



ISO/IEC JTC 1/SC 2/WG 2
Universal Coded Character Set (UCS) - ISO/IEC 10646
Secretariat: ANSI

DOC TYPE: Meeting minutes

TITLE: Unconfirmed minutes of WG 2 meeting 67
SOAS University of London, London, UK; 2018-06-16/20

SOURCE: V.S. Umamaheswaran (bhanudorai@rogers.com), Recording Secretary
Michel Suignard (michel@suignard.com), Convener

PROJECT: JTC 1.02.18 - ISO/IEC 10646

STATUS: SC 2/WG 2 participants are requested to review the attached unconfirmed minutes, act on appropriate noted action items, and to send any comments or corrections to the convener as soon as possible but no later than the due date below.

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DUE DATE: 2019-05-01

DISTRIBUTION: SC 2/WG 2 members and Liaison organizations

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Title:	Unconfirmed minutes of WG 2 meeting 67 SOAS University of London, London, UK; 2018-06-16/20
Source:	V.S. Umamaheswaran (bhanudorai@rogers.com), 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

1 Opening

Input document:

[4950](#) Agenda for the 67th Meeting of ISO/IEC JTC 1/SC2/WG2, SOAS, London, U.K. 2018-June 18-22; Michel Suignard, Convener; 2018-02-22

Mr. Michel Suignard, the convener, opened the meeting at 13:10h on Monday 2018-06-16.
(Welcoming of the experts by the host, explanation of logistics and meeting facilities, and introduction by the attending experts, were done in the JTC 1/SC 2 plenary session that preceded the WG2 meeting in the morning of Monday 2018-06-16.)

Links to the documents in the agenda document are from WG2 repository on Unicode site, [SC2 livelink repository](#), IRG site (the links will of the form <http://appsrv.cse.cuhk.edu.hk/%7Eirg/irg/irg46/IRGNxxxxx>) or to UTC/L2 site, as needed.

Mr. Michel Suignard: All the documents are posted on the WG2 documents collection. I am still receiving new documents. You can also access the ...wg2/docs folder and search by document number. The agenda has hyperlinks to the relevant documents.

1.1 Roll call

Input document

[4892](#) Lists of experts, post meeting #66, Hohot China, [List with email](#) (Protected); V.S. Umamaheswaran; 2017-10-19

The following **39** experts accredited (or invited) by **10** national bodies and **4** liaison organizations were present at different times during the meeting. Experts in attendance were requested to review and make any corrections to the circulated list of experts.

Name	Accreditation	Affiliation
Dhruba Jyoti BORAH	.Invited Expert (India)	Assam Hills Medical College
Mahendra Kumar YADAVA	.Invited Expert (India)	Assam Electronics Development Corporation Ltd.
Paramananda RAJBONGSHI	.Invited Expert (India)	Pragjyotish College
Jeremy BURGE	.Invited Expert (Unicode)	Unicode Emoji Sub Committee
Richard ISHIDA	.Invited Expert (w3c)	W3C Consortium
Qin LU	.IRG rapporteur	Hong Kong Polytechnic University
Shuichi TASHIRO	.SC 2 Chairman	Information-technology Promotion Agency
Toshiko KIMURA	.SC 2 Secretariat	IPSJ/ITSCJ
Chui Hsing CHIU	.TCA (Cat. C Liaison)	Bureau of Standards, Ministry of Economic Affairs
Lin Mei WEI	.TCA (Cat. C Liaison)	Chinese Foundation for Digitization Technology
Michel SUIGNARD	.WG 2 Convenor; USA	Unicode Inc.
Alain LABONTÉ	Canada	Independent
Karljürgen FEUERHERM	Canada	Wilfrid Laurier University

V.S. (Uma) UMAMAHESWARAN	Canada	IBM Canada
Guoying LI	China	Beijing Normal University
Huang DAI	China	CESI
Jianchun LU	China	Weifang Beida Jade Bird Huaguang Imagesetter Co. Ltd.
Jinbao LIANG	China	Inner Mongolia Ethnic Affairs Commission of China
Lili HE	China	China Publishing Group Digital Media Co. Ltd.
Nashunwuritu	China	Inner Mongolia University
Xiaowen ZHOU	China	Beijing Normal University
Yifei ZHANG	China	China Publishing Group Digital Media Co. Ltd.
Yingzhe WU	China	Inner Mongolia University
Zhuang CHEN	China	CESI
Jan KUČERA	Czech Republic	Charles University
Karl PENTZLIN	Germany	AC&S Analysis Consulting & Software GmbH
Krishnankutty MANIKANDAN	India	Bureau of Indian Standards
Shikhar Kumar SARMA	India	Gauhati University
Michael EVERSON	Ireland	Evertime
Takada TOMOKAZU	Japan	National Institute for Japanese Language and Linguistics
Toshiya SUZUKI	Japan	Hiroshima University
Wataru TAKAGI	Japan	Hitachi, Ltd.
Gowoon KIM	Korea	Telecommunications Technology Association
Kyongsok KIM	Korea	Pusan National University
Wang Sung YANG	Korea	Hancom
Andrew WEST	UK	Independent
Martin HOSKEN	UK	SIL International
Deborah ANDERSON	USA, UC Berkeley (Cat. C Liaison)	University of California, Berkeley
Peter CONSTABLE	USA, Unicode (Cat. A Liaison)	Microsoft Corp.

Messrs. Michel Suignard and Dr. Deborah Anderson volunteered to be on the drafting committee assisting Dr. Umamaheswaran, the recording secretary, in drafting the meeting recommendations.

2 Approval of the agenda

Input document:

4950 Agenda for the 67th Meeting of ISO/IEC JTC 1/SC2/WG2, SOAS, London, U.K. 2018-June 18-22; Michel Suignard, Convener; 2018-02-22

Mr. Michel Suignard reviewed the (preliminary) agenda.

Experts should identify any new contributions to the convener. The agenda will have updates as the meeting progresses.

The following are some additions to the agenda:

10.3.21 Document N4907 Medieval Cornish

10.3.22 Document N4841 Five Latin Tironian Letters

Documents N4913 and N4011 are part of 10.3.2 discussion (they can also be for 10.3.14 Emoji discussion)

WG2 will discuss the Assamese contributions on Tuesday morning.

The following are some topics for ad hoc group meetings:

Khitan Small script, chaired by Dr. Deborah Anderson, on Wednesday starting at 09:00h.

Emoji coordination consideration, chaired by Mr. Peter Constable, on Monday starting at 16:00h.

Assamese, if needed.

Disposition: Approved the agenda as updated. Updates to the agenda were posted to the WG 2 website with additional contributions as the meeting progressed.

(Note: the item numbers in these minutes do not align with the agenda item numbers in document [N4800](#). 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 material 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.)

Item Number	Title	Page
1	Opening	2
1.1	Roll call	2
2	Approval of the agenda	3
3	Minutes of meeting 66	5
4	Action items from previous meeting	5
4.1	Outstanding action items from meeting 60, Chiang Mai, Thailand, 2012-10-22/27	6
4.2	Outstanding action items from meeting 62, San Jose, CA, USA; 2014-02-24/28	6
4.3	Outstanding action items from meeting 63, Colombo, Sri Lanka; 2014-09-29/10-03	6
4.4	Outstanding action items from meeting 64, Matsue, Shimane, Japan; 2015-10-19/23	6
4.5	Outstanding action items from meeting 65, San Jose, CA, USA; 2016-09-26/30	6
4.6	New action items from meeting 66, Hohhot, Inner Mongolia, China; 2017-09-25/29	7
5	JTC1 and ITTF matters:	11
6	SC2 matters:	11
6.1	Ballot on DAM1 to 10646:2017	11
6.2	Disposition of ballot comments on 10646:2017 DAM1	11
6.2.1	Japan: Positive with comments	11
6.2.2	UK: Positive with comments	11
6.2.3	US: Positive with comments	12
6.2.4	ISO/CS editing unit	12
7	WG2 matters	13
7.1	Ballot on PDAM 2.2 to 10646:201710646:2017	13
7.2	Disposition of ballot comments on 10646:2017 PDAM 2.2	13
7.3	Ballot on PDAM 2.3 to 10646:201710646:2017	13
7.4	Disposition of ballot comments on 10646:2017 PDAM 2.3	13
7.4.1	Ireland: Negative	14
7.4.2	Japan: Positive with comments	16
7.4.3	USA: Positive with comments	16
7.5	Roadmap Snapshot	17
8	IRG status and reports	17
8.1	IRG #49 and #50 summary report	17
8.2	IRG PnP Version 11	18
9	Script contributions related to ballots:	18
9.1	Related to and incorporated into PDAM 2.2	18
9.2	Removed repertoire related to PDAM 2.2	18
9.2.1	Quality of CJK Unified ideographs in extension G	18
9.2.2	Shuishu script	19
9.2.3	Khitan Small Script	20
9.3	Related to PDAM 2.3	21
9.3.1	Names of Egyptian Controls	21
10	Script contributions not related to ballots	21
10.1	Carried forward in WG2 and UTC preliminary contributions	21
10.2	New scripts or blocks	21
10.2.1	Dives Akuru script	21
10.2.2	Assamese script	22
10.2.3	Gongche characters for Kunqu Opera	24
10.2.4	Small Seal script	24
10.2.5	Cypro-Minoan script	25
10.3	Additions to existing scripts or blocks	26
10.3.1	Future Additions to ISO/IEC 10646	26
10.3.2	Characters for transliteration of Akson-Thai Noi	26
10.3.3	INVERTED CANDRABINDU for Sharada	27
10.3.4	PRISHTAMATRA for Sharada	28

Item Number	Title	Page
10.3.5	JIHVAMULIYA and UPADHMANIYA for Newa	28
10.3.6	DOUBLE COMMA for Newa	28
10.3.7	Creative Common (CC) license symbols	28
10.3.8	Two additional letters for Zanabazar Square	28
10.3.9	Code point for Square Japanese New Era Name	29
10.3.10	Seven additional Tangut components	29
10.3.11	Additional Arabic characters for Hausa	29
10.3.12	Arabic characters for Hindko	30
10.3.13	Emoji additions to Unicode 12.0	30
10.3.14	CANDRABINDU SIGN for Sinhala	31
10.3.15	VEDIC ANUSVARA for Malayalam	31
10.3.16	Fix six glyphs and add a letter in Bopomofo	31
10.3.17	Proposal to encode a Subscript Solidus	31
10.3.18	MIDDLE ASTERISK character	32
10.3.19	Additional symbols from ISO/IEC 9995	32
10.3.20	Latin characters for Medieval Cornish	33
10.3.21	Southern Song forms of Counting Rods	34
10.3.22	THORN with diagonal stroke	34
10.4	Miscellaneous Proposals	35
10.4.1	Development of CJK Regional Supplements of Ideographs	35
10.4.2	Updated MOJI-JOHO-KIBAN IDEOGRAPHS collection	35
10.4.3	Korean CJK Horizontal Extension	36
10.4.4	IICORE changes and additions	36
10.4.5	Removal of K1-6B6B from U+8C6C	36
10.4.6	Request by TCA of Horizontal Extension for Chemical Terminology	37
10.4.7	Additional repertoire for 10646 next edition beyond Amendment 2 (bucket)	37
10.4.8	China's Horizontal Extension for 14 CJK Ideographs	37
10.4.9	Updating 11 G source glyphs of CJK Unified Ideographs	38
10.4.10	Mongolian	38
10.5	Considerations concerning the publication of ISO/IEC 10646 6th Edition	39
11	Contributions that were not discussed	39
12	Future meetings	39
13	Closing	39
13.1	Meeting #67 recommendations	39
13.2	Adjournment	40
14	Action items	40
14.1	Outstanding action items from meeting 60, Chiang Mai, Thailand, 2012-10-22/27	41
14.2	Outstanding action items from meeting 62, San Jose, CA, USA; 2014-02-24/28	41
14.3	Outstanding action items from meeting 63, Colombo, Sri Lanka; 2014-09-29/10-03	41
14.4	Outstanding action items from meeting 65, San Jose, CA, USA; 2016-09-26/30	41
14.5	Outstanding action items from meeting 66, Hohhot, Inner Mongolia, China; 2017-09-25/29	42
14.6	New action items from meeting 67, SOAS, University of London, London, UK; 2018-06-16/20	42

3 Minutes of meeting 66

Input document:

[4953_Meeting #66 Unconfirmed Minutes, Action Items](#); V.S. Umamaheswaran, Secretary; 2018-03-23

Dr. Umamaheswaran: I have not received any comments so far. Please let me know and give me any feedback you may have before the end of this meeting.

Disposition: Adopt the minutes as presented. Convener to send the adopted minutes for distribution to SC2.

4 Action items from previous meeting

Input document:

[4953-AI Action Items from WG 2 meeting 66](#); V.S. Umamaheswaran; 2018-03-23

Dr. Umamaheswaran reviewed and updated the action items from the previous meetings. The tables below show the updated status for each item. Of the **37** action items that were reviewed, **8** items are carried forward, and **29** items are marked as either 'noted' or 'completed'.

4.1 Outstanding action items from meeting 60, Chiang Mai, Thailand, 2012-10-22/27

Item	Assigned to / action (reference resolutions in document N4254 , and unconfirmed minutes in document N4253 for meeting 60 (with any corrections noted in section 3 in the minutes of meeting 61 in document N4403).	Status
AI-60-10	Irish national body - Mr. Michael Everson	
a.	To get more information related to the status, its stability and other clarifications based on the discussions in the meeting on document N4323 - Mwangwego script. M61 and M62 -- in progress.	In progress.

4.2 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 section 3 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.	In progress.
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.	In progress.

4.3 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 section 3 in the minutes of meeting 64 in document N47xx).	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.
AI-63-7	Experts from China (Chen Zhuang), UK (Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson)	
	To take note of and act on the following items.	
a.	M63.15 (Khitan Large script): WG2 invites the authors of document N4631 to revise their proposal on the Khitan Large script taking into account the feedback summarized in the ad hoc report document N4642 , working with other experts interested in this script.	In progress.
c.	M63.17 (Naxi Dongba script): WG2 invites the authors of document N4633 to revise their proposal on the Naxi Dongba script taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress.

4.4 Outstanding action items from meeting 64, Matsue, Shimane, Japan; 2015-10-19/23

Item	Assigned to / action (Reference recommendations in document N4701 , and unconfirmed minutes in document N4739 for meeting 64.	Status
AI-64-6	Experts from China (Chen Zhuang), UK (Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson)	
	To take note of and act on the following items.	
b.	<i>M64.10 (Small Seal script)</i> : WG2 invites the authors of document N4688 to revise their proposal on the Small Seal script taking into account the feedback received at this meeting, working with other experts interested in this script.	Completed. See documents N4973 , N4992 ; agenda item on Small Seal script.

4.5 Outstanding action items from meeting 65, San Jose, CA, USA; 2016-09-26/30

Item	Assigned to / action (Reference recommendations in document N4772 , and unconfirmed minutes in document N4873 for meeting 65 - this document you are reading).	Status
AI-65-6	Experts from China (Chen Zhuang), UK (Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson)	
	To take note of and act on the following items.	
a.	<i>M65.12 (Shuishu script)</i> : WG2 invites the authors of document N4758 to revise their proposal on the Shuishu script taking into account the feedback received at this	Completed.

	meeting, working with other experts interested in this script.	
b.	<i>M65.13 (Primitive Scripts of South West China)</i> : WG2 invites the authors of document N4759 to revise their proposal on the Primitive Scripts of South West China taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress.
c.	<i>M65.19 (Small Seal script)</i> : WG2 invites the authors of document N4688 to revise their proposal on the Small Seal script, taking into account the feedback documents received prior to this meeting and the discussion at this meeting, working with other experts interested in this script.	Completed. See documents N4973, N4992; agenda item on Small Seal script.

4.6 New 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 - this document you are reading).	Status
AI-66-1	Recording Secretary - Dr. V.S. UMaMaheswaran	
a.	To finalize the document N4874 containing the adopted meeting recommendations and send it to the convener as soon as possible.	Completed; see document N4874.
b.	To finalize the document N4953 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed; see document N4953.
AI-66-2	Convener - Mr. Michel Suignard	
	To take note of and act upon the following items:	
a.	To add relevant contributions carried forward from previous meetings to agenda of next meeting. (See list of documents under AI-66-7, items b and c below.)	Completed.
AI-66-3	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.	<i>M66.03 (Disposition of ballot comments of PDAM-1.3 to 5th Edition)</i> : WG2 recommends that SC2 accept the disposition of PDAM-1.3 ballot comments in document N4870. The following significant changes are noted: <ul style="list-style-type: none"> a. 058B ARMENIAN SMALL LETTER TURNED AYB is moved to 0560, and 058C ARMENIAN SMALL LETTER YI WITH STROKE is moved to 0588. b. Removed 12 characters -- 18B69 (Radical-03), 18BD2 (Radical-06), 18C02 (Radical-07), 18C15 (Radical-08), 18C32 (Radical-10), 18C3B (Radical-11), 18C57 (Radical-13), 18C6A (Radical-14), 18C86 (Radical-15), 18C94 (Radical-16), 18C9E (Radical-17), 18CDD (Radical-20), and shifting of the remaining code positions up to fill the vacated code positions. c. 18CFD KHITAN SMALL SCRIPT ITERATION MARK is moved to 18B00 and 18B00..18CE0 are moved down by 1 position. d. Renamed 1FA60 XIANGQI RED GENERAL, 1FA61 XIANGQI RED MANDARIN, 1FA62 XIANGQI RED ELEPHANT, 1FA63 XIANGQI RED HORSE, 1FA64 XIANGQI RED CHARIOT, 1FA65 XIANGQI RED CANNON, 1FA66 XIANGQI RED SOLDIER, 1FA67 XIANGQI BLACK GENERAL, 1FA68 XIANGQI BLACK MANDARIN, 1FA69 XIANGQI BLACK ELEPHANT, 1FA6A XIANGQI BLACK HORSE, 1FA6B XIANGQI BLACK CHARIOT, 1FA6C XIANGQI BLACK CANNON, 1FA6D XIANGQI BLACK SOLDIER, by changing 'RED XIANGQI' and 'BLACK XIANGQI' as they appeared in PDAM 1.3, to 'XIANGQI RED' and 'XIANGQI BLACK'. e. Renamed 2BBA OVERLAPPING WHITE SQUARES, 2BBB OVERLAPPING WHITE AND BLACK SQUARES and 2BBC OVERLAPPING BLACK SQUARES by replacing 'INTERLOCKING' as it appeared in PDAM 1.3, with 'OVERLAPPING'. f. In addition to changes to Khitan Small script mentioned in items b and c above, the entire script is moved out of Amendment 1 to Amendment 2. 	Completed. DAM 1
b.	<i>M66.04 (Dogra addition)</i> : WG2 recommends that SC2 accepts the proposal to insert the Dogra combining character VOWEL SIGN VOCALIC RR in document N4862 at code position 11832 in Amd. 1, and move the characters 11832...1183A down by one to 11833..1183B in the Dogra block.	Completed. DAM1
c.	<i>M66.06 (Progression of Amendment 1 to the 5th edition)</i> : WG2 recommends that its project editor prepares the final text of Amendment 1 to the 5th edition of the standard, which will include the changes arising from recommendations M66.03 to	Completed. DAM1

	M66.05 above, along with the final disposition of comments (document N4870), and forward it to the SC2 secretariat for processing as a DAM ballot. The draft code charts are in document N4872. The target starting date is modified to DAM 1 2017-11.	
d.	<p><i>M66.07 (Disposition of ballot comments of PDAM-2 to 5th Edition):</i> WG2 recommends that SC2 accept the disposition of PDAM-2 ballot comments in document N4871. The following significant changes are noted:</p> <ol style="list-style-type: none"> Changed the names for the Egyptian Hieroglyph control characters -- 13432 EGYPTIAN HIEROGLYPH START AT TOP, 13433 EGYPTIAN HIEROGLYPH START AT BOTTOM, 13434 EGYPTIAN HIEROGLYPH END AT TOP, 13435 EGYPTIAN HIEROGLYPH END AT BOTTOM, 13437 EGYPTIAN HIEROGLYPH BEGIN SEGMENT, and 13438 EGYPTIAN HIEROGLYPH END SEGMENT Changed 'Hieroglyphs' to 'Hieroglyph' in the block name resulting in 'Egyptian Hieroglyph Format Controls'. Removed the two small KOs (from the 9 Small Kanas) at code positions 1B132 and 1B155. Corrected the name for 1FA08 to NEUTRAL CHESS KNIGHT ROTATED FORTY-FIVE DEGREES. Added 1 character 13436 EGYPTIAN HIEROGLYPH OVERLAY MIDDLE (based on document N4818). Khitan Small Script after changes under items b and c in recommendation M66.03 is moved into Amendment 2 (a net addition of 470 Khitan Small Script characters). 	Completed.
e.	<p><i>M66.08 (Urgently needed CJK ideographs):</i> WG2 recommends that SC2 accepts encoding the following urgently needed ideographs in the standard:</p> <ol style="list-style-type: none"> 9FEB (GCE-118), 9FEC (GCE-117) and 9FED (GCE-113, UTC-01119) with their glyphs, source reference and attribute data from document N4830. 9FEE (JMJ-057449) and 9FEF (JMJ-060040) with their glyphs, source references and attribute data from document N4831. Glyphs, source references and attribute for horizontal extensions for 9FEB (T5-7C54) and 9FEC (T4-6E5D) from document N4832. 	Completed.
f.	<p><i>M66.09 (Wancho script):</i> WG2 recommends to SC2 to accept for encoding in the standard the Wancho script, in a new block 1E2C0...1E2FF named 'Wancho' and populate it with 59 characters with their names, code positions and glyphs based on document N4787R. There are 4 combining characters in the set.</p>	Completed.
g.	<p><i>M66.10 (Shuishu script):</i> WG2 accepts the Shuishu ad hoc report in document N4894R and recommends to SC2 to accept for encoding in the standard the Shuishu script in two blocks as follows:</p> <ol style="list-style-type: none"> A new block named 'Shuishu Logograms' in the range 1B300...1B4FF, and populate it with 486 characters A new block named 'Shuishu Radicals' in the range 1B500..1B52F, and populate it with 47 characters <p>with their names, code positions and glyphs from document N4894R.</p>	Completed.
h.	<p><i>M66.11 (Symbols Set 1):</i> WG2 recommends to SC2 to accept for encoding in the standard, with reference to document N4888, and in response to Irish and UK comments to PDAM 1.3 (see document N4870) the following 7 symbols:</p> <ol style="list-style-type: none"> 1F93F BILLIARD GAMES (glyph from Irish comment in document N4870), with annotation CUE SPORTS <p><Animals>:</p> <ol style="list-style-type: none"> 1F9A1 MAMMOTH 1F9A2 DODO 1F9A3 BADGER 1F9A4 SQUIRREL 1F9A5 SWAN <p><new header – Fantasy Being>:</p> <ol style="list-style-type: none"> 1F97B TROLL 	Completed. PDAM 2.2
i.	<p><i>M66.12 (Symbols Set 2):</i> WG2 recommends to SC2 to accept for encoding in the standard, 67 symbols with their code positions, names and glyphs from document N4846 (revised).</p>	Completed.
j.	<p><i>M66.13 (Miao additions):</i> WG2 recommends to SC2 to accept for encoding in the</p>	Completed.

	standard, 16 characters in the Miao block with glyphs, code positions and names from document N4845, with name of 16F4F changed to MIAO SIGN NUKTA.	
k.	<p><i>M66.15 (Latin character additions):</i> WG2 recommends to SC2 to accept for encoding in the standard the following Latin characters:</p> <ul style="list-style-type: none"> a. 3 characters for early Pinyin from document N4782: A7C4 LATIN CAPITAL LETTER C WITH PALATAL HOOK A7C5 LATIN CAPITAL LETTER S WITH HOOK, and A7C6 LATIN CAPITAL LETTER Z WITH PALATAL HOOK. b. 2 Thorn characters with Stroke from document N4836: A7C0 LATIN CAPITAL LETTER THORN WITH DIAGONAL STROKE, and A7C1 LATIN SMALL LETTER THORN WITH DIAGONAL STROKE. c. 2 Anglicana letters from document N 4838: A7C2 LATIN CAPITAL LETTER ANGLICANA W, and A7C3 LATIN SMALL LETTER ANGLICANA W. d. 2 Sinological Latin letters based on document N4842: AB66 LATIN SMALL LETTER DZ DIGRAPH WITH RETROFLEX HOOK, and AB67 LATIN SMALL LETTER TS DIGRAPH WITH RETROFLEX HOOK. 	Completed.
l.	<p><i>M66.16 (Miscellaneous character additions):</i> WG2 recommends to SC2 to accept for encoding in the standard the following Latin characters:</p> <ul style="list-style-type: none"> a. 1 character 0C77 TELUGU SIGN SIDDHAM from document N4860. b. 1 character 2BC9 NEPTUNE FORM TWO. Glyph is based on what is shown on page 3 of N4863. c. 1 character 2BFF HELLSCHREIBER PAUSE SYMBOL with glyph based on what is shown on Page 2 of N4864. d. 1 character 1145F NEWA LETTER VEDIC ANUSVARA from document N4865. e. 1 character 2E4F DOUBLE OBLIQUE HYPHEN WITH FALLING DOTS from document N4902. f. 1 character 116B8 TAKRI LETTER ARCHAIC KHA with glyph and annotation from document N4866. g. 2 control characters 11A84 SOYOMBO SIGN JIHVAMULIYA, and 11A85 SOYOMBO SIGN UPADHMANIYA with their glyphs based on document N4867. (National bodies and experts who participated in Soyombo ad hoc please take a note of this addition.) h. 2 marks for use with Old Chinese from document N4847: 16FE3 OLD CHINESE ITERATION MARK 16FE2 OLD CHINESE HOOK MARK 	Completed.
	<p><i>M66.17 (Progression of Amendment 2):</i> WG2 recommends that its project editor prepares the final text of Amendment 2 to the 5th edition of the standard, which will include the changes arising from recommendations M66.07 to M66.16 above, along with the final disposition of comments (document N4871), and forward it to the SC2 secretariat for processing as a PDAM-2.2. The draft code charts are in document N4904. The target starting dates are modified to PDAM-2.2 2017-11, PDAM-2.3 2018-03, DAM-2: 2018-08.</p>	Completed.
m.	<p><i>M66.19 (Additions to Amendment 2 before next WG2 meeting):</i> WG2 recognizes that some scripts and additional characters which are under preparation as potential additions to the standard could become mature and will have consensus among WG2 experts to include in the standard. The project editor should be able to add these to the current PDAM 2.2 text or to a future PDAM 2.x text, after exercising due diligence. Candidates include, but are not limited to:</p> <ul style="list-style-type: none"> h. 'CJK Extension G' being prepared by IRG, i. Five Latin Tironian letters (from document N4841) if clarified and consensus is reached, j. Five Counting Rod characters (from document N4868) at code positions 1D379..1D37D if revised and a consensus is reached, k. Six Tangut ideographs at 187F2..187F7 with the glyphs, source reference information, and glyph corrections from document N4896, when additional relevant information is available, and, l. Naxi Dongba script (see recommendation M66.10 above). 	Completed. Some scripts were added. Ext. G went in PDAM 2.2 and came out – for further discussion N4841 – Latin Tironian N4868 – needs discussion N4896 – code positions corrected in PDAM 2.2 Naxi Dongba was not included.

AI-66-4	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	
	To take note of and act upon the following items:	
a.	<i>M66.22 (Rules for IVD registration):</i> WG2 requests the IRG rapporteur to prepare some text related to relaxing the rules for IVD registration per Unicode Technical Specification 37, along with appropriate explanation and examples.	Completed. See UTS #37.
b.	<i>M66.23 (Future meetings):</i> WG2 endorses the following schedule for future meetings: IRG Meeting 50 – 2018-05-21/25, Beijing, China IRG Meeting 51 – 2018-10-22/26, Hanoi, Vietnam	Noted.
AI-66-5	Ad hoc group on roadmap (Dr. Umamaheswaran)	
a.	To update the Roadmaps with the results from this meeting.	Completed.
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 items.	
a.	<i>M66.05 (Mongolian script):</i> WG2 accepts the meeting summary of Mongolian ad hoc meeting held on Monday 2017-09-25 (in document N4893) and encourages the experts to continue the dialog towards making progress on the different issues identified in the report. WG2 also accepts the revised chart prepared by the project editor (document N4900) correcting editorial errors for Mongolian inclusion in Amendment 1.	Completed. See DAM 1
b.	<i>M66.18 (Naxi Dongba script):</i> WG2 accepts the Naxi Dongba ad hoc report in document N4895 , and invites the author of the script to provide a revised version with the characters reordered according to the type of classification used in the source dictionaries, based on the revised chart in document N4898 . WG2 recommends to SC2 to accept the revised version of the script, consisting of 1188 characters in a new block Naxi Dongba in the range 1A800...1ACFF for encoding in the standard.	In progress.
c.	<i>M66.20 (Shuowen Small Seal script):</i> WG2 accepts the ad hoc report on Shuowen Small Seal script in document N4853 , and encourages the experts to continue the work towards a contribution for encoding the script to submit to WG2. WG2 notes that another ad hoc meeting of experts is planned by TCA in May 2018 (tentatively) in Beijing, China, and invites all the interested experts to take note towards planning to attend the meeting.	Completed. See documents N4973 and N4992 ; agenda item on Small Seal script.
d.	<i>M66.21 (Primitive Scripts of South West China):</i> WG2 invites the authors of documents N4856 and N4901 , to revise their proposals on Muya, Namuz and Ersu scripts, taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress.
AI-66-7	Experts from all national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	<i>M66.23 (Future meetings):</i> WG2 endorses the following schedule for future meetings: WG2 Meeting 67 - 2018-06-18/22, London, UK (to be confirmed with BSI); (backup USA) WG2 Meeting 68 – 2019-06, USA West Coast (backup Canada) IRG Meeting 50 – 2018-05-21/25, Beijing, China IRG Meeting 51 – 2018-10-22/26, Hanoi, Vietnam	Noted.
b.	Following items are carried forward from earlier meetings - filtered at meeting 66: Scripts, new blocks or large collections (awaiting updated proposals from the authors): Afáka (N4292), Bagam (N4293), Balti 'B' (N4016), Balti scripts (N3842), Bima (L2/16-119), Brusha (L2/17-183), Buginese extensions (L2/16-159), Chinese Chess Symbols (N3910), Dhives Akuru (L2/17-292), Diwani Siyaq Numbers (N4122), Ebee Hmong (N4668), Egyptian Hieroglyphs Extension Old Yi (N4751), Elymaean (L2/17-226), Garay (N4709), Jurchen (N4077), Kawi (N4266), Kerinci (L2/16-074), Khambu Rai (N4018), Khatt-i Baburi (N4130), Khotanese (L2/15-022), Khwarezmian (L2/17-054), Kpelle (N3762), Kulitan (L2/15-232), Lampung (L2/16-073), Landa (N3768), Leke (N4438), Lota Ende (L2/16-076), Mandombe (L2/16-077R), Moon (N4128), Mwangwego (N4323), Obsolete Simplified Chinese Ideographs (N3695), Old Yi (N3288), Oracle Bone (N4687), Ottoman Siyaq (N4124), Palaeohispanic (L2/17-129), Pau Cin Hau Syllabary (L2/16-014), Persian Siyaq (N4125), Proto-Cuneiform (N4760), Pungchen (L2/17-181), Pyu (N3874), Ranjana (N4515), Sumbawa (L2/16-096), Tigalari (L2/16-241), Tocharian (L2/15-236), Tolong Siki (N3811), Vexillology symbols (L2/17-089),	Noted.

	Western Cham (N4734), Woleai (N4146), and Zou (N4044).	
c.	The following documents are awaiting further refinements and discussion: 4733 Revised proposal to encode the Cypro-Minoan script in the SMP; SEI/Michael Everson; 2016-07-22 4786 Towards an encoding of the Loma script in the SMP; SEI/Michael Everson; 2017-02-19 4837 Cumulative chart of the Loma script; SEI/Michael Everson; 2017-07-22 4795 Towards an encoding of the Jurchen script and implications for Khitan Small Script; Andrew West, et al; 2017-05-03 4854 Preliminary proposal for encoding the Vithkuqi script in the SMP; Michael Everson; 2017-09-08 4886 Naxi Geba characters from Fang Guoyu's dictionary; Michael Everson; 2017-09-17 4887 Naxi Geba characters from Li Lincan's dictionary; Michael Everson; 2017-09-22 4848 Proposal to encode old Chinese lute (pípa) notation; Andrew West, Eiso Chan; 2017-09-07 4849 Proposal to encode old Chinese flute (súzípǔ or bànzípǔ) notation; Andrew West, Eiso Chan; 2017-09-07 See also items under AI-66-6 above.	Noted. 4733 – Cypro-Minoan was added to the agenda. 4854 - Expert on Vithkuqi demised! (Michael will follow up with alternate contacts)

5 JTC1 and ITTF matters:

Input document:

[SC2/N4579](#) Notice of Publication: ISO/IEC 10646: 2017, Information technology -- Universal Coded Character Set (UCS); 2017-12-22

The 5th edition of ISO/IEC 10646 was published at the end of 2017. It is publicly and freely available on the ITTF list of [Publicly Available Standards](#).

See agenda item 10.5 on page 39 on future format for the 6th edition.

6 SC2 matters:

6.1 Ballot on DAM1 to 10646:2017

Input documents:

[4923](#) Additional repertoire for ISO/IEC 10646:2017 (5th ed.) Amendment 1 (DAM1), revised; Michel Suignard, Project editor; 2017-11-22

[SC2/N4574](#) Text for ISO/IEC 10646 (Ed 5)/DAM 1, Information technology -- Universal Coded Character Set (UCS) -- Amendment 1; 2017-11-21

[SC2/N4593](#) Summary of Voting on ISO/IEC 10646 (Ed 5)/DAM 1, Information technology -- Universal Coded Character Set (UCS) -- Amendment 1; 2018-04-23

[4611](#) Summary of Voting on 10646 DAM 1; SC2 Secretariat; SC2 N4350; 2014-09-02

[4611-BSI](#) DAM1-Results-BSI Comments; SC2 Secretariat SC2 N4350; 2014-09-02

Above referenced documents are background documents for the next item on disposition of DAM1 ballot comments.

6.2 Disposition of ballot comments on 10646:2017 DAM1

Input document:

[4952](#) Draft disposition of comments on DAM1 to ISO/IEC 10646 5th edition; Michel Suignard, project editor; 2018-05-23

Output document:

[4952R](#) Disposition of comments on DAM1 text to ISO/IEC 10646 5th edition; 2018-06-18

13 P members have voted Positive. Japan, UK, USA member bodies had submitted comments. 21 Abstentions (P and O members), and 6 'no responses' are recorded. ISO CS also had input some comments to the editor. The following are the comments and discussion of the draft dispositions.

6.2.1 Japan: Positive with comments

E.1: Japan proposes replacing "All but four of these ideographs are identified by a JO J source." to "All but four of these ideographs are identified by a JO source.", under Annex A.4.6.

Disposition: Accepted.

6.2.2 UK: Positive with comments

E.1: The UK proposes correcting the Alias "hēi jiāng" for 1FA67 XIANGQI BLACK GENERAL to "hēi jiāng".

Disposition: Accepted in principle. The corrected alias is "hēi jiàng". The annotations can now contain extended Latin characters.

E.2: The UK proposes to add the missing space before "devanagari sign siddham" in the cross reference for 0C84 KANNADA SIGN SIDDHAM.

Disposition: Accepted in principle. The cross reference is auto-generated.

E.3: The UK proposes to revert the glyph for 1F381 BILLIARDS to its previous form, as agreed for PDAM 2 ballot disposition of comments.

Disposition: Accepted. The glyph will be reverted to its previous form.

E.4: The UK proposes to apply correct font to all Mongolian positional forms, pointing out that the glyphs for some Mongolian positional variants appear as a question mark in a rectangular box.

Disposition: Not accepted. The preamble for the Mongolian letters contains the rationale for the currently used glyphs for these characters. The requested change will await someone providing the correct character glyph in a font.

E.5: The UK proposes to change the apostrophe before D to U+02BF MODIFIER LETTER LEFT HALF RING in annotations for three code points containing “ ... Aramaic heterogram ‘D ...’ in them.

Disposition: Accepted.

T6: The UK proposes to change the name for 10F45 SOGDIAN PHONOGRAM SHIN to something more appropriate, since this character is not a phonogram.

(See also comment T4 from the US).

Disposition: Accepted in principle.

The changed name is SOGDIAN INDEPENDENT SHIN (in response to US comment T.4).

6.2.3 US: Positive with comments

T1: The US proposes to remove “MARK” from the names of the Hanifi Rohingya characters in the range U+10D1D..U+10D21, to be more consistent with other names with “VOWEL” in the standard.

Disposition: Accepted.

Mr. Michel Suignard: The name for 10D23 is corrected to HANIFI ROHINGYA NA KHONNA. The correction was already in Unicode 11.

T2: The US proposes to retain the names as listed in the amendment for U+A7B8 and U+A7B9: “ ... WITH STROKE”.

Disposition: Noted.

T3: The US proposes to change the name for U+10F58 from SOGDIAN PUNCTUATION CIRCLES WITH DOTS to SOGDIAN PUNCTUATION TWO CIRCLES WITH DOTS to be more specific about the character.

Disposition: Accepted.

T4: The US proposes to change the name for 10F45 from SOGDIAN PHONOGRAM SHIN to SOGDIAN INDEPENDENT SHIN, along with the rationale for the proposal.

(See also comment T6 from the UK).

Mr. Michel Suignard: Note that while UK commented that this character is not a phonogram, the US comments that it is a phonogram for a Chinese logogram.

Disposition: Accepted.

T5: The US proposes to change the glyph for 1F6BE WATER CLOSET to the original shape that was published in Unicode 6.0 and 10646 – the glyph showing a side view of a toilet bowl with a tank and an open toilet seat, replacing the black square with ‘WC’ inside it.

Disposition: Accepted.

6.2.4 ISO/CS editing unit

All the 6 editorial comments from the CS editing unit were Accepted. One should note that there may be some limitations on what can be done with the request for A4 size when it comes to the code charts – since these are produced in synch with Unicode standard, which is published in Letter size.

Mr. Michel Suignard: Do we need to do an FDAM1? Since there were some technical changes in the disposition of comments, we need to do an FDAM1 ballot.

Disposition: Progress to FDAM 1.

Relevant recommendations.

M67.01 (Disposition of ballot comments of DAM-1 to 5th Edition): WG2 recommends that SC2 accept the disposition of DAM-1 ballot comments in document [N4952R](#). The following name changes are noted:

- 10F45 SOGDIAN PHONOGRAM SHIN to SOGDIAN INDEPENDENT SHIN
- 10D1D HANIFI ROHINGYA VOWEL MARK A to HANIFI ROHINGYA VOWEL A
- 10D1E HANIFI ROHINGYA VOWEL MARK I to HANIFI ROHINGYA VOWEL I
- 10D1F HANIFI ROHINGYA VOWEL MARK U to HANIFI ROHINGYA VOWEL U
- 10D20 HANIFI ROHINGYA VOWEL MARK E to HANIFI ROHINGYA VOWEL E
- 10D21 HANIFI ROHINGYA VOWEL MARK O to HANIFI ROHINGYA VOWEL O
- 10D23 HANIFI ROHINGYA NA KHANNA to HANIFI ROHINGYA NA KHONNA, and,
- 10F58 SOGDIAN PUNCTUATION CIRCLES WITH DOTS to SOGDIAN PUNCTUATION TWO CIRCLES WITH DOTS

M67.02 (Progression of Amendment 1 to the 5th edition): WG2 recommends that its project editor prepare the final text of Amendment 1 to the 5th edition of the standard, which will include the changes arising from recommendation M67.01 above, along with the final disposition of comments (document [N4952R](#)), and forward it to the SC2 secretariat for processing as an FDAM ballot. The draft code charts are in document N5005. The target starting date is modified to FDAM 1 2018-08.

7 WG2 matters

7.1 Ballot on PDAM 2.2 to 10646:201710646:2017

Input documents:

- [4922](#) Additional repertoire for ISO/IEC 10646:2017 (5th ed.) Amendment 2 (pdam2.2) with ExtG; Michel Suignard, Project editor; 2017-11-22
- [SC2/N4576](#) ISO/IEC 10646 (Ed.5)/PDAM 2.2, Information technology -- Universal Coded Character Set (UCS) -- Amendment 2; 2017-11-29
- [SC2/N4585](#) Summary of Voting on ISO/IEC 10646 (Ed.5)/PDAM 2.2, Information technology -- Universal Coded Character Set (UCS) -- Amendment 2; 2018-02-23

The above listed documents are background documents for the item on disposition of PDAM 2.2 ballot comments.

7.2 Disposition of ballot comments on 10646:2017 PDAM 2.2

Input documents:

- [4940](#) ISO/IEC 10646:2017 PDAM2.2 Disposition of Comments Michel Suignard, project editor 2018-03-21

Mr. Michel Suignard: The PDAM 2.2 ballot and the disposition of ballot comments in document [N4940](#) are since the last WG2 meeting. Based on the disposition of comments, PDAM 2.3 was circulated for ballot and the results and draft disposition of ballot comments will be discussed at this meeting under item 7.4 on page 13.

Based on comments received on PDAM 2.2, blocks for CJK Ext. G, Khitan Small Scripts, Shuishu Logograms and Shuishu Radicals were moved out of PDAM 2.2. Wancho is in PDAM 2.3, but needed more evidence. We did not have to remove Egyptian characters. The comments were not essential to the script.

Relevant information:

Observation M67.03 (Additions in Amendment 2 to 5th edition since meeting 66): WG2 notes that document [N4922](#) lists **6622** character additions in Amendment 2, in the amendment text that was prepared and sent for PDAM 2.2 ballot after M66. Based on disposition of PDAM 2.2 ballot comments in document [N4940](#), document [N4941](#) lists **605** character additions in the resulting amendment text sent for PDAM 2.3 ballot.

7.3 Ballot on PDAM 2.3 to 10646:201710646:2017

Input documents:

- [4941](#) Additional repertoire for ISO/IEC 10646:2017 (5th ed.) Amendment 2.3. Michel Suignard, project editor; 2018-03-21
- [SC2/N4588](#) ISO/IEC 10646 (Ed.5)/PDAM 2.3, Information technology – Universal Coded Character Set (UCS) – Amendment 2; 2018-04-02
- [SC2/N4608](#) Summary of Voting on ISO/IEC 10646: 2017 (Ed.5)/PDAM 2.3, Information technology -- Universal Coded Character Set (UCS) -- Amendment 2 (replaces N 4607); 2018-05-31

The above-listed documents are background documents for the next item on disposition of PDAM 2.3 ballot comments.

7.4 Disposition of ballot comments on 10646:2017 PDAM 2.3

Input documents:

- [4940](#) ISO/IEC 10646:2017 PDAM2.2 Disposition of Comments; Michel Suignard, project editor; 2018-03-21
- [4943](#) Cluster Formation Model for Khitan Small Script; Andrew West, et al; 2018-04-15
- [4958](#) Draft disposition of comments on PDAM2.3 to ISO/IEC 10646 5th edition; Michel Suignard, project editor; 2018-06-01
- [4976](#) Evidence for four Wancho diacritics; Banwang Lisu; 2018-06-07

Output documents:

- [4995](#) Disposition of comments on PDAM2.3 to ISO/IEC 10646 5th edition; Michel Suignard, project editor; 2018-06-18
- [5000](#) DAM2 additional repertoire - code charts Michel Suignard, Project editor; 2018-06-21

26 votes were cast. There were 13 Approvals with no comments, 2 Approvals with comments (from Japan and USA), 1 Disapproval (Ireland) and 10 Abstentions. The following are the comments and discussion of the draft dispositions. (Note: some documents referenced in the ballot comments are also listed under input documents above.)

7.4.1 Ireland: Negative

T1. Ireland proposes to change the name for 2E4F from MEDIEVAL CORNISH VERSE SEPARATOR to CORNISH VERSE DIVIDER, providing the rationale, in the Supplemental Punctuation block.

Discussion:

- a. Mr. Michel Suignard: The removal of the adjective 'MEDIEVAL' seems adequate. It is not clear why we should not keep 'SEPARATOR'.
- b. Mr. Michael Everson: A similar function in Old Nubian uses the word 'divider'.
- c. Mr. Andrew West: It makes sense to me to make it consistent.
- d. Mr. Peter Constable: There are 6 names with 'divider' and 34 names with 'separator'. We can live with 'divider'.
- e. Prof. Karljürgen Feuerherm: As an academic, which one would you use? (?divider?)

Disposition: Accept the name 2E4F CORNISH VERSE DIVIDER.

T2. Ireland expresses its strong support for encoding of A7C0 LATIN CAPITAL LETTER THORN WITH DIAGONAL STROKE and ACC1 LATIN SMALL LETTER THORN WITH DIAGONAL STROKE, in the Latin Extended-D block. PDAM 2.3 removed these from PDAM 2.2. Ireland suggest reinstating these characters in Amendment 2, along with its rationale.

Mr. Michel Suignard: I removed these two characters from PDAM 2.3 because they are controversial. They can still be maintained in a future repertoire subject to committee level ballot like the CD for the next edition of the standard.

Disposition: Noted. The two characters are in 'bucket' for future encoding.

T3. Page 55, Row 16FE: Ideographic Symbols and Punctuation

Ireland suggests that if Small Khitan Script is included in this amendment, 034F COMBINING GRAPHEME JOINER should be replaced by a script-specific control, and that it should be in Ideographic Symbols and Punctuation block or it should be the first character in the KSS block, in order to facilitate the sorting behaviour described at the bottom of page 9 of N4943R.

Disposition: Noted. A script specific control need not be in the same block. It can be either at the beginning of the block or in a block preceding the KSS block. It is also not clear why the KSS Iteration Mark is not in that block.

T4. Ireland requests to reinstate the four combining characters proposed to be encoded at 1E2EC..1E2CF (should be 1E2EC..1E2EF) in the Wancho block in this amendment, along with a rationale.

Mr. Michel Suignard: The request was for printed evidence of these 4 tone marks. We have a new document N4976 providing the evidence.

Disposition: Accept. Add these FOUR CHARACTERS back in Amendment 2.

T5. Ireland affirms its support for the encoding of BILLIARD GAMES at 1F93F (with glyph of stick and stack of balls) in the Supplemental Symbols and Pictographs block, to distinguish it from 1F3B1 BILLIARDS (with glyph of Eight Ball), with rationale.

Discussion:

- a. Mr. Michel Suignard: The argument to unify or dis-unify has been going on for some time. Some vendors do follow, and others do not.
- b. Mr. Andrew West: This is a case where there are two different user groups using these symbols in different ways. It does make sense to have another character encoded.
- c. Mr. Michael Everson: Samsung has now the separate EIGHTH BALL as emoji.
- d. Mr. Michel Suignard: Unicode 11 has the glyph with a stick and stack of balls for 1F3B1.
- e. Mr. Michael Everson: We will accept the 'Noted' disposition.

Disposition: Noted.

T6. Ireland affirms its strong support for the encoding of 1F98B TROLL, in the Supplemental Symbols and Pictographs block, along with a rationale.

Disposition: Noted. This character is not part of PDAM 2.3 but can be for future encoding.

T7. Ireland affirms its strong support for the encoding of 1F9A3 MAMMOTH, 1F9A4 DODO, and 1F9A5 SQUIRREL, in the Supplemental Symbols and Pictographs block, along with a rationale.

Discussion:

- a. Mr. Michel Suignard: These characters are not part of Pdam2.3. The cases for encoding MAMMOTH and DODO are reasonable and these can be entertained for future encoding. SQUIRREL is another case of dis-unification with CHIPMUNK.
- b. Mr. Michael Everson: CHIPMUNK was part of the Webdings set. Unicode changed the glyph of CHIPMUNK to a SQUIRREL.

Disposition: Noted.

T8. Ireland expresses its continued objection to the Unicode's publication of the pictographic characters on this PDAM while those characters are under technical ballot, with further explanation on its objection.

Disposition: Noted. Ballot comment is not the optimal place to make such comment.

E1. Ireland proposes changes to glyphs for Anglicana W characters A7C2 and A7C3 in the Latin Extended-D block, based on consultation with expert typographers about their appropriate design.

Disposition: Accepted in principle. Ballot response for PDAM 2.2 had the same comment (see disposition in document N4940). The project editor will fix the glyphs based on receiving an updated font from Ireland.

E2. Ireland proposes changing the annotation of A7BD from "also used in Egyptology as yod" to the following:

A7BD LATIN SMALL LETTER GLOTTAL I
= egyptological yod
x A723 latin small letter egyptological alef
x A725 latin small letter egyptological ayin.

Disposition: Accepted.

E3. Ireland proposes improving the glyphs for Egyptian Hieroglyphs Format Controls 1F430..1F438, with proposed acronyms and pictographs within dotted square boxes, along with a rationale.

Discussion:

- a. Mr. Michel Suignard: The first part of the comment is verbatim the same as for PDAM 2.2 and does not apply anymore (the glyphs in PDAM 2.3 look very different from the glyphs for IDs). The acronyms bring very little practical information and make the embedded pictographs much smaller.
- b. Mr. Michael Everson: The idea is to avoid confusion with mathematical symbols and indicate the function of the character. I can make the acronyms much smaller in size.
- c. Mr. Michel Suignard: My preference was not to have the acronym.

Disposition: Accepted in principle. *See the final disposition of comments document N4995 for the final set of glyphs.*

E4. Ireland proposes changed reference glyphs (basically white outlined rather than black silhouettes) for the seven characters 1F995, 1F996, 1F998, and 1F99B...1F99E, in the Supplemental Symbols and Pictographs block, for consistency with other glyphs in the standard.

Disposition: Accepted in principle, based on receiving a font with the updated glyphs.

E5. Ireland proposes changing the glyphs for 1F9B8 SUPERHERO and 1F9B9 SUPERVILLAIN in the Supplemental Symbols and Pictographs block, with caped isotype figures.

Disposition: Accepted in principle. We can improve the current glyphs. However, it is not clear that the proposed new glyphs are distinctive enough.

E6. Ireland proposes that the glyph for 1F9E7 RED GIFT ENVELOPE in the Supplemental Symbols and Pictographs block should have a closer vertical hatching as other red-coloured glyphs in the standard do.

Disposition: Accepted in principle, based on receiving a font with the updated glyph.

E7. Ireland proposes changing the glyphs for the hair colour swatches at 1F9B0..1F9B3 in the Supplemental Symbols and Pictographs block with person images within wiggly boxes, with a rationale.

Disposition: Accepted in principle. These characters are not modifiers, and should not have the wiggly square box. However, improving the glyphs depends on receiving a font with the updated glyphs.

Mr. Michael Everson: Based on the above disposition, Ireland reverses its vote to 'Positive'.

7.4.2 Japan: Positive with comments

TE.1. Japan proposes deleting the description for “GHR”, “T13” and “UK” in 23.01 List of source references. These remainders from CJK Ext. G removed from PDAM 2.3.

Disposition: Accepted.

TE.2. Japan proposes deleting “GHR-dddddd.dd” “T13-hhhh” and “UK-ddddd” on “Third field format” column in Table 5. These are also remainders from use with CJK Ext. G removed from PDAM 2.3.

Disposition: Accepted.

7.4.3 USA: Positive with comments

TE.1. The USNB recommends moving Elymaic from its current location, 10ECO..10EDF, to 10FE0..10FFF, to be in sync with the latest Roadmap.

Disposition: Accepted.

ED.2. USNB requests capitalizing ‘Pinyin’ in the subhead “Letters used in early pinyin romanization” above A7C4 in the names list for Latin Extended-D.

Disposition: Accepted

ED.3. USNB proposes moving “Whole blocks” to the appropriate place before Khitan Small Script etc. on page 3 of the amendment text.

Disposition: Accepted. The editor’s note section will disappear in DAM2 text anyway.

Disposition: Accept final disposition of ballot comments in document N4995 and progress Amendment 2 to a DAM2 ballot. The draft code charts for DAM2 will be in document N5000.

Relevant recommendations:

M67.04 (Disposition of ballot comments of PDAM-2.3 to 5th Edition): WG2 recommends that SC2 accept the disposition of PDAM-2.3 ballot comments in document N4995. The following significant changes are noted:

- a. ELYMAIC block is moved from 10ECO..10EDF to 10FE0..10FFF
- b. Following 4 Wancho tone marks are added:
1E2EC WANCHO TONE TUP
1E2ED WANCHO TONE TUP MANG
1E2EE WANCHO TONE OKOI
1E2EF WANCHO TONE OKOI MANG
- c. Name of 2E4F MEDIEVAL CORNISH VERSE SEPARATOR is changed to CORNISH VERSE DIVIDER
- d. Several glyphs are changed (see list in document N4995), and
- e. Added cross reference to A723 and A725 for A7BD LATIN SMALL LETTER GLOTTAL I

M67.05 (Additional changes to Amd.2 to 5th Edition): WG2 recommends that SC2 accept the following name changes for following Egyptian Hieroglyph control characters (based on document N5001):

- 13432 EGYPTIAN HIEROGLYPH START AT TOP to EGYPTIAN HIEROGLYPH INSERT AT TOP START
- 13433 EGYPTIAN HIEROGLYPH START AT BOTTOM to EGYPTIAN HIEROGLYPH INSERT AT BOTTOM START
- 13434 EGYPTIAN HIEROGLYPH END AT TOP to EGYPTIAN HIEROGLYPH INSERT AT TOP END
- 13435 EGYPTIAN HIEROGLYPH END AT BOTTOM to EGYPTIAN HIEROGLYPH INSERT AT BOTTOM END

The glyphs for Egyptian Hieroglyph Controls will be changed to accommodate smaller size acronyms within the glyphs.

M67.06 (IVD registration): WG2 recommends that SC2 accept to append to sub-clause 16.6.3 in the standard, a sentence like the following, to explain the purpose of IVD registration:

The purpose of IVD registration is to provide a technical solution to represent ideograph variants that are considered unifiable and should not be encoded in CJK Unified Ideographs.

M67.07 (Progression of Amendment 2): WG2 recommends that its project editor prepares the final text of Amendment 2 to the 5th edition of the standard, which will include the changes arising from recommendations M67.04 to M67.06 above, along with the final disposition of comments (document N4995), and forward it to the SC2 secretariat for processing as DAM-2. The draft code charts are in document N5000. The target starting dates are modified to DAM-2 2018-08, FDAM-2 2019-02.

7.5 Roadmap Snapshot

Dr. Umamaheswaran: The latest roadmaps as of 2018-06-06, posted at the [Roadmaps website](#) are: BMP Version 11.0.0, SMP Version 11.0.0, SIP Version 11.0.0, TIP Version 11.0.0 and SSP Version 11.0.0. The hyperlinks point to the latest proposals in either the WG2 or Unicode document registers. If you have any feedback, you can send them to my attention.

8 IRG status and reports

8.1 IRG #49 and #50 summary report

Input documents:

[4970](#) IRG#49 San Jose, CA, USA, 2017-10-16/20 recommendations; IRG; 2017-10-20

[4971](#) IRG#50 Beijing, China, 2018-05-21/25 recommendations; IRG; 2018-05-25

[4978](#) Summary of IRG#49 and IRG#50; Lu Qin, IRG Rapporteur; 2018-06-08

Dr. Lu Qin presented the summary report in document N[4978](#).

Item 1: Meetings IRG #52 Hong Kong, 2019-05-13/17, and IRG #53 China (Tentative), 2019-10-21/25, (location TBD), need WG2 approval. *See relevant recommendation M67.31 on page 39.*

Item 2: We have sent some feedback received on Ext. G to the project editor. We will correct some errors found in the generated chart, due to new UTC font and some Chinese character glyph and others.

Item 3: IRG PnP – has a change. IRG used to replace old glyph with any changed glyph. Now the glyphs will be versioned.

Item 4: IRG has updated the Working document set. We have added ROK's normalization version 1.1B to the collection.

Item 5: Regarding IVD, IRG provided text to UTC for consideration in revision of section 2 in UTR 37.

Item 6: IRG provided feedback to Vietnam on their horizontal extensions request. They are to correct their input and resubmit.

Item 7: We have already made the changes to glyphs requested by Vietnam.

Item 8: We have made the changes to glyphs and updated the mapping table for HKSCS-2016, based on a request from HKSAR.

Item 9: IRG agreed to separate characters with UK source from characters with UTC source, for Ext. G collections.

Item 10: IRG accepted ROK request for a glyph change for one character in Ext. F. (*See discussion on document N[4972](#) from ROK under agenda item 10.4.5 on page 36.*)

Item 11: Working set 2017 – Version 1.0 has one additional set. It is undergoing quality check.

Discussion:

- a. Mr. Michel Suignard: There was a request from Mr. Jimmy Chan for one Character.
- b. Dr. Lu Qin: I have not received any such single character request for WS 2017.
- c. Mr. Andrew West: There were characters from before, for adding to 2015.

Item 12: IRG reviewed request to add 3 IDC characters – recommended accepting two of the three are acceptable.

Item 13: IRG reviewed a proposal for process for CJK Regional Supplementary Ideographs submitted to SC2; found lacks sufficient details.

Item 14: IRG reviewed a request for removing UCS 2003 column of glyphs. Moving to the end column was a possibility. The feedback is not to remove it until we find a better solution.

Item 15: IRG review of request to use IVS and IVD with unifications that are more liberal. We need some clarification of text or guidelines from SC2 / WG2 to make it easier for IRG members to be able to understand and make others in their territories understand.

Discussion:

- a. Dr. Lu Qin: If we cannot use IVD then they will need separate encoding. The UTS 37 is already liberal in terms of unification etc. We would like to have text similar to UTS 37 in ISO/IEC 10646.
- b. Mr. Andrew West: For cognate characters, it is fine. If there are non-cognates, can we unify them?
- c. Dr. Lu Qin: We use these rules only for Variants.
- d. Mr. Michel Suignard: We already referencing UTS 37 normatively. You can send me some suggested text to include in the standard.

Disposition:

WG2 accepts to add some text to explain the purpose of IVD registration in 16.6.3 in the standard.

Relevant recommendation:

M67.06 (IVD registration): WG2 recommends that SC2 accept to append to sub-clause 16.6.3 in the standard, a sentence like the following, to explain the purpose of IVD registration:

The purpose of IVD registration is to provide a technical solution to represent ideograph variants that are considered unifiable and should not be encoded in CJK Unified Ideographs.

8.2 IRG PnP Version 11

Input documents:

[4979](#) IRG Principles and Procedures (IRG PnP) Version 11; Lu Qin, IRG Rapporteur; 2018-06-11

Document [N4979](#) is the latest IRG principles and procedures document. WG2 experts are to review and provide feedback. *Action item:* WG2 experts are to provide feedback on document [N4979](#) containing the latest IRG Principles and Procedures to IRG convener.

9 Script contributions related to ballots:

9.1 Related to and incorporated into PDAM 2.2

Input documents:

[4896](#) Tangut Character Additions and Glyph Corrections; Andrew West, et al; 2017-09-22
[4916](#) Proposal to encode the Elymaic script in Unicode; Anshuman Pandey, AAC; 2017-10-23
[4917](#) Proposal to encode Ottoman Siyaq Numbers in Unicode; Anshuman Pandey, AAC; 2017-09-29
[4918](#) Ad hoc recommendations for Emoji characters in Unicode 11+; Emoji Ad hoc; 2017-10-26
[4919](#) HKSAR's Request for Horizontal Extension and Update of Glyphs; HKSAR; 2017-10-13
[4920](#) Vietnam Horizontal Extensions; Lee Collins; 2017-10-24
[4921](#) Vietnam Glyph Changes; Lee Collins; 2017-10-24
[4936](#) Proposal to encode CJK Unified Ideograph Extension G, IRG Working Set WS2015 v5.0; IRG; 2017-11-23

The above documents referenced while drafting the text of PDAM 2.2 are for WG2 experts' information. There were no discussion on these at this meeting.

9.1.1 Two Vietnamese Alternate Reading Marks

Input document:

[4915](#) Proposal to Encode Two Vietnamese Alternate Reading Marks; Lee Collins; 2017-11-06

Mr. Michel Suignard: Do these need further study? It is somewhat related to IRG. It was part of PDAM 2.2 ballot comments from UK.

Discussion:

- a. Mr. Andrew West: The marks need further study. These marks could squeeze the existing boxes etc. Chinese publications also use them. The argument to take out a diacritical mark would potentially be problematic.
- b. Mr. Peter Constable: Has the author of the proposal seen the feedback?
- c. Mr. Andrew West: We are discussing it with some experts – but not with Mr. Lee Collins yet – until we know what the correct solution is. We will provide a WG2 document that Mr. Lee Collins can see.

9.2 Removed repertoire related to PDAM 2.2

9.2.1 Quality of CJK Unified ideographs in extension G

Input document:

[4935](#) Concern about the quality of CJK unified ideographs extension G (CJK G) in PDAM2.2; Japan; 2018-02-21

Mr. Michel Suignard: I am trying to understand what is going on with the font supplied. It does not render properly. Amendment 2 is going to DAM stage. If Ext. G is included in DAM 2, it has to be stable. I am reluctant to include it in Amendment 2.

Discussion:

- a. Prof. Kyongsok Kim: Korea found about 20 characters having some issues.
- b. Dr. Lu Qin: I have not seen these characters that you mentioned – neither have other IRG members. If these are for beautification, IRG should look at these. Korea has changed the Font vendors.
- c. Mr. Toshiya Suzuki: There was lack of time and resulting insufficient progress in reviewing Ext. G. We have to ask IRG to give sufficient time for planning.
- d. Dr. Lu Qin: IRG's meeting dates depend on the convenience of IRG members. They are in May and October each year. When WG2 was in September, we had enough time. Now that you have moved it to June, we have to adjust the IRG schedules. Many of the IRG members are in Universities and April end is examination time.
- e. Mr. Michel Suignard: The next WG2 meeting is 17 to 21 of June 2019.
- f. Dr. Lu Qin: We will have sufficient time.
- g. Mr. Michel Suignard: The plan would be to include Ext. G in next CD.

Relevant recommendation:

M67.18 (CJK Ext-G): WG2 recommends that SC2 accept encoding of 4938 CJK Unified Ideographs in a new block 30000..3134F named CJK Unified Ideograph Extension G, and populate it with their glyphs and sources as shown in document [N4982R](#).

9.2.2 Shuishu script

Input documents:

[4942](#) Comments on Shuishu in PDAM2.2 text; Toshiya Suzuki; 2018-04-02

[4946](#) Additional Comments on Shuishu in PDAM2.2 text; Toshiya Suzuki; 2018-04-20

[4956](#) Analysis of Shuishu character repertoire; Andrew West, Eiso Chan; 2018-06-01

[4981](#) A Letter from Shui Community (Shuishu Users) in China (support of Shuishu); Institute of Shui Ethnic; 2018-06-12

9.2.2.1 Japanese comment set 1

Document [N4942](#) contains the first set of comments on Shuishu from Japanese expert.

Discussion:

- a. Mr. Toshiya Suzuki: The first comment is on the relationship between methodology and purpose; it is unclear. Some questions are included in the document. The example shows three interchangeable glyphs all having the meaning of star of exodus from the Earth. What is the purpose of the standard; how would one preserve the glyphs versus the meaning in a Shuishu document? Should these be encoded separately or use IVSs?
- b. Mr. Michel Suignard: I think these are glyph variants – IVS is a stretch.
- c. Mr. Toshiya Suzuki: The selection of representative glyph would be an issue. A statistical analysis of available material – based on frequency of findings, seems to be the criterion. The proposers have discarded a higher frequency glyph, I suspect, because it is similar to an ideograph. Even though it is important to have statistical occurrences, other factors may also be important. Example of numerals was pointed out – vertical and horizontal representations. Should we code them separately? Are they glyph variants? Some are rotations between Shuishu and Hanshu; some are mirrors etc. The request is to have some clarification on the criteria used.
- d. Mr. Andrew West: There are many places the glyphs are shown as rotated or mirrored. I think we should treat these as glyph variants. We should not encode them separately.
- e. Mr. Toshiya Suzuki: These seem to be, I suspect, rotations or mirroring of Han characters.
- f. Mr. Andrew West: Even though some glyph is of higher frequency, one could select a lower-frequency.
- g. Mr. Toshiya Suzuki: Pronunciation in character names - was another item in the Japanese comment document. For example, single, double and triple coffins. In another dictionary, the pronunciation is quite different from the currently selected name. There is also a third pronunciation for the same character. It is not good idea to include such pronunciations in immutable character names. Another point is on ASCII notation of the Shui pronunciation. Different user communities seem to be using different ASCII pronunciations. Such variations should be in a data dictionary – and should not be in the names.
- h. Mr. Michel Suignard: We had similar issues with Nushu also. Including the pronunciations in the names is not a good idea.
- i. Mr. Andrew West: Many of Shuishu characters have many readings.
- j. Mr. Michael Everson: Elsewhere we did use the transliterations – the frequency of variations were much less.
- k. Mr. Toshiya Suzuki: I have summarized my concerns and suggestions to improve at the end in the document.

9.2.2.2 Japanese comment set 2

Document [N4946](#) contains the second set of comments on Shuishu from Japanese expert.

Discussion:

- a. Mr. Toshiya Suzuki: Second set of comments on Shuishu is in document [N4946](#). Stroke count or radicals, is the basis for the current sorting. Some characters are in one group versus another group of radicals. I have shown some examples where the first stroke is the basis. In addition, some characters have different glyphs in different dictionaries, with different first component. Second component is quite common between them. Possibly the second component could have been used for sorting.
- b. Mr. Michel Suignard: The UTC also discussed it. It was not clear whether radical-based taxonomy used for ordering is better. Possibly one could provide simply a list, and other means be used for sorting etc.
- c. Mr. Andrew West: Shuishu script is not amenable to radical based lookups in dictionaries / sorting etc.
- d. Mr. Michael Everson: In Yi we have also seen – but the group did create a dictionary showing a selected one. They also provided information on which associated variants exist. I am not sure, if they have done such an exercise.
- e. Mr. Andrew West: If there is a need for transcription, one could standardize on a single glyph form.
- f. Mr. Toshiya Suzuki: The scope of standardization needs clarification. It is unclear about normalization. Another point is different rotations of glyphs in Shuishu documents.
- g. Mr. Andrew West: In case of ‘Man’, we may need to encode variants separately. In case of Numbers – possibly no. The upright Man may have a different meaning.

- h. Mr. Michel Suignard: In Egyptian – we do have similar situation – same glyph has different meanings in different rotations. Encodings of these are separate. This needs further study.
- i. Mr. Toshiya Suzuki: There are composite glyphs – hungry like a horse, like a pig etc. However, there is no self-standing horse, pig or chicken etc. There are pigs, chicken etc. in other Shuishu dictionaries.
- j. Mr. Michael Everson: They are just giving the readings – and we should believe their input in their language.
- k. Mr. Andrew West: Specific situations would need such readings.
- l. Mr. Michel Suignard: We have to remember that this is not a writing system.
- m. Mr. Toshiya Suzuki: Glyph distinctiveness. Example: ‘death’- two different glyphs – PDAM 2.2 removed one of these. We kept another one with two glyphs with same pronunciation. Somehow, 1B449, 1B41D were interchanged. My concern is on the criteria used for unifying, keeping, dropping etc. I have shown some example of similar glyphs with different meanings, but appearing as distinct glyphs in other dictionaries. It makes one to re-examine the criterion used for selecting the representative glyph.
- n. Mr. Michel Suignard: What are we representing in Shuishu – phonograms, logograms or what? We need consensus on it.
- o. Mr. Toshiya Suzuki: Some characters looking like Hanshu. However, there are examples of some Hanshu-like characters that are not encoded. Example: Hanshu for Gate. Should we be mixing Han and Shuishu encoding for plain text? We may lose some text in digital representation if some Han looking characters in Shuishu are not encoded.

9.2.2.3 Analysis by UK expert

Document [N4956](#) contains an analysis of proposals on Shuishu from the UK expert.

Mr. Andrew West: I assumed everything was going fine – the US comments pointed out it is not mature enough. We looked at some existing documents on Shuishu including a dictionary. We have a summary of recommendations. There are two projects to digitize the Shui manuscripts under British Library. One of the questions I would ask the Shuishu experts is the purpose for which they would be using the script in digital form. There is a good understanding of the basic repertoire. However, there are a number of issues. Script name should be the native Sui name instead of Chinese name Shuishu. The repertoire proposed is probably over-unified - leading to potential loss of information. There is a dictionary from 2007, which is widely used as a reference. Many characters from that dictionary are missing. We have included some recommendation about criteria for unification. Some good fonts are available for producing the charts. We have provided more background in support of more research.

9.2.2.4 Letter from Shuishu community

Mr. Michel Suignard: Document [N4981](#) is a letter from Shuishu community in support of what we have now. The Shuishu script proposal needs more work.

Disposition: Invite experts from China to come up with a revised proposal taking into account the comments received.

Relevant recommendation:

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.

9.2.3 Khitan Small Script

Input document:

[4943](#)_Cluster Formation Model for Khitan Small Script; Andrew West, et al; 2018-04-15

[4977](#)_Comments on WG2 #67 (June 2018) documents [Khitan SS and Zanabazar Square]; Deborah Anderson, et al.; 2018-06-09

Output document:

[5002](#)_Khitan Small Script Ad Hoc Report (London);Deborah Anderson, Peter Constable; 2018-06-20

There was an ad hoc group meeting on Khitan Small Script. Dr. Deborah Anderson presented the ad hoc report in document [N5002](#). The ad hoc group discussed different models. The ad hoc report includes a set of recommendations. WG2 decided to include it in a future encoding rather than in current Amendment 2.

Relevant recommendation:

M67.08 (Khitan Small Script): WG2 accepts the ad hoc report in document [N5002](#) on Khitan Small Script (Block 18B00-18CFF in document [N4982R](#)). WG2 recommends that SC2 accept the repertoire for future encoding, with the following changes:

- a. The name of 18B00 KHITAN SMALL SCRIPT ITERATION MARK is changed to be algorithmic, to KHITAN SMALL SCRIPT CHARACTER-18B00.
- b. Add a new a script-specific format character, 16FE4 KHITAN SMALL SCRIPT FILLER, in the Ideographic Symbols and Punctuation block.

9.3 Related to PDAM 2.3

Input documents:

[4928](#) Proposal to encode the Prishthamatra for Nandinagari; Srinidhi. A, Sridatta. A; 2017-10-13

[4976](#) Evidence for four Wancho diacritics; Banwang Lisu; 2018-06-07

[4926](#) Glyphs for Egyptian Hieroglyphic control characters; Michael Everson, Andrew Glass; 2018-01-18

Drafting of the text for PDAM 2.3 included considerations for the above documents. There were no discussions on these at this meeting.

9.3.1 Names of Egyptian Controls

[5001](#) Egyptian Format Control Names; Andrew Glass; 2018-06-19

Dr. Deborah Anderson: Mr. Andrew Glass pointed out that names of Egyptian Control Characters are incorrect, and the original names were correct.

Discussion:

- a. Mr. Peter Constable: Word 'START' in names – is meant to be a noun and not a verb. Current wording is 'START AT TOP' the original name was 'INSERT TOP START'. The action here is INSERT. The place where to insert is 'TOP START'.
- b. Mr. Alain LaBontè: In both cases, the wordings are unambiguous.
- c. Mr. Michael Everson: The ballot comments were to try to get the ambiguity removed.
- d. Mr. Peter Constable: We could use 'INSERT AT TOP START' etc. In any case, one has to read the relevant information that will be in the Unicode documentation.
- e. Mr. Michael Everson: Re: Glyph changes I have changed the glyphs to include a small version of acronyms within the box.
- f. Mr. Michel Suignard: I will see what you have done in Amendment 2

Disposition: Accept to change the names.

Relevant recommendation:

M67.05 (Additional changes to Amd.2 to 5th Edition): WG2 recommends that SC2 accept the following name changes for following Egyptian Hieroglyph control characters (based on document N5001):

13432 EGYPTIAN HIEROGLYPH START AT TOP to EGYPTIAN HIEROGLYPH INSERT AT TOP START

13433 EGYPTIAN HIEROGLYPH START AT BOTTOM to EGYPTIAN HIEROGLYPH INSERT AT BOTTOM START

13434 EGYPTIAN HIEROGLYPH END AT TOP to EGYPTIAN HIEROGLYPH INSERT AT TOP END

13435 EGYPTIAN HIEROGLYPH END AT BOTTOM to EGYPTIAN HIEROGLYPH INSERT AT BOTTOM END

The glyphs for Egyptian Hieroglyph Controls will be changed to accommodate smaller size acronyms within the glyphs.

10 Script contributions not related to ballots

10.1 Carried forward in WG2 and UTC preliminary contributions

Mr. Michel Suignard: We are carrying forward the following contributions, with references to a mix of WG2 and UTC documents. Most preliminary proposals usually have UTC numbers, whereas documents that were in progress or submitted to WG2 do have WG2 numbers. All the documents that are in progress in WG2 are in the WG2 document register.

Afáka (N4292), Bagam (N4293), Balti 'B' (N4016), Balti scripts (N3842), Bima (L2/16-119), Brusha (L2/17-183), Buginese extensions (L2/16-159), Chinese Chess Symbols (N3910), Chorasmian (L2/18-164), Cypro-Minoan (N4733), Diwani Siyaq Numbers (N4122), Eebee Hmong (N4668), Egyptian Hieroglyphs Extension Old Yi (N4751), Garay (N4709), Jurchen (N4795), Kawi (N4266), Kerinci (L2/16-074), Khambu Rai (N4018), Khatt-i Baburi (N4130), Khotanese (L2/15-022), Kpelle (N3762), Kulitan (L2/15-232), Lampung (L2/16-073), Landa (N3768), Leke (N4438, 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 (N4687), Palaeohispanic (L2/18-030), Pau Cin Hau Syllabary (L2/16-014), Persian Siyaq (N4125), Proto-Cuneiform (N4760), Pungchen (L2/17-181), Pyu (N3874), Ranjana (N4515), Shuowen Small Seal (N4688 N4853), Southwest China Hieroglyphs (N4856, N4901), Sumbawa (L2/16-096), Tigalari (L2/17-378), Tocharian (L2/15-236), Tolong Siki (N3811), Vexillology symbols (L2/17-089), Vithkuqi (N4854), Western Cham (N4734), Woleai (N4146), and Zou (N4044).

10.2 New scripts or blocks

10.2.1 Dives Akuru script

Input document:

[4929](#) Proposal to encode Dives Akuru in Unicode; Anshuman Pandey; 2018-01-23

Dr. Deborah Anderson: Dhivehi language (aka Maldivian) in Maldives uses the Akuru script. The proposal has had several rounds of review. It is mature and ready to go to ballot.

Disposition: Accept for future encoding.

Relevant recommendation:

M67.09 (Dives Akuru script): WG2 recommends that SC2 accept the proposal to encode the Dives Akuru script in document N4929, in a new block named Dives Akuru 11900..1195F, and populate it with 72 characters with their names, code points and glyphs as shown in document N4982R.

10.2.2 Assamese script

Input document:

[4947](#) Proposal for inclusion of Assamese Script in ISO 10646; Bureau of Indian Standards; 2018-05-14

Output document:

[4999](#) Ad hoc report; Assamese Ad hoc group; 2018-06-21

Prof. Shikhar Kumar Sarma made a presentation providing the history and background of the proposal with examples. The modern day Assamese script is based on Kamrupi – 4 to 13th Century, Medieval – 13-19th century and Modern – 19th till to date. Showed pictures of different rock inscriptions, Bark, Paper, Woven cloth containing the script examples. Showed also examples from Hemkosha book, Dainik Asom News, and Emails.

Prof. Shikhar Kumar Sarma: We do not have a separate encoding of Assamese script. Currently Bengali script, which is almost identical to Assamese script, is used. However, there are limitations on not being able to represent all characters needed in Assamese. ISCII was used from 1991 – which had Assamese and Bengali script encoding. BIS panel in 2015 recommended separate encoding of Assamese and Bengali. Government of Assam was given the task of coming up with a proposal. Not having a separate encoding is leading to potential loss of the script's identity. We are not able to represent the script properly in ICT. 104 characters are part of the script requirement. Many of the symbols are not encoded. Of the 104, 35 are similar to the Bengali counterparts. Many of the symbols used for measurements etc. are not encoded. It affects the applications like e-governance etc.

Discussion:

- a. Mr. Michael Everson: You have not made a case. You have an alphabet – similar to Hindi speakers and Marathi speakers sharing the same script. There are differences between the two. We can accommodate the differences. I understand there are old versions of Assamese. One can pronounce a letter in a given script differently in different languages using the same script. If we were to take all the Bengali letters and put them in a different block – duplicate – then we will cause problems.
- b. Mr. Michel Suignard: Take the example of Latin script shared by several languages, even though the pronunciation is very different. Assamese and Bengali happen to share the same script. You may have a valid case to complement the existing script in UCS with missing characters needed in Assamese.
- c. Mr. Peter Constable: The fraction symbols etc. are potential candidates for encoding. The question is about the characters that are common with Bengali.
- d. Prof. Shikhar Kumar Sarma: There are 35 common characters; the others are not. We would like to keep their Assamese identity.
- e. Mr. Michael Everson: We can certainly add informative notes to each character to indicate their use in Assamese. The names in the standard are fixed and are not changeable. However, we can add informative notes to each to indicate their use in Assamese language. The only reason the names Bengali came into being because the largest user of the script happens to be Bengali users.
- f. Prof. Mahendra Kumar Yadava: We have heard these arguments many times in the past. The argument that several European languages use the Latin script does not apply because those languages did not have their own script. Bengali and Assamese look similar – however that similarity stops at the symbol level. The argument is that the identity of the Assamese script is being lost. The standard should not restrict the language.
- g. Mr. Karl Pentzlin: You showed a newspaper page and said that you cannot represent it because we do not have the fonts for all the characters. I would have liked to see which characters in the newspaper are not representable by using, for example, the Bengali fonts. From what I could see in the two columns of ISCII that you showed, the two columns appear identical. Please ignore the names of characters / scripts etc. What I would like to see is which characters are different.
- h. Mr. Andrew West: Regarding the newspaper example—most newspaper do not use Unicode.
- i. Mr. Toshiya Suzuki: I see the character like vowels, consonants etc.; are they used differently?
- j. Prof. Shikhar Kumar Sarma: There are homographs, but are distinct characters in Assamese.

- k. Mr. Michael Everson: There are homoglyphs in some instances – with the different meanings. Show me which characters are different.
- l. Prof. Shikar Kumar Sarma: What about the case of Trihuta? There are many common characters.
- m. Mr. Peter Constable: Trihuta has similar characters with Bengali – but as a collection, the script is different from Bengali. The name in the standard is purely technical – you can use whatever name the user is familiar with for the character names. You can treat the current Bengali characters – in a manner similar to use of Devanagari in different languages.
- n. Dr. Lu Qin: Within the Japanese, Chinese etc. we have ideographic characters without language names attached to the characters.
- o. Prof. Shikar Kumar Sarma: In case of the example of Devanagari – the characters have language-independent names.
- p. Mr. Martin Hosken: In Myanmar script – the Shan languages are unified with Myanmar – the characters that are different are named with Shan names, even though Shan people do not like it.
- q. Dr. Umamaheswaran: We will be able to entertain your proposal if it does not ask for separate encoding of the common characters.
- r. Mr. Michel Suignard: The Bengali script could have had names that are more neutral. It is just a name. Within the standard, it happens to have the current name. You can use whatever names you want in Assam for the code point.
- s. Prof. Shikar Kumar Sarma: Our concern is with the International Standard publications. When the students encounter the Bengali script etc. in the digital world, they are sensitive.
- t. Mr. Peter Constable: No one teaches the students any language using ISO 10646 etc.
- u. Prof. Shikar Kumar Sarma: But once you get into the technical world, you do not have the Assamese script.
- v. Prof. Karljürgen Feuerherm: What the standard provides is functionality. The names etc. are incidental.
- w. Prof. Mahendra Kumar Sarma: We do have a script and language. The standard has made distinction between Trihuta and Bengali.
- x. Mr. Michel Suignard: This is a technical committee.
- y. Mr. Karl Pentzlin: Germany had similar problem with Faktur script for German etc. We had no problem with using Latin.
- z. Mr. Peter Constable: Commenting on the cultural identify - there are the Persian, the Assyrians etc. with over 2500 years of history. The Arabs are much shorter in terms of number of years. They all use Arabic script to write their languages. There is some animosity amongst some users, though the standard uses Arabic names. If the culture and language are dependent on the labels of characters in a standard, then you may have a bigger problem.
- aa. Prof. Dhruba Jyoti Borah: Can you change the script name?
- bb. Mr. Michel Suignard: We could add annotations in the names lists. There are two kinds of annotations – formal and informal.
- cc. Mr. Michael Everson: You have not shown the differences in shapes between Bengali and Assamese. The Trihuta case is different.
- dd. Mr. Andrew West: Formal Aliases were introduced mainly to correct mistakes and errors. More recently, formal Aliases have extended usage – for example, IT systems show them. If you assign formal aliases to Bengali characters, you may end up in having unhappy Bengali users.
- ee. Mr. Michel Suignard: I think there is no issue with new additions for Assamese. However, we need more discussion on the proposed additions.
- ff. Mr. Andrew West: The additions may have to go to SMP – since there is no more room in the BMP.

An ad hoc group met and prepared the report in document [N4999](#).

Mr. Michael Everson gave a summary of the ad hoc discussion.

Discussion:

- a. Mr. Michael Everson: I will be preparing the document with charts and names lists. We discussed the representation of Assamese. Character names are immutable. We will add annotations to the current set of names in Bengali block. We have determined that the block property value is not changeable. However, it is possible to replace the name of the block in the charts. The best alternative suggested for the block name in the chart is Eastern. The shaping behaviour for Trihuta made it separately encoded. We also analyzed the alternate forms proposed – some seem to be different presentation forms. Some other proposed characters need further study. Some are unifiable with current encoded character. More study is required for several other characters and other symbols.
- b. Prof. Shikar Kumar Sarma: I would like to discuss further on some items in the verbal report. (A revision of the draft ad hoc report captured further discussion.)
- c. Mr. Michel Suignard: Send me the input and I will try to get the chart done if we can.

- d. Dr. Deborah Anderson: I have sent a link to example of a contribution to Prof. Mahendra Kumar Yadava.
- e. Mr. Michel Suignard: The CD would be the next vehicle to carry the informal names annotations.

Relevant recommendation:

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 names list 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.

10.2.3 Gongche characters for Kunqu Opera

Input document:

[4967](#) Proposal of Gongche characters for Kunqu Opera; Eiso Chan, et al.; 2018-06-01

Mr. Andrew West: Musical notation in China for Kunqu Opera. IRG review said they are not to be included in CJK Unified Ideographs. In my opinion, their usage should be as Ideographs.

Discussion:

- a. Mr. Michael Everson: We should normalize the representative glyphs with others in the block.
- b. Mr. Andrew West: They come in different styles.
- c. Dr. Lu Qin: IRG had a discussion on these. Their use is only as Music symbols, and not for anything else.
- d. Mr. Michael Everson: It is similar to A, B, C etc. as numbers.
- e. Mr. Andrew West: There are other already encoded characters similar to these. 6 dot above and 2 dot above are examples of music symbols, from HKSAR, are already encoded in the URO.
- f. Mr. Michel Suignard: These are not urgently needed characters – and may end up in waiting for adding to CJK URO.
- g. Mr. Peter Constable: Their use being exclusively for Musical notation, there should not be any issues for unification.
- h. Mr. Michel Suignard: We have dealt with the Chemical symbols, which are similar.
- i. Dr. Lu Qin: No one in IRG is against encoding these – but the opinion is that they are unlike the other ideographs used for text. I do not have any strong opinions.
- j. Prof. Kyongsok Kim: I think these are symbols derived from regular ideographs. Because these are symbols, these should be in a separate block.
- k. Mr. Michael Everson: This is a small set of characters with special use and musical community needs them. We should be able to add these characters without need for UNCs.
- l. Mr. Peter Constable: Thinking of analogy to Latin script – we have symbols derived from Latin script in a separate block. These are there only for legacy compatibility reasons. Do we have similar precedents in ideographs?
- m. Dr. Lu Qin: The hooks at the bottom make these symbols totally unrelated to the meaning of ideographs above the hook.
- n. Mr. Peter Constable: These look very distinctive. The concern is they should not be appearing in any input methods.
- o. Mr. Andrew West: If you put in the URO, it may show up in input methods. If you put these at the end of Ext. B, C or D etc. it need not.
- p. Mr. Michel Suignard: I need to get CJK related information for including in Ext. B. Seven Characters with sources for the ideographs.

Disposition: Accept for future encoding.

Relevant recommendation:

M67.10 (Gongche characters for Kunqu Opera): WG2 recommends that SC2 accept seven ideographs based on document N4967 for encoding in a new block 2A6E0..2A6FF named CJK Unified Ideographs Supplement and populate the first seven code points 2A6E0..2A6E6 with the proposed glyphs and with UTC as source for these ideographs.

10.2.4 Small Seal script

Input document:

[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

[4973](#) Comments on encoding Shuowen Small Seal; TCA, China; 2018-06-12

[4992](#) Comments on WG2 N4973 (Small Seal) Toshiya Suzuki; 2018-06-17

[4996](#) Response to WG2 N4992 (Small Seal); Selena Wei; 2018-06-20

Ms. Lin Mei Wei: Last year we had an ad hoc on Small Seal Script. We had to work on duplicates – the experts were from China and TCA. Document N4973 contains the results of our study. We have three kinds of duplicates – *Actual* duplicates, *Possible* duplicates and *non*-duplicates. I will report on the actual duplicates and possible duplicates. There are 15 actual

duplicates – example: you4 and you5. These should be encoded only once. Gong3 is an example of possible duplicate (13, 14 and 15 – have minor differences and are possible duplicates). The encoding of the possible duplicates should be separate. There were 5 such sets – with differences in some components. There are two characters with differences in the Font – TTF font has the correct glyph. There are 8 of these.

Mr. Toshiya Suzuki: Our comments on document N4973 are in document N4992. On the separate encoding of Shuowen and Guwen, the Guwen style has more needle shape. China and TCA want to have separate encodings for these. Distinction based on Zhuamwen, Zhouwen and Guwen are some additional items for Category B. If we use these styles as separate encoding criterion (as is in current proposal), Chinese and TCA experts do not include these under possible duplicates. Ex: 6957, 6958 and 6959. (Figure 2). Another example is of Horse glyphs. Should these be distinguished or not? I have expressed some concerns about dealing with the three as different scripts. Figures 4 and 5 show examples of semantically same but different glyphs – should these be distinct? I understand importance of Zhouwen. My suggestion is that if a character appears in all three – we could consider these as separately encoded. In other material beside Zhouwen, I suggest these should not be separately encoded.

Ms. Lin Mei Wei: Our response to Suzuki's feedback is in document N4996. Zhouwen is the main script – but others are also accepted and hence included for consideration for Small Seals. Even if there are minor differences, these should be encoded separately. Re: normalization – we could discuss in the future. Our need is requirement to encode Zhouwen. It is not a good idea to use NFKC or NFKD. Document N4973 was jointly prepared by China and TCA experts and is sufficient for needs of the scholars. Some of the stuff you consider should be encoded only once – I agree with that.

Discussion:

- a. Mr. Toshiya Suzuki: I did not mention normalization in my feedback. If we take old material for small seal – they should be normalized with Zhouwen characters.
- b. Mr. Michel Suignard: If there are different appearances, one could use IVSs equivalent. Show Zhouwen as the primary – and if glyph distinction is necessary to be preserved then you could use IVS. One should not encode obvious duplicates.
- c. Mr. Toshiya Suzuki: In document N4973, Figure 2 shows separate encodings for 06957, 8 and 9 at present. Should these be separate encodings?
- d. Ms. Lin Mei Wei: I agree we could use IVSs for these.
- e. Mr. Toshiya Suzuki: Should we continue the review of the script on current proposal or a new one.
- f. Mr. Michel Suignard: I mentioned to you about the need to replace the current background document with a new one. When do you expect a stabilized script proposal?
- g. Mr. Toshiya Suzuki: It may take one more year.
- h. Ms. Lin Mei Wei: We have plan to have one more ad hoc at the end of the year – likely in November. After that, we could submit a revised document.
- i. Mr. Toshiya Suzuki: We do have a mailing list with Unicode – but the traffic is low. There is more dialog between Chinese and TCA experts. The current feedback from TCA is from only about a week ago and we have not had time to review.
- j. Mr. Michel Suignard: Please let other experts know of the ad hoc meeting as early as possible.
- k. Mr. Andrew West: What is the script name? Shouwen Small Seal Script?
- l. Mr. Michel Suignard: No – Just Small Seal Script. We absolutely need a dictionary associated with the proposed script. As we do additional work, we may find more sources; these could be included until the finalization of the script. There can be extensions for additional characters– they will be all Small Seal. We have done similar work for other scripts – for example CJK. We need to make progress on Small Seal – it has been in the works for a number of years.

Relevant recommendation:

M67.28 (Small Seal script): WG2 recommends that SC2 note the progress made by the experts in document N4973, and encourages the experts to continue the work towards a contribution for encoding the script, taking into account the feedback documents and discussion at this meeting. WG2 notes that another ad hoc meeting of experts is planned by TCA in November 2018 in Taipei (tentatively), and invites all the interested experts to take note towards planning to attend the meeting.

10.2.5 Cypro-Minoan script

Input document:

4733 Revised proposal to encode the Cypro-Minoan script in the SMP; SEI/Michael Everson; 2016-07-22

Mr. Michael Everson: The proposal is for a small set of 140 characters, prepared in consultation with experts. The script is partially decoded. Some characters are unifiable per item 6 on page 3. In the proposal for Anatolian Hieroglyphs, for

example, we encoded all of them even though some of these are considered now as ghost characters. With Cypro-Minoan, the set being small, the experts believe it may be better to encode all of them. Dr. Ken Whistler has mentioned he is uncomfortable with such potential duplicates. I had introduced this proposal in Hohhot WG2 meeting and there has been no feedback since that time. I suggest we place this on a ballot to get some feedback – if it becomes controversial then we can postpone to another ballot. I would like WG2 to agree to put this in the next ballot without further delay.

Discussion:

- a. Dr. Deborah Anderson: I agree that we would like to make progress. I would like invite experts to an ad hoc meeting on the topic to discuss some of the issues.
- b. Mr. Andrew West: I do not see any point in delaying this any further now. There is some dispute on whether some characters are unifiable or not. The Egyptian hieroglyphs is full of these. For small set like this one, we should proceed to encode them, and let the users decide which one to use.
- c. Mr. Michel Suignard: I do have some sympathy to this partial decoding situation. The minimum should be to get this on the ballot as soon as we can. The CD ballot is still a few months away. I prefer to get the feedback from other experts soon. We should not be holding back the script due to lack of feedback.
- d. Mr. Michael Everson: There have been suggestions as unifiable –the names list has cross references for these. I would like the scholars to be able to use the script encoding.
- e. Mr. Peter Constable: Some of the UTC experts may not be experts on Cypro-Minoan. However, they are concerned about the long-term quality of the standard.
- f. Dr. Deborah Anderson: The script ad hoc of UTC will consider this.
- g. Mr. Michel Suignard: If we discover it needs more work, then we can postpone. The CD will not be ready for ballot for another month or so.
- h. Mr. Andrew West: It would be helpful if the national feedback is more detailed than just statement that ‘script x is not mature’.
- i. Mr. Michael Everson: There is good documentation on the sources for all these characters. That catalog is the basis for this proposal. I would like this script to go into ballot. It has been waiting too long.
- j. Dr. Deborah Anderson: I will try to get some feedback. I prefer not to include in CD at this meeting.
- k. Dr. Umamaheswaran: We could give the discretion of including the script in CD ballot to the editor, awaiting the feedback from UTC script ad hoc.

Disposition: Accept for potential inclusion in CD. Block range is changed to 12700..1278F.

Relevant recommendation:

Recommendation M67.22 (Cypro-Minoan script): WG2 recommends that SC2 accept the proposal on the Cypro-Minoan script in document [N4733](#), as a potential candidate for future encoding, in a new block named Cypro-Minoan in a new block 12700..1278F, and populate it with 140 characters with their names, code points and glyphs based on document [N4733](#).

10.3 Additions to existing scripts or blocks

10.3.1 Future Additions to ISO/IEC 10646

Input documents:

- [4011](#) Proposal to add heraldic hatching characters; Michael Everson; 2011-04-01
- [4913](#) Towards dealing with hair styles and colouring; Michael Everson; 2017-10-23
- [4966](#) Future Additions to ISO/IEC 10646 (April-May 2018); Unicode Consortium; 2018-05-04
- [4994](#) Future Additions to ISO/IEC 10646 (January 2018); Unicode Consortium; 2018-01-27

Documents [N4966](#) and [N4994](#) contain requests for future additions to the standard from deliberations in UTC and US national body, in the interest of maintaining synchronization between ISO/IEC 10646 and Unicode standards. Different agenda items at this meeting deal with the requests and documents referenced in these documents.

10.3.2 Characters for transliteration of Akson-Thai Noi

Input documents:

- [4927](#) Request to Add Thai Characters, [ISO/CD 20674-1Transliteration of Akson-Thai-Noi \(Protected\)](#), [Ballot](#) Nitaya Kanchanawan 2018-01-02
- [ISO/CD 20674-1Transliteration of Akson-Thai-Noi \(Protected\)](#)
- [4939](#) Thai-Noi Transliteration, answer to WG2 N4927 Martin Hosken, SIL 2018-02-20
- [4963](#) Towards a comprehensive proposal for Thai Noi / Lao Buhan script; Ben Mitchell, et al.; 2018-02-23

Mr. Martin Hosken: ISO TC46 received a proposal for transliteration of Thai Noi. It included a proposal to add 20+ characters to the Thai block. I analyzed their proposal. The response to the proposers is to try to encode first and then try the transcription after that. The suggestion was to unify the script with Tai Tham, and not with Thai. They need some subjoining characters, which are gone from Thai, whereas Tai Tham has them.

Discussion:

- a. Dr. Deborah Anderson: Document N4963 is the feedback from Mr. Ben Mitchell. The proposers should have enough feedback to come back with an encoding proposal.
- b. Mr. Michel Suignard: We should send the feedback documents to the authors of N4927.

Disposition: Dr. Deborah Anderson is to provide the feedback to the proposers of document N4927. (Mr. Michel Suignard will provide the contact names).

10.3.3 INVERTED CANDRABINDU for Sharada

Input document:

4930 Proposal to encode the INVERTED CANDRABINDU for Sharada; Anshuman Pandey; 2017-12-14

Dr. Deborah Anderson: The proposal is for one character 111CF SHARADA SIGN INVERTED CANDRABINDU. The document shows contrastive use with regular CANDRABINDU.

Disposition: Accept one new SHARADA character for inclusion in repertoire for next CD.

See relevant recommendation M67.19 item b, below.

M67.19 (Miscellaneous additions): WG2 recommends that SC2 accept the following additional characters with their glyphs as shown in document N4982R for future encoding in the standard:

- a. 111CE SHARADA VOWEL SIGN PRISHTHAMATRA E
- b. 111CF SHARADA SIGN INVERTED CANDRABINDU
- c. 11460 NEWA SIGN JIHVAMULIYA
11461 NEWA SIGN UPADHMANIYA
- d. 1145A NEWA DOUBLE COMMA
- e. Following **six** circled characters:
1F10D CIRCLED ZERO WITH SLASH
1F10E CIRCLED COUNTERCLOCKWISE ARROW
1F10F CIRCLED DOLLAR SIGN WITH OVERLAID BACKSLASH
1F16D CIRCLED CC
1F16E CIRCLED C WITH OVERLAID BACKSLASH
1F16F CIRCLED HUMAN FIGURE
- f. 11A48 ZANABAZAR SQUARE CLUSTER-INITIAL LETTER LA
11A49 ZANABAZAR SQUARE CLUSTER-INITIAL LETTER SA
- g. Following **seven** Tangut Component characters:
18AF3 TANGUT COMPONENT-756
18AF4 TANGUT COMPONENT-757
18AF5 TANGUT COMPONENT-758
18AF6 TANGUT COMPONENT-759
18AF7 TANGUT COMPONENT-760
18AF8 TANGUT COMPONENT-761
18AF9 TANGUT COMPONENT-762
- h. 08BE ARABIC LETTER PEH WITH SMALL V
08BF ARABIC LETTER TEH WITH SMALL V
08C0 ARABIC LETTER TTEH WITH SMALL V
08C1 ARABIC LETTER TCHEH WITH SMALL V
08C2 ARABIC LETTER KEHEH WITH SMALL V
- i. 08C3 ARABIC LETTER GHAIN WITH THREE DOTS ABOVE
08C4 ARABIC LETTER AFRICAN QAF WITH THREE DOTS ABOVE
- j. 0D81 SINHALA SIGN CANDRABINDU
- k. 0D04 MALAYALAM LETTER VEDIC ANUSVARA
- l. 31BB BOPOMOFO FINAL LETTER G
- m. Add following **ten** characters to Latin Extended-D block to support Medieval Cornish:
A7D0 LATIN SMALL LETTER A WITH OVERCURL
A7D1 LATIN SMALL LETTER E WITH OVERCURL
A7D2 LATIN SMALL LETTER I WITH OVERCURL
A7D3 LATIN SMALL LETTER M WITH OVERCURL
A7D4 LATIN SMALL LETTER N WITH OVERCURL
A7D5 LATIN SMALL LETTER R WITH OVERCURL
A7D6 LATIN SMALL LETTER S WITH OVERCURL
A7D7 LATIN SMALL LETTER T WITH OVERCURL
A7D8 LATIN SMALL LETTER U WITH OVERCURL
A7D9 LATIN SMALL LETTER Y WITH OVERCURL
- n. Add following **five** counting rod numerals (moved out from PDAM 2.2):

- 1D379 SOUTHERN SONG COUNTING ROD UNIT DIGIT FOUR
- 1D37A SOUTHERN SONG COUNTING ROD UNIT DIGIT FIVE
- 1D37B SOUTHERN SONG COUNTING ROD UNIT DIGIT NINE
- 1D37C SOUTHERN SONG COUNTING ROD TENS DIGIT FIVE
- 1D37D SOUTHERN SONG COUNTING ROD TENS DIGIT NINE
- o. A7C0 LATIN CAPITAL LETTER THORN WITH DIAGONAL STROKE
- A7C1 LATIN SMALL LETTER THORN WITH DIAGONAL STROKE

10.3.4 PRISHTAMATRA for Sharada

Input document:

[4931](#) Proposal to encode the Prishthamatra for Sharada; Srinidhi. A and Sridatta. A; 2017-10-13

Dr. Deborah Anderson: The proposal is for one new combining character 111CE SHARADA VOWEL SIGN PRISHTAMATRA E. The document has examples of its use in sequences.

Disposition: Accept one new SHARADA combining character for inclusion in repertoire for next CD.

See relevant recommendation M67.19 item a on page 27.

10.3.5 JHVAMULIYA and UPADHMANIYA for Newa

Input document:

[4932](#) Proposal to encode JHVAMULIYA and UPADHMANIYA for Newa; Srinidhi A, Sridatta A; 2017-12-08

Dr. Deborah Anderson: The proposal is for two new characters - 11460 NEWA SIGN JHVAMULIYA and 11461 NEWA SIGN UPADHMANIYA.

Mr. Peter Constable: They have special behaviours in Newa.

Disposition: Accept two new NEWA characters for inclusion in repertoire for next CD.

See relevant recommendation M67.19 item c on page 27.

10.3.6 DOUBLE COMMA for Newa

Input document:

[4933](#) Proposal to encode the DOUBLE COMMA for Newa; Srinidhi. A, Sridatta. A; 2017-12-24

Dr. Deborah Anderson: The proposal is to add 1145A NEWA DOUBLE COMMA. They had unified this character earlier; but now they have identified a double comma. The UTC has reviewed it and it is OK.

Disposition: Accept NEWA DOUBLE COMMA character for inclusion in repertoire for next CD.

See relevant recommendation M67.19 item d on page 27.

10.3.7 Creative Common (CC) license symbols

Input documents:

[4934](#) Proposal to add Creative Common (CC) license symbols; Creative Commons Corporation; 2017-07-24

[4966](#) Future Additions to ISO/IEC 10646 (April-May 2018); Unicode Consortium; 2018-05-04

[4994](#) Future Additions to ISO/IEC 10646 (January 2018); Unicode Consortium; 2018-01-27

Dr. Deborah Anderson: Document [N4934](#) proposes 7 circled symbols used in Creative Common similar to Copyright symbol. It shows examples of use. Document [N4994](#) shows updates to the code points and some names. Only 6 of these have been accepted by UTC. The Circled Equal character was not accepted. Document [N4966](#), towards the end, shows further corrections to document [N4994](#).

Disposition:

Accept 6 creative commons characters for inclusion in repertoire for next CD. Document [N4982](#) shows final position in the bucket.

See relevant recommendation M67.19 item e on page 27.

10.3.8 Two additional letters for Zanabazar Square

Input documents:

[4945](#) Proposal to encode two additional Zanabazar Square letters Andrew West 2018-04-20

[4977](#) Comments on WG2 #67 (June 2018) documents [Khitani SS and Zanabazar Square] Deborah Anderson, et al. 2018-06-09

Mr. Andrew West: During implementation of a font for Zanabazar Square used in Mongolia, I encountered a problem with writing characters such as RA+KA etc. The document shows examples for Sanskrit and Tibetan syllables. Many Zanabazar Square examples that I have seen use the squished form, as in the Tibetan syllable examples. Since we need the two forms, we need to cluster with initial letter similar to what we have in Soyombo. Examples of sub-joint forms are given. Since Zanabazar Square script is not widely used, I have not been able to find contrastive use of squished and non-squished forms. I

have discussed this with Dr. Anshuman Pandey and he agrees with the proposal. The proposal is to add two Zanabazar Square characters.

Discussion:

- a. Dr. Deborah Anderson: The feedback is to get some clarification of use of the marks. How would you support the various compressed and uncompressed glyphs shown in the different figures?
- b. Mr. Andrew West: Examples in Figures 3 or Figure 4 are showing what they should look like. In other figures, some of characters appear chopped compared to Figures 3 and 4. I can update the document to showing use of ligation or compression.
- c. Mr. Michael Everson: The structural use of Tibetan versus Sanskrit orthographies is the main intention. The font that is used can influence the ligation etc. We can accept the proposed characters for inclusion.
- d. Dr. Deborah Anderson: It should be OK.

Disposition: Accept two new Zanabazar Square characters for inclusion in repertoire for next CD. The glyphs should have a square frame instead of dotted circle.

See relevant recommendation **M67.19 item f** on page 27.

10.3.9 Code point for Square Japanese New Era Name

Input document:

[4949](#) Request to reserve the code point for square Japanese new era name; Japan; 2018-05-23

Mr. Michel Suignard: We have tentatively reserved a code point for the upcoming new Japanese era name. We do not have a name, nor a glyph for this character. February 2019 is the date for finalizing these.

Discussion:

- a. Mr. Peter Constable: The UTC will treat it like any other currency symbol; we may have to act to encode this character with minimum delay, whereas SC2's process may take more time.
- b. Mr. Wataru Takagi: WG2 could mark it as reserved. The implementers need to know ahead of time what the code point is.
- c. Mr. Michael Everson: We could recommend to SC2 to accept the new Japanese Era name at 32FF pending the availability of its name and glyph.

Disposition: Accept to make recommendation suggested

Relevant recommendation:

M67.23 (Code point for Square Japanese New Era Name): WG2 recommends that SC2 accept the request for future encoding of the new Japanese Era name at code point 32FF, pending availability of its name and glyph.

10.3.10 Seven additional Tangut components

Input document:

[4957](#) Proposal to encode seven additional Tangut components Andrew West 2018-06-01

Mr. Andrew West: We have added several Tangut components, used typically for Indexing etc. There were no known examples of use for the proposed seven components when we added those – modern scholars were the primary users. Then an additional text came to our attention – it does list Tangut components in two folios. It shows the component and example character using that component in different scripts. There are 7 out of 230 that we have not encoded. We encountered a couple of these components, which were not encoded. Some components in low-resolution examples were not clear. In November 2017, we discovered a higher resolution document. Some publications on Tangut use these components – showing three of the not-encoded characters.

Mr. Michael Everson: It is gratifying to know that modern scholars are not the only users of these.

Mr. Michel Suignard: I would need an updated font for these.

Disposition: Accept 7 Tangut component characters (see page 12 of [N4957](#)) for inclusion in repertoire for next CD.

See relevant recommendation **M67.19 item g** on page 27.

10.3.11 Additional Arabic characters for Hausa

Input document:

[4959](#) Proposal to encode additional Arabic script characters for Hausa; Lorna Evans, Andy Warren-Rothlin; 2018-04-26

Mr. Martin Hosken: The proposal is to add two new Arabic characters for use in Ajani In some part of Africa.

08C3 ARABIC LETTER GHAIN WITH THREE DOTS ABOVE

08C4 ARABIC LETTER AFRICAN QAF WITH THREE DOTS ABOVE

Dr. Deborah Anderson: The UTC has reviewed this proposal. The script ad hoc of UTC had requested the authors to fix some errors. This document [N4959](#) has the corrections in it.

Disposition: Accept the proposed two new Arabic characters for inclusion in repertoire for next CD.
See relevant recommendation M67.19 item i on page 27.

10.3.12 Arabic characters for Hindko

Input documents:

[4961](#) Proposal to include Hindko alphabets; Lateef Sagar Shaikh; 2018-01-17

[4962](#) Hindko additions for Arabic; Deborah Anderson, Roozbeh Pournader; 2018-05-02

Mr. Peter Constable: Five pre-composed Arabic characters used in Hindko in Pakistan are proposed. Document [N4961](#) has examples and references. Document [N4962](#) has corrected names from original proposal.

Mr. Toshiya Suzuki: Do the users of the script use these character names?

Mr. Peter Constable: Names of other similar encoded characters is the basis for these names.

Disposition: Accept the proposed four new Arabic characters for inclusion in repertoire for next CD.

See relevant recommendation M67.19 item h on page 27.

10.3.13 Emoji additions to Unicode 12.0

Input document:

[4960](#) ESC Emoji Recommendations for 2018Q2; UTC Unicode Emoji Sub-Committee; 2018-05-03

Mr. Michel Suignard: The document has the next batch of emoji from Unicode Emoji Sub Committee that is in the Unicode pipeline for Unicode 12.0.

Discussion:

- a. Mr. Peter Constable: We are providing this document for feedback from WG2 experts. Input from vendors participating in the Emoji Sub Committee is the basis. I cannot make comment on the rationale for any of these. There are coloured circles etc.
- b. Mr. Andrew West: I have comments on several characters in the proposal. Yawning Face is not necessary since we have another character at 1F62B with equivalent meaning. Standing Person -we do have standing man, woman etc. – why do we need another standing person? Kneeling Person – the rationale is clear – standing, sitting, kneeling etc. Hearing Aid – the glyph looks like an ear – one feedback I received was this is offensive. Do we need a Bikini when we have Bathing Suit? Why do we need Briefs vs Shorts – two kinds of underwear? Because these are popular words, why do we need emoji for these? 1F9BA – Service Animal – how many service animals may be there? What is its use case? OTTER versus SEAL – have issues with names vs glyphs. Garlic vs Onions – UTC says we should keep together things with similar concepts. Banjo is going to invite emoji for other musical instruments. Chair - we have a chair already. ESC has invented the Colour Squares with no justification. How are these going to be used? We should not be imposing all these on users – we need to do some research with user groups.
- c. Mr. Peter Constable: All these comments are useful – please provide your comments as feedback.
- d. Mr. Michael Everson: I will differ from Mr. Andrew West on the characters for colour. We do have some coloured ones from the original emoji. Regarding the coloured squares, we have 25A4 – horizontal heraldic boxes in year 2017 document. You can see symbols for the different colours in document [N4913](#). Geometric shapes block has some of these square coloured ones already.
- e. Dr. Lu Qin: Coming from IRG, I get the impression we seem to be encoding symbols without any end in sight. Where is the limit? We are going backwards in our encoding.
- f. Mr. Peter Constable: Many in UTC have raised this question when the original Japanese set came in. The larger the set gets, there is going to be difficulty for I/O etc. Onion vs Garlic, for example, are items that ESC would be considering. All the feedback we received are valuable.
- g. Prof. Kyongsok Kim: Where is the limit for emoji? It looks it may become its own language.
- h. Mr. Michel Suignard: There is no grammar, no structure etc. We can revise the proposal by eliminating duplicates.
- i. Mr. Peter Constable: Per document [N4903](#), one can send feedback to the UTC via WG2 email list notification. One could also send feedback directly to UTC.
- j. Dr. Deborah Anderson: The UTC is about 4 weeks away. The earlier you provide the feedback the better it will be.

Disposition: Remove the 4 duplicates for the colours. Document [N4982](#) is the repertoire for the next CD containing the code points from PDAM 2.2 and from document [N4960](#) from UTC emoji sub-committee.

Relevant recommendation:

M67.17 (Emoji additions): WG2 recommends that SC2 accept the following 63 (60 from document [N4960](#) and 3 moved from PDAM 2.2) characters for future encoding with their glyphs as shown in document [N4982R](#):

1F6D5 HINDU TEMPLE; 1F6FA AUTO RICKSHAW;

1F7E0 LARGE ORANGE CIRCLE; 1F7E1 LARGE YELLOW CIRCLE; 1F7E2 LARGE GREEN CIRCLE; 1F7E3 LARGE PURPLE CIRCLE;

1F7E4 LARGE BROWN CIRCLE; 1F7E5 LARGE RED SQUARE; 1F7E6 LARGE BLUE SQUARE; 1F7E7 LARGE ORANGE SQUARE;

1F7E8 LARGE YELLOW SQUARE; 1F7E9 LARGE GREEN SQUARE; 1F7EA LARGE PURPLE SQUARE;
1F7EB LARGE BROWN SQUARE; 1F90D WHITE HEART; 1F90E BROWN HEART; 1F90F PINCH; 1F93F DIVING MASK;
1F971 YAWNING FACE; 1F979 TROLL; 1F97B SARI; 1F9A3 MAMMOTH; 1F9A4 DODO; 1F9A5 SLOTH; 1F9A6 OTTER;
1F9A7 ORANGUTAN; 1F9A8 SKUNK; 1F9A9 FLAMINGO; 1F9AA OYSTER; 1F9AE GUIDE DOG; 1F9AF PROBING CANE;
1F9BA SERVICE ANIMAL VEST; 1F9BB EAR WITH HEARING AID; 1F9BC MOTORIZED WHEELCHAIR;
1F9BD MANUAL WHEELCHAIR; 1F9BE MECHANICAL ARM; 1F9BF MECHANICAL LEG; 1F9C3 BEVERAGE BOX; 1F9C4 GARLIC; 1F9C5
ONION; 1F9C6 FALAFEL; 1F9C7 WAFFLE; 1F9C8 BUTTER; 1F9C9 MATE DRINK; 1F9CA ICE CUBE; 1F9CD STANDING PERSON; 1F9CE
KNEELING PERSON; 1FA70 BALLET SHOES;
1FA71 ONE-PIECE SWIMSUIT; 1FA72 BRIEFS; 1FA73 SHORTS; 1FA78 BLOOD DROP;
1FA79 ADHESIVE BANDAGE; 1FA7A STETHOSCOPE; 1FA80 YO-YO TOY; 1FA81 KITE; 1FA82 PARACHUTE; 1FA90 RINGED PLANET;
1FA91 CHAIR; 1FA92 RAZOR; 1FA93 AXE; 1FA94 DIYA LAMP; 1FA95 BANJO.

Emoji ad hoc (document N5003)

An ad hoc group met on better interworking on emoji between the UTC and WG2. Their report is in document N5003 Emoji Ad Hoc Report (London, UK) Deborah Anderson (SEI) 2018-06-20.

Relevant recommendation:

M67.29 (Emoji Ad hoc): WG2 recommends that SC2 take note of the report from WG2 Emoji ad hoc meeting in document N5003 on improved interworking between WG2 and the Unicode Consortium.

10.3.14 CANDRABINDU SIGN for Sinhala

Input document:

[4964](#) Proposal to encode the CANDRABINDU for Sinhala; Srinidhi A, Sridatta A; 2018-02-05

Dr. Deborah Anderson: This particular character proposal raised some questions from Sri Lanka. There was some feedback from some experts that it is useful in Sinhala in some material.

Disposition: Accept the proposed the SINHALA character for inclusion in repertoire for next CD.

See relevant recommendation M67.19 item j on page 27.

10.3.15 VEDIC ANUSVARA for Malayalam

Input document:

[4965](#) Proposal to encode MALAYALAM LETTER VEDIC ANUSVARA; Srinidhi. A, Sridatta. A; 2017-12-08

Dr. Deborah Anderson: The proposal for one Malayalam character. It has several examples of use. The UTC reviewed it and agreed to its encoding.

Disposition: Accept the proposed the MALAYALAM character for inclusion in repertoire for next CD.

See relevant recommendation M67.19 item k on page 27.

10.3.16 Fix six glyphs and add a letter in Bopomofo

Input document:

[4980](#) Proposal to fix glyphs in Bopomofo extended block and encode one Bopomofo letter; Selena Wei, et al. (TCA); 2018-06-13

Ms. Lin Mei Wei: The proposal is to fix six glyphs and add one new character in Bopomofo. The rationale and the required changes in the glyphs for Bopomofo are given. The new proposed character is 31BB BOPOMOFO LETTER FINAL LETTER G. There should be an annotation to use this as preferred character to 31B6. The glyph is a smaller version of 310D.

Disposition: Accept the proposed the 7 Bopomofo glyph changes and one new Bopomofo character for inclusion in repertoire for next CD.

See relevant recommendation M67.19 item l on page 27, for the new character.

10.3.17 Proposal to encode a Subscript Solidus

Input document:

[4985](#) Proposal to encode a Subscript Solidus Karl Pentzlin 2018-06-12

[2788](#) Proposal to encode six Indo-Europeanist phonetic characters in the UCS; Deborah Anderson and Michael Everson; 2004-06-07

Mr. Karl Pentzlin: I have encountered the character proposed in document N4985 in use for classification of fire protecting doors DIN EN 13501. A set of characters for Linguistic purposes in document N2788, proposed by Deborah and Michael Everson several years ago, included this character. I also got feedback from the UTC that they do not want to open the door for symbols without showing usage etc. Here we have two instances of use of this character.

Discussion:

- a. Mr. Peter Constable: It is not clear to me that there is a need for this in plain text. There are other ways to handle the subscript solidus in fancy text.

- b. Mr. Michael Everson: Linguistics use the subscripted solidus etc. for some purposes. Some experts may consider fancy text is the way to go etc. We already have subscripted numbers and many subscripted letters, some symbols etc. In the absence of subscripted solidus, they can only use the regular solidus in baseline, with some fancy text. If we send this character to a database and then try to retrieve it, the fancy text gets lost. In Mathematics, they have special software for many such needs. We can use these as notations in linguistics.
- c. Mr. Peter Constable: From Oxford dictionary, they were stacking letters for similar function that you described with use of subscripted notations. It is really a presentation issue, to show how to present something.
- d. Mr. Karl Pentzlin: The DIN authors may have used this character without any knowledge of ISO/IEC 10646. Some order handling systems that need to carry the characters from this standard are handling using ‘S-subscript a/S-subscript m’ etc. They are using stopgap measures.
- e. Mr. Peter Constable: I would like to see an example of order confirmation system needing these.
- f. Mr. Karl Pentzlin: What is the harm in adding?
- g. Mr. Peter Constable: The order confirmation system will end up in having to deal with dual encoding system, and potential complexity because of that.
- h. Prof. Karljürgen Feuerherm: Databases are not for fancy text – as long as they keep the data and send it back, it is good. How it looks is a presentation issue. Fancy text should use markup.
- i. Mr. Michael Everson: My argument is that we have some instability with Linguistics use of subscripted notations with the solidus missing.
- j. Mr. Andrew West: I think the case from DIN is not very strong. Users of subscripted characters for Linguistics purposes may benefit in completing the set. The justification needs examples that are more convincing.
- k. Mr. Michel Suignard: One could add markup like _{Solidus} etc. I do have some sympathy for the Linguistics case but much less for the DIN case.
- l. Mr. Peter Constable: In addition to more appropriate examples, a description of what may happen in database searches etc. is also needed.
- m. Mr. Michel Suignard: One has to keep in mind that both super and subscript forms of symbols are in the block.
- n. Mr. Michael Everson: I suspect most of these came from legacy sets. The letters are recent additions.

Disposition: Invite the authors to provide a revised proposal, taking into account the feedback from this meeting.

10.3.18 MIDDLE ASTERISK character

Input document:

[4983](#) Proposal to encode a Middle Asterisk; Karl Pentzlin; 2018-06-11

Mr. Karl Pentzlin: Under telephone symbols we have on mobile phones Asterisk, Hash tags etc. The currently encoded character that is not in line with Hash tags on the phones. When we were working on DIN and associated typography. There are several asterisks in various blocks in the standard. There is a similar mathematical character. However, we prefer not to misuse it for a telephone symbol. We are proposing this new character not to conflict with other asterisks in the standard.

Discussion:

- a. Mr. Michael Everson: When we designed symbols there are Webdings we have 5 and 6 stroke asterisks of different weights. They do not allow for glyph variants in fonts.
- b. Mr. Michel Suignard: The most widely used asterisk is the 6-spoke version in i-phone.
- c. Mr. Peter Constable: You are trying to over-engineer here. Over the last so many years, no one had problems to write documentation using regular asterisk. Something that looks like a ‘star’
- d. Dr. Umamaheswaran: You are also seeking various font sizes etc. Using a regular asterisk and using different font should work in documentation.
- e. Mr. Michael Everson: You could use, for example, 1F7B7 in the standard informatively with any notes regarding its size etc.

Disposition: Not accepted.

10.3.19 Additional symbols from ISO/IEC 9995

Input documents:

[4984](#) Proposal to incorporate the symbols of ISO/IEC 9995-7:2009 and its Amd 1 and of ISO/IEC 9995-10:2013; JTC1/SC35; 2018-06-12

[4986](#) Feedback on N4984 (encoding of symbols from ISO/IEC 9995); Deborah Anderson, Peter Constable; 2018-01-09

[4997](#) Response on WG2 4986 (Feedback on Keyboard Symbols SC2 N4522); Karl; 2018-06-18

Mr. Karl Pentzlin: Several symbols from ISO/IEC 9995 of 2007 were included in ISO/IEC 10646 a few years ago. Keyboard layout standards have added several more symbols since then. We requested to add these symbols to ISO/IEC 10646 for proper documentation. I have shown examples of the revised ISO and DIN keyboard standard. When we published the

revised standard, we had to use PUAs since we do not have standardized code points. This is not the first time we have presented the request to WG2.

Discussion:

- a. Mr. Andrew West: This has been requested a number of times. I do not see any reason not to encode them.
- b. Mr. Michael Everson: I have seen the feedback document. UCS is also an ISO standard – the request has been for symbols on keyboard layout engravings. There is room for including those in UCS. It is reasonable to include these. There are also alternate ways to include them in the documentation.

N4986 – feedback document

Discussion:

- a. Dr. Deborah Anderson: Are there any examples to show these in print?
- b. Mr. Karl Pentzlin: In printing the DIN standard, we used code points for existing characters but not for those that were missing.
- c. Mr. Peter Constable: The concern I have is that – these characters are originating from SC35 and they are inventing them. Do you use them like other symbols? You have not demonstrated with evidence of their use.
- d. Mr. Michel Suignard: Do actual keyboards use these symbols? If you can provide examples showing major providers of keyboards are using them, it will make a stronger case. A subset of the proposed symbols, with strong evidence of use, could be progressed. There is some reluctance on accepting the full set.
- e. Dr. Deborah Anderson: I can show you some examples of what has been done in other cases.
- f. Mr. Karl Pentzlin: Yes – keyboard layouts do use them.
- g. Mr. Alain LaBontè: When you want to provide documentation on what key to press etc., we need code points.
- h. Mr. Michel Suignard: We should be able to progress a subset. We need proof of use for other symbols by big manufacturers of keyboard layouts.
- i. Mr. Alain LaBontè: Cherry is one manufacturer in Germany which is using these.
- j. Mr. Karl Pentzlin: This document is a revision of the previous submission. Currently SC35 website may be using PUAs for these symbols.

Disposition: Invite the authors to provide a subset of characters that could be progressed. We would need more evidence of use for characters outside the subset.

10.3.20 Latin characters for Medieval Cornish

Input document:

[4907](#) Proposal to add one combining character for medieval Cornish; Michael Everson et al; 2017-10-17

Mr. Michael Everson: We introduced this proposal in Hohhot WG2 meeting. National bodies had time to review and we had one small comment. This character is urgently required – I have a pre-publication draft of a book on Cornish. The alternative is to use a PUA or a combining circle mark as a kludge. We discovered two characters that were not encoded. One of these is under ballot. The other one is missing was a diacritical mark used in abbreviation, which one could read as, for example, ‘am’ or ‘an’ etc. Latin and Middle English also make use of it. One of the properties – was ‘attached to the right’. We do not think it is appropriate - its use is in Paleographic orthography etc. We could code these atomically. However, we do not want to do it since there could be more. The only feedback we received was from Mr. Rouzbeh Pournader - ‘possible difficulty’ in fonts to render correctly.

Discussion:

- a. Mr. Peter Constable: One of the feedback we received was ‘we do not want to have combining mark’. Can it be a glyph variant of another mark?
- b. Mr. Michael Everson: If we use atomic encoding – it would complicate searches etc. If we unify it with another – that is always unattached, then the behaviour of attached is not replicated. The over curl does not always have nasal reading like the breve above. Medieval English also uses it. If the absence of encoding of this medieval abbreviation, some other symbol has to be used by current publications. It is also wrong to unify with Breve above.
- c. Prof. Karljürgen Feuerherm: Are you saying that it is a nasalization?
- d. Mr. Michael Everson: The difference is sometimes it is not a nasalization – but an abbreviation.
- e. Prof. Karljürgen Feuerherm: I am favouring use of the over curl for nasalization, but not also for decorative use.
- f. Mr. Andrew West: In medieval English sometimes you have marks that behave like that.
- g. Mr. Peter Constable: I strongly object to a combining mark. Everyone looking at our standard looks at what any combining mark combines with. We have atomic encoding for phonetic characters we need, with this aspect as one of the reasons.
- h. Mr. Michael Everson: You would prefer to have atomic encoding. Ligation shortcomings in fonts will not cause problems since it will still be legible. Medievalists who design special fonts can ligate properly.

- i. Mr. Andrew West: Would Mr. Peter Constable be opposed to atomic character encoding?
- j. Mr. Peter Constable: No.
- k. Mr. Michel Suignard: Can we come up with a set of these? Is it productive?
- l. Mr. Michael Everson: There can be more from medieval English.
- m. Mr. Peter Constable: If there is a dependency on the combining mark having a dependency on attachment points to the base character, it causes complexity for rendering and fonts. Preference for these is to have atomic encodings. This is the case for some of the Phonetic marks.
- n. Mr. Michael Everson: I can prepare a list of pre-composed characters that seem to get some consensus.
- o. Dr. Umamaheswaran: is there any Case stability issue?
- p. Mr. Michael Everson: No. We are defining SMALL letters.

Disposition: Accept the proposed ten Latin Extended-D characters for inclusion in repertoire for next CD.

See relevant recommendation **M67.19 item m** on page 27.

10.3.21 Southern Song forms of Counting Rods

Input document:

[4868](#) Revised proposal to add Southern Song forms of counting rods as separate characters; Eduardo Marin Silva; 2017-08-02

Mr. Michel Suignard: These were not included in PDAM 2.2, and needed feedback. We will put it back in ballot.

Disposition: Include the removed characters in the repertoire for next CD.

See relevant recommendation **M67.19 item n** on page 27.

10.3.22 THORN with diagonal stroke

Input document:

[4836](#) Proposal to add LATIN LETTER THORN WITH DIAGONAL STROKE, revised; Andrew West, Michael Everson; 2017-10-17

Mr. Andrew West: Introduced the document. It has a large number of examples of use through 450 years.

In the Norse tradition, of which we have fewer examples, it is with horizontal stroke. Changing the glyph of Thorn with horizontal stroke (A765) to diagonal stroke would be disruptive. The reverse case of using the existing one for diagonal stroke is also disruptive.

Discussion:

- a. Mr. Michael Everson: This character was taken out of PDAM 2.2 based on an assertion by US national body that ‘they are glyph variants’. There was no proof.
- b. Mr. Peter Constable: This is a new document – cannot really comment on it on this. On the previous document, we did make an input that they are glyph variants – though we did not provide the rationale. Looking at several other characters, a diagonal stroke cutting across a letter is different from having a diagonal stroke only at the top of the stem of the Thorn. Latin letter L has distinction between horizontal and diagonal. A few of them existed in the standard from the start. We suspect they are from older standards for compatibility reasons. We do have Q with a diagonal stroke. The reading of the Thorn with horizontal and diagonal is the same – that makes it question if are these unifiable. You have given examples of typographical variations – the author was possibly not careful to use the right glyph. If that was the case, that gives the reason to change the glyph in the current standard.
- c. Mr. Andrew West: If the usage of these characters were identical, then they unification is possible. However, since the horizontal stroked Thorn has been in the standard for several years, it is not wise to change it now.
- d. Mr. Michael Everson: The current character glyph is for supporting the Norse tradition. If we change the glyph now they would be unhappy. The Norse and Saxon texts were similar even though the writing of this stroked Thorn has been different over centuries in print and manuscripts.
- e. Mr. Andrew West: The medievalists typically use the encoded Thorn with horizontal stroke and the Thorn with the diagonal stroke in the PUA.
- f. Dr. Deborah Anderson: Are there any contrastive examples?
- g. Mr. Andrew West: There may be examples from conferences etc. where the same documents submitted in one way and printed in another way!
- h. Mr. Toshiya Suzuki: A Wikipedia search for thorn with stroke cites the articles by Michael Everson and Andrew, saying the English ones use a diagonal form and Nordicists use the horizontal. There seem to be already using forms interchangeably. My concern is impact on current users of existing form as an alternative to preferred form.
- i. Mr. Michael Everson: Some in the user community may be using current form because they do not have a choice. I agree that there is a cost for dis-unification. However, this is the kind of dis-unification the user group will be happy about.

Disposition: Include the Thorn with Diagonal Stroke characters at AC70 and AC71 that were removed from PDAM 2.2, in the repertoire for next CD.

See relevant recommendation **M67.19 item o** on page 27.

10.4 Miscellaneous Proposals

10.4.1 Development of CJK Regional Supplements of Ideographs

Input document:

[4948](#) Proposal to start dev. of CJK Regional Sup. Ideographs and terminate dev. of CJK Unified Ideographs; Japan; 2018-05-15

Mr. Toshiya Suzuki: Page 2 in document [N4948](#) has a table showing the majority of ideographs, unified from many sources. The single-source characters are increasing in the work of CJK. For example in Ext. E or Ext. F, there are single sources.

Discussion:

- a. Mr. Michel Suignard: More and more we are getting horizontal extensions. The single source is just at the time the coding was done. We are seeing usage of many CJK characters way beyond the original sources. For example, when we were looking at the new Japanese collections – they do not have information of J source. The argument about the single source is flawed.
- b. Mr. Toshiya Suzuki: Mr. John Jenkins had made a similar comment at IRG. This document addresses that comment. See the paragraph under the table.
- c. Mr. Peter Constable: Are you suggesting that if we have future Ideograph blocks without the unification exercise, they are going to be a single column chart?
- d. Mr. Toshiya Suzuki: The author of the proposal claims that in the future there will be a Chinese Supplement, a TCA Supplement etc.
- e. Mr. Michel Suignard: Will an ideograph from the Chinese supplement be used also in Japanese?
- f. Mr. Toshiya Suzuki: If there is potentially unifiable character, in the future, each supplement will encode it separately.
- g. Mr. Andrew West: If you have a Chinese block and a Japanese block – if both propose similar character and semantic you will code them separately. For example, China uses Vietnamese ideographs.
- h. Dr. Lu Qin: We appreciate Japanese national body has done the work on statistics about unification. IRG had some discussion. If the submitter proposes an ideograph without a collective review that could lead to duplicate encoding etc. We do appreciate the work to try to simplify the IRG unification exercise.
- i. Mr. Michel Suignard: The proposal goes against the unification exercise that is in place almost from the start. The proposal does not adequately consider the future use of an ideograph from users other than original proposer.
- j. Mr. Wataru Takagi: The intent of the author of the proposer was to make everybody think about simplifying the work of IRG.
- k. Dr. Lu Qin: We will encourage all experts to come up with proposals to simplify the work of IRG. The current Japanese proposal has many issues.
- l. Mr. Andrew West: We very much appreciate input from Japan. Several IRG experts are frustrated due to current IRG process of review etc.
- m. Mr. Michel Suignard: If an ideograph does not get into a working set of a particular year, it takes a few more years before further consideration. One possibility is to allow minor additions to current Working Set.
- n. Dr. Lu Qin: IRG had lot of help from several experts outside the nominated experts. We have improved on the old system of using only the editors nominated by IRG member bodies. IRG has now input from larger group of experts and contributors by opening up the participation in an online system we are trying out.

Disposition: Invite the Japanese national body to consider the feedback.

Relevant recommendation:

M67.30 (IRG Process): WG2 recommends that SC2 welcome the input from Japanese national body on improving the working of IRG (in document [N4948](#)), and invites the Japanese national body to take into consideration the feedback from the discussion in WG2.

10.4.2 Updated MOJI-JOHO-KIBAN IDEOGRAPHS collection

Input document:

[4955](#) A proposal to add updated MOJI-JOHO-KIBAN IDEOGRAPHS in Annex A, [JMJKI-2017.txt](#); Japan; 2018-05-28

Mr. Shuichi Tashiro: The proposal is to add updated Moji-Joho-Kiban Ideographs as a new fixed collection and deprecating the existing collection.

Discussion:

- a. Dr. Deborah Anderson: Did Japan update the IRG property to include the J-sources for the updated Moji-Joho-Kiban Ideographs?
- b. Mr. Michel Suignard: J-source information is useful and we should consider including it along with the collection. It is important to know which CJK character and its associated glyph the collection uses.
- c. Dr. Lu Qin: Some of the characters used in this collection – may not have an entry in the J-column as source of CJK.

Disposition: Add the requested collection as collection number 391 MOJI-KIBAN-IDEOGRAPHS '2018', with some text indicating to use new collection 391 instead of current 390.b

Relevant recommendation:

M67.11 (Moji-Joho-Kiban-Ideographs collection): WG2 recommends that SC2 accept adding a new collection #391: MOJI-JOHO-KIBAN-IDEOGRAPHS 2018 to the standard (based on document N4955), with a note that this collection should be used instead of the current collection # 390.

10.4.3 Korean CJK Horizontal Extension

Input document:

4968 A proposal requesting a horizontal extension of 152 Hanja chars, [data concerning K6 source](#); KIM Kyongsok; 2018-06-01

Prof. Kyongsok Kim: The proposal is to add sources and glyphs – 152 Hanja characters from KS X1027-5:2014 standard. IRG has reviewed the proposal.

Disposition: Accept for inclusion in CD. A new K6 source KS X1027-5:2014 has to be added to the standard.

Relevant recommendation:

M67.12 (New K6 source KS X 1027-5:2014): WG2 recommends that SC2 accept adding new K6 source corresponding to KS X 1027-5:2014, and corresponding Ideograph glyphs and source code points for 152 CJK Unified Ideographs as proposed in document N4968 in the standard.

10.4.4 IICORE changes and additions

Input document:

4969 Proposed IICore Changes & Additions; Ken Lunde, Jaemin Chung; 2018-06-01

Mr. Michel Suignard: The document is a contribution prepared primarily by Dr. Ken Lunde and reviewed by Mr. Jaemin Chung. Some K source characters do not have K source entries for characters in IICORE set. Two characters need J sources. Some for HKSAR and Macau SAR. It also points to some entries, which will need orphaned IDs. The IICORE is in heavy use. It gives a hint of the need – the why and where - of an ideograph. The proposal is to create a new version of IICORE correcting all the errors found after review by Dr. Ken Lunde. We could have updated existing IICORE collection – it is a fixed collection. However, we should leave it alone. Create a new collection and call it something else.

Discussion:

- a. Prof. Kyongsok Kim: The assumption is that some characters are same as KSX 1001. At the creation time of IICORE, they were not part of the requirements. The request to the member bodies was to submit what was useful for them.
- b. Mr. Michel Suignard: It does not make sense. Many people think that to have better designed IICORE. The basis for including the K value is KSX 1001, which is actually in use in Korea. When you create pan-CJK applications, you run into all sorts of issues. You can continue to use existing IICORE if you wish. This will be a new collection.
- c. Mr. Toshiya Suzuki: National bodies agree on the ideographs needed in each country or region in the IRG. Can other experts from outside national bodies bring in requirements?
- d. Prof. Kyongsok Kim: We submitted only some normalized forms from the characters in KSX 1001 to IICORE. We use the normal forms instead of those in K0 collection. Characters like 3960 are in K3.
- e. Mr. Peter Constable: Why are the really-needed characters not in K0?
- f. Prof. Kyongsok Kim: I have provided my comments on this document to IRG and IRG will consider them at its next meeting.

Disposition: Await IRG feedback.

10.4.5 Removal of K1-6B6B from U+8C6C

Input document:

4972 Request to remove K1-6B6B from U+8C6C; Jaemin Chung; 2018-06-05

Mr. Michel Suignard: We have moved the K source from 8C6C to 27CEF. The unification is wrong.

Discussion:

- a. Dr. Deborah Anderson: Dr. Ken Lunde has pointed out that one of the DPRK standards is pointing to that character. The source should be KC1-xxx.
- b. Mr. Toshiya Suzuki: You are moving the K1 character from URO to Ext. B. I think we should keep it in the URO and put a note in the Annex.
- c. Prof. Kyongsok Kim: IRG agreed that it is wrong unification. Korea requested to keep it in URO due to possible impact on existing implementations.
- d. Mr. Michel Suignard: If it was K0 source, I would be much more cautious.
- e. Dr. Lu Qin: IRG had the view similar to what Mr. Toshiya Suzuki described.
- f. Mr. Michel Suignard: In situation such as Domain Name, this does cause potential confusion and is an issue.

- g. Dr. Deborah Anderson: Dr. Ken Lunde also suggests keeping source and change the glyph, and put a note.
- h. Dr. Lu Qin: Dr. Ken Lunde's suggestion is to keep the source and change the glyph. We can give some more time for Korea to evaluate the proposal.
- i. Mr. Michel Suignard: This is really really bad. As a minimum, we should change the glyph right away. Otherwise, we are giving the implementers the wrong message. We will not change the source.
- j. Mr. Toshiya Suzuki: We had the correct glyph in the 1993 version of the standard. It changed in the 2003 version.

Disposition: Accept to Change the Glyph in the CD. Ballot comments can bring up any issues.

Relevant recommendation:

M67.13 (K1-6B6B as source for code point 8C6C): WG2 recommends that SC2 accept changing the glyph for source K1-6B6B to the correct form as reflected by the other horizontal variants for this ideograph at code point 8C6C in the standard.

10.4.6 Request by TCA of Horizontal Extension for Chemical Terminology

Input document:

[4974](#) Request by TCA of Horizontal Extension for Chemical Terminology; TCA; 2018-06-12

Ms. Lin Mei Wei: We have submitted this document to IRG 50. The request is to add 23 characters horizontally with glyphs and T-Source. See Table on page 4.

Disposition: Accept for inclusion in the CD.

Relevant recommendation:

M67.14 (New T source): WG2 recommends that SC2 accept adding 23 new T-sources for Chemical terminology, with corresponding glyphs and code points, as proposed in the table starting on page 3 of document [N4974](#) to the standard.

10.4.7 Additional repertoire for 10646 next edition beyond Amendment 2 (bucket)

Input document:

[4982](#) Additional repertoire for ISO/IEC 10646:2017 (5th ed.) beyond Amendment 2; Michel Suignard, Project editor; 2018-06-12

Output document:

[5006](#) CD 10646 6th Edition additional repertoire - code charts, [original](#); Michel Suignard, Project editor; 2018-08-16

This document is a collection of scripts and characters that are additional candidates beyond all the accepted characters up to the end of Amendment 2 to the current edition, before the start of this meeting. These are candidates for inclusion in the next edition of the standard. We will include characters and scripts accepted at this meeting to this collection. The repertoire for the CD of 6th edition will be in document [N5006](#). WG2 recommended the preparation of the text for CD of the next edition, including possible additional mature candidates. The convener will request SC2 to approve a project for the next edition of the standard.

Relevant recommendations:

M67.20 (next Edition)

- a. WG2 recommends that SC2 create a new project proposal for the next edition of the standard.
- b. WG2 recommends that its project editor prepare the text for the next edition of the standard based on contents till end of Amendment 2 to the 5th edition and additions from resolutions M67.08 to M67.19 above, and, submit the text for a CD ballot – with the following target dates for starting the ballots: CD 2018-09; CD-2 2019-01; DIS 2019-07.

M67.24 (Additions to CD 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:

- a. Cypro-Minoan script
- b. New Japanese Era name character

10.4.8 China's Horizontal Extension for 14 CJK Ideographs

Input document:

[4987](#) Proposal on China's Horizontal Extension for 14 CJK Ideographs' China NB; 2018-06-13

Mr. Yifei Zhang: The first proposed character, used in Chemistry, has a GCE source and glyph. The second to fifteenth characters are in GGFZ officially released by Govt. of China. The proposal document gives the sources and associated glyphs. IRG reviewed these at its meeting 49.

Discussion:

- a. Mr. Michel Suignard: We got a feedback from Dr. Ken Lunde. He was expecting a G-source also for 24FB9. It is currently an orphan character. Currently it has a UCI reference. If it does exist, a G-source entry would also be good.
- b. Mr. Peter Constable: IRG document N2245 suggests G9-9B35 as the source reference based on GB 18030.
- c. Mr. Michel Suignard: GB18030 transcodes – becomes a circular reference.

Disposition: Accept the proposed G sources. In addition, replace the source reference UCI-00942 with G9-9B35.

Relevant recommendation:

M67.15 (New G-source): WG2 recommends that SC2 accept 14 additional ideograph glyphs with corresponding GCE and GGFZ sources, as proposed in document N4987, and replace UCI-00942 with source reference G9: 96389B35, in the standard.

10.4.9 Updating 11 G source glyphs of CJK Unified Ideographs

Input document:

4988 Proposal on Updating 11 G glyphs of CJK Unified Ideographs; China NB; 2018-06-13

Mr. Yifei Zhang: The document proposes 11 glyph corrections and corrections to source references. IRG has reviewed it.

Discussion:

- a. Dr. Umamaheswaran: Some of the replacement glyphs have different number of strokes. Will it cause problem for stroke count entries in the charts?
- b. Mr. Michel Suignard: In general, the stroke count matches the G-source. Sometimes it uses another source like J as the basis.
- c. Dr. Umamaheswaran: If the stroke count does not match any of the corrected glyphs, you would need to correct the stroke counts to match at least one of the glyphs.
- d. Mr. Michel Suignard: Entry 08 - we are going back to the UCS 2003 shape.
- e. Dr. Lu Qin: The glyph for existing GHZ- source has the shape of UCS 2003.
- f. Mr. Chen Zhuang: The stroke count is correct.
- g. Mr. Michel Suignard: I can call attention to the glyph changes in document for ballot (Blue mark). Due to synchronization with the Unicode standard, these will show in CD as well as in Unicode 12.0 charts.

Disposition: Accept for CD.

Relevant recommendation:

M67.16 (Corrections to G-source glyphs): WG2 recommends that SC2 accept the 11 glyph corrections to G-source ideographs in document N4988.

10.4.10 Mongolian

Input documents:

4989 Mongolian Working Group Meeting 2 Report, April 3-5 2016, San Jose, CA, USA; Lisa Moore; 2018-04-07

4998 China's comments on Mongolian code charts in 10646 5th edition DAM1; China; 2018-06-20

Dr. Deborah Anderson: Document N4989 is the working group report. We had a follow up technical meeting in San Jose. The UTC script ad hoc is still working through some of the recommendations. Another meeting is planned for April 2019 in Ulan Bator.

Mr. Chen Zhuang: The Mongolian charts in DAM 1 were reviewed by Chinese national Mongolian experts' group and we have provided some comments on them in document N4998. There are three types of comments.

Discussion:

- a. Mr. Michel Suignard: Some of these proposed changes are OK to make them right away. The second form and third forms are additional standardized variants -These additions are a technical change. It will be entertained in the CD.
- b. Mr. Richard Ishida: Are we in the process of adding these into Unicode – they are not there right now.
- c. Mr. Michel Suignard: Actual glyphs will replace some of the question marks. These are really attestations for those characters.
- d. Mr. Peter Constable: It will be useful if China can provide a separate document, containing all the Additional VSs requested with some rationale as to where they are used.
- e. Mr. Chen Zhuang: There are several images of use of the various forms, and the request is to add these.
- f. Mr. Peter Constable: We also need phonetic information.
- g. Mr. Michel Suignard: All First Forms are easy to handle. The additions of second, third or fourth forms could be difficult.
- h. Dr. Umamaheswaran: Can we include the non-additions in Amendment 1 since these comments are on DAM1 charts?
- i. Mr. Michel Suignard: It is too risky to include in Amendment 1. These also need some more review. There was some reason why they were not there. We can add the positional first forms in the CD. All changes to existing ones can also go into CD. We cannot do the deletions. At some time in the future, we could add annotations or we could hide them. The additions will be documented and reviewed and only the agreed upon ones should go into the first CD ballot.
- j. Mr. Richard Ishida: Does China mean by 'Should delete' to change the shape of glyph only or also the sequence.
- k. Mr. Michel Suignard: It could mean either.

Disposition: Invite the Chinese national body prepare a separate document on all proposed additions.

Relevant recommendation:

M67.27 (Mongolian): WG2 recommends that SC2 notes the progress made by the Mongolian experts in documents N4989 and N4998, and invites the Chinese national body, working with Mongolian experts, to prepare and submit to WG2, a separate document containing only the proposed additions with rationale and phonetic information.

10.5 Considerations concerning the publication of ISO/IEC 10646 6th Edition

Input document:

4991 Considerations concerning the publication of ISO/IEC 10646 6th Edition; Michel Suignard, Project editor; 2018-06-17

Mr. Michel Suignard: We had an ad hoc on the publication issues. The document explains what happened in the 5th edition. We used to have a single zip file containing separate pdf files. Now the main part is a giant pdf file including the charts inside. There are HTTP links to all attachments. The standard in clause 2 has five normative references. We could use the same technique for the data files also. They are also on the Unicode website. One advantage is the previous versions of data file would be available, unlike the ISO site where previous versions are essentially not available. The code charts are in a different situation. There is a lot of restriction on these. For the 6th ed. I created a prototype of what it may look like. In this prototype, the charts have ISO standard name with a copyright for the chart as Unicode. Other standards, like parts of ISO 639, have done something similar. I would like to get some consensus on the data files. The copyright issue is something else.

Discussion:

- a. Dr. Umamaheswaran: I do not see any issues with the proposal.
- b. Mr. Alain LaBontè: What if French version comes along? Was there size restriction on Unicode site?
- c. Mr. Michel Suignard: It is not the size issue. If Unicode has to do the French version, its continuous maintenance is the issue.
- d. Dr. Umamaheswaran: If you develop a French version of the standard, you can move the pointers in the French version to ISO site if you want.

Disposition: Add N4991 while drafting CD.

Relevant recommendation:

M67.21 (Consideration for next edition): WG2 recommends that the project editor adopt the proposed changes from page 3 in document N4991, for the next edition to the organization and referencing of the various data files.

11 Contributions that were not discussed

Input documents:

4841 Proposal to add five Latin Tironian letters to the UCS'; Michael Everson, Andrew West; 2017-09-04

4925 Naming conventions for larger character sets; Michael Everson, Andrew West; 2018-01-11

4975 SEI liaison report; Deborah Anderson; 2018-06-07

4990 Unicode Liaison Report to ISO/IEC JTC 1/SC 2; Unicode Consortium; 2018-06-08

Above documents were on the agenda. They were either for information of WG2 experts, or were not presented at this meeting.

12 Future meetings

- a. Meeting 68 – June 17-21 2019 – Redmond (Microsoft Campus, Seattle area), WA USA
The above is confirmed.
- b. Meeting 69 – June 2020 (open)
Tentative Asia; June 15-19 or 22-26, 2020. Possible Backup Dundee, Scotland

Relevant recommendation:

M67.31 (Future meetings): WG2 endorses the following schedule for future meetings:

WG2 Meeting 68 - 2019-06-17/21, Redmond, WA, USA

WG2 Meeting 69 – Need Host, Tentative: 2020-06-15/19; (backup Dundee, Scotland, UK)

IRG #52 Hong Kong SAR, China, 2019-05-13/17

IRG #53 China(Tentative), 2019-10-21/25, (location TBD)

13 Closing

13.1 Meeting #67 recommendations

Output document:

4954 Meeting #67 recommendations; WG 2 meeting 67; 2018-06-22

WG2 reviewed a set of draft recommendations prepared by the recording secretary with assistance from the drafting committee. The review resulted in some edits and corrections to the draft set. The final set of recommendations is in document N4954. The WG2 convener will submit this document for SC2 consideration.

The character counts at the start of this meeting were as follows. **136411** in the currently published 5th edition, **911** additions in DAM 1, and **1531** additions in PDAM 2.2, resulting in **138853** characters.

The character counts at the end of this meeting, including the changes in Amendment 2 resulting from the balloting of PDAM 2.3 after the previous meeting, are as follows. **136411** in the currently published 5th edition, **911** additions in FDAM 1 (to be balloted), **609** additions in DAM 2 (to be balloted), and **5598** additions in the CD of next edition (to be balloted), resulting in **143529** already encoded characters or characters accepted for encoding.

Acknowledgements:

Relevant recommendations:

Appreciation M67.32 (Appreciation to DKUUG for web site support): WG2 thanks DKUUG and its staff for its continued support of the web site for the older WG2 documents.

Appreciation M67.33 (Appreciation to Unicode Consortium for web site support) :WG2 thanks the Unicode Consortium and its staff for providing the new web site and its support for WG2.

Appreciation M67.34 (Appreciation to Host): WG2 thanks the national body of UK and SOAS, University of London, for hosting the meeting. In addition, WG 2 thanks Ms. Gema Zamora Fernandez and staff at the Endangered Languages Archive, Dr. Mandana Seyfeddinipur of Endangered Languages Documentation Programme, SOAS, with additional support from Dr. Nathan Hill and staff at the Department of East Asian Languages and Cultures at SOAS.

13.2 Adjournment

The convener adjourned the meeting around 11:45h on Friday, 2018-06-20.

14 Action items

All the action items recorded in the minutes of the previous meetings from 25 to 59, 61 and 64, have been either completed or dropped. Status of outstanding action items from previous meetings 60, 62, 63, 65, 66 and new action items from this meeting 67 are listed in the tables below.

- Meeting 25, 1994-04-18/22, Antalya, Turkey (document N1033)
- Meeting 26, 1994-10-10/14, San Francisco, CA, USA (document N1117)
- Meeting 27, 1995-04-03/07, Geneva, Switzerland (document N1203)
- Meeting 28, 1995-06-22/26, Helsinki, Finland (document N1253)
- Meeting 29, 1995-11-06/10, Tokyo, Japan (document N1303)
- Meeting 30, 1996-04-22/26, Copenhagen, Denmark (document N1353)
- Meeting 31, 1996-08-12/16, Québec City, Canada (document N1453)
- Meeting 32, 1997-01-20/24, Singapore (document N1503)
- Meeting 33, 1997-06-30/07-04, Heraklion, Crete, Greece (document N1603)
- Meeting 34, 1998-03-16/20, Redmond, WA, USA (document N1703)
- Meeting 35, 1998-09-21/25, London, UK (document N1903)
- Meeting 36, 1999-03-09/15, Fukuoka, Japan (document N2003)
- Meeting 37, 1999-09-17/21, Copenhagen, Denmark (document N2103)
- Meeting 38, 2000-07-18/21, Beijing, China (document N2203)
- Meeting 39, 2000-10-08/11, Vouliagmeni, Athens, Greece (document N2253)
- Meeting 40, 2001-04-02/05, Mountain View, CA, USA (document N2353), and
- Meeting 41, 2001-10-15/18, Singapore (document 2403)
- Meeting 42, 2002-05-20/23, Dublin, Ireland (document N2453)
- Meeting 43, 2003-12-09/12, Tokyo, Japan (document N2553)
- Meeting 44, 2003-10-20/23, Mountain View, CA, USA (document N2653)
- Meeting 45, 2004-06-21/24, Markham, Ontario, Canada (document N2753)
- Meeting 46, 2005-01-24/28, Xiamen, China (document N2903)
- Meeting 47, 2005-09-12/15, Sophia Antipolis, France (document N2953)
- Meeting 48, 2006-04-24/27, Mountain View, CA, USA (document N3103)
- Meeting 49, 2006-09-25/29, Tokyo, Japan (document N3153)
- Meeting 50, 2007-04-23/27, Frankfurt-Am-Main, Germany (document N3253)
- Meeting 51, 2007-09-17/21, Hangzhou, China (document N3353)
- Meeting 52, 2008-04-21/25, Redmond, WA, USA (document N3453)
- Meeting 53, 2008-10-13/17, Hong Kong SAR (document N3553)
- Meeting 54, 2009-04-20/24, Dublin, Ireland (document N3603)
- Meeting 55, 2009-10-26/30, Tokyo, Japan (document N3703)

Meeting 56, 2010-04-19/23, San José, CA, USA (document N3803)
Meeting 57, 2010-10-04/08, Busan, Korea (Republic of) (document N3903)
Meeting 58, 2011-06-06/10, Helsinki, Finland (document N4103)
Meeting 59, 2012-02-13/17, Mountain View, CA, USA (document N4253)
Meeting 60, 2012-10-22/27, Chiang Mai, Thailand, (document N4353)
Meeting 61, 2013-06-01/14, Vilnius, Lithuania, (document N4403)
Meeting 62, San Jose, CA, USA; 2014-02-24/28, (document N4553)
Meeting 63, Colombo, Sri Lanka, 2014-09-29/20-03, (document N4603)
Meeting 64, Matsue, Shimane, Japan, 2015-10-19/23, (document N4739)
Meeting 65, San Jose, CA, USA; 2016-09-26/30, (document N4873)
Meeting 66, Hohhot, Inner Mongolia, China; 2017-09-25/29, (document N4953)
Meeting 67, SOAS University of London, London, UK; 2018-06-16/21, (document N5020) (this document).

14.1 Outstanding action items from meeting 60, Chiang Mai, Thailand, 2012-10-22/27

Item	Assigned to / action (reference resolutions in document N4254, and unconfirmed minutes in document N4253 for meeting 60 (with any corrections noted in section 3 in the minutes of meeting 61 in document N4403).	Status
AI-60-10	Irish national body - Mr. Michael Everson	
a.	To get more information related to the status, its stability and other clarifications based on the discussions in the meeting on document N4323 - Mwangwego script. M61 and M62 -- in progress.	In progress.

14.2 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 section 3 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.	In progress.
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.	In progress.

14.3 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 section 3 in the minutes of meeting 64 in document N47xx).	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.
AI-63-7	Experts from China (Chen Zhuang), UK (Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson)	
	To take note of and act on the following items.	
a.	M63.15 (Khitan Large script): WG2 invites the authors of document N4631 to revise their proposal on the Khitan Large script taking into account the feedback summarized in the ad hoc report document N4642, working with other experts interested in this script.	In progress.
c.	M63.17 (Naxi Dongba script): WG2 invites the authors of document N4633 to revise their proposal on the Naxi Dongba script taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress.

14.4 Outstanding action items from meeting 65, San Jose, CA, USA; 2016-09-26/30

Item	Assigned to / action (Reference recommendations in document N4772, and unconfirmed minutes in document N4873 for meeting 65 - this document you are reading).	Status
AI-65-6	Experts from China (Chen Zhuang), UK (Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson)	
b.	M65.13 (Primitive Scripts of South West China): WG2 invites the authors of document N4759 to revise their proposal on the Primitive Scripts of South West China taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress.

14.5 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 - this document you are reading).	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 items.	
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.	In progress.
d.	M66.21 (Primitive Scripts of South West China): WG2 invites the authors of documents N4856 and N4901, to revise their proposals on Muya, Namuz and Ersu scripts, taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress.

14.6 New 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 - this document you are reading).	Status
AI-67-1	Recording Secretary - Dr. V.S. UMaMaheswaran	
a.	To finalize the document N4954 containing the adopted meeting recommendations and send it to the convener as soon as possible.	
b.	To finalize the document N5020 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	
AI-67-2	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-67-9, item e below.)	
AI-67-3	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.	M67.01 (Disposition of ballot comments of DAM-1 to 5 th Edition): WG2 recommends that SC2 accept the disposition of DAM-1 ballot comments in document N4952R. The following name changes are noted: 10F45 SOGDIAN PHONOGRAM SHIN to SOGDIAN INDEPENDENT SHIN 10D1D HANIFI ROHINGYA VOWEL MARK A to HANIFI ROHINGYA VOWEL A 10D1E HANIFI ROHINGYA VOWEL MARK I to HANIFI ROHINGYA VOWEL I 10D1F HANIFI ROHINGYA VOWEL MARK U to HANIFI ROHINGYA VOWEL U 10D20 HANIFI ROHINGYA VOWEL MARK E to HANIFI ROHINGYA VOWEL E 10D21 HANIFI ROHINGYA VOWEL MARK O to HANIFI ROHINGYA VOWEL O 10D23 HANIFI ROHINGYA NA KHANNA to HANIFI ROHINGYA NA KHONNA, and, 10F58 SOGDIAN PUNCTUATION CIRCLES WITH DOTS to SOGDIAN PUNCTUATION TWO CIRCLES WITH DOTS	
b.	M67.02 (Progression of Amendment 1 to the 5 th edition): WG2 recommends that its project editor prepare the final text of Amendment 1 to the 5th edition of the standard, which will include the changes arising from recommendation M67.01 above, along with the final disposition of comments (document N4952R), and forward it to the SC2 secretariat for processing as an FDAM ballot. The draft code charts are in document N5005. The target starting date is modified to FDAM 1 2018-08.	
c.	M67.04 (Disposition of ballot comments of PDAM-2.3 to 5 th Edition): WG2 recommends that SC2 accept the disposition of PDAM-2.3 ballot comments in document N4995. The following significant changes are noted: f. ELYMAIC block is moved from 10EC0..10EDF to 10FE0..10FFF g. Following 4 Wancho tone marks are added: 1E2EC WANCHO TONE TUP 1E2ED WANCHO TONE TUP MANG 1E2EE WANCHO TONE OKOI 1E2EF WANCHO TONE OKOI MANG h. Name of 2E4F MEDIEVAL CORNISH VERSE SEPARATOR is changed to CORNISH VERSE DIVIDER i. Several glyphs are changed (see list in document N4995), and j. Added cross reference to A723 and A725 for A7BD LATIN SMALL LETTER GLOTTAL I	

d.	<p><i>M67.05 (Additional changes to Amd.2 to 5th Edition):</i> WG2 recommends that SC2 accept the following name changes for following Egyptian Hieroglyph control characters (based on document N5001):</p> <p>13432 EGYPTIAN HIEROGLYPH START AT TOP to EGYPTIAN HIEROGLYPH INSERT AT TOP START 13433 EGYPTIAN HIEROGLYPH START AT BOTTOM to EGYPTIAN HIEROGLYPH INSERT AT BOTTOM START 13434 EGYPTIAN HIEROGLYPH END AT TOP to EGYPTIAN HIEROGLYPH INSERT AT TOP END 13435 EGYPTIAN HIEROGLYPH END AT BOTTOM to EGYPTIAN HIEROGLYPH INSERT AT BOTTOM END</p> <p>The glyphs for Egyptian Hieroglyph Controls will be changed to accommodate smaller size acronyms within the glyphs.</p>	
e.	<p><i>M67.06 (IVD registration):</i> WG2 recommends that SC2 accept to append to sub-clause 16.6.3 in the standard, a sentence like the following, to explain the purpose of IVD registration:</p> <p>The purpose of IVD registration is to provide a technical solution to represent ideograph variants that are considered unifiable and should not be encoded in CJK Unified Ideographs.</p>	
f.	<p><i>M67.07 (Progression of Amendment 2):</i> WG2 recommends that its project editor prepares the final text of Amendment 2 to the 5th edition of the standard, which will include the changes arising from recommendations M67.04 to M67.06 above, along with the final disposition of comments (document N4995), and forward it to the SC2 secretariat for processing as DAM-2. The draft code charts are in document N5000. The target starting dates are modified to DAM-2 2018-08, FDAM-2 2019-02.</p>	
g.	<p><i>M67.08 (Khitani Small Script):</i> WG2 accepts the ad hoc report in document N5002 on Khitan Small Script (Block 18B00-18CFF in document N4982R). WG2 recommends that SC2 accept the repertoire for future encoding, with the following changes:</p> <ul style="list-style-type: none"> c. The name of 18B00 KHITAN SMALL SCRIPT ITERATION MARK is changed to be algorithmic, to KHITAN SMALL SCRIPT CHARACTER-18B00. d. Add a new a script-specific format character, 16FE4 KHITAN SMALL SCRIPT FILLER, in the Ideographic Symbols and Punctuation block. 	
h.	<p><i>M67.09 (Dives Akuru script):</i> WG2 recommends that SC2 accept the proposal to encode the Dives Akuru script in document N4929, in a new block named Dives Akuru 11900..1195F, and populate it with 72 characters with their names, code points and glyphs as shown in document N4982R.</p>	
i.	<p><i>M67.10 (Gongche characters for Kunqu Opera):</i> WG2 recommends that SC2 accept seven ideographs based on document N4967 for encoding in a new block 2A6E0..2A6FF named CJK Unified Ideographs Supplement and populate the first seven code points 2A6E0..2A6E6 with the proposed glyphs and with UTC as source for these ideographs.</p>	
j.	<p><i>M67.11 (Moji-Joho-Kiban-Ideographs collection):</i> WG2 recommends that SC2 accept adding a new collection #391: MOJI-JOHO-KIBAN-IDEOGRAPHS 2018 to the standard (based on document N4955), with a note that this collection should be used instead of the current collection # 390.</p>	
k.	<p><i>M67.12 (New K6 source KS X 1027-5:2014):</i> WG2 recommends that SC2 accept adding new K6 source corresponding to KS X 1027-5:2014, and corresponding Ideograph glyphs and source code points for 152 CJK Unified Ideographs as proposed in document N4968 in the standard.</p>	
l.	<p><i>M67.13 (K1-6B6B as source for code point 8C6C):</i> WG2 recommends that SC2 accept changing the glyph for source K1-6B6B to the correct form as reflected by the other horizontal variants for this ideograph at code point 8C6C in the standard.</p>	
m.	<p><i>M67.14 (New T source):</i> WG2 recommends that SC2 accept adding 23 new T-sources for Chemical terminology, with corresponding glyphs and code points, as proposed in the table starting on page 3 of document N4974 to the standard.</p>	
n.	<p><i>M67.15 (New G-source):</i> WG2 recommends that SC2 accept 14 additional ideograph glyphs with corresponding GCE and GGFZ sources, as proposed in document N4987, and replace UCI-00942 with source reference G9: 96389B35, in the standard.</p>	
o.	<p><i>M67.16 (Corrections to G-source glyphs):</i> WG2 recommends that SC2 accept the 11 glyph corrections to G-source ideographs in document N4988.</p>	
p.	<p><i>M67.17 (Emoji additions):</i> WG2 recommends that SC2 accept the following 63 (60 from document N4960 and 3 moved from PDAM 2.2) characters for future encoding with their glyphs as shown in document N4982R:</p> <p>1F6D5 HINDU TEMPLE; 1F6FA AUTO RICKSHAW; 1F7E0 LARGE ORANGE CIRCLE; 1F7E1 LARGE YELLOW CIRCLE; 1F7E2 LARGE GREEN CIRCLE; 1F7E3 LARGE PURPLE CIRCLE; 1F7E4 LARGE BROWN CIRCLE; 1F7E5 LARGE RED SQUARE; 1F7E6 LARGE BLUE SQUARE; 1F7E7 LARGE ORANGE SQUARE;</p>	

	<p>1F7E8 LARGE YELLOW SQUARE; 1F7E9 LARGE GREEN SQUARE; 1F7EA LARGE PURPLE SQUARE; 1F7EB LARGE BROWN SQUARE; 1F90D WHITE HEART; 1F90E BROWN HEART; 1F90F PINCH; 1F93F DIVING MASK; 1F971 YAWNING FACE; 1F979 TROLL; 1F97B SARI; 1F9A3 MAMMOTH; 1F9A4 DODO; 1F9A5 SLOTH; 1F9A6 OTTER; 1F9A7 ORANGUTAN; 1F9A8 SKUNK; 1F9A9 FLAMINGO; 1F9AA OYSTER; 1F9AE GUIDE DOG; 1F9AF PROBING CANE; 1F9BA SERVICE ANIMAL VEST; 1F9BB EAR WITH HEARING AID; 1F9BC MOTORIZED WHEELCHAIR; 1F9BD MANUAL WHEELCHAIR; 1F9BE MECHANICAL ARM; 1F9BF MECHANICAL LEG; 1F9C3 BEVERAGE BOX; 1F9C4 GARLIC; 1F9C5 ONION; 1F9C6 FALAFEL; 1F9C7 WAFFLE; 1F9C8 BUTTER; 1F9C9 MATE DRINK; 1F9CA ICE CUBE; 1F9CD STANDING PERSON; 1F9CE KNEELING PERSON; 1FA70 BALLET SHOES; 1FA71 ONE-PIECE SWIMSUIT; 1FA72 BRIEFS; 1FA73 SHORTS; 1FA78 BLOOD DROP; 1FA79 ADHESIVE BANDAGE; 1FA7A STETHOSCOPE; 1FA80 YO-YO TOY; 1FA81 KITE; 1FA82 PARACHUTE; 1FA90 RINGED PLANET; 1FA91 CHAIR; 1FA92 RAZOR; 1FA93 AXE; 1FA94 DIYA LAMP; 1FA95 BANJO.</p>	
q.	<p><i>M67.18 (CJK Ext-G)</i>: WG2 recommends that SC2 accept encoding of 4938 CJK Unified Ideographs in a new block 30000..3134F named CJK Unified Ideograph Extension G, and populate it with their glyphs and sources as shown in document N4982R.</p>	
r.	<p><i>M67.19 (Miscellaneous additions)</i>: WG2 recommends that SC2 accept the following additional characters with their glyphs as shown in document N4982R for future encoding in the standard:</p> <ul style="list-style-type: none"> p. 111CE SHARADA VOWEL SIGN PRISHTHAMATRA E q. 111CF SHARADA SIGN INVERTED CANDRABINDU r. 11460 NEWA SIGN JIHVAMULIYA 11461 NEWA SIGN UPADHMANIYA s. 1145A NEWA DOUBLE COMMA t. Following six circled characters: 1F10D CIRCLED ZERO WITH SLASH 1F10E CIRCLED COUNTERCLOCKWISE ARROW 1F10F CIRCLED DOLLAR SIGN WITH OVERLAID BACKSLASH 1F16D CIRCLED CC 1F16E CIRCLED C WITH OVERLAID BACKSLASH 1F16F CIRCLED HUMAN FIGURE u. 11A48 ZANABAZAR SQUARE CLUSTER-INITIAL LETTER LA 11A49 ZANABAZAR SQUARE CLUSTER-INITIAL LETTER SA v. Following seven Tangut Component characters: 18AF3 TANGUT COMPONENT-756 18AF4 TANGUT COMPONENT-757 18AF5 TANGUT COMPONENT-758 18AF6 TANGUT COMPONENT-759 18AF7 TANGUT COMPONENT-760 18AF8 TANGUT COMPONENT-761 18AF9 TANGUT COMPONENT-762 w. 08BE ARABIC LETTER PEH WITH SMALL V 08BF ARABIC LETTER TEH WITH SMALL V 08C0 ARABIC LETTER TTEH WITH SMALL V 08C1 ARABIC LETTER TCHEH WITH SMALL V 08C2 ARABIC LETTER KEHEH WITH SMALL V x. 08C3 ARABIC LETTER GHAIN WITH THREE DOTS ABOVE 08C4 ARABIC LETTER AFRICAN QAF WITH THREE DOTS ABOVE y. 0D81 SINHALA SIGN CANDRABINDU z. 0D04 MALAYALAM LETTER VEDIC ANUSVARA aa. 31BB BOPOMOFO FINAL LETTER G bb. Add following ten characters to Latin Extended-D block to support Medieval Cornish: A7D0 LATIN SMALL LETTER A WITH OVERCURL A7D1 LATIN SMALL LETTER E WITH OVERCURL A7D2 LATIN SMALL LETTER I WITH OVERCURL A7D3 LATIN SMALL LETTER M WITH OVERCURL A7D4 LATIN SMALL LETTER N WITH OVERCURL 	

	<p>A7D5 LATIN SMALL LETTER R WITH OVERCURL A7D6 LATIN SMALL LETTER S WITH OVERCURL A7D7 LATIN SMALL LETTER T WITH OVERCURL A7D8 LATIN SMALL LETTER U WITH OVERCURL A7D9 LATIN SMALL LETTER Y WITH OVERCURL</p> <p>cc. Add following five counting rod numerals (moved out from PDAM 2.2): 1D379 SOUTHERN SONG COUNTING ROD UNIT DIGIT FOUR 1D37A SOUTHERN SONG COUNTING ROD UNIT DIGIT FIVE 1D37B SOUTHERN SONG COUNTING ROD UNIT DIGIT NINE 1D37C SOUTHERN SONG COUNTING ROD TENS DIGIT FIVE 1D37D SOUTHERN SONG COUNTING ROD TENS DIGIT NINE</p> <p>dd. A7C0 LATIN CAPITAL LETTER THORN WITH DIAGONAL STROKE A7C1 LATIN SMALL LETTER THORN WITH DIAGONAL STROKE</p>	
s.	<p><i>M67.20 (next Edition)</i></p> <p>c. WG2 recommends that SC2 create a new project proposal for the next edition of the standard.</p> <p>d. WG2 recommends that its project editor prepare the text for the next edition of the standard based on contents till end of Amendment 2 to the 5th edition and additions from resolutions M67.08 to M67.19 above, and, submit the text for a CD ballot – with the following target dates for starting the ballots: CD 2018-09; CD-2 2019-01; DIS 2019-07.</p>	
t.	<p><i>M67.21 (Consideration for next edition):</i> WG2 recommends that the project editor adopt the proposed changes from page 3 in document N4991, for the next edition to the organization and referencing of the various data files.</p>	
u.	<p><i>M67.22 (Cypro-Minoan script):</i> WG2 recommends that SC2 accept the proposal on the Cypro-Minoan script in document N4733, as a potential candidate for future encoding, in a new block named Cypro-Minoan in a new block 12700..1278F, and populate it with 140 characters with their names, code points and glyphs based on document N4733.</p>	
v.	<p><i>M67.23 (Code point for Square Japanese New Era Name):</i> WG2 recommends that SC2 accept the request for future encoding of the new Japanese Era name at code point 32FF, pending availability of its name and glyph.</p>	
w.	<p><i>M67.24 (Additions to CD before next WG2 meeting):</i> WG2 recognizes that some scripts and additional characters which are under preparation as potential additions to the standard could become mature and will have consensus among WG2 experts to include in the standard. The project editor should be able to add these to the balloted texts, after exercising due diligence. Candidates include, but are not limited to:</p> <p>m. Cypro-Minoan script n. New Japanese Era name character</p>	
AI-67-4	<p>IRG Rapporteur and IRG Editor (Dr. Lu Qin)</p> <p>To take note of and act upon the following items:</p>	
a.	<p><i>M67.31 (Future meetings):</i> WG2 endorses the following schedule for future meetings: IRG #52 Hong Kong SAR, China, 2019-05-13/17 IRG #53 China(Tentative), 2019-10-21/25, (location TBD)</p>	
AI-67-5	<p>Ad hoc group on roadmap (Dr. Umamaheswaran)</p>	
a.	<p>To update the Roadmaps with the results from this meeting.</p>	
AI-67-6	<p>Experts from Japan (Mr. Wataru Takagi)</p>	
a.	<p><i>M67.30 (IRG Process):</i> WG2 recommends that SC2 welcome the input from Japanese national body on improving the working of IRG (in document N4948), and invites the Japanese national body to take into consideration the feedback from the discussion in WG2.</p>	
AI-67-7	<p>BIS (K. Manikandan), Experts on Assamese from India and elsewhere.</p>	
a.	<p><i>M67.25 (Assamese script):</i> After consideration of the proposal in document N4947 to encode the Assamese script, WG2 recommends that SC2 accept the ad hoc report on Assamese script in document N4999, which has the following main recommendations:</p> <p>d. Add Assamese character names in the nameslist as annotations, e. Change the block header from Bengali to Bengali-Assamese, and, f. Prepare a revised contribution on new characters to be added.</p> <p>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.</p>	
AI-67-8	<p>Experts from China (Chen Zhuang), UK (Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson). TCA (Lin Mei Wei), Mongolia experts</p>	

	To take note of and act on the following items.	
a.	<i>M67.27 (Mongolian)</i> : WG2 recommends that SC2 notes the progress made by the Mongolian experts in documents N4989 and N4998, and invites the Chinese national body, working with Mongolian experts, to prepare and submit to WG2, a separate document containing only the proposed additions with rationale and phonetic information.	
b.	<i>M67.28 (Small Seal script)</i> : WG2 recommends that SC2 note the progress made by the experts in document N4973, and encourages the experts to continue the work towards a contribution for encoding the script, taking into account the feedback documents and discussion at this meeting. WG2 notes that another ad hoc meeting of experts is planned by TCA in November 2018 in Taipei (tentatively), and invites all the interested experts to take note towards planning to attend the meeting.	
c.	<i>M67.26 (Shuishu script)</i> : WG2 invites the authors of Shuishu script (Block 1B300-1B4FF Shuishu Logograms and Block 1B500-1B52F Shuishu Radicals from document N4894R) that was taken out of PDAM 2.2 based on ballot comments, to revise their proposal, taking into account the feedback received at this meeting (see documents N4942, N4946 and N4956), working with other experts interested in this script.	
d.	<i>M66.21 (Primitive Scripts of South West China)</i> : WG2 invites the authors of documents N4856 and N4901, to revise their proposals on Muya, Namuz and Ersu scripts, taking into account the feedback received at this meeting, working with other experts interested in this script.	
AI-67-9	Experts from all national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	<i>M67.31 (Future meetings)</i> : WG2 endorses the following schedule for future meetings: WG2 Meeting 68 - 2019-06-17/21, Redmond, WA, USA WG2 Meeting 69 – Need Host, Tentative: 2020-06-15/19; (backup Dundee, Scotland, UK) IRG #52 Hong Kong SAR, China, 2019-05-13/17 IRG #53 China(Tentative), 2019-10-21/25, (location TBD)	
b.	<i>M67.29 (Emoji Ad hoc)</i> : WG2 recommends that SC2 take note of the report from WG2 Emoji ad hoc meeting in document N5003 on improved interworking between WG2 and the Unicode Consortium.	
c.	<i>M67.03 (Additions in Amendment 2 to 5th edition since meeting 66)</i> : WG2 notes that document N4922 lists 6622 character additions in Amendment 2, in the amendment text that was prepared and sent for PDAM 2.2 ballot after M66. Based on disposition of PDAM 2.2 ballot comments in document N4940, document N4941 lists 605 character additions in the resulting amendment text sent for PDAM 2.3 ballot.	
d.	To provide feedback on document N4979 containing the latest IRG Principles and Procedures to IRG convener.	
e.	Following items are carried forward from earlier meetings - filtered at meeting 67: Scripts, new blocks or large collections (awaiting updated proposals from the authors): Afáka (N4292), Bagam (N4293), Balti 'B' (N4016), Balti scripts (N3842), Bima (L2/16-119), Brusha (L2/17-183), Buginese extensions (L2/16-159), Chinese Chess Symbols (N3910), Chorasmian (L2/18-164), Cypro-Minoan (N4733), Diwani Siyaq Numbers (N4122), Eebee Hmong (N4668), Egyptian Hieroglyphs Extension Old Yi (N4751), Garay (N4709), Jurchen (N4795), Kawi (N4266), Kerinci (L2/16-074), Khambu Rai (N4018), Khatt-i Baburi (N4130), Khotanese (L2/15-022), Kpelle (N3762), Kulitan (L2/15-232), Lampung (L2/16-073), Landa (N3768), Leke (N4438, 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 (N4687), Palaeohispanic (L2/18-030), Pau Cin Hau Syllabary (L2/16-014), Persian Siyaq (N4125), Proto-Cuneiform (N4760), Pungchen (L2/17-181), Pyu (N3874), Ranjana (N4515), Shuowen Small Seal (N4688 N4853), Southwest China Hieroglyphs (N4856, N4901), Sumbawa (L2/16-096), Tigalari (L2/17-378), Tocharian (L2/15-236), Tolong Siki (N3811), Vexillology symbols (L2/17-089), Vithkuqi (N4854), Western Cham (N4734), Woleai (N4146), and Zou (N4044).	

***** END OF MEETING MINUTES *****