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 N4947**
ISO/IEC JTC 1/SC 2/**WG 2 N5251**
2024-10-29

Title:	Unconfirmed minutes of WG 2 meeting 71 Charles University, Prague, Czech Republic (with Remote participants via Zoom); 2024-06-10/14
Source:	Debbie Anderson (dwanders@sonic.net), Recording Secretary, Michel Suignard (michel@suignard.com), Convener
Action:	WG 2 members and Liaison organizations
Distribution: ISO/IEC JTC 1/SC 2/WG 2 members and liaison organizations	

(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 71st 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 **36** experts accredited (or invited) by **9** national bodies and **4** 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
Qin LU	.IRG Convener	Hong Kong Polytechnic University [retired] / HKITF
Masaru TAKECHI	.SC 2 Chairperson	NHK Foundation
Ayuko NAGASAWA	.SC 2 Secretariat	IPSJ/ITSCJ
Toshiya SUZUKI	.SC34 (liaison)	Hiroshima University
Lin Mei WEI	.TCA (Cat. C Liaison)	Chinese Foundation for Digitization Technology/TCA
Michel SUIGNARD	.WG 2 Convenor; USA	Unicode, Inc.
Karljürgen FEUERHERM	Canada	Wilfrid Laurier University
V.S. (Uma) UMAMAHESWARAN	Canada	Independent
Eddie Antonio SANTOS	Canada	Independent
Joshua TSAI	Canada	Independent
Zhuang CHEN	China	CESI

Shanshan HUANG	China	CESI
YANG Lei	China	CESI
SIM, CheonHyeong	China	East China University of Science and Technology
Wang Lijun	China	Beijing Normal University
Lin Lin	China	Microsoft
Sun Bojun	China	Chinese Academy of Social Sciences
Eiso CHAN	China	Culture and Art Publishing House
HU JiaJia	China	Beijing Normal University; Small Seal expert
Wushour Silamu	China	Xinjiang University
Jan KUČERA	Czech Republic	Charles University
Karl PENTZLIN	Germany	DIN
Andreas STÖTZNER	Germany	A. Stötzner Gestaltung
Deolekar DEVANSH	India	BIS
Swaran LATA	India	BIS
Michael EVERSON	Ireland	Evertype
Shuichi TASHIRO	Japan	Kaishi Professional University
Andrew WEST	UK	Independent
Craig CUMMINGS	USA	Unicode, Inc.
Ken LUNDE	USA	Apple Inc.
Craig CUMMINGS	USA	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
Peter CONSTABLE	USA, Unicode (Cat. A Liaison)	Microsoft Corp.
LIANG Hai	USA	Unicode, Inc.
Robin LEROY	USA	Google Switzerland GmbH

2 Approval of the agenda

Input document:
5250R6 WG2 meeting #71, June 10-14, 2024 Agenda (revised); Michel Suignard, Convenor; 2024-06-11

Documents have been uploaded to the WG2 website, hosted by Unicode, and include now CJK Extension J and a revised agenda. No other new documents were received.

Disposition: The agenda as amended was approved. Updates to the agenda were posted to the WG2 website as the meeting progressed.

(Note: the agenda item numbers in these minutes may not align with the agenda item numbers in document 5250. 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.)

3 Approval of minutes of meeting 70

Input document: 5244 Meeting M#70 unconfirmed minutes; V.S. Umamaheswaran, Secretary; 2024-02-06

No comments were received on the Meeting #70 minutes posted as 5244. Please send feedback to Dr. Umamaheswaran on any typos or misrepresentations.

Disposition: Minutes were approved.

4 Review action items from previous meeting

Input document:

5244-AI Meeting M#70 unconfirmed minutes; V.S. Umamaheswaran, Secretary; 2024-02-06

Michel Suignard led the review of the action items from the previous meetings. Dr. Umamaheswaran and Deborah Anderson updated them accordingly. The tables below show the updated status for each item. Of the **32** action items that were reviewed, **9** items are carried forward, and **23** items are marked as either 'noted' or 'completed' or 'closed.'

Many Action Items are very old. If there is no progress within the past ten years, we should consider dropping them unless Michel Suignard hears otherwise. Hence AI-62-6 is being closed.

It would be good to make progress on AI-66-6 Naxi Dongba, as there was a meeting in Hohhot. There will be an ad hoc on Naxi Dongba at this meeting.

AI-67-7 Assamese was discussed at the London meeting in 2018. On item b, the block cannot have its name changed (in Blocks.txt), but the block header can, as well as the prose at the top of the nameslist. Michel Suignard offered to investigate the topic.

Several other script Action Items were kept open: Lisu, Bopomofo, Oracle Bone, and Shuishu. Small Seal has a new document.

In AI-70-10c Contributions Carried Forward, Andrew West noted that Chinese Chess symbols should be removed. Michel Suignard will remove that entry from 10.1.1.

4.1 Outstanding action items from meeting 62, San Jose, CA, USA; 2014-02-24/28

Item	Assigned to / action (reference resolutions in document N4554, and unconfirmed minutes in document N4553 for meeting 62, with any corrections noted in the minutes of meeting 63 in document N4603).	Status
AI-62-6	Ad hoc group on Principles and Procedures (Dr. Umamaheswaran)	
a.	To take note of section 2.1 in document N4544 on Representation of CJK ideograph glyphs; and update the P&P document appropriately. M63 through M70 -- in progress.	Closed.
b.	With reference to N4543 Character Name considerations; Michel Suignard; 2014-02-20, to elaborate on character names in the P&P document working with Mr. Michael Everson. M63 through M70 -- in progress.	Closed.

4.2 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.	In progress.

4.3 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:	

b.	*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 M70 -- in progress.	In progress.

4.4   Outstanding action items from meeting 67, SOAS, University of London, London, UK; 2018-06-16/20

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:
	     a. Add Assamese character names in the nameslist as annotations,
	     b. Change the block header from Bengali to Bengali-Assamese, and,
	     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.
		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.	*M67.26 (Shuishu script):* 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. M68 and M70 -- in progress.	In progress.

4.5   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.	*Recommendation M68.18 (Lisu Monosyllabic Script):* 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. M70 -- in progress.	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.	*Recommendation M68.19 (Bopomofo Script):* 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. M70 -- in progress.	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.	*Recommendation M68.20 (Oracle Bone Script):* 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. M70 -- in progress.	In progress.

4.6 New action items from meeting 70, 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-70-1	Recording Secretary - Dr. V.S. UMAmaheswaran	
a.	To finalize the document **N5234** containing the adopted meeting recommendations and send it to the convener as soon as possible.	Completed.
b.	To finalize the documents **N5244** containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed.
AI-70-2	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-70-10c**.)	Completed.
AI-70-3	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:	

a.	*M70.02 (Disposition of comments of CDAM 2.2):* WG2 recommends that SC2 accept the disposition of ballot comments on CDAM2.2 to 6th edition in document N5233. The following significant changes are noted in the disposition document:
	a. 603 urgently needed CJK unified ideographs:
	    2EBF0..2EE4A in a new block in the range 2EBF0..2EE4F named 'CJK Unified Ideographs Extension I'
	b. 1 Kawi character
	    11F5A KAWI SIGN NUKTA
	c. 44 Ol Onal characters in a new block
	    1E5D0..1E5FA and 1E5FF In a new block in the range 1E5D0..1E5FF, named 'Ol Onal'
	d. 2 Tulu-Tigalari characters
	    113D2 TULU-TIGALARI GEMINATION MARK
	    113D3 TULU-TIGALARI SIGN PLUTA
		Completed.

b.	*M70.04 (CJK Horizontal Extensions):* WG2 recommends that SC2 accept the following CJK Horizontal extensions for existing characters to be included in the standard: a. Addition of 134 K Hanja character proposed in document N5197. b. Adding K source reference KU-03E02 for code point 3E02, as proposed in document N5198. c. Addition of 36422 Kanji extensions for JMJ sources, based on document N5221.	Completed.
c.	*M70.05 (Glyph Corrections):* WG2 recommends that SC2 accept the glyph corrections in the standard, for seven out of eight (excluding glyph for code point 18171) Tangut ideographs as proposed in document N5206, and for four more Tangut ideographs as proposed in document N5237.	Completed.
d.	*M70.06 (Progression of CDAM2.2):* WG2 recommends that the Project Editor prepare the final text of CDAM2.3 of the 6th edition of the standard, which will include the changes arising from recommendations **M70.02** through **M70.05** above, along with the final disposition of comments (document N5233), and forward it to the SC2 secretariat for circulating for commenting. The charts are in document N5235. The target starting dates are CDAM2.3 2023-08-01, DAM2 2024-06-01, FDAM2 2025-02-01, AMD2 2025-05-01.	Completed.
e.	*M70.08 (Chisoi script:* WG2 recommends to SC2 to accept for future encoding of **40** characters for Chisoi script at code points 16D80..16D9D, 16DA0..16DA9; in a new block in the range 16D80..16DAF named 'Chisoi', based on the proposal in document L2/22-218R3.	Completed.
f.	*M70.09 (Tai Yo script):* WG2 recommends to SC2 to accept for future encoding of **55** characters for Tai Yo script at code points 1E6C0..1E6DE, 1E6E0..1E6F5, 1E6FE, 1E6FF; in a new block in the range 1E6C0..1E6FF named 'Tai Yo', based on the proposal in document L2/22-289R.	Completed.
g.	*M70.10 (Sidetic script):* WG2 recommends to SC2 to accept for future encoding of **29** characters for Sidetic script at code points 10940..1095C; in a new block in the range 10940..1095F named 'Sidetic', based on the proposal in document L2/23-019.	Completed.

h.	*M70.11 (Tolong Siki script):* WG2 recommends to SC2 to accept for future encoding of **54** characters for Tolong Siki script at code points 11DB0..11DDB, 11DE0..11DE9; in a new block in the range 11DB0..11DEF named 'Tolong Siki', based on the proposal in document L2/23-024.	Completed.

i.	*M70.12 (Character Additions):* WG2 recommends to SC2 to accept for future encoding the following additional characters:
	
	a. Two Quranic Arabic characters (based on document L2/22-281R): 10EFB
	    ARABIC SMALL LOW NOON
	    10EC5 ARABIC SMALL YEH BARREE WITH TWO DOTS BELOW
	    (Note: the project editor has the glyphs)
	b. Arabic Biblical End Of Verse (based on document L2/23-103): 10ED0
	    ARABIC BIBLICAL END OF VERSE
	c. Blank character for Khitan Small script (based on document N5205): 18CFF
	    KHITAN SMALL SCRIPT CHARACTER-18CFF
	d. Bengali Letter Alternate BA (based on document L2/22-268R): 09FF
	    BENGALI LETTER ALTERNATE BA
	e. Two characters for Middle English (based on document N5225): A7D2
	    LATIN CAPITAL LETTER DOUBLE THORN
	    A7D4 LATIN CAPITAL LETTER DOUBLE WYNN
		Completed. See documents 5249R and 5236.

j.	*M70.13 (Additions to Amendment before next WG2 meeting):* 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, Egyptian Hieroglyphs (approx. **3945** characters) mentioned in recommendation M70.07, or other **185** additional characters (captured in document N5236) mentioned in recommendations M70.08 to M70.12 above.	Completed.

AI-70-4	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	
	To take note of and act upon the following item:	

a.	*M70.15 (Future meetings):* WG2 endorses the following schedule for future meetings: WG2
	    Meeting 71 – 2024-06 17 21 Prague, Czech Republic (co-located with SC2) WG2 Meeting 72 –
	    2025-06 – Seeking Host
	    IRG#61, Yale University, New Haven, CT, USA; 2023-10-16/20
	    IRG#62, Online Zoom (Unicode), 2024-03-18/22
		Noted.

AI-70-5	Ad hoc group on roadmap (Dr. Umamaheswaran)	
a.	To update the Roadmaps reflecting the results from this meeting.	Completed.
AI-70-6	USA (Mr. Michel Suignard)	
	To take note of and act on the following item:	
a.	*M70.07 (Egyptian Hieroglyphs):* WG2 recommends to SC2 to accept in principle for future encoding the proposal for Egyptian Hieroglyphs Extension A in document N5215, and invites the author to revise the document based on discussion at this meeting.	Completed.
AI-70-7	China (Mr. Chen Zhuang)	
	To take note of and act on the following item:	
a.	*M70.03 (Feedback on CJK Extension I):* In consideration of preliminary feedback that China will request some changes to the draft repertoire in CJK Unified Ideographs Extension I, and noting China's urgent need for these characters, WG2 recommends that SC2 invite China to submit a document with comments on CJK Unified Ideographs Extension I to SC2 by end of June 2023, to incorporate changes into the next draft of CDAM2 prior to circulation for comments.	Completed.
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-70-9	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.	*M70.14 (Small Seal script):* 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.	Noted.
AI-70-10	Experts from all national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	*M70.15 (Future meetings):* WG2 endorses the following schedule for future meetings: WG2 Meeting 71 – 2024-06 17 21 Prague, Czech Republic (co-located with SC2) WG2 Meeting 72 – 2025-06 – Seeking Host IRG#61, Yale University, New Haven, CT, USA; 2023-10-16/20 IRG#62, Online Zoom (Unicode), 2024-03-18/22	Noted.
b.	From the items discussed at this meeting: a. Jurchen script (documents N4795, N5131 and N5207). See discussion under section 10.2.2. b. Aiha script (document N5226. See discussion under section 10.2.9. c. Blyssymbols (documents N5149, N5171 and N5228). See discussion under section 10.2.10. d. Tangut ideographs and components (documents N5217 and N5218). See discussion under section 10.3.5.	Noted.
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**, Bagam **N4293**, Balti 'B' **N4016**, Balti scripts N3842, Beria L2/08-265, Bété L2/19- 044, Bima L2/16-119, Brusha L2/17-183, Buginese extensions L2/16-159, Chinese Chess Symbols N3910, CJK Buddhist symbols N5166, Diwani Siyaq Numbers L2/15-066R, Eebee Hmong N4668, Jianzi Musical Notation and Format Controls, N5041, Kerinci L2/16-074, Khambu Rai N4018, Khatt-i Baburi N4130, Khitan Large script N4631, N4642, Khotanese **L2/15-022**, Kpelle N3762, Kulitan L2/15-232, 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**, Moon **N4128**, Mwangwego **N4323**, 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, Pau Cin Hau Syllabary L2/16-014, Persian Siyaq L2/21-105, Proto-Cuneiform L2/22-239, Proto- Elamite L2/20-192, Pungchen L2/17-181, Pyu N3874, Ranjana L2/23-028, Shuishu N4758, N4922, N4839, N4956, N4942, N4946, N5110, Southwest China Hieroglyphs N4856, N4901, Sumbawa L2/16-096, Tamga symbols N5092, Tocharian L2/15-236, Vexillology symbols L2/17-089, Western Cham N5098, L2/22-095, Woleai N4146, Zou **N4044.**	Noted.

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.

5.2 Notice of Publication: ISO/IEC 10646:2020 Amd 1:2023

Input document:

SC2/N4875 Notice of Publication: ISO/IEC 10646:2020/Amd 1:2023 Information technology — Universal coded character set (UCS) — Amendment 1, 2023-07-28

Amendment 1 was published in July 2023.

6 SC2 matters:

6.1 Related to Amd. 2 10646 6th edition (CDAM 2.3)

Input documents:

SC2/N4876 Text for ISO/IEC 10646 (Ed 6) CDAM 2.3; 2023-08-13
SC2/N4891 Result of CDAM2.3 consultation; 2023-12-05
Output documents:
5245 Disposition of comments on 10646 (Ed.6) CDAM2.3; Michel Suignard, Project Editor; 2024-01-03
5246 Additional draft repertoire for 10646:2020 Amendment 2 (CDAM 2.4)

The above documents are for information regarding CDAM 2.3
For contributions related to CDAM 2.3, see agenda item 9.1.

6.2 Related to Amd. 2 10646 6th edition (CDAM 2.4)

Input documents:

SC2/N4904 Text for ISO/IEC 10646 (Ed.6) CDAM2.4; 2024-02-27
SC2/N4915 Result of CDAM2.4 consultation, 2024-04-24
5275 Future Additions and Changes to ISO/IEC 10646; US National Body; 2024-04-25
Output documents:
5274 DAM2.4 Disposition of comments; Michel Suignard, Project leader; 2024-06-10
5281 ISO/IEC 10646 6th Edition Amendment 2 Code chart (DAM2); Michel Suignard, Project Editor; 2024-06-13
5283 Draft repertoire for provisionally assigned code points for Unicode (post 16.0) and ISO/IEC 10646 (post Amendment 2); Michel Suignard, Project leader; 2024-06-26

SC2/N4904 is the text of CDAM 2.4 to 6th edition of 10646 and comments.
Discussion on the disposition of comments for CDAM 2.4 is captured below under agenda item 7.2, 9.2, and 9.3.

(Note: After Meeting #71, it was noted that 5281 "ISO/IEC 10646 6th Edition Amendment 2 Code chart (DAM2)" was missing the Mende Kikakui name aliases.)

7 WG2 matters:

7.1 Roadmap Snapshot (Roadmap), accessed February 21, 2024

Input document:

[Roadmap](#) Roadmap snapshot accessed as of 2024-06-14.

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

7.2 Disposition of comments on 10646 Ed.6 CDAM2.4
Input document:
5252 CDAM2.4 Draft disposition of comments; Michel Suignard, Project Editor; 2024-05-22

Three countries submitted comments, US, India, and Czech Republic. One objective of DAM2 is to be in sync with Unicode version 16.0, which will be released September 2024.

T-001: The US requested a formal name alias for a Bamum character, since an error in the character name was discovered.

Michel Suignard noted that the formal name alias is a mechanism to rectify an error in a character's name, since character names, once published, cannot be changed.

Disposition: Accepted.

T-002 and T-003: India requested the ballot date be extended 8 weeks so linguistic experts and those concerned State Governments to be consulted on archaic shrii for Telugu and archaic shrii for Kannada.

Michel Suignard stated that postponing the ballot 8 weeks will kill the project (i.e., the amendment), so the best approach is to pull these two characters from CDAM2.4 and put them into the next phase. The next vehicle would be the new edition (7th edition). Note that Unicode has also pulled these two characters from their next edition (version 16.0), so AMD2 and Unicode 16.0 will remain in synch.

Disposition: Accepted in principle (by pushing the decision on the two characters to a new edition)

T-004: The Czech Republic recommended the normative reference to Unikemet should be to a final version instead of tracked second draft version.

Michel Suignard mentioned that Unikemet is like Unihan, but for Egyptian Hieroglyphs. Unikemet is now a proposed draft Unicode Standard Annex ("UAX") (and is maintained by him). Any committee draft (CD) or draft may refer to draft versions of referenced documents. The published version of AMD 2 will refer to a non-draft version of Unikemet.

Disposition: Accepted in principle.

T-005: The Czech Republic noted that the kRSUnicode third field format is missing a closing parenthesis before the star.

Disposition: Accepted.

Relevant Recommendations: Recommendation M71.01 (Disposition of comments of CDAM 2.4):
WG2 recommends SC2 accept the disposition of ballot comments on CDAM2.4 to 6th edition in document 5274. The following significant changes are noted:

1. Add a formal name alias of type "correction" BAMUM LETTER PHASE-A MAEMGBIEE for U+1680B BAMUM LETTER PHASE-A MAEMBGBIEE
2. Remove the following two characters: 0CDC KANNADA ARCHAIC SHRII and 0C5C TELUGU ARCHAIC SHRII

7.3 Additional changes and repertoire to 10646 Ed.6 CDAM2.4

Input documents:
5275 Future Additions and Changes to ISO/IEC 10646; USNB; 2024-04-25 (=SC2/4916)
5249R Additional draft repertoire for provisionally assigned code points (post 16.0), revised; Michel Suignard, Project Editor; 2024-05-23

Document 5275 contains changes that were made in Unicode version 16.0, based on alpha feedback. It provides relevant reference documents to the different items, listed below:

- A character name change for U+31E4, from CJK STROKE HZXG to CJK STROKE HXG.
- A request to swap the glyphs for two cuneiform characters and to add a formal name alias.
- A request to add two formal name aliases for Mende Kikakui, in order to correct the names for two characters.
- A request to remove U+0C5C TELUGU ARCHAIC SHRII and U+0CDC KANNADA ARCHAIC SHRII, based on comments from BIS. These have already been discussed in the ballot comments to CDAM2.4 in section 7.2 (above), T-002 and T-003.

Disposition: Accepted.

Relevant Recommendations: Recommendation M71.02 (Disposition of comments of CDAM 2.4):
WG2 recommends that SC2 accept the following changes to CDAM 2.4 based on WG2 N5275 (=SC2 N4916): a. Change the name of 31E4 from CJK STROKE HZXG to CJK 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.

The Editor, Michel Suignard, will create a new document incorporating ballot comments and the fixes recommended in 5275. He will work with SC2 to start the processing of DAM2, with the content as defined by 5249R. Michel Suignard noted that he is still getting feedback on Unikemet format, but these can be adjusted without a new document on the ISO side.

No further comments on DAM2 were raised.

7.4 New Program of Work: ISO/IEC 10646 7th edition

a. Input document:
5253 Considerations concerning ISO/IEC 10646 7th edition

2024-07-28
JTC1/SC2/WG2/N5251 (SC 2 NXXXX)   **Charles University, Prague, Czech Republic**   **Page 12 of 41**
Unconfirmed minutes of meeting 71

Michel Suignard provided the background on how stabilizing ISO/IEC 14651 could inform work on ISO/IEC 10646, since the Unicode Standard and ISO/IEC 10646 share the same repertoire. In addition, an increasing number of normative references in ISO/IEC 10646 point to the Unicode specifications and data set. As a result, much of ISO/IEC 10646 can remain stable as the repertoire is augmented. For example, CJK descriptions in section 24.2 can be replaced by a normative link to Unicode's Unihan (in the same way that Michel Suignard will refer to the Egyptian Hieroglyph datafile Unikemet in UAX #57). In sum, duplicative material can be removed from ISO/IEC 10646. The work will entail stabilizing properties and clauses.

The group did not voice any objection to having the Editor Michel Suignard removing duplicative material, and to use this approach as input on the 7th edition.

b. Input document:
5279R Proposal to start new program of work for the development of a seventh edition; Michel Suignard, Project Editor; 2024-06-11

For the 7th edition, Michel Suignard suggested a new project be started that contains the "bucket" of characters not yet incorporated in the amendment, as well as AMD1 and AMD2 of the 6th edition. It would include CJK Extension J and the repertoire in the (future) versions of Unicode, 17.0 and 18.0. He recommended 2+ years for the next edition or 36 months. It was noted that items in 9.5 are not as urgent, though they have been reviewed by the UTC.

The group endorsed a recommendation to SC2 to start a new program of work on the 7th edition, based on 5279R (= SC2/N4926).

Disposition: Recommend to SC2 to start a new program of work on the 7th edition, based on 5279R (= SC2/N4926).
See relevant recommendation M71.04:
WG2 recommends that SC2 accept to start a project subdivision for a new edition to ISO/IEC 10646. The supporting document is N5279 and the starting repertoire is detailed in N5249R. The target dates are: CD: 2024-08-01, DIS 2026-07-01, FDIS 2027-02-01, IS 2027-07-01.

8 IRG

8.1 IRG status and reports
Input documents:
5243 IRG #61 Hybrid, 2023/10/16~20 Recommendations and Action Items; IRG; 2023-10-20
5255 IRG #62 Virtual, 2024/3/18~22 Recommendations and Action Items; IRG; 2024-03-22
5256 Summary IRG 61 and 62; Lu Qin, IRG Convenor; 2024-04-09
5256 IRG PnP Version 17; IRG; 2024-03-20

Dr. LU walked the WG2 attendees through the summary report, 5256:
- Section 1 listed the future meetings. IRG meeting #66, an Online Zoom hosted by Unicode, for 2026-03-16/20 needs approval from WG2.
- Section 2: Annex S had limited examples of unification, so IRG has been working on more examples of unification and disunification in their working document series. No approval from WG2 is needed.
- Section 3: Principle and Procedures has been updated with changes, the latest including text inclusions, procedures, and logistics. If a large file is submitted, a short cover page is needed.

The last IRG meeting decided to include the possible use of captions and subtitles. If multiple sources of multimedia are used, IRG needs to approve this practice before considering it as evidence. IRG wants to retain the collected evidence (which is now done online), for future reference. This will help to ensure submissions have been quality-assured. If a current submission has problems, such as mistakes in the data, the member body has time to prepare a document.

- Section 4: Working Set 2021 has had two rounds of review since the last WG2 meeting in 2023. Version 5 is frozen, and characters can only be removed, not added, so it is now stable. Version 7 was submitted May 24 2024, though fonts were delayed in being submitted for the preliminary code chart. IRG is trying to figure out how to improve the process. Dr. LU has prepared the proposal summary document.
- Section 5: IRG accepted a number of glyph changes. The updated fonts were sent to Michel Suignard, who can follow up on font issues, if needed. Michel Suignard is working with Henry CHAN on some minor issues.
- Section 6: IRG accepted the unification of a G-source character to U+2C21C. IRG is still reviewing ROK's request for a horizonal extension of over 300 K-source characters.
  The Project Editor noted that Japan also requested additional JMJ sources, which would have benefited from review by IRG.
- Section 7: IRG agreed to change the G-source references to U+320DD and U+2C21C. These changes were forwarded to the UTC by the CJK & Unihan Working Group, have been approved by the UTC, and are already incorporated in Unicode 16.0. They will be in Amendment 2.
- Section 8: IRG supports adding two additional CJK stroke characters.
- Section 9: IRG accepted a new G source, SJT11239 (SJ/T 11239-2001 Information Technology - Chinese ideograms coded character set for information interchange - The 8th supplementary set). Another issue that arose related to G-source references where some coded characters have no unique G-source. This applies to characters in Extension B. A solution is needed and China was asked to propose a solution at the next IRG meeting.
- Section 10: This FYI item involves the submission of the first version of guidelines on normalization principles from Vietnam (for Han-Nom) and the sixth version of guidelines from ROK. Such guidelines are especially helpful, since the text written with a brush and details on the characters appear arbitrary. IRG members are encouraged to review these guidelines.
- Section 11: The disunification of U+5CC0 will be taken up separately, under 10.3.1.1.
- Section 12: IRG will retain a list of disunifications requested by WG2. The Editor suggested waiting for the end of meeting IRG #63, as the issue has not yet been resolved.
- Section 13: IRG agreed to change the radical for U+2ECAB from 74 to 130. The Editor mentioned this has been done.
- Section 14: IRG is in support of adding the kZhuang property to the Unihan database.
  The Unicode CJK & Unihan Working Group agreed to make kZhuang a provisional property.
- Section 15: While Extension I is very important, there were concerns in IRG that two new characters did not follow the IRG unification rules. Due to time-constraints, IRG was not able to review the characters via their usual process. Unicode wanted the issue resolved promptly, because the proposed Urgently Needed characters in would have created an issue for vendors (hence they were added to Unicode 15.1). Suggestions in the report on how to handle such cases were well-received by WG2.
- Section 16: IRG has started work on a new working set, IRG WS 2024, with each member's submission limited to no more than 1,000 characters, including re-submitted characters.

See relevant recommendation M71.25 on future meetings

At the end of the IRG report, Dr LU was recognized by WG2 for her 20 years as Convenor (and Rapporteur). Peter Constable conveyed appreciation on behalf of the Unicode Consortium, which awarded her a lifetime gold sponsorship of any Unicode character of her choice. Others orally thanked and applauded Dr. LU for her long leadership and shared their gratitude for the lasting impact of her work, as she heads into retirement.

See relevant Appreciation M71.23:
Appreciation M71.23 (Appreciation to Dr. Lu) Consensus WG2 thanks Dr. Lu Qin for her 20 years of service and significant contribution as IRG Convenor.

8.2 Appointment of a new IRG Convenor
Input documents:
5264 Appointment of a new IRG Convenor, letter of support for Dr. Ken Lunde; Unicode Consortium; 2024-05-30
5280 Appointment of a new IRG Convenor, letter of support for Mr. Chen Zhuang; Yang Lei, China; 2024-06-11

Letters of support for two candidates for IRG Convenor have been submitted and posted: 5264 for Ken Lunde and 5280 for Chen Zhuang.

During discussion, both candidates were identified as being valuable contributors, Chen Zhuang as chief editor (with Henry CHAN contributing to the online system) and Ken as organizer of CJK & Unihan Working Group, who has valuable technical and people skills as well.

The possibility of having them be co-convenors, or twin-convenors, or a Chair and Co-chair was raised. Co-convenorship might cause problems with ISO rules, since they are only allowed in a joint working group (which WG2 is not), and twin-convenors can only work with one such relationship per group, decided by mutual agreement. How would two convenors function together?

To one member, it would be good to have the Chief Editor, Chen Zhuang, continue doing what he does today, and allow Ken Lunde do what he does (managing website, agenda, but not take on the editorship), hence continue without either person changing roles. There is no reason to add more work to the Chief Editor; the two jobs are quite different and demanding, and probably shouldn't be combined into one.

Dr. LU announced her retirement last year. IRG should be comfortable with the decision made here.

Disposition: Recommend to SC2 to appoint Ken Lunde as IRG Convenor, replacing Dr. Lu Qin.
See relevant recommendation M71.24.

9 Contributions related to ballots: Related to and incorporated into 10646 Ed.6 CDAM2.3
9.1 Additional draft repertoire for cdam2.3
Input documents:
5235R Additional draft repertoire for cdam2.3, revised; Michel Suignard, Project editor; 2023-08-04
5241 ISO/IEC 10646 repertoire proposal for CDAM2.3; Michel Suignard, Project editor; 2023-08-07
5240 Proposal for an extended Egyptian Hieroglyphs repertoire; Michel Suignard; 2023-12-29
5239 Encoding proposal for two arrow symbols used in Egyptology; Michel Suignard;
5214R2 and 5238 Proposal to encode 622 urgently needed ideographs, 2nd revision

L2/23-163 CJK & Unihan Group Recommendations for UTC #176 Meeting;
L2/23-133 Revision of 3 G-Source Glyphs; China NB; 2023-06-12

The above documents are for information to WG2 experts.

Michel Suignard noted that much work is taking place, particularly on the Unicode side and at Unicode CJK & Unihan group and at IRG meetings. Egyptian Hieroglyphs have also gone through many changes through various versions.

9.2 Related to and incorporated into ISO/IEC 10646 Ed.6 CDAM2.4

Input documents:

5246 Additional draft repertoire for cdam2.4; Additional draft repertoire for 10646:2020 Amendment 2 (CDAM 2.4); Michel Suignard, Project Editor; 2024-02-07

5247 ISO/IEC 10646 repertoire proposal for CDAM2.4

5240R2 Proposal for an extended Egyptian Hieroglyphs repertoire, 2nd revision, 3995 characters

L2/23-237 CJK & Unihan Group Recommendations for UTC #177 Meeting

L2/23-225 Request to update the G-Source reference for U+320DD

L2/23-243 Request to confirm one unification for U+2C21C (new G source)

L2/23-242 Proposal to Change Glyph of U+21128 (V source)

L2/23-244 Suggestions to correct representative glyphs of 4 CJKUIs, applied to U+2B92C (G source) and U+32268 (UK source)

L2/23-245 Proposal to update the reference glyphs for 3 characters G source U+203D8, U+25B9F, U+2D156

L2/23-167 Proposal to update glyph of U+3029 SUZHOU NUMERAL NINE

L2/23-220 Proposal to encode (disunify) two stroke characters in CJK Strokes block

L2/23-221 Proposal to modify the representative glyph of U+31D2 CJK STROKE P

L2/24-012 CJK & Unihan Group Recommendations for UTC #178 Meeting

(L2/24-012 New UTC sources for U+3150D and U+317EA -- page 6 and 7 of L2/24-012)

(L2/24-012 Glyph update for U+30D91 and U+30D94 (UK sources) -- page 10 of L2/24/012)

L2/23-281 Update Suzhou numerals in CJK Symbols font

5205 Proposal to encode a blank character for Khitan Small Script

L2/23-236r Proposal for 7 new Emojis

5237 Glyph corrections for four Tangut ideographs

L2/23-199 Glyph correction for Khitan Small Script U+18BD2

(5245 New K source for U+25A36 -- in Disposition of Comments on CDAM 2.3)

L2/23-191 Proposal to Encode 3 Additional Latin Characters for Wakashan and Salishan Languages U+A7DA..U+A7DC

There was no discussion on the above agenda items.

9.3 Related and to be incorporated into ISO/IEC 10646 Ed.6 DAM2

Input document:

5274 Disposition of comments on 10646 Ed.6 CDAM2.4

5275 Futures additions and changes to ISO/IEC 10646 (=SC2 N4916)

L2/24-067 CJK & Unihan Group Recommendations for UTC #179 Meeting

L2/24-009r Misspelled name of U+1680B: BAMUM LETTER PHASE-A MAEMBGBIEE (in UTC #178 properties feedback & recs)

5281 ISO/IEC 10646 6th Edition Amendment 2 Code chart (DAM2)

The disposition of comments on CDAM 2.4 (5274), USNB comments on future additions and changes (5275), and the Bamum misspelling (L2/24-009r) are discussed above under agenda item 7.2 and 7.3. Changes to CJK mentioned in L2/24-067 were incorporated in the DAM.

9.4 Provisionally assigned by Unicode for Unicode 17.0 encoding

9.4.1 Additional draft repertoire for provisionally assigned code points
Input document:
5249R Additional draft repertoire for provisionally assigned code points; Michel Suignard, Editor; 2024-05-23

Michel Suignard noted that the repertoire in this document includes characters and scripts that were proposed in the past year and would be good candidates for the 7th edition and Unicode 17.0. Unicode will be discussing the repertoire of Unicode 17.0, with consideration given to scripts in modern use, how long it has been since code points were provisionally assigned, etc.

Document 5249R shows the characters and scripts that have provisionally assigned code point positions. In the chart, the yellow highlighted characters will potentially be included in Unicode 17.0 and those not highlighted will be in the bucket.

Relevant recommendations M71.04 and M71.22
M71.04 WG2 recommends that SC2 accept to start a project subdivision for a new edition to ISO/IEC 10646. Supporting document is N5279 and the starting repertoire is detailed in N5249R.
M71.22 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.

Note: Many of the proposals in items 9.4 were discussed at WG2 meeting #70 in Waterloo, ON and were captured in the minutes of the meeting, 5244, under section 10, and the Recommendations document 5234, section M70.08ff "for future encoding." They are repeated here because they now are good candidates for inclusion in a specific version.

9.4.2 Proposal to Encode the Chisoi script
Input document:
L2/22-218R3 Proposal to Encode the Chisoi script; Biswajit Mandal; 2023-01-09

There was brief presentation of this proposal for a script used in India, containing 49 characters, with evidence of its use.

Disposition: Recommends SC2 accept the proposed Chisoi script for inclusion in 7th edition CD.
See relevant recommendation M71.07.

9.4.3 Proposal to encode the Tai Yo Script
Input document:
L2/22-289R Final Proposal to encode the Tai Yo Script; Viet Khoi Nguyen, et al.; 2023-01-09

The Tai Yo proposal was presented. This Brahmi-based script is used in Vietnam and is related to Tai Tham. The encoding model is like Tai Tham, using visual order. It is written top-to-bottom in columns running right to left. The script has limited use today.

Disposition: Recommends SC2 accept the proposed Tai Yo script for inclusion in 7th edition CD.
See relevant recommendation M71.09.

9.4.4 Proposal to encode the Sidetic script

Input document:
L2/23-019 Revised proposal to encode Sidetic in Unicode; Pandey; 2023-01-06

This historic script was presented. There were a number of comments raised: shouldn't the name N1 should be padded with zeroes, hence N01, etc.? Can annotations be added with the phonetic value? Is the alphabetical order known; is there an abcedarium?

Some members of WG2 consider the script ready for including on the next ballot. Comments can be made once the script is included in a CD. Feedback on annotations and character names can also be relayed to Unicode, via the Unicode feedback form.

Disposition: Recommends SC2 accept the proposed Sidetic script for inclusion in 7th edition CD.
See relevant recommendation M71.05.

9.4.5 Proposal to encode the Tolong Siki script

Input document:
L2/23-024 Proposal to encode the Tolong Siki script; Pandey; 2023-01-11

This proposal for a script from West Bengal was presented. It was invented in 1988 and has been used by communities in India for the Kurukh language.

A question was raised about getting approval from the state or local governments (in India, in this case) where the language and script are used. Meetei Mayek was mentioned as an example, where there was a community that wanted to digitize historic and modern materials, but some problems arose from within the state regarding the repertoire. In the end, the repertoire needed for modern texts was encoded first and then later an extension covering historic letters was added. For Tolong Siki, it would be important to be working with the state government.

Within SC2 and WG2, agencies and national standards bodies are encouraged to provide feedback. Within Unicode, the Unicode Script Encoding Working Group tries to work with proposal authors who may be able to identify the interested parties (and can provide contact information). It can be difficult identifying the experts and users to contact, however.

Comments can be made on scripts once they are added to the CD. Once scripts are identified for a specific Unicode version, comments are invited on the Unicode website during the alpha period (early February until early April).

Disposition: Recommends SC2 accept the proposed Tolong Siki script for inclusion in 7th edition CD.
See relevant recommendation M71.06.

9.4.6 Proposal to encode the Beria Erfe script

Input document:
L2/24-004R Proposal for encoding the Beria Erfe (Zaghawa) script in the SMP; Siddick Adam Issa, et al; 2024-02-22

This script was created for the Zaghawa language, a language spoken in countries in east Africa and the diaspora. While there is no established orthography, the script has been embraced by language users. The letter shapes are based on branding of camels. The script contains 50 characters.

Disposition: Recommends SC2 accept the proposed Beria Erfe script for inclusion in 7th edition CD.
See relevant recommendation M71.08.

9.4.7 Proposal to encode ARCHAIC SHRII in Kannada and Telugu

Input document:
L2/22-006 Proposal to encode ARCHAIC SHRII in Kannada and Telugu; Srinidhi A, Sridatta A; 2022-01-04

India (BIS) had commented on CDAM 2.3 that the two characters require further study.
There was no further discussion on the topic.

Disposition: Recommends SC2 accept the proposed ARCHAIC SHRII characters in Kannada and Telugu for inclusion in 7th edition CD.
See relevant recommendations: M71.01, M71.12 and M71.13.

9.4.8 Proposal to encode SANSKRIT BA (formerly ALTERNATE BA) for the Bengali Language U+09FF

Input document:
L2/22-268R Proposal to encode SANSKRIT BA (formerly ALTERNATE BA) for the Bengali Language U+09FF; Vinodh Rajan, Deepro Chakraborty; 2022-12-23

This proposal requests a new character to distinguish VA and BA in the Bengali script, needed to represent Sanskrit texts. The Unicode Script Encoding Working Group discussed this topic at length. In the end, the group recommended encoding one character, BENGALI LETTER SANSKRIT BA.

Disposition: Recommends SC2 accept the proposed SANSKRIT BA character for inclusion in 7th edition CD.
See relevant recommendation M71.10 (a).

9.4.9 Request to encode DOT ABOVE characters for the ORIYA/ODIA script

Input document:
L2/24-106R Request to encode DOT ABOVE characters for the ORIYA/ODIA script; Lorna Priest Evans; 2024-04-25

This proposal requests two dot characters to denote tone in the Kui language, a Dravidian language that uses the Oriya/Odia script. The use of these dots has been the orthographic practice for several decades.

Disposition: Recommends SC2 accept the proposed two dot above characters for the ORIYA/ODIA script for inclusion in 7th edition CD.
See relevant recommendation M71.10 (b).

9.4.10 Revised Proposal to add two characters to Middle English

Input document:
5225 Revised Proposal to add two characters to Middle English U+A7D2 U+A7D4; Everson and West; 2023-06-01

This document was already covered at WG2 meeting #70 in Waterloo, ON, see section 10.3.8 of 5244 and recommendation M70.12 (e) in 5234.

Disposition: Recommends SC2 accept the proposed two Middle English characters for inclusion in 7ᵗʰ edition CD.
See relevant recommendation M71.10 (c).

9.4.11 Proposal to add two Latin pharyngeal voiced fricative characters
Input document:
L2/23-219 Proposal to add two Latin pharyngeal voiced fricative characters; Denis Moyogo Jacquerye; 2023-10-04

Two characters are proposed. They are uncased glottal stops used in the orthography of the Pilagá community in Argentina and in phonetic transcriptions.

Disposition: Recommends SC2 accept the proposed two Latin pharyngeal voiced fricative characters for inclusion in 7ᵗʰ edition CD.
Note regarding relevant recommendation: The two characters U+A7CE LATIN CAPITAL LETTER PHARYNGEAL VOICED FRICATIVE and U+A7CF LATIN SMALL LETTER PHARYNGEAL VOICED FRICATIVE were missing from recommendations 5254 section M71.10 (c) due to error, but they are included in 5249R.

9.4.12 Unicode request for modifier capital S: U+A7F1
Input document:
L2/24-081 Unicode request for modifier capital S: U+A7F1; Kirk Miller; 2024-03-19

This proposal is to add a modifier letter capital S, used orthographically to write the Chatino language, which is used in southern Mexico. It is also used as a phonetic symbol.

Disposition: Recommends SC2 accept the proposed modifier letter capital S for inclusion in 7ᵗʰ edition CD.
See relevant recommendation M71.10 (c).

9.4.13 Proposal to encode U+08FF ARABIC LETTER NOON WITH RING ABOVE
Input document:
L2/24-046 Proposal to encode U+08FF ARABIC LETTER NOON WITH RING ABOVE; Lorna Priest Evans; 2024-02-20

This proposal is for one character, used by to write western Punjabi used in Pakistan. The orthography for western Punjabi has not yet been standardized. The character is shown in examples in the proposal.

Disposition: Recommends SC2 accept the proposed ARABIC LETTER NOON WITH RING ABOVE character for inclusion in 7th edition CD.
See relevant recommendation M71.10 (d).

9.4.14 Proposal to encode two Quranic Arabic Characters U+10EC5 U+10EFB
Input document:
L2/22-281R Proposal to encode two Quranic Arabic Characters U+10EC5 U+10EFB; Rikza F. Sh.; 2023-01-05

This document was already covered at WG2 meeting #70 in Waterloo, ON, see section 10.3.1(a) of 5244 and recommendation M70.12 (a) in 5234.

Disposition: Recommends SC2 accept the proposed two Quranic Arabic characters for inclusion in 7th edition CD
See relevant recommendation M71.10 (d).

9.4.15 Proposal for ARABIC BIBLICAL END OF VERSE U+10ED0

Input document:
L2/23-103 Proposal for ARABIC BIBLICAL END OF VERSE U+10ED0; Lorna Priest Evans; 2023-07-10

This document was already covered at WG2 meeting #70 in Waterloo, ON, see section 10.3.1(b) of 5244 and recommendation M70.12 (b) in 5234.

Disposition: Recommends SC2 accept the proposed ARABIC BIBLICAL END OF VERSE character for inclusion in 7th edition CD
See relevant recommendation M71.10 (d).

9.4.16 Proposal to encode eight Arabic Honorifics

Input document:
L2/24-002 Proposal to encode eight Arabic Honorifics; Roozbeh Pournader, et al; 2024-01-03

These are compact characters for phrases used after the name of a person to honor/praise them, based on their status in religious society. They are not used orthographically. Evidence for additional honorifics is being examined. This set is being proposed for inclusion the Arabic Presentation Forms-A block. Errors in a few of the character names are being fixed.

Disposition: Recommends SC2 accept the proposed eight Arabic honorific characters for inclusion in 7th edition CD
See relevant recommendation M71.10 (d).

9.4.17 Twenty-five more Arabic Honorifics

Input document:
L2/24-077 Twenty-five more Arabic Honorifics; Roozbeh Pournader, et al; 2024-03-19

This proposal is for twenty-five additional Arabic honorifics, with some located in the Arabic Presentation Forms-A block and others in Arabic Extended-C block. Errors in a few of the character names are being fixed.

Disposition: Recommends SC2 accept the proposed twenty-five Arabic honorifics for inclusion in 7th edition CD
See relevant recommendation M71.10 (d).

9.4.18 Proposal to encode Arabic Letter Thin Noon

Input document:
L2/23-121 Proposal to encode Arabic Letter Thin Noon; Khaled Hosny, Mostafa Jbire; 2023-05-17

This proposal is for one character used in the Warsh Quranic orthography, the predominant Quranic used in north Africa.

Disposition: Recommends SC2 accept the proposed ARABIC LETTER THIN NOON character for inclusion in 7th edition CD
See relevant recommendation M71.10 (d).

9.4.19 Proposal to encode Arabic Double Vertical Bar Below
Input document:
L2/23-248 Proposal to encode Arabic Double Vertical Bar Below; Lateef Sagar Shaikh; 2023-10-19

This proposal is for a combining mark used to denote nasalization in Old Sindhi.

Disposition: Recommends SC2 accept the proposed ARABIC DOUBLE VERTICAL BAR BELOW character for inclusion in 7th edition CD
See relevant recommendation M71.10 (d).

9.4.20 Proposal to add Arabic letter for Swahili
Input document:
L2/24-055 Proposal to add Arabic letter for Swahili; Denis Moyogo Jacquerye; 2024-02-27

This proposal is for one character, yeh with four dots below, used to write Swahili in older documents.

Disposition: Recommends SC2 accept the proposed ARABIC LETTER YEH WITH FOUR DOTS BELOW character for inclusion in 7th edition CD
See relevant recommendation M71.10 (d).

9.4.21 Proposal to Encode eight Kashmiri Sharada Characters
Input document:
L2/23-122 Proposal to Encode eight Kashmiri Sharada Characters; Vinodh Rajan; 2023-05-17

This proposal is for 8 additional Sharada characters that are used to write Kashmiri-specific vowels.

Disposition: Recommends SC2 accept the proposed eight Kashmiri Sharada characters for inclusion in 7th edition CD
See relevant recommendation M71.10 (e).

9.4.22 Proposal to encode Mongolian Manchu Alternate UE
Input documents:
5270 Proposal to encode Mongolian Manchu Alternate UE; CheonHyeong SIM; 2023-12-19
5265 Feedback on the Proposal to Revise and Add Manchu Character U+1879 (5270); China NB; 2024-06-04
5271 Response to WG2 N5265 (feedback to N5270); CheonHyeong SIM; 2024-06-06

Document 5270 is a proposal for one Mongolian Manchu character used in historic texts. The proposal was reviewed by the UTC, which felt separate encoding of the character was appropriate. A document with comments on the proposal was submitted by China, 5265, and a response from proposal author to the China document was received, 5271.

China requested an additional year for their experts to do further research into the broader problem of this character and what are considered (other) handwriting errors in manuscripts. The document 5265 suggests two options to resolve the issue: an FVS, which is preferred, or the addition of a new character. The experts in China felt that encoding the character now would cause problems, and they wanted to do more research into manuscripts.

It was noted that the proposal 5270 was based on well-known printed publications, which would be important to represent digitally. In their response, China mentioned ongoing work to investigate manuscripts. This work could mean that other characters could be proposed for later.

Michel Suignard noted that if the Manchu character is added to the 7th edition, there will be two years for research and for China to make a case for FVS approach and/or to provide strong technical arguments opposing the encoding of a new character.

The group agreed to leave the character in, since there will be two years for the repertoire to stabilize. China will ask experts to conduct research in the coming year. If there are strong objections (with good rationale), the default position would be to not encode the character.

Disposition: Recommends SC2 accept the proposed MONGOLIAN LETTER MANCHU ALTERNATE UE character for inclusion in 7th edition CD.
See relevant recommendation M71.11.

9.4.23 Unicode request for double caron
Input document:
L2/24-105 Unicode request for double caron; Kirk Miller; 2024-04-15

This is a proposal for a compound tone diacritic, whose shape is like two valleys.

Disposition: Recommends SC2 accept the proposed combining double caron character for inclusion in 7th edition CD.
See relevant recommendation M71.10 (g).

9.4.24 Request for compound tone diacritics
Input document:
L2/23-188 Request for compound tone diacritics; Kirk Miller: 2023-09-21

This is another proposal for additional diacritics, with evidence provided.

Disposition: Recommends SC2 accept the proposed six compound tone diacritics for inclusion in 7th edition CD.
See relevant recommendation M71.10 (g).

9.4.25 Unicode request for compound tone diacritics II
Input document:
L2/23-208 Unicode request for compound tone diacritics II; Kirk Miller; 2023-09-25

More additional diacritics, with evidence provided.

Disposition: Recommends SC2 accept the proposed three compound tone diacritic characters for inclusion in 7th edition CD.
See relevant recommendation M71.10 (g).

9.4.26 Request for Harrington diacritics
Input document:
L2/23-206R Request for Harrington diacritics; Yoram Meroz, et al; 2023-11-06

This is a proposal for diacritics found in the manuscripts of John Peabody Harrington. They are used by linguists and archivists who are transcribing his work.

Disposition: Recommends SC2 accept the proposed five Harrington diacritic characters for inclusion in 7th edition CD.
See relevant recommendation M71.10 (g).

9.4.27 Request for one chess symbol
Input document:
L2/24-018 Request for one chess symbol; Gavin Jared Bala, Kirk Miller; 2024-01-04

This is a proposal for one chess symbol, an equals sign with an infinity sign above it. The proposal discusses why it should not be handled as an equals sign (U+003D) with a combining infinity sign (U+1AB2). The proposal also notes that a similar sign, U+2BF9 EQUALS SIGN WITH INFINITY BELOW, is atomically encoded.

There was a question if the proposed character is used in mathematics. However, it is not possible to check every symbol's use, so it could be used in math.

Disposition: Recommends SC2 accept the proposed chess symbol for inclusion in 7th edition CD.
See relevant recommendation M71.10 (h).

9.4.28 Request for shatranj symbols
Input document:
L2/24-020 Request for shatranj symbols; Gavin Jared Bala, Kirk Miller; 2024-01-08

This is a proposal for four characters used in Shatranj, the ancestor of modern chess: two white and two black characters. One black and white set are for the *Alfil* ("the elephant"), the ancestor of the bishop in today's chess, and *ferz* is the ancestor of the queen.

The Unicode experts felt these were acceptable to encode. The font is open-source.

Disposition: Recommends SC2 accept the proposed four shatranj symbols for inclusion in 7th edition CD.
See relevant recommendation M71.10 (h).

9.4.29 Proposal to encode two small form CJK characters for Chinese
Input document:
L2/23-284 Proposal to encode two small form CJK characters for Chinese; Andrew West, Eiso Chan; 2023-12-13

This proposal is for two characters, whose use was devised by a Chinese linguist to capture the r-colored pronunciation, found especially in Beijing dialect of Mandarin Chinese. Contrastive use is shown in figure 4. A proposal was made in 2016 for a standardized variation sequence, but it was rejected by the UTC, which recommended registering an Ideographic Variation Sequences (IVS) in the Ideographic Variation Database. However, after discussion with others, including Ken Lunde, it was considered appropriate now to propose two small-sized traditional forms of ER in the Ideographic Symbols and Punctuation block.

Disposition: Recommends SC2 accept the proposed two small form CJK characters for inclusion in 7th edition CD.
See relevant recommendation M71.10 (h).

9.4.30 Proposal to encode three stable extended Suzhou Numeral-like letters for Cantonese Music

Input documents:
5267 Proposal to encode three stable extended Suzhou Numeral-like letters for Cantonese Music; Eiso Chan; 2024-06-03
5268 Suggestions on the Symbol Form of Yangqin Score (Feedback to 5267); China NB; 2024-06-05

The proposal 5267 is for three Suzhou numeral-like letters used in Cantonese music. For the proposal author U+3026 should be used for half beat. The document from China, 5268, suggested a new code point for the half beat. There was no disagreement on three characters U+16FF4..U+16FF6, but there was no consensus on the need for a fourth symbol.

Disposition: Recommends SC2 accept the three proposed extended Suzhou Numeral-like letters for inclusion in 7th edition CD.
See relevant recommendation M71.10 (h).

9.4.31 Proposal to encode 28 Tangut ideographs and 116 Tangut components

Input documents:
5217 Proposal to encode 2 Tangut components and 28 Tangut ideographs; Andrew West: 2023-05-31
5218R3 Proposal to encode 113 Tangut components; Andrew West; 2024-06-12
5276 Review of Proposal to encode 114 Tangut components; Andrew West; 2024-01-29

Document 5217 proposes 2 additional Tangut components, which can be used in description sequences for Tangut ideographs (similarly to IDS for CJK). The two additions were found in original Tangut texts. Table 2 of that document also lists 28 Tangut ideographs, attested in various sources.

A question was raised whether an IDS system for Tangut might be made available. The author will consider it, when he has had careful review. Such IDSes could be included in the Unicode Core Spec or in a UTN, making the information easier to find. Note the new Unicode Standard Annex for Egyptian Hieroglyphs (UAX #57) and Unicode Technical Report on cuneiform (UTR #56), which provides data or links to websites hosting data that is useful for users.

Proposal 5218R3 "Proposal to encode 113 Tangut components" has characters that come from a single source, a nine-volume dictionary that will likely be the go-to reference work on Tangut. It may be the source for other new additions in the future.

Document 5276 is a review of 5218R2 (=L2/23-247), a proposal for the Tangut components. Andrew West discovered that Tangut Component 783 (U+18D8E) should be removed from the proposed additions in N5218, since it can be unified with another character, Tangut Component 324 (U+18943). In addition, Tangut Component 822 (U+18DB5) has the wrong glyph and should be corrected.

A question was raised about stroke counts for Tangut components, and if it could be added to Tangutdata.txt. Andrew West will investigate and, if is deemed useful, will provide the data. It was not considered a problem to add this information to the Unicode datafiles.

Disposition: Recommends SC2 accept the proposed 28 Tangut ideographs and 115 Tangut components for inclusion in 7th edition CD.
See relevant recommendation M71.10 (f).

9.4.32 Proposal to disunify Symbols for Legacy Computing from emoji
Input document:
L2/23-252 Proposal to disunify Symbols for Legacy Computing from emoji; Rebecca Bettencourt, Doug Ewell; 2023-10-20

This is a proposal to add 10 characters for legacy computing. When the legacy computing symbols were considered (L2/21-235r and L2/19-025), these 10 were not proposed, because they were unified with existing emoji. However, implementers and users of traditional characters discovered this resulted in unwanted results, since an emoji may show up when the non-emoji glyph was expected. This was corrected by creating emoji variation sequences which offered a text vs. color presentation.

Unicode experts agreed this shouldn't have been done, because it creates a problem when the user can't control how the character is displayed. In this case, for example, these legacy computer characters currently will display as emoji. One option to resolve the issue would be to create a variation sequence to get the black/white presentation. However, that puts the burden on users. Alternatively, proposing a new set of 10 characters will simplify the situation for end users and all legacy computing symbols will be treated the same. This latter alternative is the approach taken in L2/23-252.

One participant asked about changing the charts to have color, but that isn't done per Michel Suignard. Another participant voiced concerns that this would be seen as the double encoding of characters. However, the Unicode liaison member reported this should be the tail end of legacy computing symbols, and hence the double encoding issue should not be a major concern — this is a special, rare case — while unification of emoji symbols with similar non-emoji characters has been found to cause real problems for both implementers and end users.

Disposition: Recommends SC2 accept the proposed ten characters for legacy computing for inclusion in 7th edition CD.
See relevant recommendation M71.10 (h).

9.4.33 Request for 21 historical asteroid symbols
Input document:
L2/23-207 Request for 21 historical asteroid symbols; Gavin Jared Bala, Kirk Miller; 2023-09-25

This is a proposal for 21 symbols for asteroids. Most of the proposed characters will appear in the Miscellaneous Symbols Supplement block, but a few will appear in the Alchemical Symbols block, filling it up. The proposal has extensive documentation.

Disposition: Recommends SC2 accept the proposed 21 historical asteroid symbols for inclusion in 7th edition CD.
See relevant recommendation M71.10 (h).

9.4.34 Proposal to encode 16 Geomantic Figures
Input document:
L2/23-218 Proposal to encode 16 Geomantic Figures; George Pollard; 2023-10-04

This proposal is for geomantic symbols, which are divination symbols, similar to I Ching. Several pages of documentation are provided. Although it can be handwritten, printed versions are most recognizable to people. The representative glyphs are dots.

Disposition: Recommends SC2 accept the proposed 16 geomantic figures for inclusion in 7th edition CD.
See relevant recommendation M71.10 (h).

9.4.35 Proposal for ten Chemical Symbols
Input document:
L2/23-193R2 Proposal for ten Chemical Symbols; Neil Soiffer, Murray Sargent, Asmus Freytag; 2023-11-14

This is a proposal for arrows used in chemical notation. Glyph variants are mentioned in the proposal. Arrows indicating unsuccessful reactions have additional marks through them or under them. The proposal also includes a character to depict the standard state symbol (or Plimsoll mark), used as a modifier.

Disposition: Recommends SC2 accept the proposed ten chemical symbols for inclusion in 7th edition CD.
See relevant recommendation M71.10 (h).

9.5 Provisionally assigned for future encoding by Unicode (no version specified)
9.5.1 Revised Proposal to encode three Armenian superscript characters
Input document:
L2/24-107 Revised Proposal to encode three Armenian superscript characters; Hossep Dolatian; 2024-04-16

This proposal is for three superscripted Armenian characters used as modifiers in phonetic transcription. The text examples in this document show the modern Armenian typography, though the current font in the code chart (and 5249) is traditional, and not used any longer. The editor of 10646 intends to switch the font to the modern style, using the Noto font. This font change will appear as an update to the whole block, but not in Unicode 16.0.

Disposition: Recommends SC2 accept the proposed three superscripted Armenian characters for future encoding.
See relevant recommendation M71.18 (a).

9.5.2 Unicode request for affricate ligatures
Input document:
L2/24-051 Unicode request for affricate ligatures; Kirk Miller; 2024-02-23

This proposal is for eight affricate ligatures used in phonetic transcriptions. Some of the proposed characters didn't have much evidence, but the International Phonetic Association (IPA) supported them being encoded.

Disposition: Recommends SC2 accept the proposed eight affricate ligatures for future encoding.
See relevant recommendation M71.18 (b).

9.5.3 Unicode request for letters with palatal hook U+1DF2D..U+1DF3A
Input document:
L2/24-050 Unicode request for letters with palatal hook U+1DF2D..U+1DF3A; Kirk Miller; 2024-04-01

This proposal is a request for fourteen characters with a palatal hook used to denote palatalized pronunciation. Although a combining palatal hook has been encoded, this proposal asks for the letters with hooks to be encoded atomically, following existing precedent in the UCS for several other phonetic symbols with palatal hooks. In a similar way, there are also combining overlaid tildes and retroflex hooks, but such letters with these graphic elements have also been encoded atomically.

Disposition: Recommends SC2 accept the proposed fourteen characters with a palatal hook for future encoding.
See relevant recommendation M71.18 (b).

9.5.4 Unicode request for IPA diacritics above and one below
Input document:
L2/24-080 Unicode request for IPA diacritics above and one below; Kirk Miller; 2024-04-01

This document proposes twelve combining marks to represent various articulations. The proposed characters are raised variants of diacritics that appear below a letter. The document also requests a pair of above and below diacritics.

The Editor Michel Suignard will make adjustments to the cross-references proposed for the names list.

Disposition: Recommends SC2 accept the proposed twelve IPA combining diacritics for future encoding.
See relevant recommendation M71.18 (b).

9.5.5 Request for three musical symbols
Input document:
L2/23-278R Request for three musical symbols; Gavin Jared Bala, Kirk Miller; 2024-01-08

This proposal is for three characters, two of which are combining marks. It was noted that Figure 2 shows that in some cases, the stress mark may appear above or below a character, but the representative glyph is a combining mark below.

Disposition: Recommends SC2 accept the proposed three musical symbols for future encoding.
See relevant recommendation M71.18 (c).

9.5.6 Request for 12 Stein-Zimmermann quarter-tone accidentals

Input document:

[L2/23-276](#) Request for 12 Stein-Zimmermann quarter-tone accidentals; Gavin Jared Bala, Kirk Miller; 2023-11-20

This document proposes twelve Stein-Zimmerman quarter tone accidentals, shown in the chart on page 3 with the white background. (The greyed background is used to indicate characters proposed in separate proposals.)

The characters only fill a partial block. The editor used the glyphs provided by the proposal author, Kirk Miller. The new additions will be visible in the charts, if member bodies wish to comment on the glyphs.

Disposition: Recommends SC2 accept the proposed twelve Stein-Zimmerman quarter tone accidentals for future encoding.
See relevant recommendation M71.18 (c).

9.5.7 Request for 8 digits with slashes used in figured bass

Input document:

[L2/23-277](#) Request for 8 digits with slashes used in figured bass; Gavin Jared Bala, Kirk Miller; 2023-11-20

This is a proposal for more musical notation, specifically digits with slashes that are used in figured-bass notation in Baroque and neo-Baroque compositions. Because there can be ambiguity on where the slash goes, atomic encoding of the characters is proposed.

A question was raised about naming these characters, suggesting the name "with cross-bar." After discussion, it appears the name "with stroke" is better than "with slash" or "with cross-bar." It was noted that "stroke" in a character name can reflect a line that is diagonal or horizontal, so it would be preferable. (One member voiced support for names either "with low stroke" or "with high stroke", depending upon placement of the stroke.)

The Unicode Script Encoding Working Group should consider "with stroke," and participants here can submit feedback on this topic to Unicode. The character won't appear on a ballot for another year, and feedback to Unicode would result in a faster response. It is advisable to give feedback to Unicode, even when the characters are only provisional (and appear on the [Pipeline](#)).

Disposition: Recommends SC2 accept the proposed eight digit characters with slash for future encoding.
See relevant recommendation M71.18 (c).

9.5.8 Request for modifier pre-Kiel click letters

Input document:

[L2/24-052](#)R Request for modifier pre-Kiel click letters; Kirk Miller; 2024-04-29

This proposal from Kirk Miller, who authored the other phonetic symbol proposals, is for five additional modifiers. These are related to IPA symbols and their inclusion in the standard is supported by the IPA. The last five characters in the chart on page 4 shows them. The document includes examples.

Disposition: Recommends SC2 accept the proposed five modifier pre-Kiel click letters for future encoding.

See relevant recommendation M71.18 (b).

10 Script contributions not yet assigned

10.1 Carried forward not related to ballots without new contributions

10.2 New scripts or block or existing with new contributions

10.2.1 Shuowen 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

Current proposal to encode Small Seal Script, appendix
5105 Proposal to encode Small Seal Script, Appendix; TCA, China; 2019-06-19

Various reports of discussion (with new documents for this meeting **bolded** *and italicized*)
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 N5105 proposal (of Shuowen Seal) and Changzhi's version, (and appended data); Suzuki Toshiya; 2020-04-01
5187 TCA and China Feedback on N5133; 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 N5209 (Considerations about Small Seal encoding initiative, Suignard), XLS data ; TCA; 2023-06-16
***5273** Response to WG2 N5209 (Considerations concerning the Small Seal encoding); TCA and China experts; 2024-06-06*
5231 TCA feedback to N5219 (comments from Suzuki); TCA and China; 2023-06-16
5232 Preliminary Draft of Mapping Table for Shuowen Seal: from CCZ to N5191, data (zip); Suzuki Toshiya; 2023-06-16
***5272** Response to WG2 N5232 (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

Various documents were briefly introduced, including Richard Cook and Suzuki Toshiya's large document 5211 "14-ColumnSealScriptGlyphComparisonChart-Documentation," which drew on three sources, Da Xu version (X), Xiao Xu version (K), and Duan Zhu version (D). In 5209, Michel Suignard's document

"Consideration concerning Small Seal with chart," found 55 entries in K and D versions that are not in the X version. However, there were no glyphs for the 55.

Working off 5209, TCA added glyphs for X and D, supplemented the column "Corresponding Modern Char" with the applicable modern characters, and reviewed the SW radical and radical number.

In 2024 there was an online meeting of experts, who grouped the 55 entries into different categories (documented in 5273): 8 entries do not need encoding because they are duplicates (see Appendix 1), 47 that do need encoding (see Appendix 2) and 2 additional entries that should be encoded from version D (see Appendix 3). TCA reported they will provide a font for the 47 + 2 entries.

Michel Suignard noted some differences between this proposal document 5273 and Richard Cook's document, the latter of which marked ca. 500 entries with "+" and "-", denoting major and minor glyph differences, respectively.

The proposal is getting much closer to a final version, though Michel Suignard did not think it was stable enough for Unicode 17.0. Selena will provide a font with 47 new characters + 2 additional. Properties are needed for those 49. A font is needed to be able to provide full columns for all the sources (i.e., K and D versions).

Suzuki noted that Japan has completed a comparison of THX and CCZ. He also mentioned that Japan would like a mapping table from 3 major versions when Seal is included in 10646. Have the Chinese and TW experts finished reviewing the mapping table? Michel Suignard noted that mappings can be added later, they don't need to be in the first version.

A full proposal for Seal is needed on Seal in order for it to progress in the encoding process; the proposal should include a brief introduction, the total number of characters, the dataset, the proposal summary sheet, property data on radicals, etc. Michel Suignard can assist on this task. Ideally, a font is needed to produce a multicolumn chart and sources.

Disposition: Action item on experts from National bodies and Liaison for feedback.
See relevant recommendations M71.20 and M71.22.

10.2.2 Jurchen
Input documents:
Jurchen ideographs proposal
5261R Proposal to Encode the Jurchen script, revised; Andrew West, Sun Bojun, Zhōnghuá Zìkù; 2024-06-12
4795 Towards an encoding of the Jurchen script and implications for Khitan Small Script; Andrew West et al.; 2017-05-03
5207 Towards an Encoding of the Jurchen Script; Andrew West; 2023-03-15
5131 A Supplementary Proposal to Encode the Jurchen Characters; Sun Bojun, et al. China; 2020-02-10
5278 Propose to encode Jurchen radicals; Andrew West et al.; 2024-06-12

This proposal is authored by Andrew West and Sun Bojun, who has expertise on Tangut, Khitan, and Jurchen. Jurchen is a historic script, mostly attested on ethnographic monuments and manuscripts. The proposal builds upon earlier proposals and documents from 2009, 2010, 2020, and 2023. The script has no reliable dictionary with catalog numbers. The main modern source is the 1984 Jurchen Dictionary by Jīn Qǐzōng, which includes variants. Glyphs in that dictionary are not necessarily accurate reflections of

the sources, as it was created without use of a Jurchen font, but photographically reproduced a handwritten manuscript.

The order basically follows that of the 1984 dictionary, which orders the characters by radical and stroke count, though in many cases the radical and/or stroke count has been modified by the proposal authors. There are potentially three options for the radicals: use CJK radicals; encode ca. 50 radicals, including those from Han; or propose a block of radicals, that unified the radicals for Khitan and Jurchen. As noted in section 3.2, the proposers did not recommend unification with Han radicals, so the third option was adopted.

For representative glyphs, the proposal uses the Ming forms when available, unless the Ming glyph is cursive, in which case the non-cursive form was selected. The font used is that commissioned from Weifang Beida Jade Bird Huaguang Imagesetter Co., Ltd., as part of China's Zhonghua Ziku project.

The proposed repertoire is in Table 4, with its range , 18E00..1919F okayed by the Roadmap Committee. The character names will be algorithmically derived. The properties are listed in section 4.3. A sources datafile will have tab separated properties as defined in section 4.4.

Discussion took place about separately encoding the radicals, and referring to them in the JurchenSources.txt file, which will be a separate datafile.

The document for 51 Jurchen radicals, 5278, was prepared and later discussed. The proposers recommended they have the script property as Common, since Jurchen and Khitan Large Script share the radicals. The Khitan Large Script has not yet been proposed.

There was a question about the standard used for the Latin transliteration readings. Andrew West can provide Michel Suignard with the list. A font and dataset should be provided to the Editor, Michel Suignard.

Jurchen could be in the 7th edition.

Disposition: Recommends SC2 accept the proposed 914 Jurchen characters and 51 Jurchen radicals for future encoding.
See relevant recommendation M71.19 and M71.22.

10.3 Other additions to existing scripts or blocks

10.3.1 CJK proposals:
Input documents:
5259 Proposal to Disunify U+5CC0, ROK answer in bookmark; CheonHyeong Sim, Ziheng Gao; 2024-03-09
5262 Comment on WG2 N5259 (U+5CC0 disunification); Shuichi TASHIRO; 2024-05-08

As noted in its report 5256, IRG agreed to disunify U+5CC0 and encode 岜 separately.

Japan separately responded in 5262, noting that Japan uses both glyphs at U+5CC0. Japan proposed a number of solutions in their document: (1) allow the over-unification of U+5CC0, and hence support backward compatibility, since both JMJ-010468 (⊟山田) and JMJ-068030 (⊟山由) are registered in the

Moji_Joho collection of the IVD 2017-12-12 under U+5CC0, (2) assign new code points to both ⿰山田 and ⿰山由, or (3) change its property from the current CJK Compatibility Ideographs to Unified Ideographs. Changing the property in option (c) is not possible, due to normalization.

After discussion, WG2 agreed to separately encode ⿰山田 _separately at U+2B73A at the end of the CJK Unified Ideographs Extension C block, which involves moving the T-source (T4-2634) and representative glyph of 5CC0 to 2B73A, moving the T-source (TF-2662) and representative glyph of 2F879 to 5CC0, adding a new G-source (GKX-1594.81) and representative glyph to 2B73A, and changing the T-source of 2F879 to TU-2F879 (no change to its representative glyph).

TCA and China were asked to provide updated fonts to the Project Editor by 2024-06-21.

Disposition: Recommends SC2 accept the proposed U+2B73A character for future encoding and the other proposed changes.
See relevant recommendation M71.16.

10.3.2 Extension J
Input document:
5257R IRG WS 2021 submission to WG2 (CJK Extension J); Lu Qin, IRG Convenor; 2024-06-26

This document was submitted by IRG from results of their research for Working set 2021. The original submissions for Working Set 2021 included nearly 5,000 ideographs, but several were removed or unified, so the total is now 4,300 unified ideograph characters. It has had 7 rounds of review. Some characters were unified by IRG. Fonts were provided to Michel Suignard. (Brief discussion took place on the radical for 03398 and on a few T-source references.)

Extension J is earmarked for Unicode 17.0 and the 7th edition.

Disposition: Recommends SC2 accept Extension J for inclusion in 7th edition CD.
See relevant recommendation M71.14.

10.3.3 Proposal to encode characters for the English Phonotypic Alphabet (EPA)
Input document:
5269 Proposal to encode characters for the English Phonotypic Alphabet (EPA); Karl Pentzlin; 2024-06-05

This proposal includes characters from the 19c used for 40 years, and played a role in the history of the IPA. These characters are of interest for the history of phonology and hence are being requested here. There is ongoing discussion on various letters, because they may be unified with existing characters. The document may be revised with fewer letters. Many examples are provided. Hopefully a final version will make it to the UTC to get into Unicode. One character is proposed for the BMP, but it is acceptable for the others to be in the SMP. The author will revise the proposal based on comments he has received.

Disposition: Action item on experts from National bodies and Liaison for feedback
See relevant recommendation M71.21.

10.3.4 User-Defined Variation Selectors

Input document:

5266 Proposal to Encode a Set of 128 User-Defined Variation Selectors; Andrew West, Michael Everson; 2024-05-30

The proposal authors were motivated to propose user-defined variation selectors based on documents from authors for Runic and Ogham, which pointed out the inability of Unicode to handle representing graphic variants for historic scripts. IVD is used for ideographs, and VS17–VS256 can be used, as noted in 5266, "to register up to 240 ideographic variation sequences per character for the Han script and other ideographic scripts such as Tangut." Rather than relying on the UTC, this proposal suggests letting users define their own VSs, by permitting a new set of VSes akin to PUA, but for character variants.

The document was reviewed by the Script Encoding Working Group, which appreciated the submission and felt the need as described for users of historic script as being reasonable. While users of historic scripts understand what may be best, the Script Encoding group felt leaving the decision completely to users could be chaotic. Instead, the Script group felt the approach of IVD is better, and recommended next step would be for a proposal like UTS #37 with an authorized registrar be put forward. This approach would not involve PUA.

It was noted that VS17–VS256 *can* be used for any non-ideographic characters.

Egyptian Hieroglyphs are using VSes for rotations. The proposal author of Egyptian Hieroglyphs , Michel Suignard, admitted he could make use of VSes, perhaps 10 or so. These could be helpful in defining variants. It would be helpful for those working on cuneiform. However, such an approach could be tricky for modern scripts.

Open questions remain whether a single person can request a sequence? Does it need to be an academic? Can the author of a font request a sequence? The basic criteria seem to be that there is a user community that wants to interchange data with the glyph variant.

Disposition: Action Item for Andrew West and Robin Leroy to develop a new proposal defining a mechanism like UTS #37 but for historic scripts.

10.3.5 Proposal to add historic scientific characters

Input document:

5277 Proposal to add historic scientific characters; Andreas Stötzner, et al.; 2024-02-19

This document proposes characters needed in digitizing the written heritage of Leibniz, the scholar from 17-18c who left a legacy of over 200,000 written pages of manuscripts. The characters proposed include signs used in mathematical notation, as well as ambiguity signs, geometric designs, alchemical symbols, astrological and various miscellaneous symbols, letter-like symbols, and other symbols. Handwritten and printed sources are used. The materials include many strike-throughs, underlining, and different kinds of overlays. There are additional documents discussing the ambiguity signs and other aspects of the repertoire.

The users have not differentiated between the characters needed for plain text versus those used in math layout; this is a topic that needs more discussion and will lead to some changes in the proposal.

It was noted that mathematical layout is higher-level protocol. (In math and music, the character elements use markup, but it is important to look at the system as a whole.)

The proposal encompasses many aspects, with different forms of expertise needed, so it was suggested that a good strategy would be to break the proposal into smaller proposals, such as the alchemical symbols, which may be easier to get reviewed and possibly approved.

Participants are invited to comment. Michael Everson would like to participate and had comments on the names.

Disposition: Action item on experts from National bodies and Liaisons for feedback.
See relevant recommendation M71.21

Note: A number of ad hocs were held on Bliss, Overcurl, and Naxi Dongba during meeting #71, but no reports were prepared.

11 Errata/modification
11.1 Name discrepancies of 588 hangul characters between Unicode and ISO/IEC 10646
Input document:
5260 Name discrepancies of 588 hangul characters between Unicode and ISO/IEC 10646; Jaemin Chung; 2024-04-13

This document notes a mistake in 588 Jamo short names many years ago that was corrected in Unicode but not in 10646. In Unicode, the Jamo short names have an initial "R", which is correct, whereas10646 still have an initial "L". The recommendation is to fix the datafile for 10646 for the 7th edition.

Disposition: Recommends SC2 accept the proposed corrections to 588 Jamo short names in the datafile for ISO/IEC 10646 for the 7th edition.
See relevant recommendation M71.15.

12 Architecture issues
None.

13 Liaison reports and new requests
13.1 Unicode Consortium
The Unicode liaison report was given orally during SC2 portion of the meeting already. A short addendum to the SC2 report was added later during the meeting, noting that the Core Spec will be available online in HTML format and a single PDF. Earlier it appeared in book format and then online in PDF format. The Unicode 16.0 core spec is available for review as part of the beta.

Unicode will have a private repository for representative glyphs, and will manage IP for font contributions. All new fonts will be able to convert to SVG.

13.2 IETF
No report.

13.3 SC22

During the meeting, Andrew West voiced its desire for a liaison from SC2 to SC22 be re-established (as noted also in SC2 N4862).

(Later, after the meeting, the SC2 Secretariat noted this was not discussed in the 2024 SC2 Plenary.)

13.4 W3C

No one was present to provide a liaison report on W3C.

13.5 SEI

Input document:
5263 SEI Liaison Report; Deborah Anderson, Anushah Hossain; 2024-05-26

This document highlights those scripts and characters that the Script Encoding Initiative project at UC Berkeley has been involved in. Lots of work has been done on Egyptian Hieroglyphs in the past year. Anushah Hossain will be leading the project in the future.

13.6 SAT

No report.

14 Other business

14.1 Web site review

The host dkuug is no longer working, but Michel Suignard has a full copy of what was on the dkuug website.

Many early documents have not yet been added to the Unicode-hosted WG2 document site by Michel Suignard. Adding the full archive of eligible documents to this Unicode-hosted registry involves much work. However, adding documents on the ISO side is a challenge, as the site doesn't like attachments, and one can't do revisions to documents.

Michel Suignard can provide documents to those requesting them, but noted that some documents are password protected. He also mentioned that some documents should not be made public, including ISO standards.

This will be our final opportunity to thank dkuug.

Relevant Appreciation:
M71.26 (Appreciation to DKUUG for web site support): WG2 thanks DKUUG and its staff for past support of the web site for the older WG2 documents.
M71.27 (Appreciation to Unicode Consortium): WG2 thanks the Unicode Consortium and its staff for providing the web site, for its assistance in code chart productions, and other support for WG2.

15 Future meetings

The next meeting will be hosted by Japan in Niigata, on west coast of the main island, two hours via train from Tokyo. The meeting will still be five days, and the dates are 23-27 June 2025.
For 2026 the host should be in Europe or North America. Possibilities are Dundee or Paris, or possibly North America, with the dates about the same in June.

Relevant Recommendation M71.25 (Future meetings): WG2 endorses the following schedule for future meetings:

       Meeting #72 – 2025-06-23-27 Niigata Japan (co-located with SC2)
       Meeting #73 – 2026-06 Tentative: Dundee, Scotland UK or Paris, France (co-located with SC2)
       IRG#63, 2024-10-21/25, Seoul, ROK (Location confirmed)
       IRG#64, Online Zoom (Unicode), 2025-03-17/21 (Already approved)
       IRG#65, 2025-10-13/17, Guangzhou, China (Location confirmed)
       IRG#66, Online Zoom (Unicode), 2026-03-16/20

16 Closing

Grateful thanks were conveyed by meeting participants to the host institutions and those involved, especially Jan Kučera.

Relevant Appreciation:
M71.28 WG2 thanks the Czech National Body, the Institute of Asian Studies, Charles University, for hosting the meeting. In addition, WG 2 thanks Dr. Jan Kučera, and supporting staff from Charles University, especially Jan Kučera for technical support. WG2 also appreciates the Institute of South and Central Asia Students for hosting of the enjoyable dinner on Wednesday evening.

16.1 Approval of Recommendations of meeting 71
Output document:
5254 WG2 meeting #71, June 10-14, 2024 Recommendations; Michel Suignard, Convenor; 2024-06-14

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 "Relevant Recommendation" 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, Ireland, Japan, UK, SC34 (Liaison), SEI - UC Berkeley (Liaison), TCA (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 resolutions. There was consensus on all the recommendations. See the final set of recommendations in document 5254 that will be forwarded to SC 2 for review and approval.

16.2 Adjournment
The WG2 meeting ended around noon CET on Friday 2024-06-14.
(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 M71 -- 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 M71 -- 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: a. Add Assamese character names in the nameslist as annotations, b. Change the block header from Bengali to Bengali-Assamese, and,	

	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 and M71 -- 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.	*M67.26 (Shuishu script):* 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. M68 and M71 -- in progress..	

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.	*Recommendation M68.18 (Lisu Monosyllabic Script):* 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. M71 -- 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.	*Recommendation M68.19 (Bopomofo Script):* 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. M71 -- in progress.	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.	*Recommendation M68.20 (Oracle Bone Script):* 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. M71 -- 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.	
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.	
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.	

17.6 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.)	
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.	
b.	To finalize the documents **N5251** containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	
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**.)	

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:	
a.	*M71.01 (Disposition of comments of CDAM 2.4):* WG2 recommends that SC2 accept the disposition of ballot comments on CDAM2.4 to 6th 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 MAEMBGBIEE b. Remove the following two characters: 0CDC KANNADA ARCHAIC SHRII 0C5C TELUGU ARCHAIC SHRII	
b.	*M71.02 (Additions and Corrections in AMD2):* WG2 recommends that SC2 accept the following changes to CDAM2.4 based on WG2 N5275 (=SC2 N4916): a. Change the name of 31E4 from CJK STROKE HZXG to CJK 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..	
c.	*M71.03 (Progression of CDAM2.4):* 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.	
d.	*M71.05 through M71.19 (Other Additions)* 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.	
AI-71-4	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	
	To take note of and act upon the following item:	

a.	*M71.15 (Future meetings):* 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
	    IRG#63, Seoul, Korea; 2024-10-21/25
	    IRG#64, Online Zoom (Unicode); 2025-03-17/21
	    IRG#65, Guangzhou, China; 2025-10-13/17
	    IRG#66, Online Zoom (Unicode); 2026-03-16/20	

AI-71-5	Ad hoc group on roadmap (Dr. Umamaheswaran)	
a.	To update the Roadmaps reflecting the results from this meeting.	
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.	*M70.14 (Small Seal script):* 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.	
AI-71-7	Expert from UK and USA (Dr. Andrew West and Robin Leroy)	

	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	
AI-71-8	Experts from all national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	*M71.15 (Future meetings):* 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 　IRG#63, Seoul, Korea; 2024-10-21/25 　IRG#64, Online Zoom (Unicode); 2025-03-17/21 　IRG#65, Guangzhou, China; 2025-10-13/17 　IRG#66, Online Zoom (Unicode); 2026-03-16/20	
b.	From the items discussed at this meeting: 　English Phonotypic Alphabet (document N5269). 　Historic Scientific Characters (Leibniz) (document N5277)	
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, 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, 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, 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	