Universal Multiple-Octet Coded Character Set International Organization for Standardization Organisation Internationale de Normalisation Международная организация по стандартизации

**Doc Type: Working Group Document** 

Title: Proposal to incorporate the symbols of ISO/IEC 9995-10:2013 into the UCS

Source: ISO/IEC JTC1/SC35

Authors: ISO/IEC JTC1/SC35/WG1

**Status: Liaison Contribution** 

Action: For consideration by JTC1/SC2/WG2 and UTC

Date: 2013-02-22

#### 1. Introduction

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 several instances of the ISO/IEC 9995-10 base mark for diacritical marks to be entered by the dead key method.

## 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 and 9995-10 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 having 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 9995-10 symbols. This would be accomplished by encoding the characters included in this proposal.

### 2. Proposed Characters

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

### Keyboard symbols from ISO/IEC 9995-10:2013

	U+2BF0	DOTTED UPPER HALF CIRCLE = ISO/IEC 9995-10 symbol 42, IEC 60417 symbol 6138 → 25CC dotted circle
V	U+2BF1	DOTTED LOWER HALF CIRCLE = ISO/IEC 9995-10 symbol 43, IEC 60417 symbol 6139
	U+2BF2	DEAD KEY BASE MARK = ISO/IEC 9995-10 symbol 44, IEC 60417 symbol 6140
	U+2BF3	CAP HEIGHT MARKER = ISO/IEC 9995-10 symbol 45, IEC 60417 symbol 6141 • identifies modifier letters on keytops
+	U+2BF4	SYMBOL FOR COMBINING TILDE OVERLAY = ISO/IEC 9995-10 symbol 46, IEC 60417 symbol 6142 → 0334 combining tilde overlay
#	U+2BF5	SYMBOL FOR COMBINING SHORT STROKE OVERLAY = ISO/IEC 9995-10 symbol 47, IEC 60417 symbol 6143 → 0335 combining short stroke overlay
+	U+2BF6	SYMBOL FOR COMBINING LONG STROKE OVERLAY = ISO/IEC 9995-10 symbol 48, IEC 60417 symbol 6144 → 0336 combining long stroke overlay
1	U+2BF7	SYMBOL FOR COMBINING SHORT SOLIDUS OVERLAY = ISO/IEC 9995-10 symbol 49, IEC 60417 symbol 6145 → 0337 combining short solidus overlay
*	U+2BF8	SYMBOL FOR COMBINING LONG SOLIDUS OVERLAY = ISO/IEC 9995-10 symbol 50, IEC 60417 symbol 6146 → 0338 combining long solidus overlay

# New Block: Miscellaneous Symbols and Pictographs Supplement (U+1F900-U+1F9FF)

# Keyboard symbols from ISO/IEC 9995-10:2013

П	U+1F900	SYMBOL FOR HYPHEN = ISO/IEC 9995-10 symbol 1, IEC 60417 symbol 6097 → 2010 hyphen
<del>.</del>	U+1F901	SYMBOL FOR HYPHENATION POINT = ISO/IEC 9995-10 symbol 2, IEC 60417 symbol 6099 → 2027 hyphenation point
1	U+1F902	SYMBOL FOR FIGURE DASH = ISO/IEC 9995-10 symbol 3, IEC 60417 symbol 6100 → 2013 figure dash
	U+1F903	SYMBOL FOR EN DASH = ISO/IEC 9995-10 symbol 4, IEC 60417 symbol 6101 → 2013 en dash
	U+1F904	SYMBOL FOR EM DASH = ISO/IEC 9995-10 symbol 5, IEC 60417 symbol 6102 → 2014 em dash
<u>ш</u>	U+1F905	SYMBOL FOR TWO-EM DASH = ISO/IEC 9995-10 symbol 6, IEC 60417 symbol 6103 → 23EA two-em dash
<u> </u>	U+1F906	SYMBOL FOR THREE-EM DASH = ISO/IEC 9995-10 symbol 7, IEC 60417 symbol 6104 → 23EB three-em dash
_//_	U+1F907	SYMBOL FOR HORIZONTAL BAR = ISO/IEC 9995-10 symbol 8, IEC 60417 symbol 6105 → 6105 horizontal bar
-=-	U+1F908	SYMBOL FOR MINUS SIGN = ISO/IEC 9995-10 symbol 9, IEC 60417 symbol 6106 → 2212 minus sign
ī	U+1F909	SYMBOL FOR MACRON = ISO/IEC 9995-10 symbol 10, IEC 60417 symbol 6107 → 00AF macron
II	U+1F90A	SYMBOL FOR OVERLINE = ISO/IEC 9995-10 symbol 11, IEC 60417 symbol 6108 → 203E overline

	U+1F90B	SYMBOL FOR LOW LINE  = ISO/IEC 9995-10 symbol 12, IEC 60417 symbol 6109  → 005F low line
<del> </del>	U+1F90C	SYMBOL FOR DOUBLE HYPHEN  = ISO/IEC 9995-10 symbol 13, IEC 60417 symbol 6098  → 2E40 double hyphen
~=	U+1F90D	SYMBOL FOR SWUNG DASH = ISO/IEC 9995-10 symbol 14, IEC 60417 symbol 6110 → 2053 swung dash
~	U+1F90E	SYMBOL FOR TILDE OPERATOR = ISO/IEC 9995-10 symbol 15, IEC 60417 symbol 6111 → 223C tilde operator
<b>'</b> *	U+1F90F	SYMBOL FOR LARGE ASTERISK = ISO/IEC 9995-10 symbol 16, IEC 60417 symbol 6112 → 2217 asterisk operator
l•	U+1F910	SYMBOL FOR MIDDLE DOT = ISO/IEC 9995-10 symbol 17, IEC 60417 symbol 6113 → 00B7 middle dot
<b> • </b>	U+1F911	SYMBOL FOR BULLET = ISO/IEC 9995-10 symbol 18, IEC 60417 symbol 6114 → 2022 bullet
<b>6</b>	U+1F912	SYMBOL FOR LEFT SINGLE QUOTATION MARK = ISO/IEC 9995-10 symbol 19, IEC 60417 symbol 6115 → 2018 left single quotation mark
2	U+1F913	SYMBOL FOR RIGHT SINGLE QUOTATION MARK  = ISO/IEC 9995-10 symbol 20, IEC 60417 symbol 6116  → 2019 right single quotation mark
••	U+1F914	SYMBOL FOR COMMA-SHAPED APOSTROPHE  = ISO/IEC 9995-10 symbol 21, IEC 60417 symbol 6117  → 2019 right single quotation mark
•	U+1F915	SYMBOL FOR SINGLE LOW-9 QUOTATION MARK = ISO/IEC 9995-10 symbol 22, IEC 60417 symbol 6118 → 201A single low-9 quotation mark
<u>66</u>	U+1F916	SYMBOL FOR LEFT DOUBLE QUOTATION MARK = ISO/IEC 9995-10 symbol 23, IEC 60417 symbol 6119 → 201C left double quotation mark

22	U+1F917	SYMBOL FOR RIGHT DOUBLE QUOTATION MARK = ISO/IEC 9995-10 symbol 24, IEC 60417 symbol 6120 → 201D right double quotation mark
<b>?</b> ?	U+1F918	SYMBOL FOR DOUBLE LOW-9 QUOTATION MARK = ISO/IEC 9995-10 symbol 25, IEC 60417 symbol 6121 → 201E double low-9 quotation mark
*	U+1F919	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+1F91A	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+1F91B	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+1F91C	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
ζ	U+1F91D	SYMBOL FOR LEFT ANGLE BRACKET  = ISO/IEC 9995-10 symbol 30, IEC 60417 symbol 6126  → 27E8 mathematical left angle bracket
<b>)</b>	U+1F91E	SYMBOL FOR RIGHT ANGLE BRACKET  = ISO/IEC 9995-10 symbol 31, IEC 60417 symbol 6127  → 27E9 mathematical right angle bracket
<b>//</b>	U+1F91F	SYMBOL FOR DOUBLE LEFT ANGLE BRACKET  = ISO/IEC 9995-10 symbol 32, IEC 60417 symbol 6128  → 27EA mathematical double left angle bracket
<b>&gt;&gt;</b> 1	U+1F920	SYMBOL FOR DOUBLE RIGHT ANGLE BRACKET  = ISO/IEC 9995-10 symbol 33, IEC 60417 symbol 6129  → 27EB mathematical double right angle bracket
7	U+1F921	SYMBOL FOR PRIME = ISO/IEC 9995-10 symbol 34, IEC 60417 symbol 6130 → 2032 prime
<b>"</b> "	U+1F922	SYMBOL FOR DOUBLE PRIME  = ISO/IEC 9995-10 symbol 35, IEC 60417 symbol 6131  → 2033 double prime

U+1F923 SYMBOL FOR REVERSED PRIME = ISO/IEC 9995-10 symbol 36, IEC 60417 symbol 6132 → 2035 reversed prime .// U+1F924 SYMBOL FOR REVERSED DOUBLE PRIME = ISO/IEC 9995-10 symbol 37, IEC 60417 symbol 6133 → 2036 reversed double prime .//. U+1F925 SYMBOL FOR DITTO MARK = ISO/IEC 9995-10 symbol 38, IEC 60417 symbol 6134  $\rightarrow$  3033 ditto mark U+1F926 SYMBOL FOR FRACTION SLASH = ISO/IEC 9995-10 symbol 39, IEC 60417 symbol 6135 → 2044 fraction slash U+1F927 SYMBOL FOR DIVISION SLASH = ISO/IEC 9995-10 symbol 40, IEC 60417 symbol 6136 → 2215 division slash

#### **Properties:**

```
2BF0;DOTTED UPPER HALF CIRCLE;So;0;ON;;;;N;;;;
2BF1;DOTTED LOWER HALF CIRCLE;So;0;ON;;;;;N;;;;;
2BF2;DEAD KEY BASE MARK;So;0;ON;;;;;N;;;;;
2BF3;CAP HEIGHT MARKER;So;0;ON;;;;N;;;;
2BF4;SYMBOL FOR COMBINING TILDE OVERLAY;So;0;ON;;;;;N;;;;
2BF5;SYMBOL FOR COMBINING SHORT STROKE OVERLAY;So;0;ON;;;;;N;;;;
2BF6;SYMBOL FOR COMBINING LONG STROKE OVERLAY;So;0;ON;;;;;N;;;;
2BF7; SYMBOL FOR COMBINING SHORT SOLIDUS OVERLAY; So; 0; ON; ; ; ; ; ; ; ; ;
2BF8;SYMBOL FOR COMBINING LONG SOLIDUS OVERLAY;So;0;ON;;;;;N;;;;;
1F900;SYMBOL FOR HYPHEN;So;0;ON;;;;;N;;;;
1F901;SYMBOL FOR HYPHENATION POINT;So;0;ON;;;;;N;;;;;
1F902;SYMBOL FOR FIGURE DASH;So;0;ON;;;;;N;;;;
1F903;SYMBOL FOR EN DASH;So;0;ON;;;;;N;;;;
1F904;SYMBOL FOR EM DASH;So;0;ON;;;;;N;;;;;
1F905;SYMBOL FOR TWO-EM DASH;So;0;ON;;;;;N;;;;
1F906;SYMBOL FOR THREE-EM DASH;So;0;ON;;;;;N;;;;;
1F907;SYMBOL FOR HORIZONTAL BAR;So;0;ON;;;;;N;;;;;
1F908;SYMBOL FOR MINUS SIGN;So;0;ON;;;;;N;;;;
1F909;SYMBOL FOR MACRON;So;0;ON;;;;;N;;;;
1F90A; SYMBOL FOR OVERLINE; So; 0; ON; ;;;; N;;;;;
1F90B;SYMBOL FOR LOW LINE;So;0;ON;;;;;N;;;;;
1F90C;SYMBOL FOR DOUBLE HYPHEN;So;0;ON;;;;;N;;;;;
1F90D;SYMBOL FOR SWUNG DASH;So;0;ON;;;;;N;;;;
1F90E;SYMBOL FOR TILDE OPERATOR;So;0;ON;;;;;N;;;;;
1F90F;SYMBOL FOR LARGE ASTERISK;So;0;ON;;;;;N;;;;
1F910;SYMBOL FOR MIDDLE DOT;So;0;ON;;;;;N;;;;;
1F911;SYMBOL FOR BULLET;So;0;ON;;;;;N;;;;;
1F912; SYMBOL FOR LEFT SINGLE QUOTATION MARK; So; 0; ON; ;;;; N; ;;;;
1F913;SYMBOL FOR RIGHT SINGLE QUOTATION MARK;So;0;ON;;;;;N;;;;;
1F914;SYMBOL FOR COMMA-SHAPED APOSTROPHE;So;0;ON;;;;;N;;;;
1F915;SYMBOL FOR SINGLE LOW-9 QUOTATION MARK;So;0;ON;;;;;N;;;;;
1F916; SYMBOL FOR LEFT DOUBLE QUOTATION MARK; So; 0; ON; ;;;; N; ;;;;
1F917;SYMBOL FOR RIGHT DOUBLE QUOTATION MARK;So;0;ON;;;;;N;;;;;
1F918; SYMBOL FOR DOUBLE LOW-9 QUOTATION MARK; So; 0; ON; ;;;; N; ;;;;
1F919; SYMBOL FOR SINGLE LEFT-POINTING ANGLE QUOTATION MARK; So; 0; ON; ;;;; N;;;;
1F91A; SYMBOL FOR SINGLE RIGHT-POINTING ANGLE QUOTATION MARK; So; 0; ON; ;;;; N;;;;
1F91B; SYMBOL FOR DOUBLE LEFT-POINTING ANGLE QUOTATION MARK; So; 0; ON; ;; ;; N; ;; ;;
1F91C;SYMBOL FOR DOUBLE RIGHT-POINTING ANGLE QUOTATION MARK;So;0;ON;;;;;N;;;;
1F91D;SYMBOL FOR LEFT ANGLE BRACKET;So;0;ON;;;;;N;;;;;
1F91E; SYMBOL FOR RIGHT ANGLE BRACKET; So; 0; ON; ;;;; N; ;;;;
1F91F;SYMBOL FOR DOUBLE LEFT ANGLE BRACKET;So;0;ON;;;;;N;;;;
1F920; SYMBOL FOR DOUBLE RIGHT ANGLE BRACKET; So; 0; ON; ;;;; N; ;;;;
1F921;SYMBOL FOR PRIME;So;0;ON;;;;;N;;;;;
1F922;SYMBOL FOR DOUBLE PRIME;So;0;ON;;;;;N;;;;;
1F923;SYMBOL FOR REVERSED PRIME;So;0;ON;;;;;N;;;;;
1F924;SYMBOL FOR REVERSED DOUBLE PRIME;So;0;ON;;;;;N;;;;;
1F925;SYMBOL FOR DITTO MARK;So;0;ON;;;;;N;;;;
1F926;SYMBOL FOR FRACTION SLASH;So;0;ON;;;;;N;;;;;
1F927;SYMBOL FOR DIVISION SLASH;So;0;ON;;;;;N;;;;;
```

# 3. Annotations to be changed for existing characters

○ U+25CC DOTTED CIRCLE

ADD: = ISO/IEC 9995-10 symbol 41, IEC 60417 symbol 6137

ADD: → 2BF0 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

#### ISO/IEC JTC 1/SC 2/WG 2 PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 106461

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

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

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

See also <a href="http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html">http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html</a>.

See also <a href="http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html">http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html</a>.

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Title: Proposal to incorpora     Requester's name:	ate the symbols of ISO/IEC 9995-10:2013 i	into the UCS		
Requester's name:     Requester type (Member body/Liaison/Individuals)     Submission data:	idual contribution): Liaison C	Contribution		
L 4. OUDINISSION DAIE.	7013	3-02-22		
Requester's reference (if applicable):	***************************************			
6. Choose one of the following:				
This is a complete proposal:	I-4	Yes		
(or) More information will be provided I	later:			
B. Technical – General				
Choose one of the following:     a. This proposal is for a new script (set or	f characters):	No		
Proposed name of script:	i characters).	110		
b. The proposal is for addition of characte	er(s) to an existing block: Yes, and	to a supplement of one		
Name of the existing block:	Miscellaneous symbols and	d Arrows;		
_	Miscellaneous Symbols and Pictogr	aphs Supplement		
Number of characters in proposal:		49		
3. Proposed category (select one from below -	see section 2.2 of P&P document):			
A-Contemporary X B.1-Specialized (s	small collection) B.2-Specialized (la	rge collection)		
C-Major extinct D-Attested extinct	E-Minor extinct			
F-Archaic Hieroglyphic or Ideographic				
4. Is a repertoire including character names pro	ovided?	Yes		
a. If YES, are the names in accordance v in Annex L of P&P document?	with the character naming guidelines	Voc		
b. Are the character shapes attached in a	a legible form suitable for review?	Yes Yes		
5. Fonts related:	d legible form suitable for review:	700		
	outerized font to the Project Editor of 10646 fo	or publishing the		
standard?		parameter game		
	FISO/IEC 9995-10 (Karl Pentzlin), on request			
	ruse of the font by the editors (include address			
	Public Domain according to SC35 resolution 2	<u> </u>		
6. References:	a distinguise descriptive toute etc.) provided	Vac		
a. Are references (to other character sets	s, dictionaries, descriptive texts etc.) provided as samples from newspapers, magazines, or	other sources)		
of proposed characters attached?	Yes	other sources)		
7. Special encoding issues:				
	s of character data processing (if applicable)	such as input,		
	g, transliteration etc. (if yes please enclose in			
8. Additional Information:				
Submitters are invited to provide any additional				
that will assist in correct understanding of and				
Examples of such properties are: Casing informinformation such as line breaks, widths etc., Co				
Collation behaviour, relevance in Mark Up conf				
related information. See the Unicode standard at <a href="http://www.unicode.org">http://www.unicode.org</a> for such information on other scripts. Also				
see http://www.unicode.org/Public/UNIDATA/U	JCD.html and associated Unicode Technical I	Reports for information		
needed for consideration by the Unicode Techi	nical Committee for inclusion in the Unicode	Standard.		

<sup>&</sup>lt;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

Has this proposal for addition of character(s) been submitted before?	No
If YES explain	
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
14 4 60007	763
100/100 0005 40:0043	<del>-</del>
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	700
4. The context of use for the proposed characters (type of use; common or rare)	common
	COMMON
Reference: see above  5. Are the proposed characters in current use by the user community?	Yes
If VEC where 2. Deferences	163
6. After giving due considerations to the principles in the P&P document must the proposed characte	re he 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)	
Can any of the proposed characters be considered a presentation form of an existing	.u):
character or character sequence?	No
If YES, is a rationale for its inclusion provided?	
If YES, reference:	
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:	
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?	No
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) provi	ded?
If YES, reference:	
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)	<u>-</u>
	<u>-</u>
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:	