

Title: CJK & Unihan Group Recommendations for UTC #175 Meeting

Author: Ken Lunde

Date: 2023-04-22

This document provides the CJK & Unihan Group recommendations for the UTC #175 meeting, based on a meeting that took place on 2023-04-07 from 6 to 9PM PDT, which was attended by Yi Bai, Eiso Chan, Peter Constable, Kushim Jiang, Renzhi Li, Ken Lunde, William Nelson, CheonHyeong Sim, Stephan Hyeonjun Stiller, Michel Suignard, Xieyang Wang, and Yifán Wáng via [Zoom](#). The Chair of the [CJK & Unihan Group](#), Ken Lunde, chaired the meeting.

The CJK & Unihan Group reviewed public feedback and documents that were received since the UTC #174 meeting took place. Comments are marked in **green**, and Recommendations to the UTC are marked in **red**. A “plain text” Copy&Paste-ready version of the Recommendations is also provided as the PDF attachment named *recommendations-20230407.txt*.

Unihan Database Freeze

01) Unihan Database Status

Comments: John Jenkins unexpectedly passed away on 2023-02-28, and as a result the current status of maintaining the Unihan database is unknown. While we are confident that we will be able to resurrect the Unihan database itself and the processes for updating it in a time frame to accommodate Unicode Version 16.0 (2024), there is far too much risk involved to be able to do so in a time frame to accommodate Unicode Version 15.1. Therefore, the most prudent action would be to freeze the Unihan database in its current state, as deployed in Unicode Version 15.1 Alpha, and to target any Unihan database changes for Unicode Version 16.0. We have a “source of truth” snapshot of the Unihan database as deployed in Unicode Version 15.1 Alpha, in the form of a MySQL database file, so nothing was lost.

The tools and processes for updating the three Radical-Stroke indexes, along with the tools and processes for updating the UAX #45 assets, are now well understood and have been improved by Ken Lunde. Therefore, any changes or additions to them can be safely targeted for Unicode Version 15.1.

Recommendations: The group recommends to the UTC the following disposition ➡

Consensus: Freeze the Unihan database in its current state, as deployed in Unicode Version 15.1 Alpha, based on Section 01 of document L2/23-082, for Unicode Version 15.1.

Action Item for Ken Lunde, CJK: Resurrect the Unihan database and the processes for updating it, based on Section 01 of document L2/23-082, for Unicode Version 16.0.

Draft GB 18030-2022 Amendment

China issued the first draft of a GB 18030-2022 amendment in late 2022, and issued the second draft earlier this month. The main issue that is present in both drafts is the encoding of several hundred ideographs in Plane 10, which is unallocated.

02) L2/23-057: GB 18030-2022 Amendment Feedback

Comments: This document is the US National Body feedback on the first draft of the GB 18030-2022 amendment. The disposition of the US National Body feedback on the first draft of the GB 18030-2022 amendment is provided, in Chinese, in the document in Section 03 of this document, and its excerpt is shown below for convenience:

序号	标准章条编号	意见内容	提出单位	处理意见	备注
8	附录 C “公安人口信息专用字库补充汉字” 部分	应从修改单中完全删除第 10 平面中的 897 个“公安人口信息专用字库补充汉字”，以保持与 ISO/IEC 10646 标准的同步。如果需要立即支持 897 个字符的实现，它们应该映射到国际标准的三个 PUA 区中。此外，这些 PUA 字不应记录在修改单中。经过 17 年多的时间，GB 18030-2022 最终将 PUA 要求从该标准中删除，却又建立新的 PUA 要求，特别是对大量字符的 PUA，这从根本上来说是一种倒退。	统一码技术委员会和美国国际信息技术标准委员会	不采纳。 理由同本表第 6 条。	
9	附录 C “公安人口信息专用字库补充汉字” 部分	根据 IRG 规则，从 897 个字中删除可与已编码汉字认同的字。可将这些字建立为一个新的 IVD 汉字变体数据库，让每个字作为一个注册的汉字变体序列在纯文本中表示。	统一码技术委员会和美国国际信息技术标准委员会	不采纳。 该部分汉字均为公安人口信息专用字库中的字，起草组认为应优先通过国家标准编码方式满足我国公安人口信息用字需求。	
10	附录 C “公安人口信息专用字库补充汉字” 部分	在删除已编码字、可认同字与正在国际标准编码审批流程中的字后，剩余的字可作为急用加字提交 IRG 审核。	统一码技术委员会和美国国际信息技术标准委员会	不采纳。 起草组同意应筛查排除已编码字、可认同字与正在国际标准编码审批流程中的字。 但同时起草组认为应坚持以国家标准引领国际标准的发展理念，在国际标准审批周期普遍较长的背景下，将我国公安人口信息用字先收录进国家标准中有助我国掌握汉字编码主动权。	

As indicated in the fifth column of the excerpt above, none of the US National Body comments were adopted (不采纳).

Recommendations: The group recommends to the UTC the following disposition ➡

Note: The UTC notes that none of the US National Body feedback on the first draft of the GB 18030-2022 amendment in document L2/23-057 were adopted.

03) L2/23-100: GB 18030-2022 Amendment, Draft 2 + Disposition of Comments, Draft 1

Comments: This document is the second draft of the GB 18030-2022 amendment, which also includes the disposition of comments on the first draft.

The group discussed the issue of encoding several hundred virtually unvetted ideographs in Plane 10 for nearly one hour, and concluded that the likelihood that China will move forward with this plan is very high, most likely due to pressure from the central government. Even a suggestion of an accelerated Urgently Needed Character (UNC) process is being rejected.

The idea that gained the most favor during the meeting, as a compromise solution, is to provisionally assign code points in a new block, and to progress the proposed repertoire like a UNC proposal. The following are noted:

- There is a clear urgent need for encoding these ideographs.
- China has completed an initial analysis identifying 283 non-candidates that have been removed from the initial repertoire of 897 ideographs.
- China has revised the proposed repertoire into radical-stroke order, thereby making it amenable to further analysis.
- Ken Lunde has volunteered to prepare and submit a special UNC proposal, and several IRG experts have volunteered to conduct an expedited review of the current repertoire of 614 ideographs.

Given these factors, we consider this proposed repertoire to be sufficiently mature for provisional assignment of code points. This assumes that, with the exception of providing explicit evidence, which is implicit in China's urgent need based on existing usage in China, the process of preparing this repertoire for formal assignment in a future version of the Unicode Standard will include the same analysis and vetting that would normally be expected of UNC proposals.

We will propose the new block be allocated after the [CJK Unified Ideographs Extension F](#) block in Plane 2. The recommended block name would be "CJK Unified Ideographs Extension I." (The precedent for this is Extension D, which was a repertoire of UNCs from several IRG member bodies. What eventually became Extension E was originally targeted to become Extension D.)

This will need to be discussed in plenary during the UTC #175 meeting.

Lastly, as the Unicode Consortium's liaison to CESI (*China Electronics Standardization Institute*), Ken Lunde reached out to CESI's liaison to the Unicode Consortium, CHEN Zhuang, on 2023-04-08 to request the metadata and glyphs for the repertoire of 614 ideographs. This will be used to facilitate the accelerated review by IRG experts and the preparation of the actual special UNC proposal.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Ken Lunde, CJK: Prepare and submit prior to the UTC #175 meeting a proposal for provisionally assigning up to 614 code points in a new CJK Unified Ideographs Extension I block that is encoded in Plane 2, based on Section 03 of document L2/23-082.

PRI #467 Feedback

The seven items of [PRI #467](#) (*Proposed Update UAX #38*) feedback that are in this section were discussed by the group, and for convenience, the following data files, which are PDF attachments, includes the recommended Unihan database additions and changes based on them:

- *Unihan-additions-20230407.txt*
- *Unihan-changes-20230407.txt*

The recommended Unihan database additions and changes are also shown inline, following the **Recommendations**.

04) ID20230204120331

Date/Time: Sat Feb 04 12:03:31 CST 2023

ReportID: ID20230204120331

Name: Ken Lunde

Report Type: Public Review Issue

Opt Subject: **467**

Now that UTN #50 has been published, a reference can be added to the Description of the kIRG_KPSource property in UAX #38, such as following:

See [UTN50], KP-Source Property Value History, for the complete history of property value changes that have been made to this property.

A corresponding entry needs to be added to Section 1 of UAX #41 (aka PRI #464).

Comments: The group discussed this feedback, and agreed that these are appropriate additions to UAXes #38 and #41.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Ken Lunde, EDC: Add a reference to UTN #50 to the Description of the kIRG_KPSource property in UAX #38, based on PRI #467 feedback [ID20230204120331] and Section 04 of document L2/23-082, for Unicode Version 15.1.

Action Item for Ken Whistler, EDC: Add an entry for UTN #50 to Section 1 of UAX #41, based on PRI #467 feedback [ID20230204120331] and Section 04 of document L2/23-082, for Unicode Version 15.1.

05) ID20230204120554

Date/Time: Sat Feb 04 12:05:54 CST 2023

ReportID: ID20230204120554

Name: Ken Lunde

Report Type: Public Review Issue

Opt Subject: **467**

The text of UAX #38 uses both "field" and "property" to refer to UniHan database properties, and the latter is technically correct. I recommend that this be changed.

Comments: The group discussed this feedback, and agreed that some instances of “field” are okay as-is, because they are database references. Changing instances of “field” to “property” when they reference actual properties would be completely appropriate.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Ken Lunde, EDC: Change instances of “field” to “property” in the text of UAX #38 as appropriate, based on PRI #467 feedback [ID20230204120554] and Section 05 of document L2/23-082, for Unicode Version 15.1.

06) ID20230305032431

Date/Time: Sun Mar 05 03:24:31 CST 2023

ReportID: ID20230305032431

Name: Eiso Chan

Report Type: Error Report

Opt Subject: **Update for the description of K6-Source**

KATS has updated KS X 1027-5 to KS X 1027-5:2021, please see <https://e-ks.kr/streamdocs/view/sd;streamdocsId=72059264418840247> . 2.2 in pp. 5-6 show the updates mentioned by me in IRGN2300 Feedback (https://appsrv.cse.cuhk.edu.hk/~irg/irg/irg50/IRGN2300_EisoFeedback.pdf) and horizontal extension requests in IRGN2468 (https://appsrv.cse.cuhk.edu.hk/~irg/irg/irg56/IRGN2468_Hori_Ext_6_K6_chars.pdf). All of the updates have been included in UCS and Unicode.

Comments: The group discussed this feedback, and agreed that this is an appropriate change to the Description of the normative *kIRG_KSource* property in UAX #38.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Ken Lunde, EDC: Update the reference for the K6 source prefix in the Description of the normative *kIRG_KSource* property in UAX #38, based on PRI #467 feedback [ID20230305032431] and Section 06 of document L2/23-082, for Unicode Version 15.1.

07) ID20230307213824

Date/Time: Tue Mar 07 21:38:24 CST 2023

ReportID: ID20230307213824

Name: John Knightley

Report Type: Public Review Issue

Opt Subject: **467**

Suggest adding to kZhuangNumeric 乙 U+4e59 reading "it" value 1 from page 264 of Sawndip Sawdenj 古壮字字典. This would, to the best of my knowledge, complete the set of distinct Zhuang numeric characters from the dictionary.

Comments: The group discussed this feedback, and agreed that this would be an appropriate addition to the provisional *kZhuangNumeric* property.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Ken Lunde, CJK: Update the UniHan database to add a kZhuangNumeric property value to U+4E59, based on PRI #467 feedback [ID20230307213824] and Section 07 of document L2/23-082, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Convey to the feedback submitter the CJK & UniHan Group comments in Section 07 of document L2/23-082. See PRI #467 feedback [ID20230307213824].

New:

U+4E59	kZhuangNumeric	1
--------	----------------	---

08) ID20230330141608

Date/Time: Thu Mar 30 14:16:08 CDT 2023

ReportID: ID20230330141608

Name: Alexei Chimendez

Report Type: Public Review Issue

Opt Subject: **473/467**

There are a number of CJK characters where the kDefinition property contains a "cross-reference" in the form of "same as ○". A selection follows:

- > U+341C (same as 仇)
- > U+3507 (same as U+93FA 錨)
- > U+4E28 (same as U+3021 HANGZHOU NUMERAL ONE |)
- > U+3D88 (same as 潑 U+6FD9)
- > U+4605 same as U+879A 蟹
- > U+5358 same as 單 U+55AE
- > U+4291 (same as 餉 饟)
- > U+3E31 (same as 舵, 柁)
- > U+3A8B (same as 扞, 捍)
- > U+67F8 (same as 杯 [U+676F] and 栢 [U+686E])
- > U+4280 (same as 糈) (same as 糊)

> U+42E1 (same as 紓) (interchangeable 舒)

> U+4762 same as U+734C 猥 or U+8C99 獮

The majority of such annotations are of the form "(same as ○)", but as can be seen from the examples above, some include the codepoint before or after, some include the name, some lack parentheses. If there are multiple cross-references, they may be placed in the same parentheses, or separately; and they may be separated by space, comma, both, or the word "and" or "or".

For consistency, all such cross-references should be changed to the common form. Or perhaps much of this information would be better off in separate properties altogether, where it can be more easily parsed.

It is unclear how "interchangeable" differs from "same as"; UAX #38 says nothing about this except that "in some cases, synonyms are indicated".

When a cross-reference appears within a definition, the comma is sometimes mistakenly omitted, making it unclear to which minor definition the parenthetical belongs with, for example:

> U+3EEA a kind of jade (same as 璿 璇) fine jade

may belong to "a kind of jade" or "fine jade", whereas for example

> U+3EA9 jade articles, (same as 玨) a kind of jade

unambiguously belongs to "a kind of jade".

Comments: The group discussed this feedback, and agreed that someone should make appropriate changes to the appropriate provisional *kDefinition* property values.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Ken Lunde, CJK: Update the UniHan database to adjust the provisional *kDefinition* property values as appropriate, based on PRI #467 feedback [ID20230330141608] and Section 08 of document L2/23-082, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Convey to the feedback submitter the CJK & UniHan Group comments in Section 08 of document L2/23-082. See PRI #467 feedback [ID20230330141608].

09) ID20230330074247

Date/Time: Thu Mar 30 07:42:47 CDT 2023

ReportID: ID20230330074247

Name: Eiso Chan

Report Type: Error Report

Opt Subject: **Corrections for UAX #38**

The following updates for *kCantonese* property have been discussed on the Slack channel, and John Jenkins had been agreed for the updates.

U+20487 ji4

U+244B9 jip6

U+59DD zyu1

U+869D hou4

For U+20487 兜 and U+244B9 燁, Henry Chan once wrote as below.

“兜, variant of 兒, should have pronunciation of ji4

燁, corruption of 燁, should have pronunciation of jip6

both characters are single sourced through HKSCS, specifically through personal names section of HKSCS

兜, used by 雷莊兜, Miss Hong Kong 2017

燁, used by 江燁生 and his brother, deputy leader of HK boy group Mirror

they have been given the wrong pronunciations maau6 (貌/兒) and bat1 (畢) in the old LSHK table because apparently they did not consult the correct sources”

John replied as “I've made the corrections.”

For U+59DD 姝, I once wrote as below.

“The current kCantonese value for 姝 is syu1. I just see the TVB drama The Ghetto-Fabulous Lady (《福爾摩師奶》), and they read it as zyu1. zyu1 was included as the value, but removed.”

John replied as “Weird, because the only Mandarin reading is shū, but my two Cantonese sources both give zyu2 as a secondary Cantonese reading. I've gone ahead and made the change. It's too late for the Unicode 15.1 alpha, but it will show up shortly thereafter.”

I once initiated an investigation on the Cantonese reading of 姝 on one Bilibili chanel 粤语支支斋, and the result is that most of people lived in Guangzhou City use zyu1. Please listen to from 25:58 of P2 of <https://b23.tv/KJ4XPFG> if you are interested. Other friends lived in Guangzhou show me zyu1 as well.

For U+869D 蚝, I once also wrote as below.

“We need to change the kCantonese reading for 蚝 to hou4. It is the form for oyster in Chinese mainland.”

John replied as “I've got the change queued up, unless there are any objections.”

Comments: The group discussed this feedback, and pointed out that the provisional *kCantonese* property values for U+20487 兜 and U+244B9 燁 were already changed to the proposed property values in Unicode Version 15.1 Alpha, so no action is necessary. The group agreed that the proposed changes to the provisional *kCantonese* property values for U+59DD 姝 and U+869D 蚝 are appropriate.

Recommendations: The group recommends to the UTC the following disposition ⇨

Action Item for Ken Lunde, EDC: Update the UniHan database to change the provisional *kCantonese* property values for U+59DD and U+869D, based on PRI #467 feedback [ID20230330074247] and Section 09 of document L2/23-082, for Unicode Version 16.0.

Current:

U+59DD	kCantonese	syu1
U+869D	kCantonese	ci3

Adjusted:

U+59DD	kCantonese	zyu1
U+869D	kCantonese	hou4

10) ID20230405195028

Date/Time: Wed Apr 05 19:50:28 CDT 2023

ReportID: ID20230405195028

Name: Eiso Chan

Report Type: Public Review Issue

Opt Subject: **Corrections for UAX #38**

The current Bibliographic Information for sHanyuDaCidian1986 is not right. It should be corrected as below. The book name should be 漢語大辭典 for Chinese, not 韓語 for Korean; the original book used 詞典 not 辭典; publishing house or press means 出版社 in Chinese, not 出本社.

Luo Zhufeng 罗竹风, ed. Hanyu Da Cidian (Suoyinben) 漢語大詞典(縮印本) (Hanyu Da Cidian [Compact Edition]). n.p.: 漢語大詞典出版社 (Chinese Dictionary Publishing House), 1986. ISBN 7-5432-0014-7

Comments: The group discussed this feedback, and agreed that the bibliographic information for the sHanyuDaCidian1986 source in the table in Section 4.5 of UAX #38 should be updated.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Ken Lunde, EDC: Update the bibliographic information for the sHanyuDaCidian1986 source in the table in Section 4.5 of UAX #38, based on PRI #467 feedback [ID20230405195028] and Section 10 of document L2/23-082, for Unicode Version 15.1.

PRI #468 Feedback

The five items of PRI #468 (*Proposed Update UAX #45*) feedback that are in this section were discussed by the group, and for convenience, the following data files, which are PDF attachments, includes the recommended UniHan database additions and UAX #45 data file changes based on them:

- *UniHan-additions-20230407.txt*
- *USource-changes-20230407.txt*

The recommended UniHan database additions and UAX #45 data file changes are also shown inline, following the **Recommendations**.

11) ID20230203075454

Date/Time: Fri Feb 03 07:54:54 CST 2023

ReportID: ID20230203075454

Name: Ken Lunde

Report Type: Public Review Issue

Opt Subject: **468**

Horizontally-extend U+9FFD (Unicode Version 14.0) to add UTC-00441 as a new U-source source reference. This UAX #45 ideograph was included as part of the UTC's submission for IRG Working Set 2021, because U+9FFD with an M-source source reference was not yet standardized, but it is now. See IRG Working Set 2021 #00569:

<https://hc.jsecs.org/irg/ws2021/app/index.php?id=00569>

Its UAX #45 USourceData.txt data file entry should be changed from:

UTC-00441;WS-2021;;30.10;;𐀀𐀁;kCowles 78;;;

to:

UTC-00441;URO;U+9FFD;30.10;;𐀀𐀁;kCowles 78;;13;4

Comments: The group discussed this feedback, and agreed that the proposed changes to the record for UTC-00441 in the UAX #45 data file are appropriate, to include horizontally-extending U+9FFD 𐀀 to add UTC-00441 as a new U-Source source reference. The table below constitutes a proposal to horizontally-extend U+9FFD by adding UTC-00441 as a new U-source source reference:

Code Point	Code Chart Excerpt—Version 15.0	U-Source	
		Source Reference	Representative Glyph
U+9FFD	9FFD 𐀀 30.10 𐀀 MC-00134	UTC-00441	𐀀

Recommendations: The group recommends to the UTC the following disposition ➡

Consensus: Accept the proposal to add UTC-00441 as a new kIRG_USource property value for U+3136B, based on PRI #468 feedback [ID20230203075454] and Section 11 of document L2/23-082, for Unicode Version 16.0.

Action Item for Michel Suignard, CJK: Add UTC-00441 as a new kIRG_USource property value for U+9FFD, based on PRI #468 feedback [ID20230203075454] and Section 11 of document L2/23-082, and provide to Ken Lunde an updated Unihan data file, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Update the Unihan database to add UTC-00441 as a new kIRG_USource property value for U+9FFD, based on PRI #468 feedback [ID20230203075454] and Section 11 of document L2/23-082, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Update the UAX #45 data file to reflect the proposed changes to UTC-00441, based on PRI #468 feedback [ID20230203075454] and Section 11 of document L2/23-082, for Unicode Version 15.1.

New:

U+9FFD kIRG_USource UTC-00441

Current (*USourceData.txt*):

UTC-00441;WS-2021;;30.10;;口窄;kCowles 78;;;

Adjusted (*USourceData.txt*):

UTC-00441;**URO**;**U+9FFD**;30.10;;口窄;kCowles 78;;**13**;**4**

12) ID20230213042821

Date/Time: Mon Feb 13 04:28:21 CST 2023

ReportID: ID20230213042821

Name: Charlotte Buff

Report Type: Public Review Issue

Opt Subject: **468**

In USourceData.txt, the ideographic description sequence for UTC-03237 is incorrect.

Current value: 晶_灬

Correct value: 晶_灬

Comments: The group discussed this feedback, and agreed that the proposed IDS change to the record for UTC-03237 in the UAX #45 data file is appropriate. The group also found that the IDSes for UTC-03177 (𠂇 → 王) and UTC-3199 (𠂇 → 𠂇) also needed to be adjusted to match those in IRG Working Set 2021.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Ken Lunde, CJK: Update the UAX #45 data file to reflect the proposed IDS changes to the records for UTC-03177, UTC-03199, and UTC-03237, based on PRI #468 feedback [ID20230213042821] and as amended in Section 12 of document L2/23-082, for Unicode Version 15.1.

Action Item for Ken Lunde, CJK: Convey to the feedback submitter the CJK & UniHan Group comments in Section 12 of document L2/23-082. See PRI #468 feedback [ID20230213042821].

Current:

UTC-03177;WS-2021;;96.17;;𠂇賽;UTCDoc L2/18-097 8;;21;4

UTC-03199;WS-2021;;140.6;;𠂇吐;UTCDoc L2/18-290 6;Taiwanese: puh;10;2

UTC-03237;WS-2021;;86.12;;晶_灬;UTCDoc L2/21-025 3;kJapaneseOn SHOU;16;2

Adjusted:

UTC-03177;WS-2021;;96.17;;王賽;UTCDoc L2/18-097 8;;21;4

UTC-03199;WS-2021;;140.6;;𠂇吐;UTCDoc L2/18-290 6;Taiwanese: puh;10;2

UTC-03237;WS-2021;;86.12;;晶_灬;UTCDoc L2/21-025 3;kJapaneseOn SHOU;16;2

13) ID20230305211021

Date/Time: Sun Mar 05 21:10:21 CST 2023

ReportID: ID20230305211021

Name: Ken Lunde

Report Type: Public Review Issue

Opt Subject: **468**

CJK Unified Ideographs Extension H U+3136B (𪚩 | ㄣ一) can be horizontally extended to add UTC-00087 as a new U-source source reference. Also, the UAX #45 USourceData.txt record should be updated to reflect an IDS, a correct kRSUnicode property value, and a kTotalStrokes property value as follows:

IDS (Field 5): 𪚩 | ㄣ一

kRSUnicode (Field 3): 2.2

kTotalStrokes (Field 8): 3

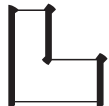
In other words, change its record from:

UTC-00087;NoAction;;;2.4;;;kHanYu 21484.021*DYC 637.220;;;5

to:

UTC-00087;ExtH;U+3136B;2.2;;𪚩 | ㄣ一;kHanYu 21484.021*DYC 637.220;;;3;5

Comments: The group discussed this feedback, and agreed that the proposed changes to the record for UTC-00087 in the UAX #45 data file are appropriate, to include horizontally-extending U+3136B 𪚩 to add UTC-00087 as a new U-Source source reference. The table below constitutes a proposal to horizontally-extend U+3136B by adding UTC-00087 as a new U-source source reference:

Code Point	Code Chart Excerpt—Version 15.0	U-Source	
		Source Reference	Representative Glyph
U+3136B	3136B 2.2  UK-10279	UTC-00087	

Recommendations: The group recommends to the UTC the following disposition ➡

Consensus: Accept the proposal to add UTC-00087 as a new kIRG_USource property value for U+3136B, based on PRI #468 feedback [ID20230305211021] and Section 13 of document L2/23-082, for Unicode Version 16.0.

Action Item for Michel Suignard, CJK: Add UTC-00087 as a new kIRG_USource property value for U+3136B, based on PRI #468 feedback [ID20230305211021] and Section 13 of document L2/23-082, and provide to Ken Lunde an updated Unihan data file, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Update the Unihan database to add UTC-00087 as a new kIRG_USource property value for U+3136B, based on PRI #468 feedback [ID20230305211021] and Section 13 of document L2/23-082, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Update the UAX #45 data file to reflect the proposed changes to the record for UTC-00087, based on PRI #468 feedback [ID20230305211021] and Section 13 of document L2/23-082, for Unicode Version 15.1.

New:

U+3136B kIRG_USource UTC-00087

Current (*USourceData.txt*):

UTC-00087;NoAction;;;2.4;;;kHanYu 21484.021*DYC 637.220;;;5

Adjusted (*USourceData.txt*):

UTC-00087;**ExtH**;**U+3136B**;2.2;;;𠂇一;kHanYu 21484.021*DYC 637.220;;;3;5

14) ID20230320114925

Date/Time: Mon Mar 20 11:49:25 CDT 2023

ReportID: ID20230320114925

Name: Ken Lunde

Report Type: Public Review Issue

Opt Subject: **468**

The following nine U-source ideographs have "WS-2017" as their status values, which is no longer appropriate given that IRG Working Set 2017 has been standardized as Extension H as of Unicode Version 15.0:

UTC-03086;WS-2017;;37.6;;𠂇大;UTCDoc L2/17-204;;9;3

UTC-03103;WS-2017;;190.11;;𠂇逢;UTCDoc L2/17-204;;21 20;3

UTC-03105;WS-2017;U+8F2F;159.9;;𠂇車𠂇口𠂇月;UTCDoc L2/17-204;;16;2

UTC-03116;WS-2017;;196.6;;𠂇戒鳥;UTCDoc L2/17-204;;17;1

UTC-03118;WS-2017;;85.9;;𠂇𠂇穴文;UTCDoc L2/17-204;;12;4

UTC-03119;WS-2017;;46.11;;𠂇山戛;UTCDoc L2/17-204;;14;1

UTC-03130;WS-2017;U+27708;145.11;;𠂇𠂇勝衣;UTCDoc L2/17-204;;17;3

UTC-03133;WS-2017;U+3A9C;66.9;;𠂇𠂇𠂇𠂇;UTCDoc L2/17-204;;13;2

UTC-03154;WS-2017;;134.13;;𠂇𠂇𠂇𠂇;UTCDoc L2/17-204;;20;1

One of them, UTC-03133, can be horizontally extended to U+3A9C 𠂇 per UCV #405, and its status value should be changed to ExtA. The rest should have their status values changed to FutureWS so that they can be reconsidered in the future. The following are the updated records:

UTC-03086;FutureWS;U+3696 U+209F5 U+21605;37.6;;𠂇大;UTCDoc L2/17-204;;9;3

UTC-03103;FutureWS;U+9B14;190.10;;𠂇逢;UTCDoc L2/17-204;;20;3

UTC-03105;FutureWS;U+8F2F;159.9;;𠂇車𠂇口𠂇月;UTCDoc L2/17-204;;16;2

UTC-03116;FutureWS;U+2A01A;196.6;;𠂇戒鳥;UTCDoc L2/17-204;;17;1

UTC-03118;FutureWS;U+3D31 U+23D6B;85.9;;𠂇𠂇穴文;UTCDoc L2/17-204;;12;4

UTC-03119;FutureWS;U+21F1B;46.11;;𠂇山戛;UTCDoc L2/17-204;;14;1

UTC-03130;FutureWS;U+27708 U+2777B;145.11;;𠂇𠂇勝衣;UTCDoc L2/17-204;;17;3

UTC-03133;ExtA;U+3A9C;66.9;;𠂇𠂇𠂇𠂇;UTCDoc L2/17-204;;13;2

UTC-03154;FutureWS;U+22E4F;159.13;;𠂇𠂇𠂇𠂇二 | ;UTCDoc L2/17-204;;20;3

The following additional changes should also be made, which are reflected in the records above:

UTC-03086: Add U+3696, U+209F5, and U+21605 as Unicode code points

UTC-03103: Add U+9B14 as a Unicode code point; change the radical-stroke value to 190.10; remove 21 from the total stroke count

UTC-03105: Change IDS to 𨇲𨇳𨇴𨇵

UTC-03116: Add U+2A01A as a Unicode code point

UTC-03118: Add U+3D31 and U+23D6B as Unicode code points

UTC-03119: Add U+21F1B as a Unicode code point

UTC-03129: Add U+2777B as a second Unicode code point

UTC-03154: Add U+22E4F as a Unicode code point; change the radical-stroke value to 159.13; change the IDS to 𨇲𨇳𨇴𨇵; change the first residual stroke from 1 to 3

Lastly, the "WS-2017" status value should be removed from UAX #45 proper and from the head of its data file, *USourceData.txt*.

Comments: The group discussed this feedback, and agreed that these are appropriate changes to the UAX #45 data file, to include removing the “WS-2017” status value from the text of UAX #45 and from the header of its data file, *USourceData.txt*, and horizontally-extending U+3A9C to add UTC-03133 as a new U-Source source reference. The table below constitutes a proposal to horizontally-extend U+3A9C 𨇲 by adding UTC-03133 as a new U-source source reference:

Code Point	Code Chart Excerpt—Version 15.0	U-Source	
		Source Reference	Representative Glyph
U+3A9C	3A9C 𨇲 66.9 𨇲𨇳𨇴𨇵 G5-4926 T4-3D5C K3-267E	UTC-03133	𨇲

Recommendations: The group recommends to the UTC the following disposition ➡

Consensus: Accept the proposal to add UTC-03133 as a new *kIRG_USource* property value for U+3A9C, based on PRI #468 feedback [ID20230320114925] and Section 14 of document L2/23-082, for Unicode Version 16.0.

Action Item for Michel Suignard, CJK: Add UTC-03133 as a new *kIRG_USource* property value for U+3A9C, based on PRI #468 feedback [ID20230320114925] and Section 14 of document L2/23-082, and provide to Ken Lunde an updated Unihan data file, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Update the Unihan database to add UTC-03133 as a new *kIRG_USource* property value for U+3A9C, based on PRI #468 feedback [ID20230320114925] and Section 14 of document L2/23-082, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Update the UAX #45 data file to reflect the proposed changes to the records for nine U-source ideographs, based on PRI #468 feedback [ID20230320114925] and Section 14 of document L2/23-082, for Unicode Version 15.1.

Action Item for Ken Lunde, EDC: Remove the “WS-2017” status value from the text of UAX #45 and from the header of the UAX #45 data file, based on PRI #468 feedback [ID20230320114925] and Section 14 of document L2/23-082, for Unicode Version 15.1.

New:

U+3A9C kIRG_USource UTC-03133

Current (*USourceData.txt*):

UTC-03086;WS-2017;;37.6;;𠂇凶大;UTCDoc L2/17-204;;9;3
UTC-03103;WS-2017;;190.11;;𠂇影逢;UTCDoc L2/17-204;;21 20;3
UTC-03105;WS-2017;U+8F2F;159.9;;𠂇車𠂇口𠂇月;UTCDoc L2/17-204;;16;2
UTC-03116;WS-2017;;196.6;;𠂇戒鳥;UTCDoc L2/17-204;;17;1
UTC-03118;WS-2017;;85.9;;𠂇𠂇穴文;UTCDoc L2/17-204;;12;4
UTC-03119;WS-2017;;46.11;;𠂇山戛;UTCDoc L2/17-204;;14;1
UTC-03130;WS-2017;U+27708;145.11;;𠂇𠂇勝衣;UTCDoc L2/17-204;;17;3
UTC-03133;WS-2017;U+3A9C;66.9;;𠂇𠂇女;UTCDoc L2/17-204;;13;2
UTC-03154;WS-2017;;134.13;;𠂇興𠂇;UTCDoc L2/17-204;;20;1

Adjusted (*USourceData.txt*):

UTC-03086; **FutureWS**; **U+3696 U+209F5 U+21605**; 37.6;; 𪛗大; UTCDoc L2/17-204;; 9; 3
UTC-03103; **FutureWS**; **U+9B14**; 190.10;; 𪛗逢; UTCDoc L2/17-204;; **20**; 3
UTC-03105; **FutureWS**; U+8F2F; 159.9;; 𪛗車 𪛗口 𪛗有; UTCDoc L2/17-204;; 16; 2
UTC-03116; **FutureWS**; **U+2A01A**; 196.6;; 𪛗戒鳥; UTCDoc L2/17-204;; 17; 1
UTC-03118; **FutureWS**; **U+3D31 U+23D6B**; 85.9;; 𪛗𪛗穴文; UTCDoc L2/17-204;; 12; 4
UTC-03119; **FutureWS**; **U+21F1B**; 46.11;; 𪛗山戛; UTCDoc L2/17-204;; 14; 1
UTC-03130; **FutureWS**; U+27708 **U+2777B**; 145.11;; 𪛗𪛗勝衣; UTCDoc L2/17-204;; 17; 3
UTC-03133; **ExtA**; U+3A9C; 66.9;; 𪛗𪛗女; UTCDoc L2/17-204;; 13; 2
UTC-03154; **FutureWS**; **U+22E4F**; 159.13;; 𪛗𪛗二 |; UTCDoc L2/17-204;; 20; **3**

15) ID20230321104527

Date/Time: Tue Mar 21 10:45:27 CDT 2023

ReportID: ID20230321104527

Name: Andrew West

Report Type: Public Review Issue

Opt Subject: **468**

There are 76 UK-source ideographs in UAX #45 with a status value of "UK-2015". The status of these could be changed to NoAction, Rejected, or Variant as appropriate, based on the following dispositions for the 76 characters in question:

UK-01318	Withdrawn due to insufficient evidence
UK-01326	Withdrawn due to insufficient evidence
UK-01327	Horizontally extended to U+2C176 𐄖
UK-01329	Withdrawn due to insufficient evidence
UK-01330	Withdrawn due to insufficient evidence
UK-01333	Withdrawn due to insufficient evidence
UK-01337	Withdrawn due to insufficient evidence
UK-01338	Withdrawn due to insufficient evidence
UK-01339	Withdrawn due to insufficient evidence

UK-01342	Withdrawn due to insufficient evidence
UK-01344	Horizontally extended to U+21249 青
UK-01345	Withdrawn due to insufficient evidence
UK-01347	Withdrawn due to insufficient evidence
UK-01349	Withdrawn due to insufficient evidence
UK-01350	Withdrawn due to insufficient evidence
UK-01351	Unified to U+3B5F 綦
UK-01353	Withdrawn due to insufficient evidence
UK-01354	Withdrawn due to insufficient evidence
UK-01355	Withdrawn due to insufficient evidence
UK-01356	Withdrawn due to insufficient evidence
UK-01358	Withdrawn due to insufficient evidence
UK-01362	Withdrawn due to insufficient evidence
UK-01363	Withdrawn due to insufficient evidence
UK-01366	Withdrawn due to insufficient evidence
UK-01367	Withdrawn due to insufficient evidence
UK-01368	Withdrawn due to insufficient evidence
UK-01369	Withdrawn due to insufficient evidence
UK-01372	Withdrawn due to insufficient evidence
UK-01391	Withdrawn due to insufficient evidence
UK-01398	Withdrawn due to insufficient evidence
UK-01401	Withdrawn due to insufficient evidence
UK-01405	Withdrawn due to insufficient evidence
UK-01408	Withdrawn due to insufficient evidence
UK-01421	Withdrawn due to insufficient evidence
UK-01423	Withdrawn due to insufficient evidence
UK-01425	Withdrawn due to insufficient evidence
UK-01437	Withdrawn due to insufficient evidence
UK-01441	Withdrawn due to insufficient evidence
UK-01462	Horizontally extended to U+24261 𪛗
UK-01470	Horizontally extended to U+21827 嬰
UK-01480	Unified to U+246D1 𪛗
UK-01533	Withdrawn due to insufficient evidence
UK-01573	Unified to U+20266 𠄎
UK-01583	Withdrawn due to insufficient evidence
UK-01586	Horizontally extended to U+2327B 𪛗
UK-01600	Unified to U+2A7CA 𪛗
UK-01627	Horizontally extended to U+23FD5 𪛗
UK-01678	Horizontally extended to U+20219 伐

UK-01746	Unified to U+6803 𣎵
UK-01834	Unified to U+2D930 旂
UK-01941	Unified to U+891D 禪
UK-01967	Horizontally extended to U+26C9E 蔘
UK-02183	Unified to U+2E64B 讖
UK-02632	Unified to U+632C 掙
UK-02635	Unified to U+2BA65 𠵽
UK-02650	Unified to U+29466 頌
UK-02651	Unified to U+241C6 烱
UK-02656	Horizontally extended to U+2548E 𣎵
UK-02776	Unified to U+2780A 覓
UK-02781	Unified to U+6465 搗
UK-02782	Unified to U+22ACF 搗
UK-02787	Horizontally extended to U+38C7 帚
UK-02790	Horizontally extended to U+22C3A 搗
UK-02821	Unified to U+2219E 𣎵
UK-02847	Unified to U+3C80 𣎵
UK-02851	Unified to U+3A30 𣎵
UK-02856	Unified to U+2459B 𣎵
UK-02857	Unified to U+27B0C 𣎵
UK-02873	Unified to U+23936 𣎵
UK-02876	Unified to U+297E0 𣎵
UK-02878	Unified to U+7666 𣎵
UK-02896	Horizontally extended to U+2DE4A 衍
UK-02919	Unified to U+7097 𣎵
UK-02922	Horizontally extended to U+2363B 𣎵
UK-02923	Horizontally extended to U+23839 𣎵
UK-02927	Unified to U+27466 𣎵

Comments: The group discussed this feedback. 14 of the UK-source ideographs were already horizontally extended, so appropriate status and code point values should be set for them. 25 were unified, so assign “Variant” as their status value with an appropriate code point. The remaining 37 should be assigned “NoAction” as their status value.

In addition, the following three records have issues and need to be changed:

UK-01430;ExtE;U+2C7CF;140.16;;;UTCDoc L2/15-260 118;;;21;3
 UK-02830;ExtB;U+238A7;76.8;;𣎵與欠;UTCDoc L2/15-260 1518;;;12;3
 UK-02930;ExtB;U+2668D;130.4;;𣎵木月;UTCDoc L2/15-260 1618;;;8;1

The first one was resubmitted to IRG Working Set 2021 as UK-20437, so its record should be changed to the following (with additional changes shown in **red**):

UK-01430;**NoAction**;;140.16;;𠂇𠂇;;UTCDoc L2/15-260 118;**IRG Working Set 2021 03467**
UK-20437;20;3

The second one was horizontally extended to U+4DBE (Extension A), not U+238A7 (Extension B), so the record should be changed to the following:

UK-02830;**ExtA**;**U+4DBE**;76.8;;𠂇𠂇𠂇;;UTCDoc L2/15-260 1518;;12;3

The third one was determined to be an error form of U+2668D, so its status should be changed to “Variant”:

UK-02930;**Variant**;U+2668D;130.4;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1618;;8;1

Finally, the following six records correspond to UK-source ideographs that were not actually horizontally extended:

UK-02592;ExtE;U+2CE73;210'.4;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1280;;10;2
UK-02843;ExtB;U+24498;86.16;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1531;;19;3
UK-02924;ExtF;U+2DED0;102.6;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1612;;11;3
UK-02925;ExtF;U+2E0C4;115.6;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1613;;11;3
UK-02928;ExtF;U+2EAC4;190.6;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1616;;16;3
UK-02929;ExtF;U+2E073;113.6;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1617;;10;3

Their status values should therefore be changed to “Variant”:

UK-02592;**Variant**;U+2CE73;210'.4;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1280;;10;2
UK-02843;**Variant**;U+24498;86.16;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1531;;19;3
UK-02924;**Variant**;U+2DED0;102.6;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1612;;11;3
UK-02925;**Variant**;U+2E0C4;115.6;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1613;;11;3
UK-02928;**Variant**;U+2EAC4;190.6;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1616;;16;3
UK-02929;**Variant**;U+2E073;113.6;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 1617;;10;3

Lastly, the “UK-2015” status value should be removed from the text of UAX #45 and from the header of its data file, *USourceData.txt*.

Recommendations: The group recommends to the UTC the following disposition ⇨

Action Item for Ken Lunde, CJK: Update the UAX #45 data file to reflect the proposed changes to 85 UK-source ideographs, based on PRI #468 feedback [ID20230321104527] and as amended in Section 15 of document L2/23-082, for Unicode Version 15.1.

Action Item for Ken Lunde, EDC: Remove the “UK-2015” status value from the text of UAX #45 and from the header of the UAX #45 data file, based on PRI #468 feedback [ID20230321104527] and as amended in Section 15 of document L2/23-082, for Unicode Version 15.1.

Action Item for Ken Lunde, CJK: Convey to the feedback submitter the CJK & Unihan Group comments in Section 15 of document L2/23-082. See PRI #468 feedback [ID20230321104527].

Current:

UK-01318;UK-2015;;8.1;;𠂇𠂇𠂇;;UTCDoc L2/15-260 6;;12;5
UK-01326;UK-2015;;13.2;;𠂇𠂇𠂇;;UTCDoc L2/15-260 14;;4;5
UK-01327;UK-2015;;14.4;;𠂇𠂇𠂇;;UTCDoc L2/15-260 15;;6;2
UK-01329;UK-2015;;16.3;;𠂇𠂇𠂇𠂇;;UTCDoc L2/15-260 17;;5;1
UK-01330;UK-2015;;17.5;;𠂇𠂇𠂇;;UTCDoc L2/15-260 18;;7;2
UK-01333;UK-2015;;24.8;;𠂇𠂇𠂇;;UTCDoc L2/15-260 21;;10;1
UK-01337;UK-2015;;26.6;;𠂇𠂇𠂇;;UTCDoc L2/15-260 25;;8;2
UK-01338;UK-2015;;30.4;;𠂇𠂇𠂇;;UTCDoc L2/15-260 26;;7;2
UK-01339;UK-2015;;30.6;;𠂇𠂇𠂇;;UTCDoc L2/15-260 27;;9;2

UK-01342;UK-2015;;30.15;;𠂇𠂇𠂇;UTCDoc L2/15-260 30;;18;2
 UK-01344;UK-2015;;33.3;;𠂇𠂇𠂇;UTCDoc L2/15-260 32;;6;2
 UK-01345;UK-2015;;34.2;;𠂇𠂇𠂇;UTCDoc L2/15-260 33;;5;3
 UK-01347;UK-2015;;34.3;;𠂇𠂇𠂇;UTCDoc L2/15-260 35;;6;1
 UK-01349;UK-2015;;58.15;;𠂇𠂇𠂇;UTCDoc L2/15-260 37;;18;1
 UK-01350;UK-2015;;196.3;;𠂇𠂇𠂇;UTCDoc L2/15-260 38;;13;3
 UK-01351;UK-2015;;75.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 39;;10;1
 UK-01353;UK-2015;;38.4;;𠂇𠂇𠂇;UTCDoc L2/15-260 41;;7;1
 UK-01354;UK-2015;;38.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 42;;9;4
 UK-01355;UK-2015;;38.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 43;;9;1
 UK-01356;UK-2015;;38.7;;𠂇𠂇𠂇;UTCDoc L2/15-260 44;;10;3
 UK-01358;UK-2015;;38.13;;𠂇𠂇𠂇;UTCDoc L2/15-260 46;;16;3
 UK-01362;UK-2015;;40.7;;𠂇𠂇𠂇;UTCDoc L2/15-260 50;;10;5
 UK-01363;UK-2015;;40.1;;𠂇𠂇𠂇;UTCDoc L2/15-260 51;;13;5
 UK-01366;UK-2015;;40.1;;𠂇𠂇𠂇;UTCDoc L2/15-260 54;;13;5
 UK-01367;UK-2015;;40.9;;𠂇𠂇𠂇;UTCDoc L2/15-260 55;;12;3
 UK-01368;UK-2015;;40.1;;𠂇𠂇𠂇;UTCDoc L2/15-260 56;;13;4
 UK-01369;UK-2015;;30.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 57;;9;2
 UK-01372;UK-2015;;37.4;;𠂇𠂇𠂇;UTCDoc L2/15-260 60;;7;1
 UK-01391;UK-2015;;9.4;;𠂇𠂇𠂇;UTCDoc L2/15-260 79;;6;1
 UK-01398;UK-2015;;115.2;;𠂇𠂇𠂇;UTCDoc L2/15-260 86;;24;1
 UK-01401;UK-2015;;122.3;;𠂇𠂇𠂇;UTCDoc L2/15-260 89;;9;1
 UK-01405;UK-2015;;128.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 93;;12;2
 UK-01408;UK-2015;;195.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 96;;17;3
 UK-01421;UK-2015;;29.7;;𠂇𠂇𠂇;UTCDoc L2/15-260 109;;9;2
 UK-01423;UK-2015;;8.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 111;;8;4
 UK-01425;UK-2015;;193.1;;𠂇𠂇𠂇;UTCDoc L2/15-260 113;;20;3
 UK-01430;ExtE;U+2C7CF;140.16;;UTCDoc L2/15-260 118;;21;3
 UK-01437;UK-2015;;40.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 125;;9;4
 UK-01441;UK-2015;;38.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 129;;9;2
 UK-01462;UK-2015;U+24261;86.7;;𠂇𠂇𠂇;UTCDoc L2/15-260 150;;11;2
 UK-01470;UK-2015;;38.11;;𠂇𠂇𠂇;UTCDoc L2/15-260 158;;14;1
 UK-01480;UK-2015;;93.11;;𠂇𠂇𠂇;UTCDoc L2/15-260 168;;15;4
 UK-01533;UK-2015;;85.13;;𠂇𠂇𠂇;UTCDoc L2/15-260 221;;16;4
 UK-01573;UK-2015;;9.9;;𠂇𠂇𠂇;UTCDoc L2/15-260 261;;11;1
 UK-01583;UK-2015;;90.9;;𠂇𠂇𠂇;UTCDoc L2/15-260 271;;13;4
 UK-01586;UK-2015;;72.11;;𠂇𠂇𠂇;UTCDoc L2/15-260 274;;15;3
 UK-01600;UK-2015;;18.9;;𠂇𠂇𠂇;UTCDoc L2/15-260 288;;11;1
 UK-01627;UK-2015;;85.13;;𠂇𠂇𠂇;UTCDoc L2/15-260 315;;16;4
 UK-01678;UK-2015;U+4FF4;9.5;;𠂇𠂇𠂇;UTCDoc L2/15-260 366;;7;1
 UK-01746;UK-2015;U+6AD4;75.5;;𠂇𠂇𠂇;UTCDoc L2/15-260 434;;9;1
 UK-01834;UK-2015;U+65DF;70.5;;𠂇𠂇𠂇;UTCDoc L2/15-260 522;;9;3
 UK-01941;UK-2015;U+891D U+79AA;145.8;;𠂇𠂇𠂇;UTCDoc L2/15-260 629;;13;4
 UK-01967;UK-2015;U+8518;140.8;;𠂇𠂇𠂇;UTCDoc L2/15-260 655;;11;5
 UK-02183;UK-2015;U+8B9F;149'.15;;𠂇𠂇𠂇;UTCDoc L2/15-260 871;;17;1
 UK-02592;ExtE;U+2CE73;210'.4;;𠂇𠂇𠂇;UTCDoc L2/15-260 1280;;10;2
 UK-02632;UK-2015;U+2BF4A;64.8;;𠂇𠂇𠂇;UTCDoc L2/15-260 1320;;11;2
 UK-02635;UK-2015;;30.5;;𠂇𠂇𠂇;UTCDoc L2/15-260 1323;;8;2
 UK-02650;UK-2015;;181.4;;𠂇𠂇𠂇;UTCDoc L2/15-260 1338;;13;3
 UK-02651;UK-2015;U+241C6;86.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 1339;;10;2
 UK-02656;UK-2015;U+788A;112.5;;𠂇𠂇𠂇;UTCDoc L2/15-260 1344;;10;1
 UK-02776;UK-2015;U+2B938;14.8;;𠂇𠂇𠂇;UTCDoc L2/15-260 1464;;10;1
 UK-02781;UK-2015;U+2BF1F;64.11;;𠂇𠂇𠂇;UTCDoc L2/15-260 1469;;14;3
 UK-02782;UK-2015;;64.5;;𠂇𠂇𠂇;UTCDoc L2/15-260 1470;;8;4
 UK-02787;UK-2015;U+38C7;50.6;;𠂇𠂇𠂇;UTCDoc L2/15-260 1475;;9;3

UK-02790;UK-2015;U+2BF28;64.9;;𠂔負;UTCDoc L2/15-260 1478;;12;3
 UK-02821;UK-2015;U+2219E;24.1;;開束;UTCDoc L2/15-260 1509;;12;1
 UK-02830;ExtB;U+238A7;76.8;;與欠;UTCDoc L2/15-260 1518;;12;3
 UK-02843;ExtB;U+24498;86.16;;火篤;UTCDoc L2/15-260 1531;;19;3
 UK-02847;UK-2015;;79.9;;尸? 殳;UTCDoc L2/15-260 1535;;?;5
 UK-02851;UK-2015;;64.11;;𠂔衰;UTCDoc L2/15-260 1539;;14;4
 UK-02856;UK-2015;U+2C312;90.12;;將且;UTCDoc L2/15-260 1544;;16;3
 UK-02857;UK-2015;U+2C920;149.12;;言𠂔;UTCDoc L2/15-260 1545;;19;2
 UK-02873;UK-2015;U+2C172;76.17;;𠂔土八𠂔欠;UTCDoc L2/15-260 1561;;21;1
 UK-02876;UK-2015;U+2CCD4;184.14;;食麼;UTCDoc L2/15-260 1564;;22;4
 UK-02878;UK-2015;U+7666;104.13;;𠂔𠂔? 八土;UTCDoc L2/15-260 1566;;18;2
 UK-02896;UK-2015;;144.4;;𠂔王于;UTCDoc L2/15-260 1584;;10;1
 UK-02919;UK-2015;;86.5;;𠂔火;UTCDoc L2/15-260 1607;;9;2
 UK-02922;UK-2015;U+2363B;75.11;;木茶;UTCDoc L2/15-260 1610;;14;2
 UK-02923;UK-2015;U+23839;75.19;;木𠂔暴;UTCDoc L2/15-260 1611;;23;3
 UK-02924;ExtF;U+2DED0;102.6;;田朶;UTCDoc L2/15-260 1612;;11;3
 UK-02925;ExtF;U+2E0C4;115.6;;禾朶;UTCDoc L2/15-260 1613;;11;3
 UK-02927;UK-2015;U+27466;142.12;;虫𠂔佳夬;UTCDoc L2/15-260 1615;;18;3
 UK-02928;ExtF;U+2EAC4;190.6;;影朶;UTCDoc L2/15-260 1616;;16;3
 UK-02929;ExtF;U+2E073;113.6;;𠂔朶;UTCDoc L2/15-260 1617;;10;3
 UK-02930;ExtB;U+2668D;130.4;;木月;UTCDoc L2/15-260 1618;;8;1

Adjusted:

UK-01318;**NoAction**;8.1;;亥亥;UTCDoc L2/15-260 6;;12;5
 UK-01326;**NoAction**;13.2;;門𠂔;UTCDoc L2/15-260 14;;4;5
 UK-01327;**ExtE**;U+2C176;14.4;;𠂔止;UTCDoc L2/15-260 15;;6;2
 UK-01329;**NoAction**;16.3;;一𠂔丿几、;UTCDoc L2/15-260 17;;5;1
 UK-01330;**NoAction**;17.5;;𠂔𠂔;UTCDoc L2/15-260 18;;7;2
 UK-01333;**NoAction**;24.8;;𠂔𠂔;UTCDoc L2/15-260 21;;10;1
 UK-01337;**NoAction**;26.6;;此𠂔;UTCDoc L2/15-260 25;;8;2
 UK-01338;**NoAction**;30.4;;𠂔中口;UTCDoc L2/15-260 26;;7;2
 UK-01339;**NoAction**;30.6;;𠂔下;UTCDoc L2/15-260 27;;9;2
 UK-01342;**NoAction**;30.15;;𠂔𠂔𠂔;UTCDoc L2/15-260 30;;18;2
 UK-01344;**ExtB**;U+21249;33.3;;土𠂔;UTCDoc L2/15-260 32;;6;2
 UK-01345;**NoAction**;34.2;;𠂔人;UTCDoc L2/15-260 33;;5;3
 UK-01347;**NoAction**;34.3;;𠂔大;UTCDoc L2/15-260 35;;6;1
 UK-01349;**NoAction**;58.15;;𠂔𠂔𠂔𠂔;UTCDoc L2/15-260 37;;18;1
 UK-01350;**NoAction**;196.3;;夕鳥;UTCDoc L2/15-260 38;;13;3
 UK-01351;**Variant**;U+3B5F;75.6;;共木;UTCDoc L2/15-260 39;;10;1
 UK-01353;**NoAction**;38.4;;王女;UTCDoc L2/15-260 41;;7;1
 UK-01354;**NoAction**;38.6;;女𠂔;UTCDoc L2/15-260 42;;9;4
 UK-01355;**NoAction**;38.6;;女在;UTCDoc L2/15-260 43;;9;1
 UK-01356;**NoAction**;38.7;;我女;UTCDoc L2/15-260 44;;10;3
 UK-01358;**NoAction**;38.13;;𠂔𠂔矢或女;UTCDoc L2/15-260 46;;16;3
 UK-01362;**NoAction**;40.7;;安止;UTCDoc L2/15-260 50;;10;5
 UK-01363;**NoAction**;40.1;;𠂔𠂔女万止;UTCDoc L2/15-260 51;;13;5
 UK-01366;**NoAction**;40.1;;𠂔𠂔如止;UTCDoc L2/15-260 54;;13;5
 UK-01367;**NoAction**;40.9;;𠂔𠂔;UTCDoc L2/15-260 55;;12;3
 UK-01368;**NoAction**;40.1;;𠂔酒;UTCDoc L2/15-260 56;;13;4
 UK-01369;**NoAction**;30.6;;𠂔𠂔;UTCDoc L2/15-260 57;;9;2
 UK-01372;**NoAction**;37.4;;戈大;UTCDoc L2/15-260 60;;7;1
 UK-01391;**NoAction**;9.4;;𠂔𠂔丰;UTCDoc L2/15-260 79;;6;1
 UK-01398;**NoAction**;115.2;;禾𠂔𠂔火;UTCDoc L2/15-260 86;;24;1
 UK-01401;**NoAction**;122.3;;𠂔网大;UTCDoc L2/15-260 89;;9;1
 UK-01405;**NoAction**;128.6;;𠂔耳吕;UTCDoc L2/15-260 93;;12;2
 UK-01408;**NoAction**;195.6;;𠂔自魚;UTCDoc L2/15-260 96;;17;3

PRI #473 Feedback

The six items of [PRI #473](#) (*Unicode 15.1.0 Alpha Review*) feedback that are in this section were discussed by the group, and for convenience, the following data files, which are PDF attachments, includes the recommended UniHan database additions, changes, and removals based on them:

- *UniHan-additions-20230407.txt*
- *UniHan-changes-20230407.txt*
- *UniHan-removals-20230407.txt*

The recommended UniHan database additions, changes, and removals are also shown inline, following the **Recommendations**.

16) ID20230208102800

Date/Time: Wed Feb 08 10:28:00 CST 2023

ReportID: ID20230208102800

Name: Kushim Jiang

Report Type: Public Review Issue

Opt Subject: **473**

In the current version of UCD > UniHan > IRGSources.txt, the kRSUnicode of U+2CC7B is 182'.5, which should be updated to 182'''.5.

Comments: The group discussed this feedback, and agreed that the proposed *kRSUnicode* property value change for U+2CC7B 𐄇 is appropriate. The group also agreed that 117.4 would serve as an appropriate second property value.

Recommendations: The group recommends to the UTC the following disposition ➡

Consensus: Accept the proposal to change the normative kRSUnicode property value of U+2CC7B, based on PRI #473 feedback [ID20230208102800] and as amended in Section 16 of document L2/23-082, for Unicode Version 16.0.

Action Item for Michel Suignard, CJK: Change the normative kRSUnicode property value of U+2CC7B, based on PRI #473 feedback [ID20230208102800] and as amended in Section 16 of document L2/23-082, and provide to Ken Lunde an updated UniHan data file, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Update the UniHan database to change the normative kRSUnicode property value of U+2CC7B, based on PRI #473 feedback [ID20230208102800] and as amended in Section 16 of document L2/23-082, for Unicode Version 16.0.

Current:

U+2CC7B	kRSUnicode	182'.5
---------	------------	--------

Adjusted:

U+2CC7B	kRSUnicode	182''''.5 117.4
---------	------------	------------------------

17) ID20230208104306

Date/Time: Wed Feb 08 10:43:06 CST 2023

ReportID: ID20230208104306

Name: Ken Lunde

Report Type: Public Review Issue

Opt Subject: **473**

Add a second *kRSUnicode* property value to the following four CJK Unified Ideographs:

Current:

U+29091 霩 *kRSUnicode* 173.4

U+313A4 併 *kRSUnicode* 9.4

U+318C3 枏 *kRSUnicode* 75.4

U+31F50 茂 *kRSUnicode* 140.4

Proposed:

U+29091 霩 *kRSUnicode* 173.4 182''.8

U+313A4 併 *kRSUnicode* 9.4 182''.2

U+318C3 枏 *kRSUnicode* 75.4 182''.4

U+31F50 茂 *kRSUnicode* 140.4 182''.4

Comments: The group discussed this feedback, and agreed that the proposed second *kRSUnicode* property values are appropriate for these four ideographs.

Recommendations: The group recommends to the UTC the following disposition ➡

Consensus: Accept the proposal to add a second normative *kRSUnicode* property value to four ideographs, based on PRI #473 feedback [ID20230208104306] and Section 17 of document L2/23-082, for Unicode Version 16.0.

Action Item for Michel Suignard, CJK: Add a second normative *kRSUnicode* property value to four ideographs, based on PRI #473 feedback [ID20230208104306] and Section 17 of document L2/23-082, and provide to Ken Lunde an updated UniHan data file, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Update the UniHan database to add a second normative *kRSUnicode* property value to four ideographs, based on PRI #473 feedback [ID20230208104306] and Section 17 of document L2/23-082, for Unicode Version 16.0.

Current:

U+29091	<i>kRSUnicode</i>	173.4
U+313A4	<i>kRSUnicode</i>	9.4
U+318C3	<i>kRSUnicode</i>	75.4
U+31F50	<i>kRSUnicode</i>	140.4

Adjusted:

U+29091	<i>kRSUnicode</i>	173.4 182''.8
U+313A4	<i>kRSUnicode</i>	9.4 182''.2
U+318C3	<i>kRSUnicode</i>	75.4 182''.4
U+31F50	<i>kRSUnicode</i>	140.4 182''.4

18) ID20230226035243, ID20230304102152 & ID20230312192826

Date/Time: Sun Feb 26 03:52:43 CST 2023

ReportID: ID20230226035243

Name: Andrew West

Report Type: Public Review Issue

Opt Subject: **473**

KP1-8852 (𪛗 飼) is mapped to U+9907 飼, but it should be mapped to U+296B1 飼.

Comments: This PRI #473 feedback is superceded by ReportID ID20230312192826.

Date/Time: Sat Mar 04 10:21:52 CST 2023

ReportID: ID20230304102152

Name: Andrew West

Report Type: Public Review Issue

Opt Subject: **473**

KP1-4850 is mapped to U+657B 𪛗 in the UR0. It should be mapped to U+22FCC 𪛗 in Ext. B.

Comments: This PRI #473 feedback is superceded by ReportID ID20230312192826.

Date/Time: Sun Mar 12 19:28:26 CDT 2023

ReportID: ID20230312192826

Name: Andrew West

Report Type: Public Review Issue

Opt Subject: **473**

This is a complete list of KP glyphs which have suboptimal mappings:

KP1-3EC8 maps to U+5C12 𪛗 but glyph matches U+21B57 𪛗

KP1-3EE4 maps to U+5C35 𪛗 but glyph matches U+2BD52 𪛗

KP1-4850 maps to U+657B 𪛗 but glyph matches U+22FCC 𪛗

KP1-49AC maps to U+6685 𪛗 but glyph matches U+23236 𪛗

KP1-4A00 maps to U+66DA 𪛗 but glyph matches U+232E1 𪛗

KP1-5450 maps to U+702C 𪛗 but glyph matches U+7028 𪛗 (G glyph; KP has different glyph for U+7028)

KP1-5662 maps to U+7222 𪛗 but glyph matches U+3E0F 𪛗 (G glyph)

KP1-5863 maps to U+7361 𪛗 but glyph matches U+2486F 𪛗

KP1-5B21 maps to U+7589 𪛗 but glyph matches U+24D01 𪛗 (T/V glyphs)

KP1-68CB maps to U+7F80 𪛗 but glyph matches U+2E29A 𪛗

KP1-8852 maps to U+9907 飼 but glyph matches U+296B1 飼

KP1-8699 maps to U+981A 頸 but glyph matches U+2948D 頸

KP1-3DB4 maps to U+217EE 𪛗 but glyph matches U+5A90 𪛗 (G/H/T/K glyphs)

KP1-44BD maps to U+2297B 𪛗 but glyph matches U+2D7E7 𪛗

KP1-4F56 maps to U+239F7 𪛗 but glyph matches U+2C194 𪛗

KP1-5565 maps to U+24275 𪛗 but glyph matches U+55A3 𪛗 (KP glyph is same for both characters)

KP1-5642 maps to U+24454 𪛘 but glyph matches U+2C2D6 𪛘

KP1-594E maps to U+249E8 𪛚 but glyph matches U+746F 瑯 (G/H/T glyphs)

KP1-59E2 maps to U+24ACA 𪛜 but glyph matches U+2919C 𪛜

KP1-5A33 maps to U+24B3E 𪛞 but glyph matches U+2C3A8 𪛞

KP1-5AE3 maps to U+24C67 𪛟 but glyph matches U+2DED0 𪛟

KP1-6202 maps to U+2579B 𪛡 but glyph matches U+2E0C4 𪛡

KP1-7818 maps to U+27BD5 𪛥 but glyph matches U+27BD6 𪛥

KP1-8FF5 maps to U+2A279 𪛩 but glyph matches U+400B 𪛩

Comments: The group discussed this feedback, and pointed that all but the following four cases were explicitly mentioned in [L2/23-041](#) as being unifiable:

KP1-5863 maps to U+7361 𪛱 but glyph matches U+2486F 𪛱

KP1-8852 maps to U+9907 𪛴 but glyph matches U+296B1 𪛴

KP1-5565 maps to U+24275 𪛗 but glyph matches U+55A3 𪛗 (KP glyph is same for both characters)

KP1-8FF5 maps to U+2A279 𪛩 but glyph matches U+400B 𪛩

Among these four additional cases, the group agreed that moving the KP1-8852 source reference and glyph from U+9907 to U+296B1 would be appropriate, but because of the likelihood of additional changes, the group recommended that the authors of L2/23-041 prepare and submit a new document that proposes this and other possible KP-source mapping changes with Unicode Version 16.0 as the target.

Recommendations: The group recommends to the UTC the following disposition ➡

No UTC action is required.

19) ID20230226073921

Date/Time: Sun Feb 26 07:39:21 CST 2023

ReportID: ID20230226073921

Name: Ken Lunde

Report Type: Public Review Issue

Opt Subject: **473**

The following three ideograph pairs have identical representative glyphs, and have kSpoofingVariant property values of each other:

U+5AB2 𪛰 & U+2180C 𪛰

U+7C51 𪛱 & U+25D89 𪛱

U+9459 𪛲 & U+28BBA 𪛲

Ideograph pairs with identical representative glyphs should instead have kZVariant property values of each, so this should be changed.

In addition, the following two ideograph pairs have identical representative glyphs, but have no property values that identify such a relationship, so kZVariant property values should be assigned:

U+3777 尋 & U+21B36 尋

U+237C3 𪛗 & U+2C13A 𪛗

Therefore, the following property values should be removed from the Unihan database:

U+5AB2 kSpoofingVariant U+2180C

U+7C51 kSpoofingVariant U+25D89

U+9459 kSpoofingVariant U+28BBA

U+2180C kSpoofingVariant U+5AB2

U+25D89 kSpoofingVariant U+7C51

U+28BBA kSpoofingVariant U+9459

And, the following property values should be added to the Unihan database:

U+3777 kZVariant U+21B36

U+5AB2 kZVariant U+2180C

U+7C51 kZVariant U+25D89

U+9459 kZVariant U+28BBA

U+2180C kZVariant U+5AB2

U+21B36 kZVariant U+3777

U+237C3 kZVariant U+2C13A

U+25D89 kZVariant U+7C51

U+28BBA kZVariant U+9459

U+2C13A kZVariant U+237C3

That is all.

Comments: The group discussed this feedback, and agreed that removing the provisional *kSpoofingVariant* property values from six ideographs was appropriate, along with assigning new provisional *kZVariant* property values to 10 ideographs, though the provisional *kSemanticVariant* property was deemed more appropriate for U+3777 尋 and U+21B36 尋.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Ken Lunde, CJK: Update the Unihan database to remove six *kSpoofingVariant* property values, add eight new *kZVariant* property values, and add two new *kSemanticVariant* property values, based on PRI #473 feedback [ID20230226073921] and as amended in Section 19 of document L2/23-082, for Unicode Version 16.0.

Removed:

U+5AB2	kSpoofingVariant	U+2180C
U+7C51	kSpoofingVariant	U+25D89
U+9459	kSpoofingVariant	U+28BBA
U+2180C	kSpoofingVariant	U+5AB2
U+25D89	kSpoofingVariant	U+7C51
U+28BBA	kSpoofingVariant	U+9459

New:

U+3777	kSemanticVariant	U+21B36
U+5AB2	kZVariant	U+2180C
U+7C51	kZVariant	U+25D89
U+9459	kZVariant	U+28BBA
U+2180C	kZVariant	U+5AB2
U+21B36	kSemanticVariant	U+3777
U+237C3	kZVariant	U+2C13A
U+25D89	kZVariant	U+7C51
U+28BBA	kZVariant	U+9459
U+2C13A	kZVariant	U+237C3

Public Feedback

The two items of public feedback from [L2/23-078](#) that are in this section were discussed by the group, and for convenience, the following data file, which is a PDF attachment, includes the recommended UniHan database changes based on them:

- *Unihan-changes-20230407.txt*

The recommended UniHan database changes are also shown inline, following the **Recommendations**.

20) ID20230119150919

Date/Time: Thu Jan 19 15:09:19 CST 2023

ReportID: ID20230119150919

Name: Lee Collins

Report Type: Error Report

Opt Subject: **Unihan_Readings.txt**

Found these in v. 15, they've been there for a while

U+6AAC kDefinition type of locust oracacia

>> type of locust or acacia

U+45E3 kDefinition insect of mulberry, insects that damage to the melons

>> insect that lives in mulberry trees, insect that damages melons

Comments: The group discussed this feedback, and agreed that the provisional *kDefinition* property value changes for U+45E3 蠶 and U+6AAC 檬 are appropriate.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Ken Lunde, CJK: Update the UniHan database to change the provisional *kDefinition* property values of U+45E3 and U+6AAC, based on feedback [ID20230119150919] in document L2/23-078 and Section 20 of document L2/23-082, for Unicode Version 16.0.

Current:

U+45E3	kDefinition	insect of mulberry, insects that damage to the melons
U+6AAC	kDefinition	type of locust oracacia

Adjusted:

U+45E3	kDefinition	insect that lives in mulberry trees , insect that damages s melons
U+6AAC	kDefinition	type of locust or acacia

21) ID20230326201057

Date/Time: Sun Mar 26 20:10:57 CDT 2023

ReportID: ID20230326201057

Name: Eiso Chan

Report Type: Error Report

Opt Subject: **KP-Sources for U+6138, U+246D8 and U+29A8E**

IRGN2608 had been discussed at IRG #60, but the issues have not been solved yet. https://appsrv.cse.cuhk.edu.hk/~irg/irg/irg60/IRGN2608_KP1disunify.pdf

TCA, ROK and Mr. Henry Chan provided their feedback comments.

In IRGN2605, the discussion record is shown as below.

<https://appsrv.cse.cuhk.edu.hk/~irg/irg/irg60/IRGN2605MiscEditorialReport.pdf>

“Due to the lack of contact to DPRK, the editors believed it is inappropriate to disunify KP1 source characters at present.”

According to current UCV rules, these cases belong to misunifications, so it is better to consider to add them to Errata list in the coming versions.

Comments: The group discussed this feedback, and agreed that it would be premature to add these three KP-source ideographs to an Errata page, particularly because a decision as their resolution has not yet been established.

Recommendations: The group recommends to the UTC the following disposition ➡

No UTC action is required.

UAX #38 / UniHan Database Documents

The document in this section was discussed by the group, and for convenience, the following data file, which is a PDF attachments, includes all of the recommended UniHan database changes based on it:

- *UniHan-changes-20230407.txt*

The recommended UniHan database changes are also shown inline, immediately following the **Recommendations**.

22) L2/23-059: Additional kRSUnicode Values

Comments: The group discussed this proposal, which is to add a second normative *kRSUnicode* property value to 77 CJK Unified Ideographs, and agreed that they are appropriate.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Michel Suignard, CJK: Add a second normative kRSUnicode property value to 77 CJK Unified Ideographs, based on document L2/23-059 (Jenkins) and Section 22 of document L2/23-082, and provide to Ken Lunde an updated UniHan data file, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Update the UniHan database to reflect a second normative kRSUnicode property value for 77 CJK Unified Ideographs, based on document L2/23-059 (Jenkins) and Section 22 of document L2/23-082, for Unicode Version 16.0.

Current:

U+3E13	kRSUnicode	87.4
U+4BE7	kRSUnicode	189.2
U+4C1B	kRSUnicode	193.5
U+4E13	kRSUnicode	1.3
U+4E22	kRSUnicode	1.5
U+4E53	kRSUnicode	4.5
U+4E61	kRSUnicode	52.0
U+4E66	kRSUnicode	5.3
U+4EA7	kRSUnicode	8.4
U+4EB5	kRSUnicode	8.10
U+5170	kRSUnicode	12.3
U+5173	kRSUnicode	12.4
U+5179	kRSUnicode	12.7
U+517B	kRSUnicode	12.7
U+517D	kRSUnicode	12.9
U+5386	kRSUnicode	27.2
U+53C6	kRSUnicode	28.12
U+53C7	kRSUnicode	28.13
U+53D8	kRSUnicode	29.6
U+542F	kRSUnicode	30.4
U+5723	kRSUnicode	32.2
U+5792	kRSUnicode	32.6
U+585F	kRSUnicode	32.10
U+5986	kRSUnicode	38.3
U+5BF9	kRSUnicode	41.2
U+5C18	kRSUnicode	42.3
U+5C1D	kRSUnicode	42.6
U+5F00	kRSUnicode	55.1
U+5F03	kRSUnicode	55.4
U+5F2F	kRSUnicode	57.6
U+604B	kRSUnicode	61.6
U+620F	kRSUnicode	62.2
U+631B	kRSUnicode	64.6
U+6588	kRSUnicode	67.3
U+6765	kRSUnicode	75.3
U+683E	kRSUnicode	75.6
U+68A6	kRSUnicode	75.7
U+6983	kRSUnicode	75.9
U+6B22	kRSUnicode	76.2
U+6BD5	kRSUnicode	81.2
U+7075	kRSUnicode	86.3
U+72B6	kRSUnicode	94.3
U+738D	kRSUnicode	96.1
U+7519	kRSUnicode	99.3

U+753B	kRSUnicode	102.3
U+76F4	kRSUnicode	109.3
U+771F	kRSUnicode	109.5
U+77D7	kRSUnicode	109.19
U+79BB	kRSUnicode	114.6
U+79CC	kRSUnicode	115.4
U+7A77	kRSUnicode	116.2
U+7C74	kRSUnicode	119.2
U+7C7B	kRSUnicode	119.3
U+7F74	kRSUnicode	122.9
U+8206	kRSUnicode	134.10
U+8314	kRSUnicode	140.5
U+8363	kRSUnicode	140.6
U+8365	kRSUnicode	140.6
U+8366	kRSUnicode	140.6
U+8367	kRSUnicode	140.6
U+83B9	kRSUnicode	140.7
U+8426	kRSUnicode	140.8
U+8651	kRSUnicode	141.4
U+867D	kRSUnicode	142.3
U+89D5	kRSUnicode	148.4
U+9763	kRSUnicode	176.0
U+97EE	kRSUnicode	179.4
U+9834	kRSUnicode	181.7
U+990D	kRSUnicode	184.6
U+995F	kRSUnicode	184.17
U+99E1	kRSUnicode	187.6
U+9CEC	kRSUnicode	196.2
U+9F8E	kRSUnicode	212.2
U+20533	kRSUnicode	12.14
U+24C48	kRSUnicode	102.4
U+27C35	kRSUnicode	152.5
U+2A3AD	kRSUnicode	200.12

Adjusted:

U+3E13	kRSUnicode	87.4 73.4
U+4BE7	kRSUnicode	189.2 8.10
U+4C1B	kRSUnicode	193.5 98.10
U+4E13	kRSUnicode	1.3 7.2
U+4E22	kRSUnicode	1.5 4.5
U+4E53	kRSUnicode	4.5 3.5
U+4E61	kRSUnicode	52.0 4.2
U+4E66	kRSUnicode	5.3 2.3
U+4EA7	kRSUnicode	8.4 117.1
U+4EB5	kRSUnicode	8.10 145.6
U+5170	kRSUnicode	12.3 1.4
U+5173	kRSUnicode	12.4 37.3
U+5179	kRSUnicode	12.7 52.6
U+517B	kRSUnicode	12.7 123.3
U+517D	kRSUnicode	12.9 30.8
U+5386	kRSUnicode	27.2 19.2
U+53C6	kRSUnicode	28.12 7.12
U+53C7	kRSUnicode	28.13 7.13
U+53D8	kRSUnicode	29.6 8.6
U+542F	kRSUnicode	30.4 63.3
U+5723	kRSUnicode	32.2 29.3

U+5792	kRSUnicode	32.6	28.7
U+585F	kRSUnicode	32.10	140.9
U+5986	kRSUnicode	38.3	90.3
U+5BF9	kRSUnicode	41.2	29.3
U+5C18	kRSUnicode	42.3	32.3
U+5C1D	kRSUnicode	42.6	28.7
U+5F00	kRSUnicode	55.1	1.3
U+5F03	kRSUnicode	55.4	8.5
U+5F2F	kRSUnicode	57.6	8.7
U+604B	kRSUnicode	61.6	8.8
U+620F	kRSUnicode	62.2	29.4
U+631B	kRSUnicode	64.6	8.8
U+6588	kRSUnicode	67.3	39.4
U+6765	kRSUnicode	75.3	1.6
U+683E	kRSUnicode	75.6	8.8
U+68A6	kRSUnicode	75.7	36.8
U+6983	kRSUnicode	75.9	102.8
U+6B22	kRSUnicode	76.2	29.4
U+6BD5	kRSUnicode	81.2	24.4
U+7075	kRSUnicode	86.3	58.4
U+72B6	kRSUnicode	94.3	90.4
U+738D	kRSUnicode	96.1	32.2
U+7519	kRSUnicode	99.3	56.5
U+753B	kRSUnicode	102.3	1.7
U+76F4	kRSUnicode	109.3	24.6
U+771F	kRSUnicode	109.5	12.8
U+77D7	kRSUnicode	109.19	24.22
U+79BB	kRSUnicode	114.6	8.8
U+79CC	kRSUnicode	115.4	86.5
U+7A77	kRSUnicode	116.2	19.5
U+7C74	kRSUnicode	119.2	11.6
U+7C7B	kRSUnicode	119.3	37.6
U+7F74	kRSUnicode	122.9	86.10
U+8206	kRSUnicode	134.10	12.12
U+8314	kRSUnicode	140.5	32.5
U+8363	kRSUnicode	140.6	75.5
U+8365	kRSUnicode	140.6	85.5
U+8366	kRSUnicode	140.6	93.5
U+8367	kRSUnicode	140.6	86.5
U+83B9	kRSUnicode	140.7	96.5
U+8426	kRSUnicode	140.8	120.5
U+8651	kRSUnicode	141.4	61.6
U+867D	kRSUnicode	142.3	30.6
U+89D5	kRSUnicode	148.4	93.7
U+9763	kRSUnicode	176.0	30.5
U+97EE	kRSUnicode	179.4	140.9
U+9834	kRSUnicode	181.7	113.11
U+990D	kRSUnicode	184.6	27.13
U+995F	kRSUnicode	184.17	187.17
U+99E1	kRSUnicode	187.6	30.13
U+9CEC	kRSUnicode	196.2	16.7
U+9F8E	kRSUnicode	212.2	27.16
U+20533	kRSUnicode	12.14	117.8
U+24C48	kRSUnicode	102.4	25.7
U+27C35	kRSUnicode	152.5	79.8

IRG Documents

The documents in this section were discussed by the group, and for convenience, the following data file, which is a PDF attachments, includes all of the recommended UniHan database additions based on them:

- *UniHan-additions-20230407.txt*

The recommended UniHan database additions are also shown inline, immediately following the **Recommendations**.

23) L2/23-058: US/Unicode Activity Report for IRG #60 [IRG N2599]

Comments: This document is the UTC's activity report as delivered during the IRG #60 meeting in March of 2023, and is therefore an FYI document for the UTC.

Recommendations: The group recommends to the UTC the following disposition ➡

No UTC action is required.

24) L2/23-087: IRG Meeting #60 Recommendations and Action Items [IRG N2600]

Comments: While this is mainly an FYI document for the UTC, because all of the necessary actions have been specified under documents that are referenced elsewhere in this document, it is important to point out the future IRG meeting schedule and the IRG Working Set 2021 review schedule, both of which impact UTC experts.

The next IRG meeting, **IRG #61 (2023-10-16 through 2023-10-20)** will be hosted by Yale University (New Haven, Connecticut, USA), otherwise it will be virtual (Zoom) and hosted by the Unicode Consortium. **IRG #62 (2024-03-18 through 2024-03-22)**, will be virtual (Zoom) and hosted by the Unicode Consortium. **IRG #63 (2024-10-21 through 2024-10-25)**, will be tentatively hosted by ROK. **IRG #64 (2025-03-17 through 2025-03-21)**, will be virtual (Zoom) and hosted by the Unicode Consortium. **IRG #65 (2025-10-13 through 2025-10-17)**, will be tentatively hosted by China in Beijing.

In terms of the IRG Working Set 2021 review schedule, the UTC does not need to submit any revised representative glyphs for its submission, and **IRG Working Set 2021 Version 5.0** is scheduled to be available by **2023-06-02**, with **2023-07-28** being the deadline to submit comments via the Online Review Tool (ORT). The review assignments have not yet been announced by the IRG Chief Editor. The ORT Manager is scheduled to release Consolidated Comments by **2023-08-18**, with responses from submitters due by **2023-10-06**.

Recommendations: The group recommends to the UTC the following disposition ➡

Action Item for Rick McGowan, EDC: Update the “Calendar of Future Meetings and Events” page to reflect the dates and locations for the four future IRG meetings, IRG #61 through IRG #65, based on document L2/23-087 (IRG Convenor) on Section 24 of document L2/23-082.

25) L2/23-088: Editorial Report on Miscellaneous Issues [IRG N2605]

Comments: This is an FYI document for the UTC, because all of the necessary actions in Sections 2 and 3 are covered by Sections 26 through 28 of this document.

Recommendations: The group recommends to the UTC the following disposition ➡

No UTC action is required.

26) L2/23-085: Request to Update Glyph for U+31D5A [IRG N2577]

Comments: The IRG recommends accepting the representative glyph change request for a single T-source ideographs proposed in IRG N2577 (aka L2/23-085). TCA has been tasked to provide to WG2 the updated representative glyphs by 2023-03-31. The group recommends that the UTC accept this T-source representative glyph change.

Recommendations: The group recommends to the UTC the following disposition ➡

Consensus: Accept the proposal to change the T-source representative glyph for U+31D5A, based on document L2/23-085 (Chan et al.) and Section 26 of document L2/23-082, for Unicode Version 15.1.

Action Item for Michel Suignard, CJK: Apply the T-source representative glyph change for U+31D5A to the code charts for the CJK Unified Ideographs Extension H block with an updated font provided by TCA, based on document L2/23-085 (Chan et al.) and Section 26 of document L2/23-082, for Unicode Version 15.1.

27) L2/23-089: G glyphs for U+25D89 and U+28BBA [IRG N2609]

Comments: The IRG recommends accepting the representative glyph change request for two G-source ideographs proposed in IRG N2609 (aka L2/23-089). China has been tasked to provide to WG2 the updated representative glyphs by 2023-03-31. The group recommends that the UTC accept these two G-source representative glyph changes.

Recommendations: The group recommends to the UTC the following disposition ➡

Consensus: Accept the proposal to change the G-source representative glyphs for U+25D89 and U+28BBA, based on document L2/23-089 (Chung) and Section 27 of document L2/23-082, for Unicode Version 15.1.

Action Item for Michel Suignard, CJK: Apply the G-source representative glyph changes for U+25D89 and U+28BBA to the code charts for the CJK Unified Ideographs Extension B block

with an updated font provided by China, based on document L2/23-089 (Chung) and Section 27 of document L2/23-082, for Unicode Version 15.1.

28) L2/23-086: A revised proposal requesting a Horizontal Extension of 150 Hanja chars [IRG N2588R]

Comments: The IRG recommends accepting the 134-ideograph horizontal extension (Extension B) proposed by ROK in IRG N2588R (aka L2/23-086). ROK has been tasked to provide to WG2 the representative glyphs by 2023-04-15. The group therefore recommends that the UTC accept the 134-ideograph horizontal extension.

Recommendations: The group recommends to the UTC the following disposition ➡

Consensus: Accept the 134-ideograph horizontal extension, based on document L2/23-086 (Shin et al.) and Section 28 of document L2/23-082, for Unicode Version 16.0.

Action Item for Michel Suignard, CJK: Add the 134 new kIRG_KSource property values, based on document L2/23-086 (Shin et al.) and Section 28 of document L2/23-082, and provide to Ken Lunde an updated UniHan data file, for Unicode Version 16.0.

Action Item for Ken Lunde, CJK: Update the UniHan database to add the 134 new kIRG_KSource property values, based on document L2/23-086 (Shin et al.) and Section 28 of document L2/23-082, for Unicode Version 16.0.

New:

U+253FD	kIRG_KSource	K6-10A0
U+2540A	kIRG_KSource	K6-10A1
U+25417	kIRG_KSource	K6-10A2
U+2541E	kIRG_KSource	K6-10A3
U+2542A	kIRG_KSource	K6-10A4
U+2542D	kIRG_KSource	K6-10A5
U+25447	kIRG_KSource	K6-10A6
U+2544D	kIRG_KSource	K6-10A7
U+25450	kIRG_KSource	K6-10A8
U+25460	kIRG_KSource	K6-10A9
U+2547B	kIRG_KSource	K6-10AA
U+25484	kIRG_KSource	K6-10AB
U+2548A	kIRG_KSource	K6-10AC
U+25493	kIRG_KSource	K6-10AD
U+254B3	kIRG_KSource	K6-10AE
U+254B8	kIRG_KSource	K6-10AF
U+254C9	kIRG_KSource	K6-10B0
U+254CB	kIRG_KSource	K6-10B1
U+254D4	kIRG_KSource	K6-10B2
U+25500	kIRG_KSource	K6-10B3
U+25518	kIRG_KSource	K6-10B4
U+25522	kIRG_KSource	K6-10B5
U+25533	kIRG_KSource	K6-10B6
U+2553D	kIRG_KSource	K6-10B7
U+2553F	kIRG_KSource	K6-10B8
U+25542	kIRG_KSource	K6-10B9
U+25550	kIRG_KSource	K6-10BA

U+2555E	kIRG_KSource	K6-10BB
U+2556E	kIRG_KSource	K6-10BC
U+25574	kIRG_KSource	K6-10BD
U+25581	kIRG_KSource	K6-10BE
U+25599	kIRG_KSource	K6-10BF
U+2559D	kIRG_KSource	K6-10C0
U+255B2	kIRG_KSource	K6-10C1
U+255D2	kIRG_KSource	K6-10C2
U+255E0	kIRG_KSource	K6-10C3
U+255EB	kIRG_KSource	K6-10C4
U+2560F	kIRG_KSource	K6-10C5
U+25619	kIRG_KSource	K6-10C6
U+2561C	kIRG_KSource	K6-10C7
U+2561E	kIRG_KSource	K6-10C8
U+2563A	kIRG_KSource	K6-10C9
U+2563C	kIRG_KSource	K6-10CA
U+25646	kIRG_KSource	K6-10CB
U+25647	kIRG_KSource	K6-10CC
U+2565E	kIRG_KSource	K6-10CD
U+25663	kIRG_KSource	K6-10CE
U+25677	kIRG_KSource	K6-10CF
U+2567F	kIRG_KSource	K6-10D0
U+2568E	kIRG_KSource	K6-10D1
U+25691	kIRG_KSource	K6-10D2
U+25697	kIRG_KSource	K6-10D3
U+256A1	kIRG_KSource	K6-10D4
U+256A2	kIRG_KSource	K6-10D5
U+256AE	kIRG_KSource	K6-10D6
U+256B4	kIRG_KSource	K6-10D7
U+256BA	kIRG_KSource	K6-10D8
U+256BB	kIRG_KSource	K6-10D9
U+256DC	kIRG_KSource	K6-10DA
U+256EF	kIRG_KSource	K6-10DB
U+256F6	kIRG_KSource	K6-10DC
U+256F8	kIRG_KSource	K6-10DD
U+25707	kIRG_KSource	K6-10DE
U+25714	kIRG_KSource	K6-10DF
U+25717	kIRG_KSource	K6-10E0
U+2571A	kIRG_KSource	K6-10E1
U+25725	kIRG_KSource	K6-10E2
U+2573F	kIRG_KSource	K6-10E3
U+2575F	kIRG_KSource	K6-10E4
U+25767	kIRG_KSource	K6-10E5
U+2576D	kIRG_KSource	K6-10E6
U+25779	kIRG_KSource	K6-10E7
U+2577B	kIRG_KSource	K6-10E8
U+25781	kIRG_KSource	K6-10E9
U+25783	kIRG_KSource	K6-10EA
U+2579C	kIRG_KSource	K6-10EB
U+257B5	kIRG_KSource	K6-10EC
U+257BC	kIRG_KSource	K6-10ED
U+25800	kIRG_KSource	K6-10EE
U+25805	kIRG_KSource	K6-10EF
U+2580B	kIRG_KSource	K6-10F0
U+25821	kIRG_KSource	K6-10F1

U+25826	kIRG_KSource	K6-10F2
U+25827	kIRG_KSource	K6-10F3
U+25837	kIRG_KSource	K6-10F4
U+2583E	kIRG_KSource	K6-10F5
U+25842	kIRG_KSource	K6-10F6
U+25865	kIRG_KSource	K6-10F7
U+25866	kIRG_KSource	K6-10F8
U+2586A	kIRG_KSource	K6-10F9
U+2588F	kIRG_KSource	K6-10FA
U+25893	kIRG_KSource	K6-10FB
U+258A7	kIRG_KSource	K6-10FC
U+258CB	kIRG_KSource	K6-10FD
U+258DE	kIRG_KSource	K6-10FE
U+258EE	kIRG_KSource	K6-10FF
U+258F0	kIRG_KSource	K6-1100
U+2590A	kIRG_KSource	K6-1101
U+2590C	kIRG_KSource	K6-1102
U+25948	kIRG_KSource	K6-1103
U+2595F	kIRG_KSource	K6-1104
U+25978	kIRG_KSource	K6-1105
U+25994	kIRG_KSource	K6-1106
U+259A0	kIRG_KSource	K6-1107
U+259CA	kIRG_KSource	K6-1108
U+259F8	kIRG_KSource	K6-1109
U+25A2A	kIRG_KSource	K6-110A
U+25A2B	kIRG_KSource	K6-110B
U+25A31	kIRG_KSource	K6-110C
U+25A38	kIRG_KSource	K6-110D
U+25A72	kIRG_KSource	K6-110E
U+25A94	kIRG_KSource	K6-110F
U+25AC3	kIRG_KSource	K6-1110
U+25AC4	kIRG_KSource	K6-1111
U+25AF4	kIRG_KSource	K6-1112
U+25B12	kIRG_KSource	K6-1113
U+25B21	kIRG_KSource	K6-1114
U+25B38	kIRG_KSource	K6-1115
U+25B55	kIRG_KSource	K6-1116
U+25B60	kIRG_KSource	K6-1117
U+25B89	kIRG_KSource	K6-1118
U+25B9D	kIRG_KSource	K6-1119
U+25BC0	kIRG_KSource	K6-111A
U+25BC6	kIRG_KSource	K6-111B
U+25BD3	kIRG_KSource	K6-111C
U+25BD4	kIRG_KSource	K6-111D
U+25BE4	kIRG_KSource	K6-111E
U+25BE6	kIRG_KSource	K6-111F
U+25BE8	kIRG_KSource	K6-1120
U+25C1C	kIRG_KSource	K6-1121
U+25C1D	kIRG_KSource	K6-1122
U+25C38	kIRG_KSource	K6-1123
U+25C40	kIRG_KSource	K6-1124
U+25C67	kIRG_KSource	K6-1125

Other Documents

29) L2/23-073: About the Encoding Model on Han Ligatures

Comments: This document, which was very briefly discussed during the IRG #60 meeting last month, discusses the possibility of encoding a character named HAN LIGATURE STARTER in the [Ideographic Symbols and Punctuation](#) block at code point U+16FE4 and its use to represent Han ligatures through the use of IDS-like sequences.

The group pointed out that there is already a well-established precedent to simply encode Han ligatures as CJK Unified Ideographs, with a fair number coming from Japan. One major benefit of simply encoding them is that properties can be assigned, which makes them more usable in existing environments. The group was also concerned with the possibility of dual encoding, the inherent complexity of such a new mechanism, and the possible need to establish a registry. The group also pointed out that the broadly supported '[ccmp](#)' (*Glyph Composition/Decomposition*), '[liga](#)' (*Standard Ligatures*), or '[rlig](#)' (*Required Ligatures*) OpenType GSUB features could be used without any involvement with the Unicode Standard.

The document author also was present at the meeting, and will consider revising the document in the future.

Recommendations: The group recommends to the UTC the following disposition ➡

No UTC action is required.

30) WG2 N5211: 14-Column Seal Script Glyph Comparison Chart

Comments: This document is intended as a resource for those who are involved in the encoding of Seal Script, and is therefore an FYI document for the UTC. The document link above is for the documentation. The actual [Glyph Comparison Charts](#) are in the form of a separate 400MB 632-page PDF.

Recommendations: The group recommends to the UTC the following disposition ➡

No UTC action is required.

That is all.