line with similar characters</i>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference:	No
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If YES, reference:	No <i>(Two such characters are proposed as Named Sequences, using the composed character sequences constituting them)</i>
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character? If YES, is a rationale for its inclusion provided? If YES, reference:	No
11. Does the proposal include use of combining characters and/or use of composite sequences? If YES, is a rationale for such use provided? If YES, reference: Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? If YES, reference:	Yes Yes <i>see text</i> Yes <i>see text</i>
12. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary)	No
13. Does the proposal contain any Ideographic compatibility character(s)? If YES, is the equivalent corresponding unified ideographic character(s) identified? If YES, reference:	No