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Universal Multiple-Octet Coded Character Set
International Organization for Standardization
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Международная организация по стандартизации

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Title: Proposal to incorporate the symbols of ISO/IEC 9995-7:2009 and its Amendment 1 and of ISO/IEC 9995-10:2013 into the UCS
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1. Introduction

This proposal is based on the ISO/IEC JTC1/SC35 resolutions 2012.53 (done 2012-08-31 at the Paris meeting of ISO/IEC JTC1/SC35) and 2017.08 (done 2017-02-09 at the Berlin meeting).

1.1 Introduction of the symbols from ISO/IEC 9995-7:2009 and its Amendment 1 (2012)

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.

Therefore, all ISO/IEC 9995-7 symbols not encoded yet and not obviously unifiable with already encoded symbols are proposed here for encoding in Unicode.

1.2 Introduction of the symbols from ISO/IEC 9995-10:2013

There are two parts of the ISO/IEC 9995 international standard series which devise keyboard symbols. While ISO/IEC 9995-7 devises symbols for keyboard functions, ISO/IEC 9995-10 devises symbols for characters which cannot be identified by their shape only. E.g., an engraving of a dash on a keyboard does not indicate its character identity by its length, which is to be regarded in relation to similar characters, or its height relative to the baseline, as the engraving is done on an area which does not necessarily present any clues about this.

ISO/IEC 9995-10 resolves this issue by defining symbols for some common characters which consist of a representation of the character itself, augmented by special symbol parts which give a unique optical hint for the identity of the character.

Moreover, ISO/IEC 9995-10 provides placeholders for base characters. By these, diacritical marks can be shown in the relative position to their base character. These placeholders also indicate in which way the diacritical mark has to be entered: A dotted circle (known from the Unicode code tables) indicates that the diacritical mark has to be entered after the base character, while a flat rectangle indicates that the diacritical mark has to be entered has to be entered before the character. The latter method, inherited from the mechanical typewriters and older encoding standards line ISO/IEC 6937, is called the "dead key" method and is part of the keyboard standards of several European countries (e.g. Germany).

Additional to the dotted circle, dotted half circles are provided which allow more room for a clearer representation of the diacritical mark itself when keytop place is limited.

The symbols devised in ISO/IEC 9995-10:2013 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.

Fig. 1: Detail of a German standard keyboard according to DIN 2137-1:2012-06, showing some of the ISO/IEC 9995-7 and 9995-10 symbols proposed here as Unicode characters.

Fig. 2: Excerpts from p.9 and p.10 of the printed edition of the German standard DIN 2137-1:2012-06, showing the use of some of the proposed characters in print.

C08	k U+006B Ⓐ	K U+004B	̦ U+0326	ĸ U+0138	̦ U+0326	̳ U+0335
C09	l U+006C Ⓐ	L U+004C	̨ U+0328	ł U+0142	Ł U+0141 Ⓑ	̸ U+0338
C10	ö U+00F6 Ⓐ	Ö U+00D6	̤ U+0323	́ U+0301	̋ U+030B	° U+00B0

B08	, U+002C	; U+003B	ʻ U+02BB	… U+2026	× U+00D7	$ U+0024
B09	. U+002E	: U+003A	‍ U+200C	· U+00B7	÷ U+00F7	# U+0023
B10	- U+002D	_ U+005F	U+00AD	ŀ U+0140	Ŀ U+013F Ⓑ	‑ U+2011
A03	␣ U+0020	␣ U+0020	⌐ U+00A0	⌐ U+202F	‍ U+200C	⌐ U+00A0

1.3 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 full now, this cannot be accomplished for symbols new to Unicode proposed here.

All symbols, which are keyboard symbols for (and thus visualizations of) invisible characters (including spaces; 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".

Symbols which are mainly arrows are placed in the “Supplemental Arrows-C” block. Groups of “left/up/right/down arrows” are completed where appropriate if single arrows of such a group are not used in ISO/IEC 9995-7.

All other symbols are placed in a new group “Miscellaneous Technical Supplement” which is proposed at 1FA80–1FAFF (the first block place following the “Pictographic Sets” area in the SMP roadmap which is currently not mentioned in other proposals).

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 a 1:1 correspondence between ISO/IEC 9995-7 and 9995-10 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 and 9995-10 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
= ISO/IEC 9995-7 symbol 105, IEC 60417 symbol 6086
= switch to specific group according to the enclosed letter
→ 25A2 white square with rounded corners

U+20F2 COMBINING ENCLOSING RIGHTWARDS WHITE SHORT ARROW
= ISO/IEC 9995-7 symbol 106, IEC 60417 symbol 6087
= latch to specific group according to the enclosed letter
→ 21E8 rightwards white arrow

U+20F3 COMBINING ENCLOSING DOUBLE SQUARE WITH ROUNDED CORNERS
= ISO/IEC 9995-7 symbol 107, IEC 60417 symbol 6088
= switch to specific mode according to the enclosed letter

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
= ISO/IEC 9995-7 symbol 63, IEC 60417 symbol 6072-1
→ 2002 en space

U+2428 SYMBOL FOR EM SPACE
= ISO/IEC 9995-7 symbol 64, IEC 60417 symbol 6072-2
→ 2003 em space

U+2429 SYMBOL FOR THREE-PER-EM SPACE
= ISO/IEC 9995-7 symbol 65, IEC 60417 symbol 6072-3
→ 2004 three-per-em space
→ 1FA8A space select symbol

U+242A SYMBOL FOR FOUR-PER-EM SPACE
= ISO/IEC 9995-7 symbol 66, IEC 60417 symbol 6072-4
→ 2005 four-per-em space

U+242B SYMBOL FOR SIX-PER-EM SPACE
= ISO/IEC 9995-7 symbol 67, IEC 60417 symbol 6072-5
→ 2006 six-per-em space

U+242C SYMBOL FOR FIGURE SPACE

= ISO/IEC 9995-7 symbol 68, IEC 60417 symbol 6072-6
→ 2007 figure space

 U+242D SYMBOL FOR PUNCTUATION SPACE
= ISO/IEC 9995-7 symbol 69, IEC 60417 symbol 6072-7
→ 2008 punctuation space

 U+242E SYMBOL FOR THIN OR NARROW SPACE
= ISO/IEC 9995-7 symbol 70, IEC 60417 symbol 6072-8
→ 2009 thin space

 U+242F SYMBOL FOR HAIR SPACE
= ISO/IEC 9995-7 symbol 71, IEC 60417 symbol 6072-9
→ 200A hair space

 U+2430 SYMBOL FOR ZERO WIDTH SPACE
= ISO/IEC 9995-7 symbol 72, IEC 60417 symbol 6072-10
→ 200A zero width space

 U+2431 SYMBOL FOR MEDIUM MATHEMATICAL SPACE
= ISO/IEC 9995-7 symbol 73, IEC 60417 symbol 6072-11
→ 205F medium mathematical space

 U+2432 SYMBOL FOR NARROW NO-BREAK SPACE
= ISO/IEC 9995-7 symbol 74, IEC 60417 symbol 6072-12
→ 202F narrow no-break space
→ 237D shouldered open box

 U+2433 SYMBOL FOR SOFT HYPHEN
= ISO/IEC 9995-7 symbol 76, IEC 60417 symbol 6073
• hyphen surrounded by very small parentheses
→ 00AD soft hyphen

 U+2434 SYMBOL FOR NON-BREAKING HYPHEN
= ISO/IEC 9995-7 symbol 77, IEC 60417 symbol 6074
• hyphen surrounded by very small inverted brackets
→ 2011 non-breaking hyphen

 U+2435 SYMBOL FOR NON-STOPPING PERIOD
= ISO/IEC 9995-7 symbol 78, IEC 60417 symbol 6075
→ 002E full stop
· entering U+002E FULL STOP by a key marked such prevents automatic capitalization of the next letter entered

 U+2436 SYMBOL FOR LINE SEPARATOR
= ISO/IEC 9995-7 symbol 79, IEC 60417 symbol 6076-1
→ 2028 line separator

 U+2437 SYMBOL FOR PARAGRAPH SEPARATOR

= ISO/IEC 9995-7 symbol 80, IEC 60417 symbol 6076-2
→ 2029 paragraph separator

U+2438 SYMBOL FOR ZERO WIDTH NON-JOINER JOINER

= ISO/IEC 9995-7 symbol 81, IEC 60417 symbol 6077-1
= nail
→ 200C zero width non-joiner

U+2439 SYMBOL FOR ZERO WITDH JOINER

= ISO/IEC 9995-7 symbol 82, IEC 60417 symbol 6077-2
→ 200D zero width joiner

U+243A SYMBOL FOR WORD JOINER

= ISO/IEC 9995-7 symbol 83, IEC 60417 symbol 6077-3
→ 2060 word joiner

U+243B SYMBOL FOR COMBINING GRAPHEME JOINER

= ISO/IEC 9995-7 symbol 84, IEC 60417 symbol 6077-4
→ 034F combining grapheme joinder

U+243C SYMBOL FOR LEFT-TO-RIGHT MARK

= ISO/IEC 9995-7 symbol 85, IEC 60417 symbol 6078
→ 200E left-to-right mark

U+243D SYMBOL FOR RIGHT-TO-LEFT MARK

= ISO/IEC 9995-7 symbol 86, IEC 60417 symbol 6078
→ 200F right-to-left mark

Block: Miscellaneous Symbols and Arrows

Keyboard symbols from ISO/IEC 9995-10:2013

U+2B74 WHITE HORIZONTAL NARROW RECTANGLE

= ISO/IEC 9995-10 symbol 44, IEC 60417 symbol 6140
= dead key base mark
• has the width of an em dash

U+2B75 WHITE VERTICAL NARROW RECTANGLE

= ISO/IEC 9995-10 symbol 45, IEC 60417 symbol 6141
= cap height marker
• identifies modifier letters on keytops
• has the height of a capital Latin letter

Keyboard symbols from ISO/IEC 9995-10:2013

 U+2B96 DOTTED UPPER HALF CIRCLE
= ISO/IEC 9995-10 symbol 42, IEC 60417 symbol 6138
→ 25CC dotted circle

 U+2B97 DOTTED LOWER HALF CIRCLE
= ISO/IEC 9995-10 symbol 43, IEC 60417 symbol 6139

Keyboard symbol from ISO/IEC 9995-7

 U+2BC9 MENU INVOCATION
= ISO/IEC 9995-7 symbol 89, IEC 60417 symbol 6089

Block: Enclosed Alphanumeric Supplement

Keyboard symbols from ISO/IEC 9995-7

 U+1F1AD SQUARED FN
= ISO/IEC 9995-7 symbol 97, IEC 60417 symbol 6081
= function key

 U+1F1AE SANS-SERIF CAPITAL U ENCLOSING ZERO-NINE
= ISO/IEC 9995-7 symbol 103, IEC 60417 symbol 6085-1
= switch to decimal Unicode mode

 U+1F1AF SANS-SERIF CAPITAL U ENCLOSING ZERO-F
= ISO/IEC 9995-7 symbol 104, IEC 60417 symbol 6085-2
= switch to hexadecimal Unicode mode

Block: Supplemental Arrows-C

Keyboard symbols from ISO/IEC 9995-7

 U+1F8B0 LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET
= ISO/IEC 9995-7 symbol 52, ISO 7000 symbol 2042
= set margin left

 U+1F8B1 RIGHTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET
= ISO/IEC 9995-7 symbol 53, ISO 7000 symbol 2042
= set margin right

 U+1F8B2 LEFTWARDS TRIANGLE-HEADED ARROW THROUGH LEFT BRACKET
= ISO/IEC 9995-7 symbol 54, ISO 7000 symbol 2044
= release margin left

 U+1F8B3 RIGHTWARDS TRIANGLE-HEADED ARROW THROUGH RIGHT BRACKET

= ISO/IEC 9995-7 symbol 55, ISO 7000 symbol 2044
= release margin right

 U+1F8B4 LEFTWARDS WHITE DOUBLE ARROW
→ U+21EE upwards white double arrow

 U+1F8B5 PAIR OF BRACKETS WITH OUTWARDS TRIANGLE-HEADED ARROWS
= ISO/IEC 9995-7 symbol 56, ISO 7000 symbol 2045
= release margin right and left

 U+1F8B6 RIGHTWARDS WHITE DOUBLE ARROW
= ISO/IEC 9995-7 symbol 102, IEC 60417 symbol 6084
= special group 2 select

 U+1F8B7 DOWNWARDS WHITE DOUBLE ARROW

 U+1F8B8 LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR
= ISO/IEC 9995-7 symbol 47, ISO 7000 symbol 253
= backspace

 U+1F8B9 UPWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR
= ISO/IEC 9995-7 symbol 45, ISO 7000 symbol 253
= line up

 U+1F8BA RIGHTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR

 U+1F8BB DOWNWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR
= ISO/IEC 9995-7 symbol 46, ISO 7000 symbol 253
= line down

 U+1F8BC LEFTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR
= ISO/IEC 9995-7 symbol 50, ISO 7000 symbol 2038
= partial space left

 U+1F8BD UPWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR
= ISO/IEC 9995-7 symbol 48, ISO 7000 symbol 2038
= partial line up

 U+1F8BE RIGHTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR
= ISO/IEC 9995-7 symbol 51, ISO 7000 symbol 2038
= partial space right

 U+1F8BF DOWNWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR
= ISO/IEC 9995-7 symbol 49, ISO 7000 symbol 2038
= partial line down

New Block: Miscellaneous Technical Supplement (1FA80–1FAFF)

Keyboard symbols from ISO/IEC 9995-7

 U+1FA80 HORIZONTAL STROKE APPLICATOR SYMBOL
= ISO/IEC 9995-7 symbol 87, IEC 60417 symbol 6079-1
→ 2B75 white vertical narrow rectangle

 U+1FA81 DIAGONAL SLASH APPLICATOR SYMBOL
= ISO/IEC 9995-7 symbol 88, IEC 60417 symbol 6079-2

 U+1FA82 OVERLAID TILDE APPLICATOR SYMBOL
= ISO/IEC 9995-7 symbol 89, IEC 60417 symbol 6079-3

 U+1FA83 HOOK BELOW APPLICATOR SYMBOL
= ISO/IEC 9995-7 symbol 90, IEC 60417 symbol 6079-4

 U+1FA84 HOOK ABOVE APPLICATOR SYMBOL
= ISO/IEC 9995-7 symbol 91, IEC 60417 symbol 6079-5

 U+1FA85 HOOK APPLICATOR SYMBOL
= ISO/IEC 9995-7 symbol 92, IEC 60417 symbol 6079-6

 U+1FA86 SUPERSCRIPT APPLICATOR SYMBOL
= ISO/IEC 9995-7 symbol 93, IEC 60417 symbol 6079-7
→ 2B74 white horizontal narrow rectangle

 U+1FA87 SUBSCRIPT APPLICATOR SYMBOL
= ISO/IEC 9995-7 symbol 94, IEC 60417 symbol 6079-7

 U+1FA88 SUPERSCRIPT AND SUBSCRIPT APPLICATOR SYMBOL
= ISO/IEC 9995-7 symbol 95, IEC 60417 symbol 6079-8

 U+1FA89 PARTIAL BACKWARD DELETE
= ISO/IEC 9995-7 symbol 96, IEC 60417 symbol 6080
→ 232B erase to the left

 U+1FA8A SPACE SELECT SYMBOL
= ISO/IEC 9995-7 symbol 74, IEC 60417 symbol 6072-13
→ 2423 open box

 U+1FA8B WHITE SQUARE WITH RAYS
= ISO/IEC 9995-7 symbol 100, IEC 60417 symbol 6082
= 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+1FA8C VERTICAL HALF WHITE SQUARE WITH RIGHT RAYS
= ISO/IEC 9995-7 symbol 101, IEC 60417 symbol 6083
= secondary superselect

Keyboard symbols from ISO/IEC 9995-10:2013

 U+1FA90 SYMBOL FOR HYPHEN
= ISO/IEC 9995-10 symbol 1, IEC 60417 symbol 6097
→ 2010 hyphen

 U+1FA91 SYMBOL FOR HYPHENATION POINT
= ISO/IEC 9995-10 symbol 2, IEC 60417 symbol 6099
→ 2027 hyphenation point

 U+1FA92 SYMBOL FOR FIGURE DASH
= ISO/IEC 9995-10 symbol 3, IEC 60417 symbol 6100
→ 2013 figure dash

 U+1FA93 SYMBOL FOR EN DASH
= ISO/IEC 9995-10 symbol 4, IEC 60417 symbol 6101
→ 2013 en dash

 U+1FA94 SYMBOL FOR EM DASH
= ISO/IEC 9995-10 symbol 5, IEC 60417 symbol 6102
→ 2014 em dash

 U+1FA95 SYMBOL FOR TWO-EM DASH
= ISO/IEC 9995-10 symbol 6, IEC 60417 symbol 6103
→ 23EA two-em dash

 U+1FA96 SYMBOL FOR THREE-EM DASH
= ISO/IEC 9995-10 symbol 7, IEC 60417 symbol 6104
→ 23EB three-em dash

 U+1FA97 SYMBOL FOR HORIZONTAL BAR
= ISO/IEC 9995-10 symbol 8, IEC 60417 symbol 6105
→ 6105 horizontal bar

 U+1FA98 SYMBOL FOR MINUS SIGN
= ISO/IEC 9995-10 symbol 9, IEC 60417 symbol 6106
→ 2212 minus sign

 U+1FA99 SYMBOL FOR MACRON
= ISO/IEC 9995-10 symbol 10, IEC 60417 symbol 6107
→ 00AF macron

 U+1FA9A SYMBOL FOR OVERLINE
= ISO/IEC 9995-10 symbol 11, IEC 60417 symbol 6108
→ 203E overline

 U+1FA9B SYMBOL FOR LOW LINE
= ISO/IEC 9995-10 symbol 12, IEC 60417 symbol 6109
→ 005F low line

 U+1FA9C SYMBOL FOR DOUBLE HYPHEN
= ISO/IEC 9995-10 symbol 13, IEC 60417 symbol 6098
→ 2E40 double hyphen

 U+1FA9D SYMBOL FOR SWUNG DASH
= ISO/IEC 9995-10 symbol 14, IEC 60417 symbol 6110
→ 2053 swung dash

 U+1FA9E SYMBOL FOR TILDE OPERATOR
= ISO/IEC 9995-10 symbol 15, IEC 60417 symbol 6111
→ 223C tilde operator

 U+1FA9F SYMBOL FOR LARGE ASTERISK
= ISO/IEC 9995-10 symbol 16, IEC 60417 symbol 6112

 U+1FAA0 SYMBOL FOR MIDDLE DOT
= ISO/IEC 9995-10 symbol 17, IEC 60417 symbol 6113
→ 00B7 middle dot

 U+1FAA1 SYMBOL FOR BULLET
= ISO/IEC 9995-10 symbol 18, IEC 60417 symbol 6114
→ 2022 bullet

 U+1FAA2 SYMBOL FOR LEFT SINGLE QUOTATION MARK
= ISO/IEC 9995-10 symbol 19, IEC 60417 symbol 6115
→ 2018 left single quotation mark

 U+1FAA3 SYMBOL FOR RIGHT SINGLE QUOTATION MARK
= ISO/IEC 9995-10 symbol 20, IEC 60417 symbol 6116
→ 2019 right single quotation mark

 U+1FAA4 SYMBOL FOR COMMA-SHAPED APOSTROPHE
= ISO/IEC 9995-10 symbol 21, IEC 60417 symbol 6117
→ 2019 right single quotation mark

 U+1FAA5 SYMBOL FOR SINGLE LOW-9 QUOTATION MARK
= ISO/IEC 9995-10 symbol 22, IEC 60417 symbol 6118
→ 201A single low-9 quotation mark

 U+1FAA6 SYMBOL FOR LEFT DOUBLE QUOTATION MARK
= ISO/IEC 9995-10 symbol 23, IEC 60417 symbol 6119
→ 201C left double quotation mark

 U+1FAA7 SYMBOL FOR RIGHT DOUBLE QUOTATION MARK
= ISO/IEC 9995-10 symbol 24, IEC 60417 symbol 6120
→ 201D right double quotation mark

U+1FAA8 SYMBOL FOR DOUBLE LOW-9 QUOTATION MARK
= ISO/IEC 9995-10 symbol 25, IEC 60417 symbol 6121
→ 201E double low-9 quotation mark

U+1FAA9 SYMBOL FOR SINGLE LEFT-POINTING ANGLE QUOTATION MARK
= ISO/IEC 9995-10 symbol 26, IEC 60417 symbol 6122
→ 2039 single left-pointing angle quotation mark

U+1FAAA SYMBOL FOR SINGLE RIGHT-POINTING ANGLE QUOTATION MARK
= ISO/IEC 9995-10 symbol 27, IEC 60417 symbol 6123
→ 203A single right-pointing angle quotation mark

U+1FAAB SYMBOL FOR DOUBLE LEFT-POINTING ANGLE QUOTATION MARK
= ISO/IEC 9995-10 symbol 28, IEC 60417 symbol 6124
→ 00AB double left-pointing angle quotation mark

U+1FAAC SYMBOL FOR DOUBLE RIGHT-POINTING ANGLE QUOTATION MARK
= ISO/IEC 9995-10 symbol 29, IEC 60417 symbol 6125
→ 00BB double right-pointing angle quotation mark

U+1FAAD SYMBOL FOR LEFT ANGLE BRACKET
= ISO/IEC 9995-10 symbol 30, IEC 60417 symbol 6126
→ 27E8 mathematical left angle bracket

U+1FAAE SYMBOL FOR RIGHT ANGLE BRACKET
= ISO/IEC 9995-10 symbol 31, IEC 60417 symbol 6127
→ 27E9 mathematical right angle bracket

U+1FAAF SYMBOL FOR DOUBLE LEFT ANGLE BRACKET
= ISO/IEC 9995-10 symbol 32, IEC 60417 symbol 6128
→ 27EA mathematical double left angle bracket

U+1FAB0 SYMBOL FOR DOUBLE RIGHT ANGLE BRACKET
= ISO/IEC 9995-10 symbol 33, IEC 60417 symbol 6129
→ 27EB mathematical double right angle bracket

U+1FAB1 SYMBOL FOR PRIME
= ISO/IEC 9995-10 symbol 34, IEC 60417 symbol 6130
→ 2032 prime

U+1FAB2 SYMBOL FOR DOUBLE PRIME
= ISO/IEC 9995-10 symbol 35, IEC 60417 symbol 6131
→ 2033 double prime

U+1FAB3 SYMBOL FOR REVERSED PRIME
= ISO/IEC 9995-10 symbol 36, IEC 60417 symbol 6132
→ 2035 reversed prime

U+1FAB4 SYMBOL FOR REVERSED DOUBLE PRIME
= ISO/IEC 9995-10 symbol 37, IEC 60417 symbol 6133
→ 2036 reversed double prime

U+1FAB5 SYMBOL FOR DITTO MARK
= ISO/IEC 9995-10 symbol 38, IEC 60417 symbol 6134
→ 3033 ditto mark

U+1FAB6 SYMBOL FOR FRACTION SLASH
= ISO/IEC 9995-10 symbol 39, IEC 60417 symbol 6135
→ 2044 fraction slash

U+1FAB7 SYMBOL FOR DIVISION SLASH
= ISO/IEC 9995-10 symbol 40, IEC 60417 symbol 6136
→ 2215 division slash

U+1FAB8 SYMBOL FOR COMBINING TILDE OVERLAY
= ISO/IEC 9995-10 symbol 46, IEC 60417 symbol 6142
→ 0334 combining tilde overlay
→ 2B75 white vertical narrow rectangle

U+1FAB9 SYMBOL FOR COMBINING SHORT STROKE OVERLAY
= ISO/IEC 9995-10 symbol 47, IEC 60417 symbol 6143
→ 0335 combining short stroke overlay

U+1FABA SYMBOL FOR COMBINING LONG STROKE OVERLAY
= ISO/IEC 9995-10 symbol 48, IEC 60417 symbol 6144
→ 0336 combining long stroke overlay

U+1FABB SYMBOL FOR COMBINING SHORT SOLIDUS OVERLAY
= ISO/IEC 9995-10 symbol 49, IEC 60417 symbol 6145
→ 0337 combining short solidus overlay

U+1FABC SYMBOL FOR COMBINING LONG SOLIDUS OVERLAY
= ISO/IEC 9995-10 symbol 50, IEC 60417 symbol 6146
→ 0338 combining long solidus overlay

Properties:

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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;;;;;
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;;;;;
2B74;WHITE HORIZONTAL NARROW RECTANGLE;So;0;ON;;;;;N;;;;;
2B75;WHITE VERTICAL NARROW RECTANGLE;So;0;ON;;;;;N;;;;;
2B96;DOTTED UPPER HALF CIRCLE;So;0;ON;;;;;N;;;;;
2B97;DOTTED LOWER HALF CIRCLE;So;0;ON;;;;;N;;;;;
2BC9;MENU INVOCATION;So;0;ON;;;;;N;;;;;
1F1AD;SQUARED FN;So;0;ON;;;;;N;;;;;
1F1AE;SANS-SERIF CAPITAL U ENCLOSING ZERO-NINE;So;0;ON;;;;;N;;;;;
1F1AF;SANS-SERIF CAPITAL U ENCLOSING ZERO-F;So;0;ON;;;;;N;;;;;
1F8B0;LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET;So;0;ON;;;;;N;;;;;
1F8B1;RIGHTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET;So;0;ON;;;;;N;;;;;
1F8B2;LEFTWARDS TRIANGLE-HEADED ARROW THROUGH LEFT BRACKET;So;0;ON;;;;;N;;;;;
1F8B3;RIGHTWARDS TRIANGLE-HEADED ARROW THROUGH RIGHT BRACKET;So;0;ON;;;;;N;;;;;
1F8B4;LEFTWARDS WHITE DOUBLE ARROW;So;0;ON;;;;;N;;;;;
1F8B5;PAIR OF BRACKETS WITH OUTWARDS TRIANGLE-HEADED ARROWS;So;0;ON;;;;;N;;;;;
1F8B6;RIGHTWARDS WHITE DOUBLE ARROW;So;0;ON;;;;;N;;;;;
1F8B7;DOWNWARDS WHITE DOUBLE ARROW;So;0;ON;;;;;N;;;;;
1F8B8;LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR;So;0;ON;;;;;N;;;;;
1F8B9;UPWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR;So;0;ON;;;;;N;;;;;
1F8BA;RIGHTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR;So;0;ON;;;;;N;;;;;
1F8BB;DOWNWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR;So;0;ON;;;;;N;;;;;
1F8BC;LEFTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR;So;0;ON;;;;;N;;;;;
1F8BD;UPWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR;So;0;ON;;;;;N;;;;;
1F8BE;RIGHTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR;So;0;ON;;;;;N;;;;;
1F8BF;DOWNWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR;So;0;ON;;;;;N;;;;;
1FA80;HORIZONTAL STROKE APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;
1FA81;DIAGONAL SLASH APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;
1FA82;OVERLAID TILDE APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;
1FA83;HOOK BELOW APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;
1FA84;HOOK ABOVE APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;
1FA85;HOOK APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;
1FA86;SUPERSCRIPT APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;
1FA87;SUBSCRIPT APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;
1FA88;SUPERSCRIPT AND SUBSCRIPT APPLICATOR SYMBOL;So;0;ON;;;;;N;;;;;
1FA89;PARTIAL BACKWARD DELETE;So;0;ON;;;;;N;;;;;
```

```
1FA8A;SPACE SELECT SYMBOL;So;0;ON;;;;;N;;;;;
1FA8B;WHITE SQUARE WITH RAYS;So;0;ON;;;;;N;;;;;
1FA8C;VERTICAL HALF WHITE SQUARE WITH RIGHT RAYS;So;0;ON;;;;;N;;;;;
1FA90;SYMBOL FOR HYPHEN;So;0;ON;;;;;N;;;;;
1FA91;SYMBOL FOR HYPHENATION POINT;So;0;ON;;;;;N;;;;;
1FA92;SYMBOL FOR FIGURE DASH;So;0;ON;;;;;N;;;;;
1FA93;SYMBOL FOR EN DASH;So;0;ON;;;;;N;;;;;
1FA94;SYMBOL FOR EM DASH;So;0;ON;;;;;N;;;;;
1FA95;SYMBOL FOR TWO-EM DASH;So;0;ON;;;;;N;;;;;
1FA96;SYMBOL FOR THREE-EM DASH;So;0;ON;;;;;N;;;;;
1FA97;SYMBOL FOR HORIZONTAL BAR;So;0;ON;;;;;N;;;;;
1FA98;SYMBOL FOR MINUS SIGN;So;0;ON;;;;;N;;;;;
1FA99;SYMBOL FOR MACRON;So;0;ON;;;;;N;;;;;
1FA9A;SYMBOL FOR OVERLINE;So;0;ON;;;;;N;;;;;
1FA9B;SYMBOL FOR LOW LINE;So;0;ON;;;;;N;;;;;
1FA9C;SYMBOL FOR DOUBLE HYPHEN;So;0;ON;;;;;N;;;;;
1FA9D;SYMBOL FOR SWUNG DASH;So;0;ON;;;;;N;;;;;
1FA9E;SYMBOL FOR TILDE OPERATOR;So;0;ON;;;;;N;;;;;
1FA9F;SYMBOL FOR LARGE ASTERISK;So;0;ON;;;;;N;;;;;
1FAA0;SYMBOL FOR MIDDLE DOT;So;0;ON;;;;;N;;;;;
1FAA1;SYMBOL FOR BULLET;So;0;ON;;;;;N;;;;;
1FAA2;SYMBOL FOR LEFT SINGLE QUOTATION MARK;So;0;ON;;;;;N;;;;;
1FAA3;SYMBOL FOR RIGHT SINGLE QUOTATION MARK;So;0;ON;;;;;N;;;;;
1FAA4;SYMBOL FOR COMMA-SHAPED APOSTROPHE;So;0;ON;;;;;N;;;;;
1FAA5;SYMBOL FOR SINGLE LOW-9 QUOTATION MARK;So;0;ON;;;;;N;;;;;
1FAA6;SYMBOL FOR LEFT DOUBLE QUOTATION MARK;So;0;ON;;;;;N;;;;;
1FAA7;SYMBOL FOR RIGHT DOUBLE QUOTATION MARK;So;0;ON;;;;;N;;;;;
1FAA8;SYMBOL FOR DOUBLE LOW-9 QUOTATION MARK;So;0;ON;;;;;N;;;;;
1FAA9;SYMBOL FOR SINGLE LEFT-POINTING ANGLE QUOTATION MARK;So;0;ON;;;;;N;;;;;
1FAAA;SYMBOL FOR SINGLE RIGHT-POINTING ANGLE QUOTATION MARK;So;0;ON;;;;;N;;;;;
1FAAB;SYMBOL FOR DOUBLE LEFT-POINTING ANGLE QUOTATION MARK;So;0;ON;;;;;N;;;;;
1FAAC;SYMBOL FOR DOUBLE RIGHT-POINTING ANGLE QUOTATION MARK;So;0;ON;;;;;N;;;;;
1FAAD;SYMBOL FOR LEFT ANGLE BRACKET;So;0;ON;;;;;N;;;;;
1FAAE;SYMBOL FOR RIGHT ANGLE BRACKET;So;0;ON;;;;;N;;;;;
1FAAF;SYMBOL FOR DOUBLE LEFT ANGLE BRACKET;So;0;ON;;;;;N;;;;;
1FAB0;SYMBOL FOR DOUBLE RIGHT ANGLE BRACKET;So;0;ON;;;;;N;;;;;
1FAB1;SYMBOL FOR PRIME;So;0;ON;;;;;N;;;;;
1FAB2;SYMBOL FOR DOUBLE PRIME;So;0;ON;;;;;N;;;;;
1FAB3;SYMBOL FOR REVERSED PRIME;So;0;ON;;;;;N;;;;;
1FAB4;SYMBOL FOR REVERSED DOUBLE PRIME;So;0;ON;;;;;N;;;;;
1FAB5;SYMBOL FOR DITTO MARK;So;0;ON;;;;;N;;;;;
1FAB6;SYMBOL FOR FRACTION SLASH;So;0;ON;;;;;N;;;;;
1FAB7;SYMBOL FOR DIVISION SLASH;So;0;ON;;;;;N;;;;;
1FAB8;SYMBOL FOR COMBINING TILDE OVERLAY;So;0;ON;;;;;N;;;;;
1FAB9;SYMBOL FOR COMBINING SHORT STROKE OVERLAY;So;0;ON;;;;;N;;;;;
1FABA;SYMBOL FOR COMBINING LONG STROKE OVERLAY;So;0;ON;;;;;N;;;;;
1FABB;SYMBOL FOR COMBINING SHORT SOLIDUS OVERLAY;So;0;ON;;;;;N;;;;;
1FABC;SYMBOL FOR COMBINING LONG SOLIDUS OVERLAY;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
= ISO/IEC 9995-7 symbol 20, ISO 7000 symbol 2025

U+2139 U+20E2 KEYBOARD SYMBOL HELP
= ISO/IEC 9995-7 symbol 21, ISO 7000 symbol 2026

5. Annotations to be changed for existing characters

Block: Arrows

↵ 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: → 1F8B4 leftwards white double arrow

⏎ U+23CE RETURN SYMBOL

ADD: → 2BA0 DOWNWARDS TRIANGLE-HEADED ARROW WITH LONG TIP LEFTWARDS

Block: Geometric Shapes

◌ U+25CC DOTTED CIRCLE

(*ADD:)* = ISO/IEC 9995-10 symbol 41, IEC 60417 symbol 6137
ADD: → 2B96 dotted upper half circle
ADD: • when used as a keyboard symbol together with a diacritical mark, it denotes that the diacritical mark is to be input after the base character

Block: Miscellaneous Symbols and Arrows

⮠ U+2BA0 DOWNWARDS TRIANGLE-HEADED ARROW WITH LONG TIP LEFTWARDS

(ADD:) = ISO/IEC 9995-10 symbol 23, ISO 7000 symbol 651
= return (new line) (ISO/IEC 9995-7)
ADD: → 21B2 downwards arrow with tip leftwards
ADD: → 21B5 downwards arrow with corner leftwards
ADD: → 23CE return symbol

6. Appendix:
Mapping of ISO/IEC 9995-7 and 9995-10 symbols into Unicode

Unprefixed numbers from 1 to 62 refer to ISO/IEC 9995-7:2009.
Unprefixed numbers from 63 to 107 refer to ISO/IEC 9995-7:2009 Amendment 1.
Number prefixed with “&” refer to ISO/IEC 9995-10_2013.
“*” marks a character proposed in this document.
“+” marks a named sequence proposed in this document.

```
  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 ;    2B61 # UPWARDS TRIANGLE-HEADED ARROW
 32 ;    2B63 # DOWNWARDS TRIANGLE-HEADED ARROW
 33 ;    2B60 # LEFTWARDS TRIANGLE-HEADED ARROW
 34 ;    2B62 # RIGHTWARDS TRIANGLE-HEADED ARROW
 35 ;    2BED # UPWARDS TWO-HEADED ARROW WITH TRIANGLE ARROWHEADS
 36 ;    2BEF # DOWNWARDS TWO-HEADED ARROW WITH TRIANGLE ARROWHEADS
 37 ;    2BEC # LEFTWARDS TWO-HEADED ARROW WITH TRIANGLE ARROWHEADS
 38 ;    2BEE # RIGHTWARDS TWO-HEADED ARROW WITH TRIANGLE ARROWHEADS
 39 ;    21F1 # NORTH WEST ARROW TO CORNER
 40 ;    21F2 # SOUTH EAST ARROW TO CORNER
 41 ;    2397 # PREVIOUS PAGE
 42 ;    2398 # NEXT PAGE
 43 ;    2B70 # LEFTWARDS TRIANGLE-HEADED ARROW TO BAR
 44 ;    2B72 # RIGHTWARDS TRIANGLE-HEADED ARROW TO BAR
 45 ; * 1F8B9 # UPWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR
 46 ; * 1F8BB # DOWNWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR
 47 ; * 1F8B8 # LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BAR
 48 ; * 1F8BD # UPWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR
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 49 ; * 1F8BF # DOWNWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR
 50 ; * 1F8BC # LEFTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR
 51 ; * 1F8BE # RIGHTWARDS SHORT TRIANGLE-HEADED ARROW FROM LONG BAR TO SHORT AND LONG BAR
 52 ; * 1F8B0 # LEFTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET
 53 ; * 1F8B1 # RIGHTWARDS TRIANGLE-HEADED ARROW FROM BAR TO BRACKET
 54 ; * 1F8B2 # LEFTWARDS TRIANGLE-HEADED ARROW THROUGH LEFT BRACKET
 55 ; * 1F8B3 # RIGHTWARDS TRIANGLE-HEADED ARROW THROUGH RIGHT BRACKET
 56 ; * 1F8B5 # 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 ; * 1FA8A # 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 WITDH 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 ; * 1FA80 # HORIZONTAL STROKE APPLICATOR SYMBOL
 88 ; * 1FA81 # DIAGONAL SLASH APPLICATOR SYMBOL
 89 ; * 1FA82 # OVERLAID TILDE APPLICATOR SYMBOL
 90 ; * 1FA83 # HOOK BELOW APPLICATOR SYMBOL
 91 ; * 1FA84 # HOOK ABOVE APPLICATOR SYMBOL
 92 ; * 1FA85 # HOOK APPLICATOR SYMBOL
 93 ; * 1FA86 # SUPERSCRIPT APPLICATOR SYMBOL
 94 ; * 1FA87 # SUBSCRIPT APPLICATOR SYMBOL
 95 ; * 1FA88 # SUPERSCRIPT AND SUBSCRIPT APPLICATOR SYMBOL
 96 ; * 1FA89 # PARTIAL BACKWARD DELETE
 97 ; * 1F19B # SQUARED FN
 98 ; *  2BC9 # MENU INVOCATION
 99 ;    2318 # PLACE OF INTEREST SIGN
100 ; * 1FA8B # WHITE SQUARE WITH RAYS
101 ; * 1FA8C # VERTICAL HALF WHITE SQUARE WITH RIGHT RAYS
102 ; * 1F8B6 # RIGHTWARDS WHITE DOUBLE ARROW
103 ; * 1F19E # SANS-SERIF CAPITAL U ENCLOSING ZERO-NINE
104 ; * 1F19F # 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
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&  1 ; * 1FA90 # SYMBOL FOR HYPHEN
&  2 ; * 1FA91 # SYMBOL FOR HYPHENATION POINT
&  3 ; * 1FA92 # SYMBOL FOR FIGURE DASH
&  4 ; * 1FA93 # SYMBOL FOR EN DASH
&  5 ; * 1FA94 # SYMBOL FOR EM DASH
&  6 ; * 1FA95 # SYMBOL FOR TWO-EM DASH
&  7 ; * 1FA96 # SYMBOL FOR THREE-EM DASH
&  8 ; * 1FA97 # SYMBOL FOR HORIZONTAL BAR
&  9 ; * 1FA98 # SYMBOL FOR MINUS SIGN
& 10 ; * 1FA99 # SYMBOL FOR MACRON
& 11 ; * 1FA9A # SYMBOL FOR OVERLINE
& 12 ; * 1FA9B # SYMBOL FOR LOW LINE
& 13 ; * 1FA9C # SYMBOL FOR DOUBLE HYPHEN
& 14 ; * 1FA9D # SYMBOL FOR SWUNG DASH
& 15 ; * 1FA9E # SYMBOL FOR TILDE OPERATOR
& 16 ; * 1FA9F # SYMBOL FOR LARGE ASTERISK
& 17 ; * 1FAA0 # SYMBOL FOR MIDDLE DOT
& 18 ; * 1FAA1 # SYMBOL FOR BULLET
& 19 ; * 1FAA2 # SYMBOL FOR LEFT SINGLE QUOTATION MARK
& 20 ; * 1FAA3 # SYMBOL FOR RIGHT SINGLE QUOTATION MARK
& 21 ; * 1FAA4 # SYMBOL FOR COMMA-SHAPED APOSTROPHE
& 22 ; * 1FAA5 # SYMBOL FOR SINGLE LOW-9 QUOTATION MARK
& 23 ; * 1FAA6 # SYMBOL FOR LEFT DOUBLE QUOTATION MARK
& 24 ; * 1FAA7 # SYMBOL FOR RIGHT DOUBLE QUOTATION MARK
& 25 ; * 1FAA8 # SYMBOL FOR DOUBLE LOW-9 QUOTATION MARK
& 26 ; * 1FAA9 # SYMBOL FOR SINGLE LEFT-POINTING ANGLE QUOTATION MARK
& 27 ; * 1FAAA # SYMBOL FOR SINGLE RIGHT-POINTING ANGLE QUOTATION MARK
& 28 ; * 1FAAB # SYMBOL FOR DOUBLE LEFT-POINTING ANGLE QUOTATION MARK
& 29 ; * 1FAAC # SYMBOL FOR DOUBLE RIGHT-POINTING ANGLE QUOTATION MARK
& 30 ; * 1FAAD # SYMBOL FOR LEFT ANGLE BRACKET
& 31 ; * 1FAAE # SYMBOL FOR RIGHT ANGLE BRACKET
& 32 ; * 1FAAF # SYMBOL FOR DOUBLE LEFT ANGLE BRACKET
& 33 ; * 1FAB0 # SYMBOL FOR DOUBLE RIGHT ANGLE BRACKET
& 34 ; * 1FAB1 # SYMBOL FOR PRIME
& 35 ; * 1FAB2 # SYMBOL FOR DOUBLE PRIME
& 36 ; * 1FAB3 # SYMBOL FOR REVERSED PRIME
& 37 ; * 1FAB4 # SYMBOL FOR REVERSED DOUBLE PRIME
& 38 ; * 1FAB5 # SYMBOL FOR DITTO MARK
& 39 ; * 1FAB6 # SYMBOL FOR FRACTION SLASH
& 40 ; * 1FAB7 # SYMBOL FOR DIVISION SLASH
& 41 ;    25CC # DOTTED CIRCLE
& 42 ; *  2B96 # DOTTED UPPER HALF CIRCLE
& 43 ; *  2B97 # DOTTED LOWER HALF CIRCLE
& 44 ; *  2B74 # WHITE HORIZONTAL NARROW RECTANGLE
& 45 ; *  2B75 # WHITE VERTICAL NARROW RECTANGLE
& 46 ; * 1FAB8 # SYMBOL FOR COMBINING TILDE OVERLAY
& 47 ; * 1FAB9 # SYMBOL FOR COMBINING SHORT STROKE OVERLAY
& 48 ; * 1FABA # SYMBOL FOR COMBINING LONG STROKE OVERLAY
& 49 ; * 1FABB # SYMBOL FOR COMBINING SHORT SOLIDUS OVERLAY
& 50 ; * 1FABC # SYMBOL FOR COMBINING LONG SOLIDUS OVERLAY
```

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646[1]
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 and of ISO/IEC 9995-10:2013 into the UCS***
2. Requester's name: *ISO/IEC JTC1/SC35*
3. Requester type (Member body/Liaison/Individual contribution): *Liaison Contribution*
4. Submission date: *2017-02-28*
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, including a new block "Miscellaneous Technical Supplement"*
2. Number of characters in proposal: *108 + 2 Named Sequences*
3. Proposed category (select one from below - see section 2.2 of P&P document):
   A-Contemporary X B.1-Specialized (small collection) B.2-Specialized (large collection)
   C-Major extinct D-Attested extinct E-Minor extinct
   F-Archaic Hieroglyphic or Ideographic G-Obscure or questionable usage symbols
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 and 9995-10 (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.

[1] 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? *Partially*
   If YES explain *The symbols from ISO/IEC 9995-7 and its Amd1 were proposed originally in L2/12-302 = ISO/IEC JTC1/SC2/WG2 N4317 and its predecessors, which are replaced by this document*
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.)? *Yes*
   If YES, with whom? *Members of SC35*
   If YES, available relevant documents: *ISO/IEC 9995-7:2009 + Amd1 (2012), 9995-10:2013*
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? *Yes*
   Reference: *All users of keyboards compliant to the ISO/IEC 9995 series*
4. The context of use for the proposed characters (type of use; common or rare) *Common*
   Reference: *see above*
5. Are the proposed characters in current use by the user community? *Yes*
   If YES, where? Reference: *see text*
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? *Partially*
   If YES, is a rationale provided? *Yes*
   If YES, reference: *To keep them in line with similar characters*
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? *No*
   If YES, is a rationale for its inclusion provided?
   If YES, reference:
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? *No*
   If YES, is a rationale for its inclusion provided?
   If YES, reference: *(Two such characters are proposed as Named Sequences, using the composed character sequences constituting them)*
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character? *No*
    If YES, is a rationale for its inclusion provided?
    If YES, reference:
11. Does the proposal include use of combining characters and/or use of composite sequences? *Yes*
    If YES, is a rationale for such use provided? *Yes*
    If YES, reference: *see text*
    Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? *Yes*
    If YES, reference: *see text*
12. Does the proposal contain characters with any special properties such as control function or similar semantics? *No*
    If YES, describe in detail (include attachment if necessary)
13. Does the proposal contain any Ideographic compatibility character(s)? *No*
    If YES, is the equivalent corresponding unified ideographic character(s) identified?
    If YES, reference: