

ISO
International Organization for Standardization
Organisation Internationale de Normalisation
ISO/IEC JTC 1/SC 2/WG 2
Universal Coded Character Set (UCS)
ISO/IEC JTC 1/**SC 2 N5007**
ISO/IEC JTC 1/SC 2/**WG 2 N5301**
2025-10-31

Title:	Unconfirmed minutes of WG 2 meeting 72 Niigata, Japan (with Remote participants via Zoom); 2025-06-23/27
Source:	Debbie Anderson (dwanders@sonic.net), Recording Secretary, Michel Suignard (michel@suignard.com), Convener
Action:	WG 2 members and Liaison organizations
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(Note: Links to the documents in this document from the agenda document are from [WG2 registry](#) on Unicode site, [SC 2 livelink repository](#), IRG site (the links will be of the form <https://www.unicode.org/irg/docs/nXXXX>) or to [UTC/L2 Register](#) site, as needed. Some of these documents need access authorizations.)

1 Opening and roll call

Michel Suignard, WG2 Convenor, opened the 72nd meeting of WG2 and welcomed attendees, both those in person and those attending virtually.

1.1 Roll call

Attendees, both in the meeting room as well as on Zoom call, introduced themselves. The following 55 experts accredited (or invited) by 10 national bodies and 5 liaison organizations were present at different times during the meeting, either in person or via Zoom call.

(Note: This list is put together from Zoom call records and WG2 experts' attendance and ISO registrations for this meeting. Please let us know if any corrections are needed.)

Name	Accreditation	Affiliation
Masaru TAKECHI	.SC 2 Chairperson	NHK Foundation
Ayuko NAGASAWA	.SC 2 Secretariat	IPSJ/ITSCJ
Toshiya SUZUKI	.SC34 (liaison)	Hiroshima University
Michel SUIGNARD	.WG 2 Convenor; USA	Unicode, Inc.
Ken LUNDE	IRG Convenor; USA	Apple, Inc.
Karljürgen FEUERHERM	Canada	Wilfrid Laurier University
V.S. (Uma) UMAMAHESWARAN	Canada	Independent
Eddie Antonio SANTOS	Canada	Independent
Joshua TSAI	Canada	Independent
Jim DELAHUNT	Canada	Independent
CHEN, Zhuang	China	CESI
TAO, Yang	China	CESI

SIM, CheonHyeong	China	Independent
LIU, Huidan	China	Institute of Software, Chinese Academy of Sciences
LI, Zhen	China	Nanjing Xiaozhuang University
DAO, Jie	China	Yunnan Minzu University
QI, Ziyuan	China	Yunnan Minzu University
HU, Jiajia	China	Beijing Normal University
WU, Yu	China	The Institute of Ethnology and Anthropology, Chinese Academy of Social Science
LIN, Lin	China	Microsoft (China)
SUN, Bojun	China	The Institute of Ethnology and Anthropology, Chinese Academy of Social Science
Zhaoqin Jiang (Kushim)	China	Independent
LI, Jianmin	China	The First Historical Archives of China
Nu Ermaimaiti Youluwasi	China	Xinjiang University
LIANG Jinbao	China	Inner Mongolia University of Technology
LUO Wenbing	China	
Yi BAI	IRG IWDS Editor	
Henry CHAN	IRG ORT Manager	
Jan KUČERA	Czech Republic	Charles University
Andreas STÖTZNER	Germany	A. Stötzner Gestaltung
Elisabeth RINNER	Germany	Niedersächsische Landesbibliothek Hannover
Siegmund Probst	Germany	Niedersächsische Landesbibliothek Hannover
Deolekar DEVANSH	India	BIS
Swaran LATA	India	BIS
Neha GUPTA	India	BIS
Vijay KUMAR	India	BIS
Shuichi TASHIRO	AH1 Chair; Japan	Kaishi Professional University
Tamaru Kenzaburo	Japan	
Tatuso Kobayashi	Japan	
Takada Tomokazu	Japan	
Masanori Kusunoki	Japan	Digital Agency
Gwoon Kim	Republic of Korea	
Yang, WangSung	Republic of Korea	
Lin-Mei WEI	TCA (Cat. C Liaison)	Chinese Foundation for Digitization Technology/TCA
WANG Yifan	SAT Daizōkyō Text Database (Cat. C Liaison)	
Yen-ling TSENG	TCA (Cat. C Liaison)	
Andrew WEST	UK	Independent
Deborah ANDERSON	USA, UC Berkeley (Cat. C Liaison)	University of California, Berkeley
Anushah HOSSAIN	USA, UC Berkeley (Cat. C Liaison)	University of California, Berkeley

Helena KANSA	USA, Unicode (Cat. A Liaison)	University of California, Berkeley
Peter CONSTABLE	USA, Unicode (Cat. A Liaison)	Microsoft Corp.
Robin LEROY	USA	Google Switzerland GmbH
Raja ADAL	USA	University of Pittsburgh
Hitomi KUDO	USA	
Eiso CHAN	Vietnam	STAMQ; Culture and Art Publishing House

2 Approval of the agenda

Input document:

[5300](#) WG2 meeting #72, June 23-27, 2025 Agenda; Michel Suignard, Convenor; 2025-06-09

Additions to the WG2 agenda include:

- 9.4.12, a proposal for RUBLE SIGN WITH DOUBLE VERTICAL STEM
- 10.2.1.23 Converging towards a Small Seal encoding proposal ([5306](#)), feedback from TCA/China ([5313R](#)), spreadsheet, feedback to 5133R ([5327](#)), answer from TCA ([5337](#)).

Michel Suignard will also update the agenda with Leibniz documents (to be listed in 10.7 on the WG2 agenda).

The agenda will be updated based on the new additions noted above and posted on the WG2 website, which is hosted by Unicode.

Disposition: The agenda as amended was approved. Updates to the agenda will be posted to the WG2 website as the meeting progresses.

(Note: the agenda item numbers in these minutes may not align with the agenda item numbers in document [5300](#). All the changes made during the meeting are included in the appropriate sections in these minutes. Some agenda items have been regrouped, reorganized or renumbered. Agenda items that did not have any document to discuss do not appear in these minutes. Documents on the agenda that did not have any discussion are only for information to WG2 experts, or are for future meetings. The following table of contents reflects the discussed items.)

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3 Approval of minutes of meeting #71

Input document:

[5251](#) Meeting #71 unconfirmed minutes; Deborah Anderson, Recording Secretary; 2024-10-29

No comments were received on the Meeting #71 minutes posted as [5251](#). Please send feedback to Dr. Anderson on any typos or misrepresentations.

Disposition: Minutes were approved.

4 Review action items from previous meeting

Input document:

[5251-AI](#) Meeting #71 unconfirmed minutes; Deborah Anderson, Recording Secretary; 2024-10-29

Michel Suignard led the review of the action items from the previous meetings. Some progress has been made.

AI-63-6 “Representation of CJK ideograph glyphs”: Uma Umamaheswaran will try to draft wording from section 2.1 from document [4620](#) (“Representation of CJK ideograph glyphs”) for the P&P document, sending Michel Suignard a draft to review. In progress.

AI-66-6 Naxi Dongba: No new document was received, but keep on AI list as In progress.

AI 67-7 Assamese: The “Bengali” block is used for both Bengali (Bangla) and Assamese. The block header on the code chart could be considered for change (cf. code chart header “[CO Controls and Basic Latin](#)”, but the Unicode block property -- which cannot be changed -- is “Basic Latin”, cf. the file [Blocks.txt](#)). Comments above the names list can also provide information. Currently the note above the names list on the [Bengali code chart](#) says: “The Bengali script is also known as Bangla. In Assam, the preferred name of the script is

Asamiya or Assamese. The Assamese language has also been written historically using distinct regional scripts known as Kamrupi”.

BSI reported they have asked the Assamese government for input, and are still awaiting a formal response. If further feedback is received this week, WG2 could make a recommendation. This AI will remain in progress for now.

AI 67-8 Shuishu: We await an update and a new proposal. In progress.

AI 68-7 Lisu Monosyllabic Script: Nothing to report. Will keep open.

AI 68-8 Bopomofo: No progress. Will keep open.

AI 68-9 Oracle Bone Script: Nothing to report. Will keep open.

AI 70-8 Combining Overcurl and Dashed-box symbols: No new proposal. Will keep open.

AI 70-10 Aiha and Blissymbols: No new proposal. Will keep open.

AI 71-1a and b: Completed

AI 71-2 and AI-71-3 a-d: Completed.

AI 71-4: Note that IRG Rapporteur and Editor Dr. Lu Qin should be changed to Dr Ken Lunde after WG2 meeting #71. Change IRG #64 and IRG #66 from “Zoom (Unicode)” to “Webex (Apple)”.

AI 71-5 Roadmap update: Completed.

AI 71-6 Small Seal: Completed.

AI 71-7 Mechanism for historical scripts (like UTS #37): In progress. Add “Danial Yacob”.

AI 71-8 a IRG #66: Change from “Zoom (Unicode)” to “Webex (Apple)”.

AI 71-8 b English Phonotypic Alphabet and Historic Scientific Characters (Leibniz): In progress.

AI 71-8 c Carried-forward contributions: Noted.

Deborah Anderson updated the AIs accordingly. The tables below show the updated status for each item. Of the **25** action items that were reviewed, 12 items are carried forward ('in progress'), and **13** items are marked as either 'noted' or 'completed' .

4.1 Outstanding action items from meeting 63, Colombo, Sri Lanka; 2014-09-29/10-03

Item	Assigned to / action (Reference recommendations in document N4604, and unconfirmed minutes in document N4603 for meeting 63 (with any corrections noted in the minutes of meeting 64 in document N4739).	Status
AI-63-6	Ad hoc group on Principles and Procedures (Dr. Umamaheswaran)	
a.	To take note of section 2.1 in document N4620 on Representation of CJK ideograph glyphs; and update the P&P document appropriately. M64 through M71 -- in progress.	In progress.

4.2 Outstanding action items from meeting 66, Hohhot, Inner Mongolia, China; 2017-09-25/29

Item	Assigned to / action (Reference recommendations in document N4874, and unconfirmed minutes in document N4953 for meeting 66, with any corrections noted in the minutes of meeting 67 in document N5020).	Status
AI-66-6	Experts from China (Chen Zhuang), UK (Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson). TCA (Lin Mei Wei), Mongolia experts	
	To take note of and act on the following item:	

a.	<i>M66.18 (Naxi Dongba script)</i> : WG2 accepts the Naxi Dongba ad hoc report in document N4895, and invites the author of the script to provide a revised version with the characters reordered according to the type of classification used in the source dictionaries, based on the revised chart in document N4898. WG2 recommends to SC2 to accept the revised version of the script, consisting of 1188 characters in a new block Naxi Dongba in the range 1A800...1ACFF for encoding in the standard.	In progress.
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4.3 Outstanding action items from meeting 67, SOAS, Univ. of London, London, UK; 2018-0616/20

Item	Assigned to / action (Reference recommendations in document N4954, and unconfirmed minutes in document N5020 for meeting 67, with any corrections noted in the minutes of meeting 68 in document N5122).	Status
AI-67-7	BIS (K. Manikandan), Experts on Assamese from India and elsewhere.	
	To take note of and act on the following item:	
a.	<i>M67.25 (Assamese script)</i> : After consideration of the proposal in document N4947 to encode the Assamese script, WG2 recommends that SC2 accept the ad hoc report on Assamese script in document N4999, which has the following main recommendations: a. Add Assamese character names in the nameslist as annotations, b. Change the block header from Bengali to Bengali-Assamese,	In progress.

	c. Prepare a revised contribution on new characters to be added. WG2 encourages the experts on Assamese script to continue the work towards a revised contribution and submit to WG2. WG2 recommends that SC2 invites the national body of India, BIS, to coordinate this effort.	
AI-67-8	Experts from China (Chen Zhuang), UK (Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson). TCA (Lin Mei Wei), Mongolia experts	
	To take note of and act on the following items:	
c.	<i>M67.26 (Shuishu script)</i> : WG2 invites the authors of Shuishu script (Block 1B300-1B4FF Shuishu Logograms and Block 1B500-1B52F Shuishu Radicals from document N4894R) that was taken out of PDAM 2.2 based on ballot comments, to revise their proposal, taking into account the feedback received at this meeting (see documents N4942, N4946 and N4956), working with other experts interested in this script.	In progress.

4.4 Outstanding action items from meeting 68, Microsoft Campus, Redmond, WA, USA; 2019-06-17/21

Item	Assigned to / action (Reference recommendations in document N5054, and unconfirmed minutes in document N5122 for meeting 68, , with any corrections noted in the minutes of meeting 69 in document N5199).	Status
AI-68-7	Experts from China (Chen Zhuang), and other experts interested in Lisu Monosyllabic script.	
	To take note of and act on the following item:	
a.	<i>Recommendation M68.18 (Lisu Monosyllabic Script)</i> : WG2 invites the authors of documents N5047 to revise their proposal on Lisu Monosyllabic script, taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress.
AI-68-8	Experts from TCA (Selena Wei), and other experts interested in Bopomofo.	
	To take note of and act on the following item:	
a.	<i>Recommendation M68.19 (Bopomofo Script)</i> : WG2 invites the authors of documents N5088 to revise their proposal on Bopomofo script, taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress.
AI-68-9	Experts from TCA (Selena Wei), China (Chen Zhuang), and other experts interested in Oracle Bone script.	
	To take note of and act on the following item:	

a.	<i>Recommendation M68.20 (Oracle Bone Script)</i> : WG2 invites the authors of documents N5090 to revise their proposal on Oracle Bone script, taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress.
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4.5 Outstanding action items from meeting 70, Wilfrid Laurier Univ., Waterloo, ON, Canada; 2023-06-19/23

Item	Assigned to / action (Reference recommendations in document N5234 , and unconfirmed minutes of meeting 70 in document N5244 the document you are reading.)	Status
AI-70-8	Ireland (Mr. Michael Everson)	
	To take note of and act on the following items:	
a.	Invited to provide more examples to support the proposal in document N5227 on Combining Overcurl.	In progress.
b.	Invited to provide a revised proposal on 'Encode dashed-box symbols in Plane 14' in document N5212 addressing the discussion under section 10.3.9.	In progress.
AI-70-10	Experts from all national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	From the items discussed at meeting M70: a Aiha script (document N5226 . See discussion under section 10.2.9. b Blissymbols (documents N5149 , N5171 and N5228). See discussion under section 10.2.10.	In progress.

4.6 New action items from meeting 71, Charles University, Prague, Czech Republic; 2024-06-10/14

Item	Assigned to / action (Reference recommendations in document N5254 and unconfirmed minutes of meeting 71 in document N5251 the document you are reading.)	Status
AI-71-1	Recording Secretary - Dr. Deborah Anderson	
a.	To finalize the document N5254 , containing the adopted meeting recommendations and send it to the convener as soon as possible.	Completed.
b.	To finalize the documents N5251 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed.
AI-71-2	Convener - Mr. Michel Suignard	
a.	To add relevant contributions carried forward from previous meetings to agenda of next meeting. (See list of documents under AI-71-8c .)	Completed.
AI-71-3	Editor of ISO/IEC 10646: (Mr. Michel Suignard with assistance from contributing editors)	
	To prepare the appropriate amendment texts, sub-division proposals, collection of editorial text for the next edition, corrigendum text, or entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following:	Completed.
a.	<i>M71.01 (Disposition of comments of CDAM 2.4)</i> : WG2 recommends that SC2 accept the disposition of ballot comments on CDAM2.4 to 6 th edition in document N5274 . The following significant changes are noted in the disposition document: a. Add a formal name alias of type "correction" BAMUM LETTER PHASE-A MAEMGBIEE for U+1680B BAMUM LETTER PHASE-A MAEMGBIEE b. Remove the following two characters: 0CDC KANNADA ARCHAIC SHRII 0C5C TELUGU ARCHAIC SHRII	Completed.
b.	<i>M71.02 (Additions and Corrections in AMD2)</i> : WG2 recommends that SC2 accept the following changes to CDAM2.4 based on WG2 N5275 (=SC2 N4916): a. Change the name of 31E4 from CIK STROKE HZXG to CIK STROKE HXG, based on document L2/24-044 b. Swap the reference glyphs for 12326 CUNEIFORM SIGN UN and 12327 CUNEIFORM SIGN UN GUNU, based on L2/24-074 c. Add a formal name alias formal name alias CUNEIFORM SIGN KALAM of type "correction" for 12327 CUNEIFORM SIGN UN GUNU, based on L2/24-074 d. Add two formal name aliases of type "correction": • MENDE KIKAKUI SYLLABLE M172 MBO for 1E899 MENDE KIKAKUI SYLLABLE M172 MBOO • MENDE KIKAKUI SYLLABLE M174 MBOO for 1E89A MENDE KIKAKUI SYLLABLE M174 MBO..	Completed.

c.	<i>M71.03 (Progression of CDAM2.4):</i> WG2 recommends that the Project Editor prepare the text of CDAM2.4 of the 6th edition of the standard, which will include the changes arising from recommendations M71.01 through M71.02 above and forward it to the SC2 secretariat for processing as a CDAM2.4 ballot. The draft code charts are in document N5281 . The target starting dates are DAM2 2024-06-15, FDAM2 2025-02-01 and AMD2 20225-05-01.	Completed.
d.	<i>M71.05 through M71.19 (Other Additions)</i> WG2 recognizes that some scripts and additional characters which are under preparation as potential additions to the standard could become mature and will have consensus among WG2 experts to include in the standard. The project editor should be able to add these to the balloted texts, after exercising due diligence. Candidates include, but are not limited to, the Jurchen script (914 characters and 51 radicals) mentioned in recommendation M71.19, and the Armenian additions, phonetic characters and musical symbols mentioned in recommendation M71.18.	Completed.
AI-71-4	IRG Rapporteur and IRG Editor (Dr. Ken Lunde)	
	To take note of and act upon the following item:	
a.	<i>M71.15 (Future meetings):</i> WG2 endorses the following schedule for future meetings: WG2 Meeting #72, Niigata, Japan (co-located with SC2); 2025-06-23/27 WG2 Meeting #73, Dundee, Scotland or Paris, France (co-located with SC2); 2026-06-06 IRG#63, Seoul, Korea; 2024-10-21/25 IRG#64, Online Webex (Apple); 2025-03-17/21 IRG#65, Guangzhou, China; 2025-10-13/17 IRG#66, Online Webex (Apple); 2026-03-16/20	Noted.
AI-71-5	Ad hoc group on roadmap (Dr. Umamaheswaran)	
a.	To update the Roadmaps reflecting the results from this meeting.	Completed.
AI-71-6	Experts from TCA (Selena Wei), China (Chen Zhuang), Japan (Toshiya Suzuki), USA (Mr. Michel Suignard, Dr. Richard Cook) and other experts interested in Small Seal script	
	To take note of and act on the following item:	
a.	<i>M70.14 (Small Seal script):</i> WG2 recommends that SC2 note the progress made by the experts from China, TCA, Japan and the US on several revised proposals submitted at this meeting, and encourages these experts to continue their co-operative effort towards a consolidated contribution for encoding the script.	Completed.
AI-71-7	Expert from UK and USA (Dr. Andrew West, Robin Leroy, and Daniel Yacob)	
	To take note of and act on the following items:	
a.	Work on a new proposal defining a mechanism like UTS #37, but for historical scripts	In progress.
AI-71-8	Experts from all national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	<i>M71.15 (Future meetings):</i> WG2 endorses the following schedule for future meetings: WG2 Meeting #72, Niigata, Japan (co-located with SC2); 2025-06-23/27 WG2 Meeting #73, Dundee, Scotland or Paris, France (co-located with SC2); 2026-06-06 IRG#63, Seoul, Korea; 2024-10-21/25 IRG#64, Online Webex (Apple); 2025-03-17/21 IRG#65, Guangzhou, China; 2025-10-13/17 IRG#66, Online Webex (Apple); 2026-03-16/20	Noted.
b.	From the items discussed at this meeting: English Phonotypic Alphabet (document N5269). Historic Scientific Characters (Leibniz) (document N5277)	In progress.
c.	The following is a list of contributions carried forward from earlier meetings. They are open for review and feedback to the authors from interested experts from SC2/WG2 and Liaison organizations. Scripts marked in bold below are new or updates of previous list in Meeting 69 agenda document.	
	Afáka N4292 , Aíha N5226 , Bagam N4293 , Balti 'B' N4016 , Balti scripts N3842 , Bété L2/19-044 , L2/23-279 , Bima (Buginese extensions) L2/23-070 , Blissymbols N5228 , N5149 , N5171 , Box-Headed script L2/24-100 , Book Pahlavi L2/24-040 , Brusha L2/17-183 , Buginese extensions L2/16-159 , CJK Buddhist symbols N5166 , Diwani Siyaq Numbers L2/15-066R , Eebé Hmong N4668 , Eskaya N4499=L2/13-229 , Jianzi Musical Notation and Format Controls N5041 , Kerinci L2/16-074 , Khatt-i Baburi N4130 , Khitan Large script N4631 , N4642 , Khotanese L2/15-022 , Kpelle N3762 , Kui Gaari L2/24-102 , Kulitan L2/15-232 ,	Noted.

	<p>Kurukh Banna L2/24-101, Lampung L2/22-044, Landa N3768, Leke N4438, Linear Elamite L2/21-233, Lisu Monosyllabic N5047, N5121, Loma N4786, N4837, Lota Ende L2/16-076, Mandombe L2/16-077R, Maya Hieroglyphs L2/23-228 and L2/23-020, Moon N4128, Mwangwego N4323, Naxi Dongba N4898, Naxi Geba N4886, N4887, Old Yi N3288, Oracle Bone N5090, Palaeohispanic Northern L2/22-146, Palaeohispanic Southern L2/22-147, Pallava L2/18-083, Pau Cin Hau Syllabary L2/16-014, Persian Siyaq L2/21-105, Proto-Cuneiform L2/23-190, Proto- Elamite L2/23-196, Proto-Sinaitic L2/19-299, Pungchen L2/17-181, Pyu N3874, Ranjana L2/23-028, Shuishu N4758, N4922, N4839, N4956, N4942, N4946, N5110, Sirmauri L2/18-085, Southwest China Hieroglyphs N4856, N4901 (Ersu), Sumbawa L2/16-096, Tamga symbols N5092, Tani Lipi N3823=L2/10-146, Tikamuli N3963=L2/10-465, Tocharian L2/15-236, Vexillology symbols L2/17-089, Western Cham N5098, L2/22-095, Woleai N4146, Zou N3864</p>	
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5 JTC1 and ITTF matters

5.1 JTC1 Code of Conduct

Input document:

[5213](#) ISO & IEC Codes of Conduct General Principles; ISO/IEC; 2023-04-05

The ISO Code of Conduct was shown on the screen. There was no discussion.

6 SC2 matters:

6.1 Related to Amd. 2 10646 6th edition (DAM 2)

Input documents:

SC2/N[4930](#) Text for ISO/IEC 10646 (Ed 6) DAM 2; 2024-06-19

SC2/N[4950](#) Result of DAM2 voting; 2024-11-26

Output document:

SC2/N[4953](#) Disposition of comments on 10646 (Ed.6) DAM2; Michel Suignard, Project Editor; 2025-01-25

This agenda item, “SC2 matters” lists what happened over the last year, as a kind of activity report. Amendment 2 was still ongoing at the last WG2 meeting (meeting #71).

6.2 Related to Amd. 2 10646 6th edition (FDAM 2)

Input documents:

SC2/N[4954](#) Text for ISO/IEC 10646 (Ed.6) FDAM2; 2025-01-13

SC2/N[4988](#) Notice of Publication: ISO/IEC 10646:2020/Amd 2:2025; 2025-06-09

FDAM2 (Final Draft Amendment 2) passed. Amendment 2 is synchronized with Unicode 16.0. SC2/N4988 notes that Amendment 2 was published.

Ken Lunde confirmed that ISO/IEC 10646:2020/Amd 2:2025 is freely available.

6.3 Related to 10646 7th edition (CD)

Input documents:

SC2/N[4940](#) Text for ISO/IEC 10646 (Ed.7) CD; 2024-08-26

SC2/N[4951](#) Result of ISO/IEC 10646 (Ed.7) CD consultation; 2024-12-19

Output documents:

SC2/N[4957](#) Disposition of comments on ISO/IEC CD 10646 (7th edition); 2025-02-12

The CD of the 7th edition will cover the repertoire of Unicode 17.0 and 18.0. The CD was created in August 2024 and the Summary of Consultation on the 7th edition appeared in SC2/N[4951](#) in December 2024. After it appeared, Michel Suignard went through the comments, found no major issues, and created CD.2 (see 6.4, below).

6.4 Related to 10646 7th edition (CD.2)

Input documents:

SC2/N[4967](#) Text for ISO/IEC CD 10646.2 (Ed.7); 2025-04-01

SC2/N[4986](#) Summary of CD Consultation on ISO/IEC 10646 (Ed.7); 2025-05-29

Output document:

[5316](#) Draft disposition of comments on CD.2 ISO/IEC 10646 7th edition; Michel Suignard, Project editor; 2025-06-04

[5339](#) Disposition of comments on CD.2 ISO/IEC 10646 7th edition; Michel Suignard, Project editor; 2025-06-25

CD.2 includes scripts and characters that the Editor, Michel Suignard, considers likely to be in Unicode 18.0, including items designated “provisionally assigned” by Unicode. Relevant proposals are in section 9 of the agenda, “Contributions related to ballots”, subdivided into those characters and scripts in 17.0 and those not yet in a Unicode version but “provisionally assigned” by Unicode. The draft Disposition of Comments is [5316](#) (see below, 7.2). The final Disposition of Comments is [5339](#).

7 WG2 matters:

[7.1 Roadmap Snapshot \(Roadmap\)](#)

Input document:

[Roadmap](#) snapshot accessed as of 2025-03-03.

As usual, the Roadmap snapshot is available for review.

Members are encouraged to review the Roadmap snapshot, which is being updated. Please notify Dr. Umamaheswaran (bhanudorai@gmail.com) if errors are found, so it can be adjusted.

[7.2 Disposition of comments on 10646 Ed.7 CD.2](#)

Input document:

[5316](#) Ed. 7 CD.2 Draft disposition of comments; Michel Suignard, Project Editor; 2025-06-04

Four national bodies submitted comments, Canada, US, China, and India. Note that the 7th edition covers Unicode 17.0, but 18.0 is not yet started. Comments received from NBs on the characters and scripts in Unicode 17.0 are creating problems, since Unicode is in the beta period for 17.0. While making changes in 17.0 is still possible, it is late in the process.

CA-1 Canada had an editorial comment which was accepted.

Disposition: Accepted.

CN-01 China requested the left component of Tangut character U+17F03 be changed. Andrew West has written [5320](#) on this topic (contained on section 10.5.3 of the agenda, =section 10.2.4. of this document), which notes that the current glyph shape is more common. China is requested to read West’s document and respond at tomorrow’s meeting. Dr. Sun, the Tangut expert, will be present then. Michel Suignard reminded those present in the meeting that glyphs are not normative. (See 10.2.4, below, for later discussion)

Disposition: Not accepted.

CN-2..CN-4 The Editor recommended “propose acceptance” for the other comments, all editorial, from China, which pose no issue.

Disposition: Accepted.

IN-01 India commented on U+0984 BENGALI SIGN COMBINING ANUSVARA ABOVE. India acknowledged this character is not used in modern Bengali, but appears in archaic materials, such as in manuscripts. As a result, Michel Suignard, as Editor of ISO/IEC 10646, recommended retaining the character in repertoire, but noted this character is not in Unicode 17.0.

Disposition: Noted.

IN-02 On U+09FF BENGALI LETTER SANSKRIT BA, India commented the proposed character could cause confusion for modern Bengali users, since the character is not used in everyday Bangla and the glyph is the same as U+09F0. Peter Constable noted that the character has the same appearance in some contexts, but differs in other syllabic contexts. It was also mentioned that this is a historic character for representing Sanskrit, and script blocks can contain both historic and modern characters. Such information can be annotated in the names list and/or in the Unicode Core Spec documentation. India felt additional discussion on this character was deemed necessary. Michel Suignard recommended the comment from India be “not accepted”, but the character stay in the CD, so additional discussion can take place.

Disposition: Not Accepted.

IN-03 India agreed the character U+0CDC KANNADA ARCHAIC SHRII needs to be encoded, but requested more time to study the glyph shape, as the glyph changed over time. Michel Suignard reported that changes to the glyph can be accepted until August 2025 for the next CD, and the glyph can be changed even later, since glyphs -- unlike properties -- are not normative. The resolution of the comment agreed upon was “accepted in principle”, noting that the character will remain in the CD, allowing for more consultation.

Disposition: Accepted in Principle.

IN-04: Similar comment for U+0C5C TELUGU ARCHAIC SHRII, as above for U+0CDC KANNADA ARCHAIC SHRII.

Disposition: Accepted in Principle.

IN-05 and IN-06: India wanted more time to get consensus from experts and from the relevant State Government on U+0B53 ORIYA SIGN DOT ABOVE and U+0B54 ORIYA SIGN DOUBLE DOT ABOVE. It was noted that these two characters have been under review for one year (see [5249](#) from May 2024), so getting such feedback earlier would have been ideal. The dots are part of the orthography of the Kui language, like the character U+0B55 ORIYA SIGN OVERLINE, which was encoded in ISO/IEC 10646 (and Unicode 13.0 in March 2020). Evidence for the two dot characters was based on text examples from the Bible, but from different publishers, which was considered sufficient evidence of the characters being used in public interchange. There was a question whether the characters could instead have been unified with U+0307 COMBINING DOT ABOVE and U+0308 COMBINING DIAERESIS, respectively. The resolution was to “accept in principle” the comments, retaining the two characters in the CD so further consultation can take place.

Disposition: Accepted in Principle.

IN-07: India requested “Oriya” be replaced by “Odia” wherever it occurs. However, due to the stability policy, character names cannot be changed. During discussion the following wording at the top of the Oriya names list was pointed out to the representatives from India: “As of 2012, the name ‘Oriya’ for this script and language is officially spelled ‘Odia’ in India. That change in spelling does not affect the Unicode block or character names, which are constrained by stability guarantees”.

Disposition: Accepted in Principle.

There was a request to remove “Unicode” from the wording cited above at the top of the Oriya (Odia) names list (i.e., “That change in spelling does not affect the Unicode block”). An action Item was added for Michel Suignard to remove “Unicode” from wording atop Oriya (Odia) names list.

Disposition: Accepted in Principle.

Action item for Michel Suignard to remove “Unicode” from wording above Oriya (Odia) names list.

IN-08 India requested more time to consult and verify the Sharada vowel signs for Kashmiri located at U+11B60..U+11B67 in the Sharada Supplement block. However, after further discussion, India had no objection to the characters.

Disposition: Accepted in Principle.

IN-09 India agreed with the encoding of Tolong Siki script, which is used for the Kurukh language.

IN-10 India requested more time to consult with experts and the relevant State Government(s) on the Chisoi script. During discussion it was remarked that encoding scripts is not dependent upon getting government endorsement, but rather based on usage, such as in newspapers, at least for the orthography of living languages. It was noted that Chisoi was already in the document [5249](#) “Additional draft repertoire post 16.0” from May 2024, so it has been available for review for over a year. Making a change at this point is possible, but affects work on block descriptions, data fields, etc. as part of the Unicode release (currently in beta review). Getting more active engagement from BSI and MeitY on scripts and characters of interest to India will help. With the newly proposed 10646 MA, all National Bodies will have an opportunity to get an early review of scripts/characters. Comment recorded was “Accepted in Principle”, since Chisoi will remain in the CD, enabling more consultation.

Disposition: Accepted in Principle.

IN-11 India did not agree with the name U+11B0A DEVANAGARI LETTER ALTERNATE DDDA, since it reported that the character has a different pronunciation, and the character should be removed. Dr Lata relayed that the government was consulted, and they said it shouldn’t be used, though it was noted that the proposal [L2/25-022](#) acknowledges both letters have been used (figure 15); the proposed character is part of the old system. This character is not in Unicode 17.0 so there is no special rush to resolve the issue, and can be kept in the CD to foster continued discussion.

Disposition: Not Accepted.

US-01 The US requested removal of 3 Sidetic characters (U+1095A..U+1095C).

Disposition: Accepted.

US-02, -03, -04 The US requested adding 12 Urgently Needed ideographs, adding the character U+2B73F, and the US voiced its support for various characters, disunifications, horizontal extensions, glyph change and Unihan property changes in L2/25-090.

Disposition: Accepted.

US-05: The US requested four formal name aliases for Bamum characters (U+16881, U+1688E, U+168DC, and U+1697D). These formal name aliases will provide the correct names for these four characters that were encoded in Unicode 6.0 (October 2010).

The name aliases are:

BAMUM LETTER PHASE-B PUNGAAM for U+16881 BAMUM LETTER PHASE-B PUNGAAM

BAMUM LETTER PHASE-B NGGOM for U+1688E BAMUM LETTER PHASE-B NGOM

BAMUM LETTER PHASE-C SHETFON for U+168DC BAMUM LETTER PHASE-C SETFON

BAMUM LETTER PHASE-E NGGOP for U+1697D BAMUM LETTER PHASE-E NGOP

Disposition: Accepted.

US-06: The US requested the name change for one Arabic character, U+10EF9, from ARABIC CROWN to ARABIC MARK CROWN.

Disposition: Accepted.

US-07: The US requested name changes to five characters: U+1DF43, U+1DF54, U+1DFCD, U+1DFCE, U+1DFCF. The corrected names are:

U+1DF43 LATIN LETTER SMALL CAPITAL BARRED E

U+1DF54 LATIN SMALL LETTER BARRED CHI

U+1DFCD MODIFIER LETTER SMALL TURNED R WITH MID-HEIGHT LEFT HOOK

U+1DFCE MODIFIER LETTER SMALL SPLIT O

U+1DFCF MODIFIER LETTER SMALL SPLIT U

Disposition: Accepted.

US-08: The US requested a name change to U+1D258, since its name is inconsistent with U+1D256 and U+1D257. The corrected name for U+1D258 should be: MUSICAL SYMBOL FLAT WITH DOUBLE STEM.

Disposition: Accepted.

US-09 The US requested a name change to U+1D25F, since an error in the character name was discovered. The glyph should also be fixed. The corrected name for U+1D25F should be: MUSICAL SYMBOL COMBINING BUZZ ROLL STEM.

Disposition: Accepted.

See relevant recommendations M72.01 and M72.02

7.3 Additional Draft Repertoire for Characters Approved for Unicode 17.0 and 10646 7th Edition

Input documents:

[5290](#) Additional Draft Repertoire for Characters Approved for Publication in Unicode Version 17.0, and 10646 7th edition; Michel Suignard, Project editor; 2024-11-26

[5291](#) Additional draft repertoire for provisionally assigned code points for Unicode (post 17.0), possibly 10646 7th edition; Michel Suignard, Project editor; 2024-11-26

These documents are FYI to WG2 experts.

8 IRG

8.1 IRG status and reports

Input documents:

[5285](#) IRG Meeting #63 Recommendations and Action Items; Ken Lunde, IRG Convenor; 2024-10-24

[5297](#) IRG Meeting #64 recommendation and Action Items; Ken Lunde, IRG Convenor; 2025-03-21

[5302](#) Summary Report of IRG Meetings #63 and #64; Ken Lunde, IRG Convenor; 2025-03-25

Ken Lunde, the IRG Convenor, reported on IRG activities. There have been two IRG meetings since the last WG2 meeting (meetings #63 and #64). WG2 has already approved meetings #65 (2025, in Guangzhou, China) and #66 (2026, virtual), but is asking for WG2 approval for:

#67, Oct 12-16, 2026, to be hosted by SAT,

#68, Virtual (2027, Webex), March 15-19,

#69 Fall 2027, still seeking host (but possibly it may be held at Stanford University).

See relevant recommendation M72.19 on future meetings

Ken Lunde presented the new [IRG website, hosted by Unicode](#). He has migrated the mailing list and set up a new [IRG document register](#), where over 50% of documents have been migrated, though not all documents are available to migrate. New pages include: [Current & Future IRG Source Prefixes](#) and [Representative Glyph Changes](#). The page also has links to the Principles & Procedures doc, the IRG Working Document Series, and a list of upcoming meetings (with registration and document submission deadlines). Working set assignments are also listed. Disunified ideographs are found Series 4 of IWDS ([IRG Working Document Series](#)), and the IRG home page also has a link to Andrew West's [IDS database page](#). Ken Lunde noted that he uses HTML for the IRG agendas, though past agendas were in MS Word.

Section 4 noted proposed changes to P&P for review at the October 2025 IRG meeting (meeting #65).

Working Set 2024 contains a total of 4,674 ideographs. Future working sets are now limited to 10K. Henry Chan reports ORT can handle larger numbers of characters.

Section 7 noted fifteen new Urgently Needed Characters in Extensions C and E that are targeted for the 7th edition (and Unicode 17.0): U+2B73B..U+2B73D, U+2CEA2..U+2CEAA, U+2CEAB..U+2CEAD.

Section 8 discusses disunifications, and calls out a request for a response from Japan to WG2 (or IRG), before IRG meeting #65 on the disunification of U+2A50D (IRG N2780, with feedback from China in IRG N2804). The two glyphs appear in IVD as Moji_Joho MJ057575 and Moji_Joho MJ056440 (in IVD document dated 2014-05-16). Tashiro-san reported that it was acceptable to Japan to change the glyph, but not the code point; he voiced the view that it is inappropriate to disunify the character once it is standardized, but users can choose the glyph. Tashiro-san also remarked that because Japan decided not to participate in IRG, the NB was not in a position to make a formal comments to IRG.

Horizontal extensions are discussed in section 10. The horizontal extension issues described in documents IRG N2040 and IRG N2722 require a response from Japan by the next IRG (meeting #65).

Section 11 noted changes to representative glyphs and source references.

Section 12 reports on IRG document N2799, a preliminary proposal to encode several hundred CJKV components as CJK unified ideographs. This will be discussed at the next IRG meeting (#65). The new block is tentatively named "CJK Unified Ideographs Components". It will be proposed for the Roadmap, once the size is known, containing perhaps 500-700 characters.

Jianzi Musical Notation is discussed in section 13. Nine ideographs for Jianzi musical notation have now been merged into the CJKV Components block (see section 12, above). This traditional notation is used in China and is very different from Western notation, so there is no overlap. The proposal for the new Components block will include all of the Jianzi fingering.

Section 14 concerns the encoding of script-hybrid Han ideographs, which use non-Han components such as Latin, Hangul, or Kana; the topic is still under discussion. The question of how to count strokes for non-Han components, such as Latin, has already been worked out.

The last section of the IRG summary reports the IRG's support of the registration of the new Culture and Art Publishing House (CAAPH) IVD collection. It will be the sixth collection added to IVD, and will appear in the ninth version of the IVD.

8.2 Request for Japan to return as an active member body of the IRG

Input document:

[5284](#) Request for Japan to return as an active member body of the IRG; Ken Lunde, IRG convenor; 2024-09-17

This document requested Japan reconsider its decision to not participate in IRG and return as an active member. Several benefits were mentioned, including:

- Japan's viewpoint would be valuable for the SC2 standardization process
- Meetings are now hybrid or virtual (hence participation can take place without incurring travel costs)
- The proposed horizontal extension for over 36,000 Han ideographs was submitted to WG2 ([5221](#)), but it would be better submitted to IRG which meets more often
- Comments on CJK Unified Ideograph Extension G and H blocks were submitted, but came in very late.

The representative from Japan reported Japan could consider joining but it is a human resources problem, due to time/workload availability. Peter Constable mentioned that with the Maintenance Agency model, CJK proposals would go to Advisory Group 1 (IRG). Andrew West, the UK expert, expressed the view that if Japan joined, it should be as a full, acting member, to be fair to the other participants. Ken Lunde noted that the review process is much more efficient today than in the past, and may take only a few days to review the characters. He also mentioned that just one person is reviewing characters for the U.S. and Unicode (Ken Lunde), and one person for U.K. (Andrew West).

8.3 IRG Convenor Re-appointment

See relevant recommendations M72.18.

9 Contributions related to ballots

9.1 Related to Unicode v17.0 and incorporated into 10646 Ed.7 CD.2

Input document:

[5290](#) Additional draft repertoire for characters approved for publication in Unicode 17.0 and 10646 7th edition; Michel Suignard, Project editor; 2024-11-26

The document [5290](#) and those listed in sections 9.1.1-.9.1.6 below are for information to WG2 experts. The only document that discussed was 9.1.7, as relayed in the notes below.

9.1.1 Tangut

9.1.1a Tangut ideograph additions

Input document:

[5286](#) Proposal to encode two Tangut ideographs; Eiso Chan, et al.; 2024-10-14

9.1.1b Tangut radical value updates

Input document:

[L2/25-091R](#) (ref. 3.4) Update radical value for U+17D0B; SEW / Jan Kučera, et al; 2025-04-17

9.1.2. CJK

Input documents:

[5287](#) Request to change the glyph for U+2E23A/KC-06640; KIM Kyongsok, et al.; 2024-10-24
[5288](#) Proposal requesting a Horizontal Extension of 306 Hanja chars; KIM Kyongsok, et al.; 2024-10-24
[5289](#) Proposal to remove 2 characters from Extension J; Tao Yang, China NB; 2024-11-04
[L2/24-165](#) CJK & Unihan Group Recommendations for UTC #180 Meeting; Ken Lunde; 2024-07-11
[L2/24-227](#) CJK & Unihan Group Recommendations for UTC #181 Meeting; Ken Lunde; 2024-10-31
[L2/25-009](#) CJK & Unihan Group Recommendations for UTC #182 Meeting; CJK / Ken Lunde; 2025-01-10

9.1.3 Adlam

Input document:

[L2/24-205](#) Replacement of Adlam Reference Font in Codesheet to Updated Design; Neil Patel, et al; 2024-09-03

9.1.4 Emoji

Input document:

[L2/24-226](#) Emoji Standard & Research Working Group Report for UTC #181; ESR / Jennifer Daniel; 2024-11-06

9.1.5 Egyptian Hieroglyphs

Input document:

[L2/24-238](#) Additional Standardized Variation Sequences for Rotations of Ancient Egyptian Hieroglyphic Texts; Daniel A. Werning, et al.; 2024-10-22

9.1.6 Mongolian

Input document:

[L2/25-028](#) Proposal to add 4 Standardized Variation Sequences for Sibe Quotation Marks; CheonHyeong Sim; 2025-01-08

9.1.7 Currency Symbol

Input document:

[L2/25-075](#) Proposal to encode the Saudi Riyal; Saudi Arabian Central Bank; 2025-03-11

In February 2025 the Central Bank of Saudi Arabia announced creation of a new currency symbol, and requested it be encoded (and supported) “at the earliest opportunity”. The character was considered for Unicode 17.0 (to be released September 2025) at the next available code point, U+20C1, and was included in the CD. As a result, it will be published in Unicode before the DIS, to accommodate the Saudi Central Bank.

There was some discussion about the representative glyph, since the proposal had very precise dimensions, and could be thought of as a logo. How will it fit in as an element of the script? Unicode members were in touch with the proposers regarding the glyph shape, and connected them with Arabic type specialists. A font with the glyph has been given to Michel Suignard for the charts.

9.2 Related to Unicode v17.0 and NOT incorporated into 10646 ED.7 CD.2

Input document:

SC2/N4991 (=WG2 N [5339](#)) Disposition of comments Report on ISO-IEC CD 10646.2; Michel Suignard, Project editor; 2025-06-22

The final Disposition of comments on CD.2 was accepted.

Disposition: Recommends SC2 accept the disposition of ballot comments on CDAM2.4 to 7th edition contained in document [5339](#).

See relevant recommendations: M72.01 and M72.02

9.2.1. CJK

Input documents:

[L2/25-090](#) CJK & UniHan Group Recommendations for UTC #183 Meeting; CJK / Ken Lunde; 2025-04-11

[L2/25-090](#) (section 27) Disunification of the KP-source of U+6138 into new U+2B73F; CJK / Ken Lunde; 2025-04-11

[L2/25-090](#) (section 25) Proposal to encode 12 CJK UNC ideographs at U+2CEA2..U+2CEAD; CJK / Ken Lunde; 2025-04-11

[IRGN2729R3](#) G-source horizontal extensions for 2,145 ideographs; China et al.; 2024-10-24

[IRGN2805R2](#) Feedback on_IRG N2743/N2747/N2772R/N2787/N2790; China (Tao Yang); 2025-03-03 [U+2B73E]

[IRGN2779R2](#) T-source Glyph Modifications and Horizontal Extension; TCA; 2025-03-06 [T-source horizontal extensions for 12 ideographs]

(See CD comments by US in [5339](#), which were accepted and Recommendations M72.1e-f and M72.02.)

9.2.2 Tangut

Input document:

[L2/25-091R](#) (ref. 3.5) Radical corrections for 4 Tangut ideographs; SEW / Jan Kučera, et al; 2025-04-17

There was no discussion on this agenda item.

9.2.3 Bamum

Input document:

[L2/25-091R](#) (ref 3.9) Bamum name corrections; SEW / Jan Kučera, et al; 2025-04-17

There was no discussion on this agenda item. (See CD comments by US in [5339](#), which were accepted, and Recommendations M72.01b)

9.2.4 Sidetic

Input documents:

[L2/25-091R](#) (ref 4.4) Removal of 3 Sidetic letters; SEW / Jan Kučera, et al; 2025-04-17

[5308](#) Sidetic naming conventions; Debbie Anderson, et al.; 2025-04-26

There was no discussion on this agenda item. (See CD comments by US in [5339](#), which were accepted, and Recommendations M72.01a.)

9.3 Provisionally assigned for future encoding by Unicode and part of 10646 ED.7 CD.2

9.3.1 Additional draft repertoire

Input document:

[5299](#) Additional draft repertoire for provisionally assigned code points for Unicode (post 17.0), and part of 10646 7th edition CD.2; Michel Suignard, Project editor; 2025-03-21

The document [5299](#) and those documents listed in sections 9.3.2-.9.3.13 below are for information to WG2 experts. The characters listed in 9.3.2 – 9.3.13 are in CD.2. The only agenda items that were discussed were 9.3.3 Hebrew and 9.3.8 Devanagari, with notes of discussion captured below and relevant recommendations noted.

9.3.2 Armenian

Input document:

[L2/24-107](#) Revised Proposal to encode three Armenian superscript characters U+0558 U+058B U+058C; Hossep Dolatian; 2024-04-16

9.3.3 Hebrew

Input document:

[L2/24-274](#) Proposal to encode Hebrew Point Sheva Na U+05C8; Jonathan Mosesson; 2024-12-23

There has been an ongoing discussion with experts on the name. The Unicode Technical Committee proposed a name based on the glyph's appearance, HEBREW POINT HEAVY SHEVA, since the name "Sheva Na" could be confusing with "Sheva Nah". The examples provided showed a heavy (thicker) sheva, though not all publishers use the "heavy sheva". Some experts felt strongly the conventional name should be employed. The CD has "HEAVY SHEVA".

Disposition: Recommends SC2 change the name of U+05C8 HEBREW POINT SHEVA NA to HEBREW POINT HEAVY SHEVA for inclusion in the next CD.

See relevant recommendation M72.03.

9.3.4 Bengali

Input document:

[L2/24-153](#) Proposal to encode Bengali Sign Combining Anusvara Above U+0984; Jan Kučera, Charles Li; 2024-06-24

9.3.5 Phonetic diacritics

Input document:

[L2/24-232](#) Proposal to encode compound tone diacritics III U+1ADE U+1ADF U+1AEC..U+1AF0; Kirk Miller; 2024-10-21

9.3.6 Latin/Greek script (including phonetic characters with Latin and Greek)

Input documents:

[L2/24-219](#) Proposal to encode subscript w y z and y U+209D..U+209F U+1DFD0; Kirk Miller; 2024-10-21

[L2/24-277](#) Proposal to encode characters for the English Phonotypic Alphabet (EPA) U+2E60..U+2E63 U+A7DD U+1DF68..U+1DF81; Karl Pentzlin; 2024-12-29

[L2/24-237](#) Proposal to encode Capital r with long leg U+A7E2; Denis Moyogo Jacquerye; 2024-10-30

[L2/24-243](#) Changing Latin script r glyphs and adding their capital characters U+AB6C U+AB6D; Denis Moyogo Jacquerye; 2024-10-28

[L2/24-052R](#) Proposal to encode modifier pre-Kiel click letters U+107BB..U+107BF; Kirk Miller; 2024-04-29

[L2/24-051](#) Proposal to encode affricate ligatures U+1DF1F..U+1DF24 U+1DF2B..U+1DF2C; Kirk Miller; 2024-02-23

[L2/24-050](#) Proposal to encode letters with palatal hook U+1DF2D..U+1DF3A; Kirk Miller; 2024-04-01

[L2/24-146](#) Proposal to encode [Greek] letters with palatal hook U+1DF3B..U+1DF3D modified to Latin names in section 4.7 of ([L2/24-228](#)); Kirk Miller; 2024-06-20

[L2/24-171](#) Proposal to encode Miscellaneous historical and para-IPA modifier letters U+1DF3E..U+1DF3F U+1DFD8..U+1DFE8; Kirk Miller; 2024-07-08

[L2/24-234r](#) Proposed to encode barred letters U+1DF40..U+1DF56 U+1DFD2..U+1DFD7; Kirk Miller et al.; 2024-11-25

[L2/25-016](#) Proposal to encode letters of the RFE phonetic alphabet U+1DF57..U+1DF59 U+1DFCD..U+1DFCF; Kirk Miller; 2025-01-06

[L2/24-273](#) Proposal to encode Initial Teaching Alphabet U+1DF5A..U+1DF66; Kirk Miller; 2024-12-23

[L2/24-272](#) Proposal to encode r lezh with curl U+1DF67; Kirk Miller; 2024-12-23

[L2/24-231](#) Proposal to encode modifier small capital P U+1DFD1; Kirk Miller, Denis Moyogo Jacquerye;

2024-10-21

[L2/24-147](#) Proposal to encode Modifier Sinological extensions to the IPA U+1DFE9..U+1DFF2; Kirk Miller;

2024-06-20

[L2/24-145r](#) Proposal to encode modifier psi and omega U+1DFF3..U+1DFF4; Kirk Miller; 2024-06-24

[L2/24-144](#) Proposal to encode modifier letters with palatal hook U+1DFF5..U+1DFF9; Kirk Miller; 2024-06-20

[L2/24-130R](#) Proposal to encode modifier voiceless implosive letters U+1DFFA..1DFFF); Kirk Miller; 2024-06-21

9.3.7 Arabic

Input documents:

[L2/24-178](#) Proposal to encode sixteen Quranic Arabic Characters U+10EC9..U+10ECF U+10EF0..U+10EF8; Rikza F. Sh.; 2024-07-08

[L2/24-131](#) Proposal to encode Arabic Crown Letters U+10ED9..10EEE U+10EF9; Manish Goregaokar, et al.; 2024-05-28

9.3.8 Devanagari

Input document:

[L2/25-022](#) Proposal to encode the Devanagari letter Sindhi DDDA U+11B0A; Biswajit Mandal; 2025-01-06

It was noticed that the CD has the character name DEVANAGARI LETTER SINDHI DDDA but the Unicode name on the Pipeline is DEVANAGARI LETTER ALTERNATE DDDA. The name should be changed to reflect this new name.

Disposition: Recommends SC2 change the name of U+11B0A DEVANAGARI LETTER SINDHI DDDA to DEVANAGARI LETTER ALTERNATE DDDA for inclusion in the next CD..

See relevant recommendation M72.03

9.3.9 Cuneiform script

Input documents:

[L2/24-270](#) Proposal to encode twelve cuneiform tenû numerals U+1246F U+12475..U+1247F; Robin Leroy; 2024-12-17

[L2/24-210r](#) Proposal to encode Archaic cuneiform numerals U+12550..U+12686; Robin Leroy et al.; 2024-10-23

9.3.10 Jurchen script

Input documents:

[5261R](#) Proposal to encode Jurchen ideographs U+18E00..U+19191; Andrew West, Sun Bojun, Zhōnghuá Zìkù; 2024-06-12

[5278](#) Proposal to encode Jurchen radicals U+191A0..U+191D2; Andrew West et al.; 2024-06-12

See also 10.2.3 Jurchen Small Script, below.

9.3.11 Kana script

Input documents:

[L2/24-150](#) Proposal for missing three Kana-Ligatures U+1B123..U+1B125; Gen Kojitani; 2024-06-21

[L2/24-279](#) Proposal to encode one Kana-ligature U+1B126; CheonHyeong Sim; 2024-12-31

9.3.12 Musical symbols

Input documents:

[L2/23-278R](#) Proposal to encode three musical symbols U+1D127 U+1D128 U+1D1FF; Gavin Jared Bala, Kirk Miller; 2024-01-08

[L2/23-276](#) Proposal to encode 12 Stein-Zimmermann quarter-tone accidentals U+1D1EB..U+1D1F6; Gavin Jared

Bala, Kirk Miller; 2023-11-20

[L2/23-277](#) Proposal to encode 8 digits with slashes used in figured bass U+1D1F7..U+1D1FE; Gavin Jared Bala, Kirk Miller; 2023-11-20

[L2/24-172](#) Proposal to encode 256th, 512th, and 1024th notes and rests U+1D250..U+1D255; Gavin Jared Bala, Kirk Miller; 2024-07-08

[L2/24-174](#) Proposal to encode Turkish and Arabic accidentals U+1D256..U+1D25A; Gavin Jared Bala, Kirk Miller; 2024-07-08

[L2/24-213](#) Proposal to encode additional tremolo U+1D25B..U+1D25F; Gavin Jared Bala, Kirk Miller; 2024-10-01

[L2/24-214](#) Proposal to encode triple [and quadruple flat] U+1D260; Gavin Jared Bala, Kirk Miller; 2024-10-01

[L2/25-015](#) Proposal to encode additional Baroque ornament U+1D261; Gavin Jared Bala, Kirk Miller; 2025-01-06

[L2/25-017](#) Proposal to encode miscellaneous musical symbols U+1D262..U+1D27F; Gavin Jared Bala, Kirk Miller; 2025-01-06

9.3.13 Other symbols

Input document:

[L2/24-151r](#) Proposal for two geometric shapes for Japanese traditional calendars U+1F1AE U+1F7DA; Gen Kojitani; 2024-09-23

9.4 Provisionally assigned for future encoding by Unicode not part of 10646 7th edition

9.4.1 Tulu-Tigalari

Input documents:

[L2/22-260](#) Proposal to encode Tulu-Tigalari Archaic II; Srinidhi and Sridatta; 2022-10-25

[L2/25-113](#) Response on the Encoding of TULU-TIGALARI LETTER ARCHAIC II; Srinidhi and Sridatta; 2025-04-07

The initial document [L2/22-260](#) from 2022 requested three characters; two have already been encoded (GEMINATION MARK and SIGN PLUTA), only the TULU-TIGALARI LETTER ARCHAIC II has not. The request hence is to accept one character, the TULU-TIGALARI LETTER ARCHAIC II. The original reasoning for not accepting ARCHAIC II was due to an architectural question. However, a similar character has been encoded in Malayalam (MALAYALAM LETTER ARCHAIC II). The encoding of a single atomic character is recommended.

Disposition: Recommends SC2 request the Project Editor consider including U+113DA TULU-TIGALARI LETTER ARCHAIC II in a future version of the standard.

See relevant recommendation M72.12.

9.4.2 Tangut

9.4.2a Tangut ideograph

Input document:

[5303](#) Proposal to encode Tangut Ideograph tǎi²; Andrew West, Viacheslav Zaytsev; 2025-03-28

There are 147 entries in the nine-volume dictionary of Tangut words, *Xīxiàwén Cídiǎn*, compiled by Hán Xiǎománg, containing unencoded variants. When Tangut was originally encoded, the proposal authors decided not to separately propose minor glyph variants. The appendix includes a listing of all the variants in the dictionary corresponding to a currently encoded Unicode character, and nearly all could probably be unified with the encoded character, and potentially represented by Ideographic Variation Sequences (IVS). However, this proposal is for one character that is not a simple glyph variant, and should be separately encoded, U+18D1F.

Disposition: Recommends SC2 request the Project Editor consider including U+18D1F TANGUT IDEOGRAPH-18D1F in a future version of the standard.

See relevant recommendation M72.12

9.4.2b Tangut radical stroke value updates

Input documents:

[L2/25-120](#) Update the Radical Stroke value of 197 Tangut ideographs; Andrew West; 2025-04-09

[L2/25-91R](#) (ref 3.4) Update the Radical Stroke value for U+17D0B TANGUT IDEOGRAPH-17D0B; SEW / Jan Kučera, et al.; 2025-04-17

This document proposes the correction of the radical/stroke values of 197 Tangut ideographs, after the author's study of kRSTUnicode key in TangutSources.txt. Document L2/25-91R requests the correction of the radical/stroke value of U+17D0B.

Disposition: Recommends SC2 recommend the Project Editor incorporate the updates to the radical/stroke value of 197 Tangut ideographs and for the radical stroke value of U+17D0B TANGUT IDEOGRAPH-17D0B for inclusion in the next CD.

See relevant recommendation M72.05

9.4.3. Cyrillic

Input document:

[L2/25-112](#) Proposal to encode Cyrillic yeru with stroke; Kirk Miller; 2025-04-24

This is a proposal for one character used in Cyrillic phonetic transcriptions. Examples of usage in different contexts are provided.

Disposition: Recommends SC2 request the Project Editor consider including U+1C8B CYRILLIC SMALL LETTER YERU WITH CONNECTING BAR in a future version of the standard.

See relevant recommendation M72.12

9.4.4. Latin script and phonetic symbols

9.4.4.a Latin w with palatal hook

Input document:

[L2/25-077](#) Proposal to encode Latin w with palatal hook; Denis Moyogo Jacquerye, Kirk Miller; 2025-03-13

This is a proposal for one phonetic character, LATIN SMALL LETTER W WITH PALATAL HOOK, which was part of a larger set of characters with palatal hook, many of which have already been proposed and encoded. This document now provides evidence of the use of this particular character; it was not included in the earlier set ([L2/24-050](#)) due to lack of evidence.

Disposition: Recommends SC2 request the Project Editor consider including U+1DF82 LATIN SMALL LETTER W WITH PALATAL HOOK in a future version of the standard.

See relevant recommendation M72.12

9.4.4.b Latin characters with double tilde overlay

Input document:

[L2/25-114](#) Proposal to encode two Latin characters with double tilde overlay; Kirk Miller; 2025-04-07

This proposal is for two lowercase Latin characters, *n* and *r* with double tilde overlay. Originally a combining double overlay mark was proposed to represent these characters (as a sequence with the combining character). However, there is precedence for handling such characters atomically.

A question was raised about uppercase forms of the two letters. However, there is no attestation for such letters. As a result, there is no way to know the appearance of such characters.

Michel Suignard noted these characters and other Latin additions are in a different style (Gentium) than that typical of other Latin characters in the code chart (Times New Roman). The Project Editor Michel Suignard is working to make the style consistent across the Latin blocks.

Disposition: Recommends SC2 request the Project Editor consider including U+1DF83 LATIN SMALL LETTER N WITH DOUBLE MIDDLE TILDE and U+1DF84 LATIN SMALL LETTER R WITH DOUBLE MIDDLE TILDE in a future version of the standard.

See relevant recommendation M72.12

9.4.4.c Compound IPA stress mark

Input document:

[L2/25-061](#) Proposal to encode a compound IPA Stress mark; Kirk Miller; 2025-02-27

This document proposes a modifier letter used in dictionaries to indicate that a syllable may be pronounced variably, either with either a primary stress (indicated by high vertical mark) or secondary stress (with a low vertical mark). The glyph is made up of two marks, one atop the other. Implementations and usage would be improved with an atomic encoding. Figure 6 shows the two marks as a sequence, which is typographically incorrect; figure 5 shows the intended display.

Disposition: Recommends SC2 request the Project Editor consider including U+208F MODIFIER LETTER HIGH AND LOW VERTICAL LINE in a future version of the standard.

See relevant recommendation M72.12.

9.4.4.d Name changes to five phonetic characters

Input document:

[L2-25-097](#) Change names of 5 Phonetic characters; Kirk Miller; 2025-03-31

No discussion recorded. Name changes were recommended as part of [5339](#) Disposition of comments on CD.2 on US-07; see also section 7.2 above.

See relevant recommendation M72.01c.

9.4.5. Katakana

Input document:

[L2/25-036](#) Proposal to encode Katakana Letter small archaic Ye; CheonHyeong Sim; 2025-01-15

This document proposes one small letter used for Marshallese transliteration. Examples are provided. The CJK & Unihan Working Group reviewed it and felt the character made sense. There is space for the character in the Small Kana Extension block. If encoded, additional actions are needed, as it needs to be added to [UAX #50](#) Unicode Vertical Text Layout.

A question was raised about its name, but this character has the same name as the non-small variant, U+1B121 KATAKANA LETTER ARCHAIC YE.

Disposition: Recommends SC2 request the Project Editor consider including U+1B121 KATAKANA LETTER SMALL ARCHAIC YE in a future version of the standard.

See relevant recommendation M72.12

9.4.6 Math symbols

Input document:

[L2/25-062](#) Proposal to encode five historic mathematical operators; Uwe Mayer, et al.; 2025-02-27

These characters have been approved for provisional assignment by the UTC. They include:

U+1CEF1 LEIBNIZIAN DIVISION SIGN

U+1CEF2 LEIBNIZIAN MULTIPLICATION SIGN

U+1CEF3 LEIBNIZIAN MULTIPLICATION-DIVISION SIGN

U+1CEF4 LEIBNIZIAN FRACTION REDUCTION SIGN-1

U+1CEF5 LEIBNIZIAN FRACTION REDUCTION SIGN-2

Disposition: Recommends SC2 request the Project Editor consider including the five Leibnizian characters (U+1CEF1..U+1CEF5) in a future version of the standard.

See relevant recommendation M72.12

9.4.7 Music symbols

9.4.7.a Two bowing symbols

Input document:

[L2/25-018](#) Proposal to encode 2 bowing symbols; Gavin Jared Bala, Kirk Miller; 2025-01-06

This proposal is for two symbols U+1D280 MUSICAL SYMBOL COMBINING STEM BOW BEHIND BRIDGE and U+1D281 MUSICAL SYMBOL COMBINING STEM BOW ON TOP OF BRIDGE indicating bowing conventions in the Musical Symbols Supplement block (U+1D250..U+1D28F). The characters can occur in running text, as well as in more complex notational environments, as in figure 3.

A question was raised about the orientation of the marks. These two musical symbols can appear on the upper half of a staff or below (and mirrored), but the variations are handled in music layout, not by encoding separate characters.

Disposition: Recommends SC2 request the Project Editor consider including U+1D280 MUSICAL SYMBOL COMBINING STEM BOW BEHIND BRIDGE and U+1D281 MUSICAL SYMBOL COMBINING STEM BOW ON TOP OF BRIDGE in a future version of the standard.

See relevant recommendation M72.12

9.4.7.b Name changes to two musical symbols

Input documents:

[L2/25-065](#) Response to feedback on the accidentals in L2/24-174; Gavin Jared Bala, Kirk Miller; 2025-02-27

[L2/25-064](#) Response to feedback on the buzz roll in L2/24-213; Gavin Jared Bala, Kirk Miller; 2025-02-27

Name changes were recommended as part of [5339](#) Disposition of comments on CD.2 on US-08 and US-09; see also section 7.2 above.

Disposition: Recommends SC2 accept the proposed name character to U+1D258 and U+1D25F

for inclusion in the next CD. The corrected name for U+1D258 should be: MUSICAL SYMBOL FLAT WITH DOUBLE STEM, and the corrected name for U+1D25F should be: MUSICAL SYMBOL COMBINING BUZZ ROLL STEM.

See relevant recommendation M72.01.c and M72.01.f.

9.4.8 Arabic

Input document:

[L2/25-071](#) Comments on Public Review Issues (Jan 3, 2025 - April 2, 2025); Feedback re: Change name of U+10EF9 to ARABIC MARK CROWN); Michelle Perham; 2025-04-02

Name changes were recommended as part of [5339](#) Disposition of comments on CD.2 on US-06; see also section 7.2 above.

Disposition: Recommends SC2 accept the proposed character name change for U+10EF9 from ARABIC CROWN to ARABIC MARK CROWN for inclusion in the next CD

See relevant recommendation M72.01.c.

9.4.9 Ruble sign

Input document:

[L2/24-134R](#) Proposal to Encode a Pridnestrovian Ruble Sign; Ivan Adrianov; 2024-08-19

In December 2024, Peter Constable penned a document “Request for SC2 member comments on proposal to encode ‘Ruble sign with double vertical stem’” ([L2/24-271](#)) requesting SC2 feedback. His document stated that the proposal [L2/24-134](#), “Proposal to Encode a Pridnestrovian Ruble Sign”, had been reviewed by the UTC, which felt the character met the technical criteria for encoding: it provided examples drawn from text environments, currency, menus and different sources. However, the name Pridnestrovian is disputed, so the UTC recommended the name be changed to a descriptive one, RUBLE SIGN WITH DOUBLE VERTICAL STEM.

The request for comments on this proposal led to submission of two documents: [L2/25-024](#) by Andrew West and [L2/25-030](#) by Karl Pentzlin. Andrew West noted that other currency symbols, such as the Saudi RIYAL (see section 9.1.7 above), were proposed by official organizations, but the proposal for the ruble was not. He raised a question about the author and whether the symbol is copyrighted. Encoding this character could be seen as a political move, that is, recognizing a region not internationally recognized. However, it was noted that the Azerbaijani Manat proposal came from an individual, not a monetary authority.

One possibility mentioned during discussion was to encode the characters in the Cyrillic block as CYRILLIC LETTER CAPITAL R WITH DOUBLE VERTICAL STEM.

Based on the discussion, Michel Suignard recommended the character be tabled, with discussion postponed since there was no decision on the block or character name. If there is consensus in the coming year, the character may be included in the CD or added to the “bucket”.

Disposition: No action.

10 Script contributions not yet assigned

10.1 Carried forward not related to ballots without new contributions

Afáka [N4292](#)
Aiha [N5226](#)
Bagam [N4293](#)
Balti 'B' [N4016](#)
Balti scripts [N3842](#)
Bété [L2/19-044](#), [L2/23/279](#)
Bima (Buginese extensions) [L2/23-070](#)
Blissymbols [N5228](#) [N5149](#) [N5171](#)
Box-Headed script [L2/24-100](#)
Book Pahlavi [L2/24-040](#)
Brusha [L2/17-183](#)
Buginese extensions [L2/16-159](#)
CJK Buddhist symbols [N5166](#)
Diwani Siyaq Numbers [L2/15-066R](#)
Eebee Hmong [N4668](#)
Eskaya [N4499=L2/13-229](#)
Jianzi Musical Notation and Format Controls [N5041](#)
Kerinci [L2/16-074](#)
Khatt-i Baburi [N4130](#)
Khitan Large script [N4631](#), [N4642](#)
Khotanese [L2/15-022](#)
Kpelle [N3762](#)
Kui Gaari [L2/24-102](#)
Kulitan [L2/15-232](#)
Kurukh Banna [L2/24-101](#)
Lampung [L2/22-044](#)
Landa [N3768](#)
Leibniz symbols ([N5277](#))
Leke [N4438](#)
Linear Elamite [L2/21-233](#)
Lisu Monosyllabic [N5047](#) [N5121](#)
Loma [N4786](#), [N4837](#)
Lota Ende [L2/16-076](#)
Mandombe [L2/16-077R](#)
[Maya Hieroglyphs L2/23-228 and L2/23-020](#)
Moon [N4128](#)
Mwangwego [L2/25-135](#)
Naxi Dongba [N4898](#)
[Naxi Geba N4886 N4887](#)
Obsolete Simplified Chinese Ideographs [N3695](#)
Old Yi [N3288](#)
Oracle Bone [N5090](#)
Palaeohispanic Northern [L2/22-146](#)
Palaeohispanic Southern [L2/22-147](#)
Pallava [L2/18-083](#)
Pau Cin Hau Syllabary [L2/16-014](#)
Persian Siyaq [L2/21-105](#)
Proto-Cuneiform [L2/23-190](#)
Proto-Elamite [L2/23-196](#)
Proto-Sinaitic [L2/19-299](#)
Pungchen [L2/17-181](#)
Pyu [N3874](#)
Ranjana [L2/23-028](#)
Shuishu [N4758](#) [N4922](#) [N4839](#) [N4956](#) [N4942](#)
[N4946](#) [N5110](#)
Sirmauri [L2/25-134](#)
[Southwest China Hieroglyphs N4856 N4901](#)
Sumbawa [L2/16-096](#)
Tamga symbols [N5092](#)
Tani Lipi [N3823=L2/10-146](#)
Tikamuli [N3963=L2/10-465](#)
Tocharian [L2/15-236](#)
Vexillology symbols [L2/17-089](#)
[Western Cham N5098 L2/22-095](#)
Woleai [N4146](#)
Zou [N4044](#)

10.2 New scripts or block or existing with new contributions

10.2.1 Shuowen Small Seal (=Seal / Small Seal)

Input documents:

Previous proposals

[4688](#) Proposal to encode Small Seal Script in UCS; TCA and China; 2015-10-20

[4853](#) Shuowen Seal Ad Hoc Meeting Resolutions; Ad hoc group; 2017-09-01

[5105](#) Proposal to encode Small Seal Script, [Appendix](#); TCA, China; 2019-06-19

Various reports of discussion (with new documents for this meeting **bolded**)

[5034](#) Report of Discussion on Small Seal Script during WG2 #67; Suzuki Toshiya; 2018-12-17

[5089](#) Shuowen Seal Informal Meeting Report (June 1st 2019, Beijing); Selena Wei, et al.; 2019-06-01

[5108](#) Report of Seal Script discussion at WG2 #68; Suzuki Toshiya; 2019-06-19
[5117](#) Shuowen Seal Encoding Report; TCA; 2019-09-27
[5118](#) About the future extension of Shuowen Seal; Selena Wei, Yenling Tseng; 2019-09-27
[5123](#) Comments on several criteria to distinguish Shuowen Seal Glyphs (Feedback to WG2 5118); Suzuki Toshiya; 2019-12-01
[5188](#) About the future extension of other versions of Shuowen Seal; TCA; 2022-06-17
[5119](#) Shuowen Seal Ad Hoc Meeting Report, Taipei, Oct 2019; Shuowen ad hoc; 2019-10-01
[5133](#) Comparison table of 5105 proposal (of Shuowen Seal) and Changzhi's version, (and appended data); Suzuki Toshiya; 2020-04-01
[5187](#) TCA and China Feedback on 5133; Experts from TCA and China; 2022-06-20
[5189](#) THX Seal Modifications Principles; Selena Wei; Selena Wei; 2022-06-17
[5190](#) THX Correction glyph summary table; TCA and China; 2022-02-20
[5191](#) THX Properties Table (pdf), excel format; TCA and China; 2022-06-20
[L2/22-279](#) UCS Seal Script Source Mapping Data; Richard Cook; 2022-11-08
[5209](#) Considerations concerning the Small Seal encoding initiative (table pdf, XLS); Michel Suignard, Project editor; 2023-03-11
[5211](#) 14-Column Seal Script Glyph comparison chart 2017-12-06 (chart (420MB)); Suzuki Toshiya, Richard Cook; 2023-04-03
[5219](#) Small seal, comments to latest documents from TCA/China (5187, 5189, 5190); Suzuki Toshiya; 2023-06-03
[5230](#) TCA feedback to 5209 (Considerations about Small Seal encoding initiative, Suignard), XLS data ; TCA; 2023-06-16
[5273](#) **New TCA and China feedback to WG2 5209 (Considerations concerning the Small Seal encoding); TCA and China experts; 2024-06-06**
[5231](#) TCA feedback to 5219 (comments from Suzuki); TCA and China; 2023-06-16
[5232](#) Preliminary Draft of Mapping Table for Shuowen Seal: from CCZ to 5191, data (zip); Suzuki Toshiya; 2023-06-16
[5272](#) **TCA feedback to WG2 5232 (Preliminary Draft of Mapping Table for Shuowen Seal); TCA; 2024-06-06**
[5242](#) Small-Seal, Glyph Image Chart to Review L2/22-279 Mapping, full chart (pdf 302MB); Suzuki Toshiya; 2023-07-08
[5293](#) Small Seal Font for 49 entries from K and D version; TCA and China experts; 2024-12-06
[5294R3](#) Considerations concerning the Small Seal encoding initiative; Michel Suignard, Project editor; 2025-01-26
[5312](#) Feedback to 5294R2 & 5294R3 (Small Seal); TCA and China; 2025-05-07
[5306](#) Converging towards a Small Seal encoding proposal; Michel Suignard, Project editor; 2025-03-31
[5313R](#) Revised feedback to 5306 (Small Seal), spreadsheet ([XLSX](#)); TCA and China; 2025-06-12
[5307R](#) Mapping Principles of Small Seal Glyphs in Different Shuowen Versions; TCA and China; 2025-06-12
[5317R](#) Disposition of feedback from 5312 and 5313; Michel Suignard, Project editor; 2025-06-19
[5318R](#) Revised proposal to encode Four-Column Small Seal Script (Preamble), revised; TCA and China; 2025-06-12
[5326](#) Comment on DYC Glyphs in TTF by TCA & China; Suzuki Toshiya; 2024-12-25
[5327](#) Comment on 5313R (Small Seal); Suzuki Toshiya; 2025-06-21
[5337](#) Feedback to N5327 (Small Seal); TCA; 2025-06-23
[5341](#) **Small Seal Code Charts and Data Set (PDF attachment); Michel Suignard, Project Editor; 2025-06-26**

Progress has been made from last year. The mapping in Richard Cook's data L2/22-279 served as the basis for ongoing work, but his data was missing glyphs. Taiwan provided 49 entries missing from KSX.

To summarize some of the documents above:

- [5232](#) "Preliminary Draft of Mapping Table for Shuowen Seal" by Suzuki compared THX with CCZ, on which TCA provided a response in [5272](#).
- Michel Suignard submitted [5306](#), which contained a repertoire of 11,140 code points, and ca. 450 the code points under review. This document included work done by Kushim Jiang, who compared modern equivalents for the C sources and the K sources; his work resulted in 14 variant sets. As a result, a total of 19 variant sets need to be investigated.

- In [5313](#), TCA and China provided revised feedback to [5306](#) (with a spreadsheet), to which Suzuki replied in [5327](#). TCA responded to Suzuki in [5337](#).
- Mapping principles are outlined in [5307](#) by TCA and China.
- Michel Suignard’s document [5294](#) contains a code chart, with multiple sources, as well as the modern CJK equivalent and radicals. Michel Suignard reports it is a work in progress. In the chart, THX form comes from merged sources.
- [5306](#) by Michel Suignard contains elements of a proposal, such as “Introduction” and “Selection of Original Materials” (both drawn from [4688](#)). Text on variants is included in this document, as well as a listing of disunifications and variants that require a decision by experts. Kushim Jiang’s additional study on disunifications was also incorporated.
- [5307](#) from TCA and China provides mapping principles with examples.
- TCA and China’s document [5313R](#) is a review of [5306](#) and stakes a position on what to do regarding 19 variant sets and 457 disunifications (of which TCA and China recommended disunifying 200). Note: Suzuki noted that DYC was well-known for having different glyph shapes.
- [5317R3](#) is the (revised) disposition of comments on [5306](#) by Michel Suignard. It addresses various comments from the following documents:
 - [5211](#) 14-Column Seal Script Glyph comparison chart 2017-12-06 (chart (420MB) by Suzuki Toshiya and Richard Cook
 - [5294R3](#) Considerations concerning the Small Seal encoding initiative by Michel Suignard
 - [5306](#) Converging towards a Small Seal encoding proposal by Michel Suignard
 - [5307](#) Mapping Principles of Small Seal Glyphs in Different Shuowen Versions by TCA and China
 - [5313R](#) Revised feedback to 5306 (Small Seal) (and spreadsheet) by TCA and China
 - [5327](#) Comment on 5313R (Small Seal) by Suzuki Toshiya, to which TCA replied in [5337](#).

The author, Michel Suignard, invited review of [5317R3](#) by experts, and noted that some radical groups were moved. He also mentioned that a number of CJK values are not encoded as ideographs, but have IDS (see Conclusion in [5317R3](#)).

Other documents listed in the agenda (but not specifically addressed) during discussion:

- [5242](#) Small-Seal, Glyph Image Chart to Review L2/22-279 Mapping by Suzuki Toshiya
- [5293](#) Small Seal Font for 49 entries from K and D version by TCA and China experts, with comment on this doc by Suzuki Toshiya in [5326](#)
- [5312](#) Feedback to 5294R2 & 5294R3 (Small Seal) by TCA and China
- [5318R](#) Revised proposal to encode Four-Column Small Seal Script (Preamble) by TCA and China

A question was raised how to handle variants: should they be done via a variation sequences or by the font? Action Item AI-71-7 was brought up; it is an action item for Robin Leroy and Andrew West to consider a UTS #37 [Unicode Ideographic Variation Database](#)-type of mechanism to register sequences for historic scripts. The IVD database will allow registering an IVS for any character with the ideographic property, hence it would be applicable to Tangut and Seal, if the ideographic property were assigned to Seal characters. The UTS #37 mechanism could theoretically allow different people to register sequences. Alternatively, another option would be to propose standardized sequences (i.e., [StandardizedVariants.txt](#)). The IVD was mentioned as the better mechanism.

The location of the Seal script on the Roadmap was also discussed. Andrew West recommended considering moving Seal from Plane 3 to Plane 4. [Plane 3](#) currently contains CJK ideographs and Seal script, though the plane is described as a place where scripts from the Old Hanzi Period could be

encoded. Michel Suignard did not wish Seal to be moved to the end of the plane, but was agreeable to moving Seal down further in the plane.

The timeline for the encoding of Seal: The repertoire for the Unicode 18.0 alpha will be decided on in January 2026, with an October 2025 UTC meeting before that. Due to the sheer size, there will inevitably be mistakes. (CJK is still disunifying characters 25 years later.) Finding errors later is ok, but would like to avoid disagreements on principles and mapping at this point. Michel Suignard would like to keep current disunifications, but comments (with rationale) are welcome.

Michel Suignard will create a new code chart taking into account the comments during this meeting and captured in the Disposition of Comments for Seal [5317](#). Seal will go into the “bucket” if it doesn’t go into the 7th edition. However, the repertoire needs to be reasonably stable, though -- as noted -- there will likely be errors. A Seal font will be provided by Selena Wei (TCA) before July 6. (Note: The code chart was posted as [5341](#)).

Later during the meeting, the charts in [5341](#) were displayed. Michel Suignard reported that a full proposal would be created soon, with the preamble ([5318](#)). The total number of characters is 11,339, incorporating some glyph changes submitted by TCA. The modern characters are still a work in progress and they will be appended to 5341. A “Uniseal” database will be added to UAX #60, or Michel Suignard may create a new UAX, as was done for Egyptian Hieroglyphs.

The question of the location of the Seal script arose again, but the Editor Michel Suignard was unsure if there was consensus to move the block to another plane or further up in the block (=lower), such as to the row 3CXXX. Ken Lunde favored Plane 4. Andrew West reported his software assumes Plane 3 has CJK, but can work around this issue. Michel Suignard stated the location may change, depending upon other experts, though he would like a discussion on the topic.

Disposition: Recommends SC2 request the Project Editor consider including 11,339 Small Seal characters at code points U+38000..U+3AC4A in a future version of the standard.

See relevant recommendation M72.13

10.2.2 Khitan Large script

Input documents:

[4631](#) Proposal on Encoding Khitan Large Script; China; 2014-09-23

[4642](#) Ad Hoc Reports for Tangut and Khitan Large Script; Deborah Anderson; 2014-09-29

[5319](#) Preliminary Proposal on the Khitan Large Script; Sun Bojun, et al. (China); 2025-06-06

[5323](#) Review of Preliminary Proposal on the Khitan Large Script (WG2 5319); Viacheslav Zaytsev, Andrew West; 2025-06-12

[5325](#) Preliminary feedback on Khitan Large Script encoding (WG2 5319); Eiso Chan, Jerry You; 2025-06-16

In the 2025 proposal [5319](#), Professor Sun Xichun rewrote forms of Khitan Large Script (KLS) characters and corrected some errors in the earlier proposal [4631](#). China noted that the experts have been waiting for publications from the Institute of Oriental Literature from the Russian Academy of Sciences, but it has not yet been published.

West noted that St. Petersburg has manuscripts in codex form and of uncertain provenance; the manuscripts are in cursive Khitan Large Script, which makes it hard to identify character forms. Most KLS

characters are based on epigraphic evidence on stone, so a wider community has been able to access the epigraphic material.

While grateful to have this document from China, West and Zaytsev [5323](#) noted several problems with the latest version of the proposal from China ([5319](#)). While Khitan Small Script (KSS) has lots of primary sources and secondary sources that served as the main basis of encoding, Khitan Large Script has no secondary studies of the script and no list of characters, so evidence must be drawn from primary sources.

Other comments raised during discussion:

- After a review of the primary sources, some duplications were found, e.g., 987 and 2141 have the same source image but one glyph has a dot, another one without the dot. Similarly, 702 and 959 also share the same source image.
- While the list of glyphs in KLS is a useful first step, work needs to be done to unify glyph variants and identify the underlying abstract character
- Character count needs to be corrected (table has 2,209 characters while the text mentions 2,245)
- Provide full context of the character instead of small snip (cf. IRG where the full page is provided or an entry where the character appears in context)
- In cases of handwritten glyph, where did it come from? Who wrote it?

Other suggestions are listed on pages 7-8 of [5323](#).

Perhaps work could be done via an online collaboration tool like the Online Review Tool (ORT) used by IRG, could be cloned. Perhaps Elso Chan and Suzuki, both of whom are familiar with CJK and Unicode, could participate. Henry Chan noted the ORT source code is on Github, so a KLS ORT could be set up, initially having a page for each character in the proposal, like CJK. Once the repertoire is reviewed and agreed upon, then a joint proposal could be proposed.

Discussion touched on the possibility of having KLS handled as part of IRG, but IRG's workload is already at a maximum, per Ken Lunde, and KLS involves different people from IRG. The suggestion was to hold a discussion on KLS on the 5th day of the IRG, and to try it out at the next IRG meeting.

Michel Suignard noted the Khitan topical page with a list of all documents on Khitan:
<https://www.unicode.org/L2/topical/khitan/>

There was also a second document with comments, [5325](#) Preliminary feedback on Khitan Large Script encoding (WG2 5319) by Eiso Chan, Jerry You.

Disposition: Action item for experts from National bodies and Liaison members to provide feedback.
See relevant recommendations M72.14 and M72.16

10.2.3 Jurchen Small Script

Input documents:

[5309](#) Proposal to encode Jurchen Small Script characters; Viacheslav Zaytsev, Andrew West; 2025-05-22

[5321](#) Technical update on Proposal to encode Jurchen Small Script characters; Viacheslav Zaytsev, Andrew West; 2025-06-10

[5338](#) Request to rename Jurchen to Jurchen Large Script; Viacheslav Zaytsev, Andrew West; 2025-06-24

The proposal [5309](#) provides detailed research on Jurchen Small Script, for which there are only a few extant examples. Of the four scripts for Jurchen and Khitan, this is the most poorly known. It is attested in one short inscription, engraved on three separate travel passes that were discovered in the 1970s and 1980s in northeast China. KSS and Jurchen Small Script are phonetic (versus Khitan Large Script and Jurchen Large Script, which are “ideographic” in the Unicode sense.)

The proposal contains the only certain examples of Jurchen Small Script, and proposes five characters (and one KSS character with a glyph change). The pronunciation and meaning are not known.

Although Jurchen Small Script looks like Khitan Small Script (KSS) and forms clusters like KSS, KSS does not include these characters.

Rather than a new block, the Script Encoding Working Group endorsed the suggestion to place the characters in the KSS block, at positions U+18CD6..U+18CDA, and a request to change the glyph for U+18C3E. It is unlikely there will be additional JSS characters, but it is possible, according to the proposal authors. The names, character properties, and other details are contained in [5321](#). To prevent disruption in naming, the proposed algorithmic names proposed are KHITAN SMALL SCRIPT CHARACTER-XXXXX, with the script value KSS (compare Manchu and Todo characters that are prefixed by MONGOLIAN LETTER...).

Question from one expert: If these are Jurchen Small Script, should the name of Jurchen (currently in the CD) be changed to Jurchen Large Script? Should the block and script name be changed?

Page 9, section 6 of [5321](#) recommends this change. Document [5338](#) formally requests the changes:

Block name ⇒ Jurchen Large Script

Script name ⇒ Jurchen_Large_Script

Character names ⇒ JURCHEN LARGE SCRIPT CHARACTER-XXXXX

The expert from China agreed the characters are worthwhile encoding, but disagreed they are Jurchen Small Script. Rather, the characters on the plates are Jurchen Large Script, written in a clustered manner, like Khitan Small Script. They appear to be phonetic, though different from Khitan Small Script.

West and Zaytsev do not believe the characters are Jurchen Large Script, which has a large corpus of material and is a mixture of semantic and phonetic units. However, Jurchen Small Script has a very limited corpus, is phonetic, and is rendered in clusters. The rendering behavior suggests the characters should be included in the Khitan Small Script block.

Discussion demonstrated that there remains debate amongst scholars. Michel Suignard suggested the characters be included in the CD in the Khitan Small Script block to continue discussion. If real controversy remains, the characters can be removed or even put in a very small block. China is welcome to prepare a document and suggest text for subheaders.

One expert noted that the ISO 15924 script code “Jurc” for Jurchen was added in 2010. Robin Leroy mentioned that the ISO 15924 code will remain the same, but the name can be changed.

Later discussion took place on the names of the Jurchen characters (currently in the CD), with the suggestion of changing them from JURCHEN IDEOGRAPH XXXXX to JURCHEN LARGE SCRIPT CHARACTER XXXXX. The ISO 15924 name field can be changed, though the abbreviation cannot.

Other characters for comparison:
SEAL CHARACTER-XXXXX (block SMALL SEAL)
TANGUT IDEOGRAPH-XXXXX
NUSHU CHARACTER-XXXXX
KHITAN SMALL SCRIPT CHARACTER-XXXXX

A more neutral name -- rather than IDEOGRAPH -- would be CHARACTER, and this was agreed to by WG2 experts.

Disposition: Recommends SC2 accept the proposed 5 characters U+18CD6..U+18CDA to the Khitan Small Script block, as proposed in [5309](#) and [5321](#), and modify the glyph for U+18C3E KHITAN SMALL SCRIPT CHARACTER-18C3E, as described in [5321](#) for inclusion in the next CD.

See relevant recommendation M72.08.

Disposition: Recommends SC2 have the Project Editor change the character names for Jurchen from JURCHEN IDEOGRAPH XXXXX to JURCHEN LARGE SCRIPT CHARACTER XXXXX in the next CD.

See relevant recommendation M72.09.

10.2.4 Tangut

10.2.4.a Glyph changes to 18 Tangut ideographs and 1 Tangut Component

Input document:

[5305](#) Glyph changes for 18 Tangut ideographs and 1 Tangut Component; Andrew West, Viacheslav Zaytsev; 2025-04-18

[5305](#) is the result of a comparison between Unicode code charts and a new 9-volume dictionary of Tangut words by Hán Xiǎománg. By checking the sources carefully, the authors found 18 Tangut ideographs where different glyphs are preferred over what appears in the Unicode code chart, and one change in the components. Evidence is provided. A font with the glyphs has been sent to Michel Saignard.

Disposition: Recommends SC2 the Project Editor incorporate the glyph corrections to 18 Tangut ideographs and 1 Tangut component for inclusion in the next CD.

See relevant recommendation M72.06.

10.2.4.b Regarding Tangut glyph for U+17F03

Input document:

[5320](#) Evidence for the glyph form of U+17F03 (Tangut); Andrew West; 2025-06-05

Page 98 of [5305](#) includes U+17F03, which China had requested in its CD.2 comments (CN-01 in [5339](#)) be changed, with the left-hand stroke slanted, not vertical. Document [5320](#) provides evidence showing both forms (current glyph and the proposed one by China), but the current glyph in the code charts is the more common form. After discussion, China was agreeable to keeping the current glyph for U+17F03.

Disposition: No change.

10.2.4.c New Tangut character

Input document:

[5314](#) Proposal to encode one newly-identified Tangut ideograph; Andrew West; 2025-05-26

This document proposes one Tangut ideograph that was found in a fragment of the Tangut *Homophones* text held at the British Library. The character is only partially complete, but its gloss allowed the authors to reconstruct its glyph and reading. There is possibly a second attestation in the Tangut *Synonyms* text. Tangut experts in China support the encoding of this character. The Unicode Script Encoding Working Group is generally cautious of using encoding as a means of publication of original research before it has been peer-reviewed, but support this character being encoded.

Disposition: Recommends SC2 ask the Project Editor to consider including the addition of U+18D20 TANGUT IDEOGRAPH-18D20 in the next CD.

See relevant recommendation M72.17.

10.2.5 Tai Xaau

Input document:

[5310](#) Proposal to encode the Tai Xaau script; China NB; 2025-06-16

[5340](#) Powerpoint Presentation TaiXaau-Meeting72; Prof.Dao Jie/ Dr.Qi Ziyuan; 2025-06-26

Prof.Dao Jie and Dr.Qi Ziyuan gave a Powerpoint presentation on Tai Xaau, which has about 500k users. The question was raised whether Tai Xaau could be unified with Tai Viet or is a separate script. According to the expert present, speakers consider them to be two different scripts, though Tai Xaau is related to Tai Viet. Some letters are similar to Tai Viet. It was noted that even though there may be significant font differences between the two, distinct letter forms is a better gauge to judge separate encoding.

One member of WG2 noted that Tai Viet can cover Black Tai, but not White Tai, so separate encoding seems acceptable.

Comments:

- Add phonetic values to the comparison on pp. 4-7.
- For the last set of symbols on page 7, it wasn't clear if these are characters or graphic elements. Provide information on how they are used. They are shown on page 28 as snippets, but showing the use of these symbols in running text, such as the entire page where they occur, is needed. Page 42 is an example of what is needed, though because the symbol(s) extend beyond a single line, they appear to be a text element rather than a character.
- Any symbols or characters, if considered controversial by those reviewing the proposal for encoding, can be added later, and shouldn't hold up a proposal.
- There was some discussion about "high" and "low" used for consonant letters, which refers to different categories of tone patterns.
- Providing copies of literature used to teach the script in schools or other text materials used in the community to teach the script would be very useful. China agreed to prepare more documents and provide teaching books.

Michel Suignard noted that the work is ongoing and he hopes progress will be made.

Disposition: Action item for experts from National bodies and Liaison members to provide feedback.

See relevant recommendation M72.15 and M72.16

10.2.6 Leibniz symbols

10.2.6.a Historic Scientific Characters

Input document:

[5277](#) Proposal to add historic scientific characters (Leibniz symbols); Stötzner, et al.; 2024-02-19

This is the omnibus document from the Leibniz group. The characters have been broken down into groups and are separately proposed (see below).

10.2.6.b Historic Math Operators

Input document:

[5328](#) (=L2/25-062) Proposal to encode 5 historic mathematical operators L-2503 Uwe Mayer, et al.; 2025-02-14

(Discussed above, section 9.4.6. *See relevant recommendation M72.12*)

10.2.6.c Mathematical Symbols

Input document:

[5331](#) Proposal to encode mathematical symbols L-2515; Mayer et al.; 2025-05-07

This proposal was presented at the meeting. The authors would be happy with using U+2314 for SMALL SECTOR and adjust sizing of others to match it.

Disposition: Action item for experts from National bodies and Liaison members to provide feedback.
See relevant recommendation M72.16

10.2.6.d Ambiguity Signs

Input document:

[5329](#) Proposal to encode Leibnizian ambiguity signs L-2504; Uwe Mayer, et al.; 2025-02-24

This is a proposal to add fifty-nine signs, which are components of Leibniz's systems containing plus and minus.

This proposal has not been reviewed yet by the Script Encoding Working Group. The name of the signs should be changed, however, from "ambiguity" to "ambiguous". The authors can suggest subheadings for the names list to indicate what the signs are used for. Proposed text for the block description can also be provided in the proposal with more explanation on the signs' usage.

Disposition: Action item for experts from National bodies and Liaison members to provide feedback.
See relevant recommendation M72.16

10.2.6.e Historical Mathematical Relations

Input document:

[5334](#) Proposal to encode historical mathematical relations L-2519; Mayer et al.; 2025-05-30

This is a proposal for 31 characters. Some of the characters have the same meaning as existing symbols (U+003D EQUAL SIGN or U+003E GREATER THAN SIGN) but have evolved.

Disposition: Action item for experts from National bodies and Liaison members to provide feedback.
See relevant recommendation M72.16

10.2.6.f Cossic

Input document:

[5333](#) Proposal to encode 12 cossic characters L-2518; Mayer, et al; 2025-05-13

“Group 1” is a set proposed symbols that derive from Latin. A comment was made about the pair LATIN SMALL LIGATURE LONG S WITH DESCENDER S and MATHEMATICAL ITALIC LIGATURE LONG S WITH DESCENDER S, as they look like sharp s. To the proposers these are ligatures of a long s and small Latin s and represent the Latin abbreviation for *sursolidum*.

The proposal authors agreed to the recommendation from the Script Encoding Working Group members that KURRENT Z should be handled as a variation sequence, based on U+1D4CF MATHEMATICAL SCRIPT SMALL Z.

Members of the Script WG also recommend changing the name of fourth root, which already exists at 221C, to “square root of square root of square root of square root”.

Disposition: Action item for experts from National bodies and Liaison members to provide feedback.
See relevant recommendation M72.16

10.2.6.g Geometric shapes

Input document:

[5330](#) Proposal to encode 17 geometric shapes; Mayer, et al; 2025-05-07

The Script Encoding Working Group will recommend the 16 characters proposed in this document be assigned provisional code points. The proposal includes one variation sequence.

During their discussion of the proposal in the Script Working Group there was discussion on the size of the glyphs, based on neighboring characters.

Disposition: Action item for experts from National bodies and Liaison members to provide feedback.
See relevant recommendation M72.16

10.2.6.h Alchemical symbols

Input document:

[5332](#) Proposal to encode historic alchemical symbols L-2517; Mayer, et al; 2025-05-07

A few comments were raised during discussion:

- There appears to be variation in the sources that should be addressed; proposed characters should be related to existing characters (i.e., SYMBOL FOR OIL vs INVERTED SYMBOL FOR OIL).
- The SYMBOL FOR TARTAR SALT could be handled as a ligature.
- The two ENCLOSED symbols (SUN and MOON) could be handled with the enclosing box U+20DE COMBINING ENCLOSING SQUARE, though one proposal author reported it doesn’t work. The Unicode representative, Peter Constable, reported it may be an implementation issue, not an

encoding issue, though the document has not yet been discussed in the Script Encoding Working Group.

- The hourglass characters are handled as annotations in this proposal.

Disposition: Action item for experts from National bodies and Liaison members to provide feedback.
See relevant recommendation M72.16

10.2.6.i Letterlike Symbols

Input document:

[5335](#) Proposal to encode 7 letterlike symbols L-2520; Mayer et al.; 2025-05-30

This document proposes 7 letterlike symbols. One comment was whether OMICRON EPSILON was a true ligature of the two Greek letters and if U+1D15 LATIN LETTER OU or U+0222 LATIN CAPITAL LETTER OU / U+0223 LATIN SMALL LETTER OU could be used to represent the symbols. The document also mentions a variation sequence LOWERCASE KURRENT X.

The document still needs to be discussed with the Script Encoding Working Group.

Disposition: Action item for experts from National bodies and Liaison members to provide feedback.
See relevant recommendation M72.16

10.2.6.j Miscellaneous Scientific Symbols

Input document:

[5336](#) Proposal to encode 21 miscellaneous scientific symbols L-2521; Mayer et al.; 2025-05-30

This document has not yet been discussed by the Script Encoding Working Group. One comment concerned the COMBINING DOUBLE-WIDE SLASH: this is not plain text and should be handled by math layout.

Disposition: Action item for experts from National bodies and Liaison members to provide feedback.
See relevant recommendation M72.16

10.2.7 Other additions

Input document:

[5322](#) Proposal to encode the UAE Dirham sign; UAE Central Bank; 2025-05-26

On March 27, 2025, UAE announced a new currency symbol, similar to the Saudi's announcement of their new riyal sign (see section 9.1.7). Like the Saudi Central Bank, UAE was eager to get their sign encoded and supported. Unfortunately, it was not possible to contact them before the April 2025 Unicode Technical Committee, so the character was not able to be included in Unicode 17.0. If multiple companies request the character, it *could* possibly be included in a dot release (i.e., Unicode 17.1), as was done for the Japanese era symbol, but such a minor release involved considerable work. For now, the Unicode Consortium has identified it for 18.0. If member companies say they have a business need to support it more quickly than 18.0 (September 2026), Unicode may need to move forward more quickly.

The character can be added to the next CD.

Disposition: Recommends SC2 request the Project Editor consider including U+20C3 UAE DIRHAM SIGN in the next CD.

See relevant recommendation M72.17

11. Errata/modification

Input document:

[5296](#) JMJ-source related glyph issues; CheonHyeong Sim; 2025-02-18

Discussion took place on glyph changes resulting from changing the font for (1) JK-source characters in CJK Extension C from Heisei to IPAmjMincho and (2) the J-source characters in the compatibility block using MS Mincho that were changed to IPAmjMincho. Michel Suignard agrees to make this fix, basing changes on the first part of [5296](#). He also noted it would be helpful if Japan could provide a single font with all the J sources, such as Hong Kong or other participants do.

Disposition: Recommends SC2 have the Project Editor revert the changes to J-source glyphs as described in [5296](#) for the next CD.

See relevant recommendation M72.07

12. Architecture issues

Input document:

[5315](#) Considerations concerning ISO/IEC 10646 Code charts; Michel Suignard, Project editor; 2025-05-26

Michel Suignard introduced this document, which seeks a formal recommendation regarding shared data files, duplication of clauses, and sharing of code charts between ISO/IEC 10646 and Unicode. At WG2 #71 the document [5253](#) “Considerations concerning ISO/IEC 10646 7th edition”, was discussed, but no formal recommendation was recorded. Rather than carry information on source references in clauses 24-28 for CJK ideographs, Tangut, Jurchen, Nüshu, and Egyptian Hieroglyphs, this document instead suggests referring to the new [Unicode Standard Annex #60](#) “Data for Non Han Ideographic Scripts”.

In addition, it would be useful to share the code charts between Unicode and ISO/IEC 10646. For example, Amendment 2 is the same as Unicode 16.0. The 7th edition will include the repertoires of Unicode 17.0 and 18.0. Making these changes will simplify the work of the Project Editor, Michel Suignard.

A suggestion was made to remove the code charts and make them a separate annex. This will reduce the page count for ISO/IEC 10646 from over 3500 to ca. 150 pages.

There was a question about font licensing. The Editor, Michel Suignard, noted the proposed approach is no different from what is done today, and terms would be the same. Unicode is very protective of fonts, which are in a private repo limited to a very restricted set of people.

Also, it would be easier for Michel Suignard to have it hosted on the Unicode site rather than ISO site. Publishing via ISO is difficult; ISO would like publication on their OSD tool, but this is very challenging due to all the fonts

There was later discussion on code charts with SC2 Chair and others. The upshot was for Michel Suignard to explore with ITTF the idea of having the charts as an attachment on the ISO side, though

copyright issues need to be resolved. Michel Suignard asked WG2 for permission to explore this option. If so, he will proceed with this option (i.e., create code charts as in the past, but make the zipped version as a link to Section 4 of ISO/IEC 10646, which lists all attachments). If ITTF agrees, he can input bookmarks.

Disposition: Recommends SC2 accept the recommendation in [5253](#) that the definitions of the source descriptions given in clauses 24 to 27 of the CD text of ISO/IEC 10646 be replaced with normative references to the relevant Unicode Standard Annexes #38 and #60 for inclusion in the next CD..
See relevant recommendations M72.04

Disposition: Recommends to SC2 that the Project Editor explore with ITTF the possibility of moving the UCS code charts from the core text of the CD into an electronic data attachment and, if an acceptable plan can be worked out, to implement that in for inclusion in the next CD.
See relevant recommendations M72.10

13. Liaison reports and new requests

[13.1 Unicode Consortium](#)

No report was submitted.

[13.2 IETF](#)

No report was submitted.

[13.3 SC2](#)

No report was submitted.

[13.4 W3C](#)

No report.

[13.5 SEI](#)

Input document:

[5324](#) SEI Liaison Report; Anushah Hossain, Deborah Anderson; 2025-06-10

A presentation of the SEI Liaison Report was given by Anushah Hossain, who is doing more public communication about work on scripts. She showed the SEI website's [map with scripts to encode](#), identifying the scripts on the map by their readiness level and took questions.

[13.6 SAT](#)

No report.

14. Other business

[14.1 Web site review](#)

The .dkuug website, <http://std.dkuug.dk/> is no longer hosting WG2 documents. If you need a document that was earlier hosted on .dkuug, please contact Michel Suignard. Note that some documents are copyright protected. It may be hard to attach a document, so he can provide links to Unicode documents (if relevant) or use attachments to Adobe PDF for data.

WG2 thanks the Unicode Consortium and staff for providing the website, assistance in code chart production, and other support.

See relevant recommendation M72.20

15. Future meetings

WG2 endorses the following schedule for future meetings:

WG2 Meeting #73, 2026-06, Paris, France (co-located with SC2)

WG2 Meeting #74, 2027-06, US (tentative), Canada (back-up)

IRG #65, 2025-10-13/17, Guangzhou, China (hybrid)

IRG #66, 2026-03-16/20, Virtual (Webex)

IRG #67, 2026-10-12/16, Tokyo, Japan (hybrid; host SAT)

IRG #68, 2027-03-15/19, Virtual (Webex)

The WG2 Convenor Michel Suignard noted that discussions with David Rabouin have taken place about holding the next WG2 (and SC2) at the University of Paris, but details are still being worked out. The likely location will be at Paris 7 (Université Paris Diderot) in central Paris near the Seine River.

The 2027 host is tentatively the US, with a back-up as Canada. If held in the US, the West Coast is the likely location (San Francisco or Seattle). Travel may be difficult to the US, so please let Michel Suignard know about a possible backup.

See relevant Recommendation M72.19

16. Closing

WG 2 thanks IPSJ/ITSCJ, the Japanese National Body accredited by JISC, for hosting the meeting. In addition, WG 2 thanks Mr. Masaru Takechi for technical support in the meeting room, Dr. Shuichi Tashiro and staff from Toki Messe for providing logistical support before and during this meeting. WG 2 also appreciates IPSJ/ITSCJ for hosting of the enjoyable dinner on Wednesday evening with tasty Japanese Sake provided by Kaishi Professional University.

See relevant Recommendation M72.21

16.1 Approval of Recommendations of meeting 72 (N5304)

Output document:

[5304](#) WG2 meeting #72 June 23-27, 2025 Recommendations; 2025-06-27

A draft of the meeting recommendations, prepared by the drafting committee, was reviewed by WG2 experts. (Any discussion of note leading to these recommendations is included under the appropriate agenda item above.)

Experts accredited (or invited) by the national bodies or liaison organizations for Canada, China, Czech Republic, Germany, India, Japan, Republic of Korea, UK, Vietnam, TCA (liaison), SC34 (liaison), SEI – UC Berkeley (liaison), the Unicode Consortium (liaison) and USA were present (either in person or via Zoom call) when the recommendations were adopted.

There were minor edits to the wordings of some of the recommendations. There was consensus on all the recommendations. See the final set of recommendations in document 5304 that will be forwarded to SC 2 for review and approval.

16.2 Adjournment

The WG2 meeting ended around noon JST on Friday 2025-06-27. (The final plenary of SC 2 followed shortly thereafter.)

17 Outstanding Action items

17.1 Outstanding action items from meeting 63, Colombo, Sri Lanka; 2014-09-29/10-03

Item	Assigned to / action (Reference recommendations in document N4604, and unconfirmed minutes in document N4603 for meeting 63 (with any corrections noted in the minutes of meeting 64 in document N4739).	Status
AI-63-6	Ad hoc group on Principles and Procedures (Dr. Umamaheswaran)	
a.	To take note of section 2.1 in document N4620 on Representation of CJK ideograph glyphs; and update the P&P document appropriately. M64 through M72 -- in progress.	

17.2 Outstanding action items from meeting 66, Hohhot, Inner Mongolia, China; 2017-09-25/29

Item	Assigned to / action (Reference recommendations in document N4874, and unconfirmed minutes in document N4953 for meeting 66, with any corrections noted in the minutes of meeting 67 in document N5020).	Status
AI-66-6	Experts from China (Chen Zhuang), UK (Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson). TCA (Lin Mei Wei), Mongolia experts	
	To take note of and act on the following item:	
a.	M66.18 (Naxi Dongba script): WG2 accepts the Naxi Dongba ad hoc report in document N4895, and invites the author of the script to provide a revised version with the characters reordered according to the type of classification used in the source dictionaries, based on the revised chart in document N4898. WG2 recommends to SC2 to accept the revised version of the script, consisting of 1188 characters in a new block Naxi Dongba in the range 1A800...1ACFF for encoding in the standard. M67 through M72 -- in progress.	

17.3 Outstanding action items from meeting 67, SOAS, Univ. of London, London, UK; 2018-0616/20

Item	Assigned to / action (Reference recommendations in document N4954, and unconfirmed minutes in document N5020 for meeting 67, with any corrections noted in the minutes of meeting 68 in document N5122).	Status
AI-67-7	BIS (K. Manikandan), Experts on Assamese from India and elsewhere.	
	To take note of and act on the following item:	
a.	M67.25 (Assamese script): After consideration of the proposal in document N4947 to encode the Assamese script, WG2 recommends that SC2 accept the ad hoc report on Assamese script in document N4999, which has the following main recommendations: <ul style="list-style-type: none"> a. Add Assamese character names in the nameslist as annotations, b. Change the block header from Bengali to Bengali-Assamese 	

	c. Prepare a revised contribution on new characters to be added. WG2 encourages the experts on Assamese script to continue the work towards a revised contribution and submit to WG2. WG2 recommends that SC2 invites the national body of India, BIS, to coordinate this effort. M68 through M72 -- in progress	
AI-67-8	Experts from China (Chen Zhuang), UK (Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson). TCA (Lin Mei Wei), Mongolia experts	
	To take note of and act on the following items:	

c.	<p><i>M67.26 (Shuishu script):</i> WG2 invites the authors of Shuishu script (Block 1B300-1B4FF Shuishu Logograms and Block 1B500-1B52F Shuishu Radicals from document N4894R) that was taken out of PDAM 2.2 based on ballot comments, to revise their proposal, taking into account the feedback received at this meeting (see documents N4942, N4946 and N4956), working with other experts interested in this script.</p> <p>M68 through M72 -- in progress</p>	
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17.4 Outstanding action items from meeting 68, Microsoft Campus, Redmond, WA, USA; 2019-06-17/21

Item	Assigned to / action (Reference recommendations in document N5054 , and unconfirmed minutes in document N5122 for meeting 68, , with any corrections noted in the minutes of meeting 69 in document N5199).	Status
AI-68-7	Experts from China (Chen Zhuang), and other experts interested in Lisu Monosyllabic script.	
	To take note of and act on the following item:	
a.	<i>Recommendation M68.18 (Lisu Monosyllabic Script):</i> WG2 invites the authors of documents N5047 to revise their proposal on Lisu Monosyllabic script, taking into account the feedback received at this meeting, working with other experts interested in this script.	
	M69 through M72 -- in progress	
AI-68-8	Experts from TCA (Selena Wei), and other experts interested in Bopomofo.	
	To take note of and act on the following item:	
a.	<i>Recommendation M68.19 (Bopomofo Script):</i> WG2 invites the authors of documents N5088 to revise their proposal on Bopomofo script, taking into account the feedback received at this meeting, working with other experts interested in this script.	
	M69through M72 -- in progress	
AI-68-9	Experts from TCA (Selena Wei), China (Chen Zhuang), and other experts interested in Oracle Bone script.	
	To take note of and act on the following item:	
a.	<i>Recommendation M68.20 (Oracle Bone Script):</i> WG2 invites the authors of documents N5090 to revise their proposal on Oracle Bone script, taking into account the feedback received at this meeting, working with other experts interested in this script.	
	M69 through M72 -- in progress	

17.5 Outstanding action items from meeting 70, Wilfrid Laurier Univ., Waterloo, ON, Canada; 2023-06-19/23

Item	Assigned to / action (Reference recommendations in document N5234 , and unconfirmed minutes of meeting 70 in document N5244 the document you are reading.)	Status
AI-70-8	Ireland (Mr. Michael Everson)	
	To take note of and act on the following items:	
a.	Invited to provide more examples to support the proposal in document N5227 on Combining Overcurl.	
	M71 through M72 -- in progress	
b.	Invited to provide a revised proposal on 'Encode dashed-box symbols in Plane 14' in document N5212 addressing the discussion under section 10.3.9.	
	M71 through M72 -- in progress	
AI-70-10	Experts from all national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	From the items discussed at meeting M70:	
	a Aiha script (document N5226 . See discussion under section 10.2.9.	
	b Blissymbols (documents N5149 , N5171 and N5228). See discussion under section 10.2.10.	

	M71 through M72 -- in progress	
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17.6 Outstanding action items from meeting 71, Charles University, Prague, Czech Republic; 2024-06-10/14

AI-71-7	Expert from UK and USA (Dr. Andrew West, Robin Leroy, and Daniel Yacob)	
	To take note of and act on the following items:	
a.	Work on a new proposal defining a mechanism like UTS #37, but for historical scripts M72 -- in progress	

17.6 New action items from meeting 72, Toki Messe, Niigata, Japan; 2025-06-23/27

Item	Assigned to / action [Reference recommendations in document N5304 and unconfirmed minutes of meeting 72 in document N5301 the document you are reading.]	
AI-72-1	Recording Secretary - Dr. Deborah Anderson	
a.	To finalize the document N5304 , containing the adopted meeting recommendations and send it to the convener as soon as possible.	
b.	To finalize the documents N5302 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	
AI-72-2	Convener - Mr. Michel Suignard	
a.	To add relevant contributions carried forward from previous meetings to agenda of next meeting. (See list of documents under AI-72-6 .)	
AI-72-3	Editor of ISO/IEC 10646: (Mr. Michel Suignard with assistance from contributing editors)	
	To prepare the appropriate CD text, collection of editorial text for the next edition, corrigendum text, or entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following:	
a.	<i>M72.01 (Disposition of comments of CD 2):</i> WG2 recommends that SC2 accept the disposition of comments on CD 2 to 7 th edition in document N5339 . The following significant changes are noted in the disposition document: <ul style="list-style-type: none"> a. Remove three Sidetic characters 1095A..1095C. b. Add a formal name alias of type "correction" for four Bamum letters as described in N5304 M72.01.section b c. Change the names of seven characters as described in N5304 M72.01, section c d. Change the name and glyph of 1D25F as described in N5304 M72.01, section d e. Add the disunified KP-source form of 6138 at code point 2B73F at the end of the CJK Unified Ideographs Extension C block. f. Add 12 urgently-needed G-source ideographs with code points U+2CEA2 through U+2CEAD at the end of the CJK Unified Ideographs Extension E block. g. Make the changes for CJK as described in M72.02, sections a-d 	
b.	<i>M72.03 (Other Additions and Changes for the CD)</i> WG2 recommends that SC2 accept the following changes to CD 2 based on WG2 <ul style="list-style-type: none"> a. Change the name of 05C8 HEBREW POINT SHEVA NA to HEBREW POINT HEAVY SHEVA, based on section 1.2 of L2/25-010 b. Change the name of 11B0A DEVANAGARI LETTER SINDHI DDDA to DEVANAGARI LETTER ALTERNATE DDDA, based on section 1.3 of L2/25-010. 	
c.	<i>M72.04 References to Clauses 24 to 27 references</i> WG2 recommends SC2 accept recommendation to replace source definitions in clauses 24 to 27 of CD text of ISO/IEC 10646 be replaced with normative references to relevant Unicode Standard Annexes #38 and #60.	
d.	<i>M72.05 Radical Stroke update for Tangut</i> SC2 recommends Project Editor update the radical stroke value of 197 Tangut ideographs proposed in L2/25-120 and radical stroke value for 17D0B TANGUT IDEOGRAPH-17D0B as cited in section 3.4 of L2/25-91R.	
e.	<i>M72.06 Glyph corrections for Tangut</i> WG2 recommends Project Editor incorporate glyph corrections for	

	18 Tangut ideographs and one Tangut component as proposed in N5305.	
f.	M72.07 <i>Glyph corrections for J-source characters</i> WG2 recommends Project Editor revert the changes to J-source glyphs as described in N5296.	
g.	M72.08 <i>Additions to Khitan Small Script</i> WG2 recommends the Project Editor add five characters 18CD6..18CDA to Khitan Small Script block as proposed in N5309 and N5321 and modify the glyph for 18C3E KHITAN SMALL SCRIPT CHARACTER-18C3E as described in N5321.	
h.	M72.09 <i>Jurchen script</i> WG2 recommend Project Editor change the character names from JURCHEN IDEOGRAPH-XXXXX to JURCHEN CHARACTER-XXXXX.	
i.	M72.10 <i>Code charts</i> WG2 recommends the Project Editor explore with ITTF the possibility of moving UCS code charts from the core text of CD into an electronic data attachment and, if an acceptable plan can be worked out, implement that in the CD.	
j.	Remove “Unicode” from the wording above at the top of the Oriya (Odia) names list (i.e., “That change in spelling does not affect the Unicode block”).	
k.	M72.11 (<i>Progression of CD.2</i>): WG2 recommends that the Project Editor prepare the text of CD3 of the 7th edition of the standard, which will include the changes arising from recommendations M72.01 through M72.10 in N5304 and forward it to the SC2 secretariat for consultation. The target starting dates are DIS 2026-07-01, FDIS 2027-02-01, IS 2027-07-01.	
l.	M72.12 and M72.17 (<i>Other Additions</i>) WG2 recognizes that some scripts and additional characters which are under preparation as potential additions to the standard could become mature and will have consensus among WG2 experts to include in the standard. The project editor should be able to add these to the balloted texts, after exercising due diligence. Candidates include, but are not limited to, the Small Seal script (11,339 characters) mentioned in recommendation M72.13, and the character additions mentioned in recommendation M72.12 and M72.17.	
AI-72-4	IRG Rapporteur and IRG Editor (Dr. Ken Lunde)	
	To take note of and act upon the following item:	
a.	M72.15 (<i>Future meetings</i>): WG2 endorses the following schedule for future meetings: WG2 Meeting #73, Paris, France (co-located with SC2); 2026-06 IRG#65, Guangzhou, China; 2025-10-13/17 IRG#66, Online Webex (Apple); 2026-03-16/20 IRG #67, 2026-10-12/16, Tokyo, Japan (hybrid; host SAT) IRG #68, 2027-03-15/19, Virtual (Webex)	
AI-72-5	Ad hoc group on roadmap (Dr. Umamaheswaran)	
a.	To update the Roadmaps reflecting the results from this meeting.	
AI-72-6	Experts from all national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	M71.15 (<i>Future meetings</i>): WG2 endorses the following schedule for future meetings: WG2 Meeting #73, 2026-06, Paris, France (co-located with SC2) WG2 Meeting #74, 2027-06, US (tentative), Canada (back-up) IRG #65, 2025-10-13/17, Guangzhou, China (hybrid) IRG #66, 2026-03-16/20, Virtual (Webex) IRG #67, 2026-10-12/16, Tokyo, Japan (hybrid; host SAT) IRG #68, 2027-03-15/19, Virtual (Webex)	
b.	From the items discussed at this meeting: Khitan Large Script Tai Xaau Leibniz proposals (N5336, N5335, N5334, N5333, N5332, N5331, N5330, N5329)	
c.	The following is a list of contributions carried forward from earlier meetings. They are open for review and feedback to the authors from interested experts from SC2/WG2 and Liaison organizations. Scripts marked in bold below are new or updates of previous list in Meeting 72 agenda document.	

<p>Afáka N4292, Aiha N5226, Bagam N4293, Balti 'B' N4016, Balti scripts N3842, Bété L2/19-044, L2/23-279, Bima (Buginese extensions) L2/23-070, Blissymbols N5228, N5149, N5171, Box-Headed script L2/24-100, Book Pahlavi L2/24-040, Brusha L2/17-183, Buginese extensions L2/16-159, CJK Buddhist symbols N5166, Diwani Siyaq Numbers L2/15-066R, Eebee Hmong N4668, Eskaya N4499=L2/13-229, Jianzi Musical Notation and Format Controls N5041, Kerinci L2/16-074, Khatt-i Baburi N4130, Khitan Large script N4631, N4642, N5319, Khotanese L2/15-022, Kpelle N3762, Kui Gaari L2/24-102, Kulitan L2/15-232, Kurukh Banna L2/24-101, Lampung L2/22-044, Landa N3768, Leke N4438, Linear Elamite L2/21-233, Lisu Monosyllabic N5047, N5121, Loma N4786, N4837, Lota Ende L2/16-076, Mandombe L2/16-077R, Maya Hieroglyphs L2/23-228 and L2/23-020, Minim Dag Noore L2/25-136, Moon N4128, Mwangwego L2/25-135, Naxi Dongba N4898, Naxi Geba N4886, N4887, Obsolete Simplified Chinese Ideographs N3695, Old Yi N3288, Oracle Bone N5090, Palaeohispanic Northern L2/22-146, Palaeohispanic Southern L2/22-147, Pallava L2/18-083, Pau Cin Hau Syllabary L2/16-014, Persian Siyaq L2/21-105, Proto-Cuneiform L2/23-190, Proto- Elamite L2/23-196, Proto-Sinaitic L2/19-299, Pungchen L2/17-181, Pyu N3874, Ranjana L2/23-028, Sheek Bakri Saphaloo L2/24-109, Shuishu N4758, N4922, N4839, N4956, N4942, N4946, N5110, Sirmauri L2/25-134, Southwest China Hieroglyphs N4856, N4901 (Ersu), Sumbawa L2/16-096, Tamga Symbols N5092, Tani Lipi N3823=L2/10-146, Tikamuli N3963=L2/10-465, Tocharian L2/15-236, Vexillology symbols L2/17-089, Western Cham N5098, L2/22-095, Woleai N4146, Zou N3864</p>	
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