ISO/IEC JTC1/SC2/WG2 Coded Character Set Secretariat: Japan (JISC)

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Comments were received from China, Japan, Korea (ROK - South), Serbia, and USA. The following document is the disposition of those comments. The disposition is organized per country.

Note 2 – With some minor exceptions, the full content of the ballot comments have been included in this document to facilitate the reading. The dispositions are inserted in between these comments and are marked in <u>Underlined Bold Serif text</u>, with explanatory text in italicized serif.

As a result of these draft dispositions, three of the four negative votes were fully accommodated, concerning China, Korea (ROK), and USA NBs.

As a result of these dispositions the following significant changes were made:

Characters removed:

1DFA COMBINING OVERCURL

1F9CC TROLL

T Source (TB-55BD) reference added back to U+53FD (difference source value)

Significant glyph changes in CJK extension G:

30034, 3039F, 30CEB, 3109C, 310E5

China: Negative

Technical comment

T1. Mongolian

The JTC1/SC2/WG2N5103 (SC2/WG2 Mongolian Ad Hoc Report) dated June 17, 2019 writes:

"Remove the variant information from ISO/IEC 10646 6th Edition and the Unicode Standard V13 from the names list, but keep all the stable Mongolian encoding information that will never change: the character code point and name. Provide a formal, reference link to UTR#54 in 10646 and the Unicode Standard, and document that UTR#54 is the standard reference for Mongolian variant information for implementers. " (See Entry 3. Documentation of the current names list Mongolian variant information and next steps.)

The variation information was removed from the UCS6CD3 while it seems that "a formal, reference link to UTR#54 in 10646" was not reflected in this document.

Proposed change by China

"Provide a formal, reference link to UTR#54 in 10646 and the Unicode Standard, and document that UTR#54 is the standard reference for Mongolian variant information for implementers" at appropriate place in UCS.

Accepted

The link for the published version will be: https://www.unicode.org/reports/tr54/, current draft of the main page is https://www.unicode.org/reports/tr54/tr54-1.html and the actual information is in https://www.unicode.org/reports/tr54/U1800 v12 1 20190426.pdf.

The note 2 in clause 17.6.2 (Standardized variation sequences) will be modified as follows:

NOTE 2 – The Mongolian characters have various presentation forms depending on their position in a code unit sequence. These presentations forms are called isolate, initial, medial and final. The reference for Mongolian variant information for implementers is provided in https://www.unicode.org/reports/tr54/.

Japan: Negative

General, Technical, and Editorial comments (noted as GE, TE, or ED)

Technical comments

TE.1. Page 9 Clause 5 Electronic data attachments

In clause 5 "Electronic data attachments", there are several URLs for reference document. As described in RESOLUTION M 24-04 from the 24th SC2 Plenary Meeting, please implement a document format in accordance with ISO guideline.

Proposed change by Japan.

See above.

Accepted

The links in the DIS text for that clause and other relevant clauses referring to the same data will change from: http://www.unicode.org/wg2/iso10646/edition6/data/... to http://standards.iso.org/iso-iec/10646/ed-6/....

TE.2. Page 530, 34.5 Code charts and lists of character names - CJK characters U+4DB6

10 CJK unified ideographic characters are added on CJK extension-A from 4DB6 through 4DBF. Japan thinks some characters out of these 10 characters should not be added. See the following comments from TE2 through TE8.

It is proposed that following CJK character is added into U+4DB6.



In addition to that, the glyph of U+2B83C is changed as follows.



According to IRGN2370, this is because the glyph of U+2B83C in current 10646 standard (see follows) was wrong, so should be modified.

We have to accept this glyph change because it is error.

However, in this tread, we do not understand why the glyph on U+4DB6 which is different from current U+2B83C is newly added.

Proposed change by Japan.

Delete U+4DB6, then propose the addition of this character into the next set of CJK Unified Ideograph Extension after CJK Extension-G.

Not accepted

IRGN2370 (http://appsrv.cse.cuhk.edu.hk/~irg/irg/irg52/IRGN2370.pdf) in page 4 says:

Therefore, the V glyph for U+2B83C should be modified to 三上捉, and the kRSUnicode value should be changed to 1.12. On the other hand, the disunifiable character 三上提 should be re-submitted, URO+ or the next working set.

Putting the proposed character after Extension G would delay the proposed character by at least 5 years, probably much more, because the working set after Extension G is already frozen (WS 2017). At the same time, IRGN2370 provided evidence for the glyph currently encoded at U=2B83C. The other suggestion (using URO+) is what was implemented in principle (using unencoded space at the end of Extension A).

TE.3. Page 530, 33.5 Code charts and lists of character names - U+4DB7

Addition of U+4DB7 is proposed because the character on T-column of U+53FD should be disunified with G0-5F34.



Then, In CD3 text, the character on T-column of U+53FD is deleted as follows.



We think the character on T-column of U+53FD should be preserved for implementation compatibility.

Proposed change by Japan.

Do not delete the character on T-column of U+53FD. Then, the source information would be TU-53FD.

Accepted in principle

After consultation with TCA experts, the source TB-5545 was found in Plane 11 of CNS 11643 matching the intended glyph as shown by the G glyph. As the previous T glyph was clearly in error from a unification point of view, it seems much preferable to provide a reference which matches the intended reference. Therefore, the T source will be set to TB-5545, and the glyph is similar to the G source. A glyph following TCA design has been created by the editor, considering other T ideographs with similar components:

U+53FD (T source):

See following picture for evidence of the original source:



TE.4. Page 530, 33.5 Code charts and lists of character names – U+4DBA

It is proposed that the following character is added on U+4DBA with radical MOON.



According to IRG N2383, this is because the radical of character on U+2F8D6 is actually MOON, so that this character could not be unified with U+80AD, then could not be categorized as CJK compatibility character anymore.



We understand this rationale to change the radical and this character should not be categorized as CJK compatibility character. However, this situation could be solved without adding new character on U+4DBA.

Proposed change by Japan.

Change the radical of U+2F8D6 to MOON, and classify it as CJK unified ideograph, not CJK compatibility ideograph. Same approach had been taken on CJK compatibility ideographs block from U+F900, such as U+FA0E, U+FA0F.

Not accepted

Note that the CD code chart representation for U+2F8D6 is:



It is true that in the past some of the characters part of the CJK compatibility block were re-classified as CJK unified ideographs. This is however not possible anymore because this would change the normalization behavior of these characters and would impact many protocols relying on the stabilization of the normalizations forms. See the note 1 in sub-clause 22 of the standard:

NOTE 1 – The result of applying any of these normalization forms onto a code unit sequence is intended to stay stable over time. It means that the normalized representation of a code unit sequence consisting of characters assigned in this version of the standard remains normalized even when the standard is amended.

Because of that constraint a new character is required for this dis-unification.

TE.5. page 530, 33.5 Code charts and lists of character names – U+4DBB

The following character is added on U+4DBB with radical MOON.



According to IRG N2383, this is because the radical of character on U+2F8D7 is actually MOON, so that this character could not be unified with U+43D9, then could not be categorized as CJK compatibility character anymore.



We understand this rationale to change the radical and this character should not be categorized as CJK compatibility character. However, this situation could be solved without adding new character on U+4DBB.

Proposed change by Japan.

Change the radical of U+2F8D7 to MOON, and classify it as CJK unified ideograph, not CJK compatibility ideograph. Same approach had been taken on CJK compatibility ideographs block from U+F900, such as U+FA0E, U+FA0F.

Not accepted

Same rationale as for TE.4.

TE.6. page 530, 33.5 Code charts and lists of character names – U+4DBD

It is proposed that the following character is added on U+4DBD with radical MOON.



According to IRG N2383, this is because the character on U+2F8DA could not be unified with U+6721, then could not be categorized as CJK compatibility character anymore.



We understand the reason why this character should not be categorized as CJK compatibility character. However, this situation could be solved without adding new character on U+4DBD.

Proposed change by Japan.

Classify U+2F8DA as CJK unified ideograph, not CJK compatibility ideograph.

Same approach had been taken on CJK compatibility ideographs block from U+F900, such as U+FA0E, U+FA0F. This save the coding space.

Not accepted

Same rationale as for TE.4.

Note that the CD code chart representation for U+2F8DA is:



~ 6721 FE00 (new TU source)

TE.7. page 530, 33.5 Code charts and lists of character names - U+4DBE

It is proposed that the following character is added on U+4DBE.



According to IRG N2338, this is because the character on U+2F8F0 could not be unified with U+238A7, then could not be categorized as CJK compatibility character anymore.



We understand the reason why this character should not be categorized as CJK compatibility character. However, this situation could be solved without adding new character on U+4DBE.

Proposed change by Japan.

Classify U+2F8F0 as CJK unified ideograph, not CJK compatibility ideograph.

Same approach had been taken on CJK compatibility ideographs block from U+F900, such as U+FA0E, U+FA0F. This save the coding space.

Not accepted

Same rationale as for TE.4.

Note that the CD code chart representation for U+2F8F0 is:



TE.8. page 530, 33.5 Code charts and lists of character names - U+4DBF

It is proposed that the following character is added on U+4DBF.



According to IRG N2338, this is because the character on U+2FA02 could not be unified with U+98E2, then could not be categorized as CJK compatibility character anymore.



We understand the reason why this character should not be categorized as CJK compatibility character. However, this situation could be solved without adding new character on U+4DBF.

Proposed change by Japan.

Classify U+2FA02 as CJK unified ideograph, not CJK compatibility ideograph.

Same approach had been taken on CJK compatibility ideographs block from U+F900, such as U+FA0E, U+FA0F. This save the coding space.

Not accepted

Same rationale as for TE.4.

Note that the CD code chart representation for U+2FA02 is:



TE.9. page 34, 24.1 List of source references

On this CD3 text, some of source information for the character on T column is changed as TU-xxxx. The meaning of "U" of TU should be explained in the section 24.1.

Proposed change by Japan.

Add some explanation for "TU" next to "TF". For example,

TU For the compatibility purpose of previous version of this standard.

Accepted in principle

There is already a note in 24.2 which captures the purpose of this kind of sources:

NOTE 3 – The reference types 'GU', 'HU', 'KU', 'KPU', 'TU', and 'VU' identifies self-referenced code points with no other sources within their source types. The value associated is simply the character code point.

It is however possible to add another note in 24.1 after the initial enumeration of the sources with following terms:

NOTE 1 – Some source references use a special type to denote self-referencing (i.e. the standard code point is the reference). These sources may correspond to initial sources that could not be confirmed, or to sources used in previous versions of this standard. The categories using this notation are 'G', 'H', 'K', 'KP', 'T', and 'V'. The corresponding sources are 'GU', 'HU', 'KU', 'KPU', 'TU', and 'VU'.

In summary, while the changes requested made in TE.2, TE.4 to TE.8 were not accepted, there were no disagreement in the need for disunification. For the first request TE.2), it is a matter of schedule concerning the addition for the needed code point, for the others (TE.4 to TE.8), the solution requested as an alternative by the JP NB (transforming existing CJK compatibility ideographs into CJK unified ideographs) is not implementable because the stability requirement concerning normalization forms prevents this sort of changes.

Korea (South): Negative comments

Technical comments

TE.1. Page 47, 27.10 Character names for Hangul syllables, Table 8, Notes 1 and 2

- Requests: Method I -> Method II; Method II -> Method I; Table 5 -> Table 8 (twice)
- 1) Note 2. ... The I and F strings in Syllable name elements are based on Method I of ISO/TR 11941
- Note 2. ... The I and F strings in Syllable name elements are based on Method II of ISO/TR 11941
- 2) Note 2. ... The I and F strings in Annotation elements of the same Table 5 are based on Method II of ISO/TR 11941
- Note 2. ... The I and F strings in Annotation elements of the same Table 5 are based on Method I of ISO/TR 11941

3) NOTE 1 –. The I and F strings in Syllable name elements of Table 5 \dots

NOTE 1 –. The I and F strings in Syllable name elements of Table 8 ...
4) NOTE 2 ... The I and F strings in Annotation elements of the same Table 5 ...

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NOTE 2 ... The I and F strings in Annotation elements of the same Table 8 ...

- Reasons:

- 1) As you can see the case of letter ¬, I string 'G' in Syllable name elements (in a blue rectangle) is the same as 'g' in Method II (in a blue rectangle) of ISO TS (TR) 11941, NOT 'k' in Method I (in a red rectangle).
- 2) As you can see the case of letter ¬, I string 'k' in Annotation elements (in a red rectangle) is the same as 'k' in Method I (in a red rectangle) of ISO TS (TR) 11941, NOT 'g' in Method II (in a blue rectangle).
- 3), 4) Table '5' seems a typo of Table '8'.

ISO/TR 11941:1996(E)

4 Transliteration tables

Table 1 — Consonants

	V	Latin			
No.	Korean	Method I	Method II		
1	7	k	g		
2	7	kh	k		
3	רר	kk	gg		
4	_	t	ď		
5	E	th	t		
6	cc	tt	dd		
7	ㅂ	P	ь		
8	ᄑ	ph	р		
9	범	PP	bb		
10	_	c	j		
11	츳	ch	c		
12	ᄍ	сс	jj		
13	٨	5	s		
14	~	55	ss		
15	8	h	h		
16	0	zero	zero		
17	L	n	n		
18	2	r/l	r/l		
19	0	m	m		

	number	string	string	string	string	string	string
	0	G	A		k	a	
	1	GG	AE	G	kk	ae	k
	2	N	YA	GG	n	ya	kk
	3	D	YAE	GS	t	yae	ks
-		n n	20	**			

Accepted

TE.2. Request to change 6 K glyphs in Ext. G - Reasons and detailed changes are shown and explained below.

- These changes are reflected in the attached TTF font "ExtG_KR-v31" (2019.10.18.).

No.	UCS cp in CD 10646.3; K src. ref.; (UCS cp in TTF)	ISO/IEC CD 10646.3 (SC2 N4690)	CJK_ExtG_KR-v31 TTF font (NEW)	Reason, Modification
1	U+3039F KC-00970 (U+3466)	3039F	炭	A little space was inserted between upper and lower components to make them look distinct components.
2	U+30865 KC-02449 (U+34E6)	30865 犬 94.11 犬 94.11 KC-02449	潛	Based on the evidence shown left, one slanted stroke was removed from lower right component 白 (white).
3	U+3109C KC-04510 (U+3590)	3109C 頁 181.10 旁 KC-04510	顤	65B9 対 70.0 方 方 方 方 方 方 防房放 ND 5841 ND 5825 ND 5825 As you can see in several examples shown above, the upper component of 方 (corner) is wrtten as a vertical bar rather than as a slanted dot (stroke) in Korean style fonts.
4	U+310E5 KC-04530 (U+3593)	310E5 食 184.6 KC-04530	酬	9920

5	U+30CEB KC-03812 (U+354E)	30CEB 行 144.7 (万 KC-03812	傾了	KC-03812 There is a very thin slanted stroke within 目 component. It was removed.
6	U+30034 KC-00011 (U+3401)	30034 Z 5.4 KC-00011	丢	Width value of the char in TTF font was only half of the width of the actual char. It was corrected.

Proposed change by Korea

See above.

Partially accepted

Five of the six changes are not controversial. However, concerning U+30865, it is interesting to reconstruct how this character was added in Extension G.

It appeared in WS2015 as following:

index	source	glyph	Evidence	IDS
02436	KC-2449	潛	档	Ⅲ犭習

Then in reviewing the set, Japanese experts made the following observation:

02436 F	KC-02449	潛	智	N	the lower left component in the evidence is 日, instead of 白
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(source http://appsrv.cse.cuhk.edu.hk/~irg/irg/irg46/IRGN2133-JapanReview.docx)

During IRG46, the experts accepted to normalize the font using the original IDS: \square 3 3 3, part of the rationale may have been that there were no precedent anywhere in the CJK repertoire for the component represented by the IDS sequence: \square 3 3 4 that would be used by the evidence.

1		1	1		<u> </u>	
	94			XZZZ		
02436	犬			渻		font accepted for normalization, irg46.
	11 5			KC-02449		

(source http://appsrv.cse.cuhk.edu.hk/~irg/irg/irg47/IRGN2179IRG_Working_Set2015v3.0p241-p360.pdf)

This means that CJK experts decided to use the 'normalized' glyph, which is different from the evidence.

Still, in the CD and CD.2 of ISO/IEC 10646, the character was shown as:



In RG 52 (Hong Kong May 2019, the editorial report (IRG N2363 http://appsrv.cse.cuhk.edu.hk/~irg/irg52/IRGN2363ERportExtG.pdf mentioned in page 4: Page 11

U+30864 02436 KC-02449 Change the glyph

This was reflected in the code chart for CD.3 ISO/IEC 10646:



Based on this, the glyph for U+30865 will be unchanged, because modifying it now would be contrary to what IRG experts agreed.

TE3. Request to use revised TTF font "ExtG_KR-v31" (2019.10.18.) for K glyphs in CJK Ext. G

- KR found that at least tens of K glyphs in CJK Ext. G are displayed with horizontal strokes uneven under some conditions. KR tested several different cases and concluded that this problem is caused by the fact the horizontal strokes are somewhat thin.
- To remedy the problem, KR changed the horizontal strokes a little bit thicker for a large number of glyphs in CJK Fxt. G
- Therefore, KR requests that revised TTF font "ExtG_KR-v31" (2019.10.18.) be used for the K glyphs in CJK Ext. G in the subsequent printing of ISO/IEC 10646. Its TTF file name is "k2301_132_ExtG_KR-v31_20191018.ttf".

- Examples showing K glyphs in CJK Ext. G with uneven horizontal strokes:

ISO/IEC CI (SC2 N		CJK_ExtG_KR-v31 TTF font (NEW)
300C9 人 9.21	原 KC-00236	顝
30243 □ 30.16	以 KC-00569	礡
302B8 ± 32.13	堰 KC-04939	堰
302DD 大 37.5	昊 KC-00816	昊
3035C	集 KC-00902	集
303F9 53.8	 KC-01115	奉

30400 / 53.11	慶 KC-01124	凑
30489 心 61.11	愉 KC-01281	戂
3072C 水 85.10	悠 C-02056	澙
3073C 水 85.11	液 KC-02088	漃
3081F 片 91.8	烯 KC-02401	腈
3099E 矢 111.11	摸 KC-02882	縸



30F30 金 167.7	銷 KC-04214	銷
3109F 頁 181.17	KC-04516	籲
31111 馬 187.2	KC-05913	鶬
311C9 魚 195.17	KC-05954	鮜

Proposed change by Korea

See above.

Accepted

GE.4 Search by UCS cp within SC2N4690.pdf file (ISO/IEC CD 10646.3)

- It does not seem possible to search by UCS cp within SC2N4690.pdf file. It seems that the UCS cp is not expressed in U+0030 $^{\sim}$ U+0039, but probably in PUA cp.
- Will it become possible to search by UCS cp in the future editions? <u>Proposed change by Korea.</u>

See above.

Accepted in principle

It is for sure a design goal to have all numeric values contained in the standard to be searchable by their regular digit values (0 to 9 expressed in ASCII values 0030 to 0039). While in the past some numeric fields in the code charts have used PUA values for encoding, these has been modified in recent iterations of the standard, including amendments and proposed updates. If the Korean NB can point to explicit failing test cases, the editor would like to know about them in order to fix these issues.

Serbia: Positive with comments

Technical comments:

TE.1. Latin Extended-A

Add Serbian Language wherever there is Croatian Latin.

The Serbian Language is the only European language with synchronous digraphia, that is, with two alphabets within one language. Latin and Cyrillic alphabets are used optimally in all areas in everyday life, in accordance with the Law

on the Official Use of Languages and Alphabets. The symbols of Serbian Latin Alphabet are identical as in Croatian Language.

Proposed change by Serbia.

See above.

Accepted in principle

The term Croatian appears twice as annotation in the code chart for the block Latin-Extended-A. Once for code point U+0107, and once for code point U+0111. These annotations can be changed to read (Serbian added):

0107 ć LATIN SMALL LETTER C WITH ACUTE

• Polish, Croatian, Serbian, ...

0111 đ LATIN SMALL LETTER D WITH STROKE

Croatian, Serbian, Vietnamese, Sami

TE.1. Latin Extended-B

Add Serbian Language wherever there is Croatian Latin.

The Serbian Language is the only European language with synchronous digraphia, that is, with two alphabets within one language. Latin and Cyrillic alphabets are used optimally in all areas in everyday life, in accordance with the Law on the Official Use of Languages and Alphabets. The symbols of Serbian Latin Alphabet are identical as in Croatian Language.

Proposed change by Serbia.

See above.

Accepted in principle

The header in front of U+01C4 LATIN CAPITAL LETTERDZ WITH CARON will be modified as follows (modified new group header and following note):

Latin digraphs matching Serbian Cyrillic letters

These digraphs are for Gaj's Latin alphabet, used in writing Bosnian, Croatian, Serbian, and Montenegrin.

USA: Negative

Technical comments:

TE.1. 34 Code charts and lists of character names – Combining Diacritical Marks Supplement – 1DFA Overcurl

The USNB requests the removal of U+1DFA COMBINING OVERCURL.

The COMBINING OVERCURL was proposed to represent palaeographic text, in particular medieval handwriting. It is not clear that the overcurl on Latin letters serves a meaningful orthographic distinction that needs to be captured in plain text: the overcurl could reflect a stylistic variant or may be a ligature of a small Latin letter with an inverted breve.

In our view, representing the details of hands in manuscripts is better handled by another layer, such as markup or OpenType features (such as stylistic sets).

If strong evidence were to be provided indicating the necessity for distinct representation of a Latin letter with an overcurl in plain text, then we would prefer encoding any such character as an atomic character, rather than as a sequence including a dubious combining diacritic mark. Such an atomic character encoding appeared in the earlier CD (SC2 N4635).

Proposed change by US:

Remove U+1DFA COMBINING OVERCURL..

If this comment and te.2 are satisfied, the USNB vote will be changed to "Yes."

Accepted

Given the controversy, and the absence of a consensus between the two solutions proposed (as sequences using a combining mark or precomposed characters), the character will be removed from the 6th edition repertoire. It can always be proposed for a future amendment/edition.

TE.2. 34 Code charts and lists of character names – Supplemental Symbols and Pictographs – 1F9CC TROLL

The USNB requests the removal of U+1F9CC TROLL. The Unicode Technical Committee has progressed the TROLL character and it is a Provisional Candidate for Unicode 14.0, but it is premature to include it currently as part of the 6th edition of ISO/IEC 10646. We would like Unicode 13.0 and the 6th edition to have a completely synchronized repertoire.

Proposed change by US:

Remove U+1F9CC TROLL.

If this comment and comment te.1 are satisfied, the USNB vote will be changed to "Yes.".

Accepted

The character will be removed from the 6^{th} edition repertoire but is likely to be introduced shortly after.

Editorial comments:

ED.1. 34 Code charts and lists of character names – Oriya – 0B55

The annotation for U+0B55 ORIYA SIGN OVERLINE reads "kuvi language". Kuvi should be uppercase (cf. U+0946 DEVANAGARI VOWEL SIGN SHORT E * Kashmiri, Bihari languages).

Proposed change by US:

Uppercase "Kuvi" in the annotation for U+0B55.

Accepted

ED.2. 34 Code charts and lists of character names – Syloti Nagri – A82C

The annotation for U+A82C SYLOTI NAGRI SIGN ALTERNATE HASANTA reads: "a killer, no conjunct formed." More appropriate wording would be "killer, does not form conjuncts" (cf. U+ A953 REJANG VIRAMA *does not form conjuncts).

Proposed change by US:

Change the annotation as recommended.

Accepted

ED.3. 34 Code charts and lists of character names – Combining Diacritical Marks Extended

The annotations for U+1ABF and U+1ACO read, "indicate a voiced labialization" and "indicate a voiceless labialization," respectively. Each annotation should read "indicates".

Proposed change by US:

Change the annotations from "indicate" to "indicates".

Accepted

ED.4. 34 Code charts and lists of character names – Latin Extended-E

The annotations for the new characters from U+AB68...U+AB6B have "indicate" (in a similar manner as ed.3, above), and should be "indicates."

Proposed change by US:

Change the annotations from "indicate" to "indicates".

Accepted in principle

For consistency with other annotations in that block, it is simpler to just remove 'indicates a' for these 4 annotations.