



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 66  
Hohhot, Inner Mongolia, China, 2017-September 25-29

**SOURCE:** V.S. Umamaheswaran ([umavs@ca.ibm.com](mailto:umavs@ca.ibm.com)), Recording Secretary  
Michel Suignard ([michel@suignard.com](mailto: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.

**ACTION ID:** ACT

**DUE DATE:** 2018-05-15

**DISTRIBUTION:** SC 2/WG 2 members and Liaison organizations

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ISO  
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ISO/IEC JTC 1/SC 2/WG 2  
Universal Coded Character Set (UCS)

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ISO/IEC JTC 1/SC 2/WG 2 N4953  
2018-03-23

<b>Title:</b>	Unconfirmed minutes of WG 2 meeting 66 Hohhot, Inner Mongolia, China, 2017-September 25-29
<b>Source:</b>	V.S. Umamaheswaran ( <a href="mailto:umavs@ca.ibm.com">umavs@ca.ibm.com</a> ), Recording Secretary Michel Suignard ( <a href="mailto:michel@suignard.com">michel@suignard.com</a> ), Convener
<b>Action:</b>	WG 2 members and Liaison organizations
<b>Distribution:</b>	ISO/IEC JTC 1/SC 2/WG 2 members and liaison organizations

## 1 Opening

Input document:

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

Mr. Michel Suignard, the convener, opened the meeting at 09:30h on Tuesday 2017-09-26. (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 WG 2 meeting on Monday 2017-09-25.)

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

Output document

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

A hardcopy of the WG2 experts list was circulated and attendees were requested to indicate any updates needed.

The following 23 experts accredited (or invited) by 7 national bodies and 3 liaison organizations were present at different times during the meeting. An experts list was circulated for the experts to review and make any corrections.

Name	Accreditation	Affiliation
Adrian CHEUK	.Invited Expert (China)	Independent
Liang HAI	.Invited Expert (SEI)	Independent
Eiso CHAN	.Invited Expert (UK)	Independent
Qin LU	.IRG rapporteur	Hong Kong Polytechnic University
Shuichi TASHIRO	.SC 2 Chairman	Information-technology Promotion Agency
Toshiko KIMURA	.SC 2 Secretariat	IPSJ/ITSCJ
Lin Mei WEI	.TCA (Cat. C Liaison)	Chinese Foundation for Digitization Technology
Michel SUIGNARD	.WG 2 Convenor; USA	Unicode Inc.
Alain LABONTÉ	Canada	Independent
V.S. (Uma) UMAMAHESWARAN	Canada	IBM Canada
Liming ZHAO	China	Tsinghua University
Wang YIHUA	China	Fudan University
Zhang YIFEI	China	Project of Chinese Character Repertoire
Zhuang CHEN	China	CESI
Michael EVERSON	Ireland	Evertime
Takada TOMOKAZU	Japan	National Institute for Japanese Language and Linguistics
Toshiya SUZUKI	Japan	Hiroshima University
Wataru TAKAGI	Japan	Hitachi Ltd.
Undraa BYAMBA	Mongolia	Mongolian Agency for Standardization and Metrology

Name	Accreditation	Affiliation
Andrew WEST	UK	Independent
Deborah ANDERSON	USA, UC Berkeley (Cat. C Liaison)	University of California, Berkeley
Lisa MOORE	USA, Unicode (Cat. A Liaison)	Unicode Inc.
Peter CONSTABLE	USA, Unicode (Cat. A Liaison)	Microsoft Corp.

Messrs. Michel Suignard, Wataru Takagi 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:

[4800](#) Preliminary Agenda Meeting 66 Hohhot, China, 2017, September 25-29; Michel Suignard, WG2 convener; 2017-09-19

Mr. Michel Suignard reviewed the (preliminary) agenda.

Two documents were added to the version posted on 19<sup>th</sup> of September. Documents received during the meeting will be added to the agenda.

PDAM 1.2 was result from last WG2 meeting. There were minor issues – some repertoires were added as they became stable between the meeting and the issuing of the PDAM1.2. Some national bodies had some issues with it. I will refrain from adding stuff to what we agree on at the meeting for the content of PDAM. PDAM 2 was issued. Several individual contributions were included in them. We will be covering the ballot response to this.

The following ad hoc groups are expected to meet during this meeting.

Dr. Deborah Anderson - volunteered to be the lead.

- Shuishu and Primitive scripts on Tuesday;
- Mongolian and Small Khitan scripts on Wednesday;
- Medieval Punctuation – likely on Thursday;
- Georgian additions – likely on Thursday.

In addition, there will be a presentation of about 20 minutes by experts on SW China scripts.

*Disposition:* Approved the agenda as updated. The agenda was also updated and posted to the WG 2 website as new topics or contributions were identified 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, renumbered. Agenda items that did not have any material to discuss are dropped from these minutes, and any relevant documents that were not discussed are grouped as FYI only, or to be carried forward. The following table of contents reflects the items that were discussed.)*

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### 3 Approval of minutes of meeting 65

Input document:

[4873](#) Meeting #65 Minutes; V.S. Umamaheswaran; 2017-09-18

Dr. Umamaheswaran: No comments have been received so far. Experts are requested to review and feedback any comments to Dr. Umamaheswaran before the end of the meeting.

*Disposition:* Adopt the minutes as presented.

*Action item:* Convener to send the adopted minutes for distribution to SC2.

### 4 Review action items from previous meeting

Input document:

[4739-AI](#) Action Items from WG 2 meeting 64; V.S. Umamaheswaran; 2016-08-31

Dr. Umamaheswaran reviewed and updated the action items from the previous meetings. The resulting updated status for each item is shown below. Of the **27** action items that were reviewed, **10** items are carried forward as 'in progress', and **17** items have been 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 <a href="#">N4254</a> , and unconfirmed minutes in document <a href="#">N4253</a> for meeting 60 (with any corrections noted in section 3 in the minutes of meeting 61 in document <a href="#">N4403</a> ).	Status
<b>AI-60-10</b>	Irish national body - Mr. Michael Everson	
<b>a.</b>	To get more information related to the status, its stability and other clarifications based on the discussions in the meeting on document <a href="#">N4323</a> - 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 <a href="#">N4554</a> , and unconfirmed minutes in document <a href="#">N4553</a> for meeting 62 (with any corrections noted in section 3 in the minutes of meeting 63 in document <a href="#">N4603</a> ).	Status
<b>AI-62-6</b>	Ad hoc group on Principles and Procedures (Dr. Umamaheswaran)	
<b>a.</b>	To take note of section 2.1 in document <a href="#">N4544</a> on Representation of CJK ideograph glyphs; and update the P&P document appropriately.	In progress.
<b>b.</b>	With reference to <a href="#">N4543</a> 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 <a href="#">N4604</a> , and unconfirmed minutes in document <a href="#">N4603</a> for meeting 63 (with any corrections noted in section 3 in the minutes of meeting 64 in document <a href="#">N47xx</a> ).	Status
<b>AI-63-6</b>	Ad hoc group on Principles and Procedures (Dr. Umamaheswaran)	
<b>a.</b>	To take note of section 2.1 in document <a href="#">N4620</a> on Representation of CJK ideograph glyphs; and update the P&P document appropriately.	In progress.
<b>AI-63-7</b>	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>a.</b>	M63.15 (Khitan Large script): WG2 invites the authors of document <a href="#">N4631</a> to revise their proposal on the Khitan Large script taking into account the feedback summarized in the ad hoc report document <a href="#">N4642</a> , working with other experts interested in this script.	In progress.
<b>c.</b>	M63.17 (Naxi Dongba script): WG2 invites the authors of document <a href="#">N4633</a> 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. See agenda item 10.2.10 (documents <a href="#">N4877</a> , <a href="#">N4878</a> ).

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

Item	Assigned to / action (Reference recommendations in document <a href="#">N4701</a> , and unconfirmed minutes in document <a href="#">N4739</a> for meeting 64.	Status
<b>AI-64-6</b>	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>b.</b>	<i>M64.10 (Small Seal script)</i> : WG2 invites the authors of document <a href="#">N4688</a> 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.	In progress. See agenda item 10.2.7 for feedbacks.

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

Item	Assigned to / action (Reference recommendations in document <a href="#">N4772</a> , and unconfirmed minutes in document <a href="#">N4873</a> for meeting 65 - this document you are reading).	Status
<b>AI-65-1</b>	Recording Secretary - Dr. V.S. UMaaheswaran	
<b>a.</b>	To finalize the document <a href="#">N4772</a> containing the adopted meeting recommendations and send it to the convener as soon as possible.	Completed. See document <a href="#">N4772</a> .
<b>b.</b>	To finalize the document <a href="#">N4873</a> containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed. See document <a href="#">N4873</a> .
<b>AI-65-2</b>	Convener - Mr. Michel Suignard	
	To take note of and act upon the following items:	
<b>a.</b>	To add relevant contributions carried forward from previous meetings to agenda of next meeting. (See list of documents under AI-65-7, items b and c below.)	Completed. See agenda item 10.1.1.
<b>AI-65-3</b>	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:	
<b>a.</b>	<i>M65.03 (Hentaigana)</i> : WG2 recommends that SC2 accept the repertoire of 285 Hentaigana characters from document <a href="#">N4732</a> (Hentaigana_Revised_Repertoire-201606.pdf), and encode the first 254 of these in code points 1B002 to 1B0FF in the Kana Supplement block, and the remaining 31 characters at code points 1B100...1B11E, in a new block named Kana Extended-A (in the range 1B100..1B12F), for inclusion in Amendment 1 to the 5 <sup>th</sup> edition. WG2 also recommends adding the character name alias 'HENTAIGANA LETTER E-1' to 1B001 as proposed in document <a href="#">N4731</a> .	
<b>b.</b>	<i>M65.04 (Disposition of ballot comments of PDAM-1 to 5<sup>th</sup> Edition)</i> : WG2 recommends that SC2 accept the disposition of PDAM-1 ballot comments in document <a href="#">N4767</a> . The following significant changes are noted: <ul style="list-style-type: none"> <li>a. Dropping the word 'ASTROLOGICAL' in the character names for the 4 Astrological Symbols for Pluto: 2BD4...2BD7.</li> <li>b. Dropping the word 'ASTROLOGICAL PLANET' in the character names for the 8 Uranian Astrological symbols: 2BE0...2BE7.</li> <li>c. Correcting the name for 2E4B to 'TRIPLE DAGGER'</li> <li>d. Removing 13430 EGYPTIAN HIEROGLYPH LIGATURE JOINER, moving characters at 13431...13432 up by one code position to 13430..13431, naming the column 13430...1343F as a new block 'Egyptian Hieroglyphs Format Controls', and, moving the start of the Egyptian Hieroglyphs Extended-A block to 13440.</li> <li>e. Adding Tangut ideographs 187ED...187F1 to TangutSrc.txt file.</li> </ul>	
<b>c.</b>	<i>M65.05 (Khitani Small Script)</i> : WG2 accepts the recommendations of the ad hoc on Khitan Small Script, in document <a href="#">N4768</a> , and recommends that SC2 accept to encode the script in a new block 18B00...18CFF named 'Khitani Small Script' and populate it with 484 characters with their names, code positions and glyphs based on document <a href="#">N4771</a> .	
<b>d.</b>	<i>M65.06 (Xiangqi game symbols)</i> : WG2 recommends that SC2 accept the set of 30 Xiangqi game symbols (circled ideographs) in the Enclosed Ideographic Supplement block, with their names, code positions and glyphs based on document <a href="#">N4766</a> .	
<b>e.</b>	<i>M65.07 (Japanese core Kanji collection)</i> : WG2 recommends that SC2 accept to add a new collection named 'Japanese core Kanji' consisting of 2136 ideographs to add to clause A.4 CJK Collections, along with the JapaneseCoreKanji.txt file, based on	

	document <a href="#">N4744</a> .	
f.	<p><i>M65.08 (Additional changes in Amendment 1 to 5<sup>th</sup> edition):</i> WG2 recommends that SC2 accept the following additional changes in the Amendment 1 to the 5<sup>th</sup> edition of the standard:</p> <p>a. Add the following <b>4</b> circled characters in the Geometric Shapes Extended block (with their glyphs from document <a href="#">N4719R</a>):  1F7D5 CIRCLED TRIANGLE  1F7D6 NEGATIVE CIRCLED TRIANGLE  1F7D7 CIRCLED SQUARE  1F7D8 NEGATIVE CIRCLED SQUARE</p> <p>b. Add the following <b>3</b> Medieval punctuation marks in Supplemental Punctuation block.  2E4C MEDIEVAL COMMA (with its glyph from document <a href="#">L2/16-220</a>)  2E4D PARAGRAPHUS MARK, and, 2E4E PUNCTUS ELEVATUS MARK (with their glyphs from document <a href="#">L2/16-235</a>)</p> <p>c. Move up characters 2BD4...2BD7 by one code position to 2BD3...2BD6 in Miscellaneous Symbols and Arrows block.</p> <p>d. Add following <b>9</b> astrological symbols (with their glyphs from document <a href="#">L2/16-080R</a>) in Miscellaneous Symbols and Arrows block:  2BD7 TRANSPLUTO  2BD8 PROSERPINA  2BD9 ASTRAEA  2BDA HYGIEA  2BDB PHOLUS  2BDC NESSUS  2BDD WHITE MOON SELENA  2BDE BLACK DIAMOND ON CROSS  2BDF TRUE LIGHT MOON ARTA</p> <p>e. Add following <b>4</b> half-star symbols (with their glyphs from document <a href="#">N4747</a>) in Miscellaneous Symbols and Arrows block:  2BE8 LEFT HALF BLACK STAR  2BE9 RIGHT HALF BLACK STAR  2BEA STAR WITH LEFT HALF BLACK  2BEB STAR WITH RIGHT HALF BLACK</p> <p>f. Add 0A76 GURMUKHI ABBREVIATION SIGN (with its glyph from document <a href="#">L2/16-209R</a>) in Gurmukhi block</p>	
g.	<p><i>M65.09 (Progression of Amendment 1 to the 5<sup>th</sup> edition):</i> WG2 recommends that its project editor prepares the final text of Amendment 1 to the 5<sup>th</sup> edition of the standard, which will include the changes arising from recommendations <b>M65.03</b> to <b>M65.08</b> above, along with the final disposition of comments (document <a href="#">N4767</a>), and forward it to the SC2 secretariat for processing as a PDAM 1.2 ballot. The draft code charts are in document <a href="#">N4770</a>.  The target starting dates are modified to PDAM 1.2 2016-12, DAM 1 2017-04.</p>	Completed items a through g. See PDAM 1.2 in document <a href="#">SC2 N4512</a> .
h.	<p><i>M65.10 (Mongolian ad hoc report):</i> WG2 accepts the Mongolian ad hoc report in document <a href="#">N4769</a>, and recommends to SC2 that the project editor prepares the recommended updates to the Standardized Variation Sequences for Mongolian in the standard. At the discretion of the project editor, these changes could be considered as part of disposition of ballot comments on the DIS of the 5<sup>th</sup> edition (which is currently under ballot).</p>	Completed.
i.	<p><i>M65.11 (Project subdivision for Amendment 2 to the 5<sup>th</sup> edition of the standard):</i> Anticipating the need for encoding additional scripts and characters that will have mature proposals prior to the next SC2 meeting, WG2 recommends to its convener and project editor to generate a new project subdivision proposal for a second amendment to the 5<sup>th</sup> edition of the standard, and submit it to SC2 for approval. WG2 notes that adding 'CJK Extension G characters' is a candidate for inclusion in Amendment 2. Tentative target starting dates for Amendment 2 to the 5<sup>th</sup> edition are: PDAM2 2017-07, DAM2 2017-12.</p>	Completed. See document <a href="#">SC2 N4516</a> .
<b>AI-65-4</b>	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	
	To take note of and act upon the following items:	
a.	<p><i>M65.15(Future meetings):</i> WG2 endorses the following schedule for future meetings:</p>	Noted.

	IRG Meeting 49 – San Jose, CA, USA (Adobe), 2017-10-16/20.	
<b>AI-65-5</b>	Ad hoc group on roadmap (Dr. Umamaheswaran)	
<b>a.</b>	To update the Roadmaps with the results from this meeting.	Completed. See SC2 standing document <a href="#">SD1 SC2 Roadmaps</a> .
<b>AI-65-6</b>	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>a.</b>	<i>M65.12 (Shuishu script)</i> : WG2 invites the authors of document <a href="#">N4758</a> to revise their proposal on the Shuishu script taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress. See agenda item 10.2.5 and document <a href="#">N4839</a> .
<b>b.</b>	<i>M65.13 (Primitive Scripts of South West China)</i> : WG2 invites the authors of document <a href="#">N4759</a> 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. See agenda item 10.2.7 and document <a href="#">N4856</a> .
<b>c.</b>	<i>M65.19 (Small Seals script)</i> : WG2 invites the authors of document <a href="#">N4688</a> to revise their proposal on the Small Seals 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.	In progress. See agenda item 10.2.1 regarding ad hoc meeting and contributions on the subject.
<b>AI-65-7</b>	Experts from all national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
<b>a.</b>	<i>M65.15 (Future meetings)</i> : WG2 endorses the following schedule for future meetings: WG2 Meeting 66 - 2017-09-25/29, <a href="#">Hohhot</a> , Inner Mongolia, China, (co-located with SC2). (Date to be confirmed) WG2 Meeting 67 - 2018-09 or 10 (London, UK). IRG Meeting 49 – San Jose, CA, USA (Adobe), 2017-10-16/20.	Noted.
<b>b.</b>	Following items are carried forward from earlier meetings - filtered at meeting 65: Scripts, new blocks or large collections (awaiting updated proposals from the authors): <a href="#">Afáka (N4292)</a> ; <a href="#">Bagam (N4293)</a> ; <a href="#">Balti 'B' (N4016)</a> ; <a href="#">Balti scripts (N3842)</a> ; <a href="#">Chinese Chess Symbols (N3910)</a> ; <a href="#">Dhives Akuru (N3848)</a> ; <a href="#">Diwani Numerals (N4119)</a> ; <a href="#">Diwani Siyaq Numbers (N4122)</a> ; <a href="#">Eebee Hmong (N4668)</a> ; <a href="#">Jurchen (N4077)</a> ; <a href="#">Kawi (N4266)</a> ; <a href="#">Khambu Rai (N4018)</a> ; <a href="#">Khatt-i Baburi (N4130)</a> ; <a href="#">Kpelle (N3762)</a> ; <a href="#">Landa (N3768)</a> ; <a href="#">Leke (N4438)</a> ; <a href="#">Mandombe (L2/16-077R)</a> ; <a href="#">Moon (N4128)</a> ; <a href="#">Mwangwego (N4323)</a> ; <a href="#">Nandinagari (N4389)</a> ; <a href="#">Naxi Dongba (N4043)</a> ; <a href="#">Obsolete Simplified Chinese Ideographs (N3695)</a> ; <a href="#">Old Yi (N3288)</a> ; <a href="#">Oracle Bone (N4687)</a> ; <a href="#">Ottoman Siyaq (N4124)</a> ; <a href="#">Pau Cin Hau Syllabary (N4412)</a> ; <a href="#">Persian Siyaq (N4125)</a> ; <a href="#">Pyu (N3874)</a> ; <a href="#">Ranjana (N4515)</a> ; <a href="#">Rohingya (N4283)</a> ; <a href="#">Tolong Siki (N3811)</a> ; <a href="#">Tulu (N4025)</a> ; <a href="#">Woleai (N4146)</a> ; <a href="#">Zou (N4044)</a> .	Completed. See agenda item 10.1.1 for filtered list.
<b>c.</b>	The following documents are awaiting further refinements and discussion: <a href="#">4688</a> Proposal to encode Small Seal Script in UCS (zip file with Proposal and associated files); TCA and China; 2015-10-20 <a href="#">4709</a> Proposal for encoding the Garay script in the SMP of the UCS; SEI/Michael Everson; 2016-03-22 <a href="#">4716</a> ; Proposal to Apply Source-Based Variation Selector in Shuowen Small Seal Encoding; Suzuki Toshiya; 2016-04-28 <a href="#">4712</a> Revised proposal for the addition of Georgian characters; Michael Everson; 2016-05-03 <a href="#">4733</a> Revised proposal to encode the Cypro-Minoan script in the SMP; SEI/Michael Everson; 2016-07-22 <a href="#">4734</a> Proposal to encode Western Cham in the SMP; SEI/Michael Everson, et al; 2016-06-13 <a href="#">4735</a> Update on encoding the Loma script in the SMP; SEI/Michael Everson; 2016-07-22 <a href="#">4741</a> ; Preliminary proposal to encode Möller's Egyptian Hieroglyphs in the SMP; SEI/Michael Everson; 2016-09-09 <a href="#">4742</a> ; Preliminary Mapping table of Möller's Egyptian Hieroglyphs; Deborah Anderson; 2016-09-21 <a href="#">4751</a> ; Source analysis of an extended Egyptian Hieroglyphs repertoire (Hieroglyphica); Michel Suignard, expert; 2016-09-09	Noted. Some feedbacks: Small seal – agenda item 10.2.1; Garay – agenda item 10.2.8 (document <a href="#">N4875</a> ); Loma – agenda item 10.2.2 (documents <a href="#">N4786</a> and <a href="#">N4837</a> ); Shuishu – agenda item 10.2.5, (document <a href="#">N4839</a> ); Primitive Scripts of SW China – agenda item 10.2.7 (documents <a href="#">N4856</a> , <a href="#">N4901</a> ).



	<p><a href="#">4758</a> Updated Proposal for encoding Shuishu in the SMP of the UCS; China; 2016-09-22</p> <p><a href="#">4759</a> Preliminary Proposal for encoding Primitive Scripts in Southwest China in the SMP; ZHAO, Liming; 2016-09-22</p> <p><a href="#">4760</a> Preliminary proposal for encoding Proto-Cuneiform in the SMP of the UCS; Michael Everson; 2016-09-25</p> <p>(See also documents under action AI-64-7-b above.)</p>	
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## 5 SC2 matters:

### 5.1 Documents for information

Input document:

[SC2/N4506](#) Summary of Voting on ISO/IEC DIS 10646 (Ed 5), Information technology -- Universal Coded Character Set (UCS); 2016-10-27

The above document was for information of WG2 experts, and was not discussed.

### 5.2 Disposition of comments on ISO/IEC 10646 5th edition

Input document:

[4777](#) Disposition of comments on ISO/IEC DIS 10646 5th edition; Michel Suignard, Project Editor; 2016-11-14

Mr. Michel Suignard: The 5th edition of the standard was under DIS ballot at our last meeting. The comments that were received were all editorial. The disposition of comments in document [N4777](#) covers these. ITTF has sent feedback that the standard should follow a new format. The old format would probably what we would follow, with edits to clauses 2 and 3. We can discuss how and when we will present in the new format. It could be either in Amendment 1 or Amendment 2 or wait for next edition.

### 5.3 Considerations on PDAM and CD development process

Input documents:

[SC2/4549](#) Request to discuss the development process of PDAM and CD at the 22nd Plenary Meeting of ISO/IEC JTC 1/SC 2; 2017-09-12

[4891](#) Considerations on PDAM and CD development process; Michel Suignard; Project editor; 2017-09-19

Output document:

[4903](#) Summary of Ad Hoc Meeting on SC2/WG2 and UTC Processes; Lisa Moore; 2017-09-27

Concerns raised by the national body of Japan in document [SC2/4549](#) regarding development process of PDAM between meetings and a response prepared by the project editor in document [N4891](#) were relegated to an ad hoc group. The ad hoc group also took note of the comments made by Ireland and the UK in their ballot comments for PDAM 1.3. The ad hoc report is in document [N4903](#).

Ms. Lisa Moore: The concerns were about the relationship between WG2 and the UTC processes of progressing and publishing the results in the relevant standards. There will be ongoing discussions between WG2 and UTC in the future. The ad hoc reached consensus on the following:

- Regarding defining symbols for use as Emoji, the UTC should not freeze the Emoji repertoire prior to release of any version of the Unicode standard, till the UTC provides an opportunity from SC2 national bodies to provide their feedback.
- In general, the WG2 email list should be used by the UTC for new character proposals that could be candidates for fast tracking by the UTC. Mr. Michael Everson and Dr. Deborah Anderson will monitor the feedback.
- Mr. Michel Suignard, the project editor, will also notify WG2 members in advance, of any characters that were not discussed at a WG2 meeting, prior to including them in a ballot.
- The two committees will work to create the best practice for managing symbol sets and communicating their decisions on the repertoire.

## 6 WG2 matters

### 6.1 Amendment 1 to 10646 5th edition – PDAM 1.2

Input documents that were considered and incorporated in generating text for PDAM 1.2:

[3987](#) Proposal to add two kana characters; Ken Lunde; 2011-02-09

[4798](#) Proposal to encode the TELUGU SIGN COMBINING ANUSVARA ABOVE; Srinidhi A, Sridatta A; 2016-10-20

[4801](#) Proposal to encode Eris and Sedna Symbols; David Faulks; 2016-11-11

[4802](#) Proposal to encode CHAKMA LETTER LHAA, DEPENDENT VOWEL SIGNS AA & EI for Chakma; Bivuti Chakma, Andrew Glass; 2016-11-02

[4803](#) Feedback for the two proposals to encode additional small kana characters L2/16-334 and L2/16-354; Ken Lunde; 2016-11-22

[4804](#) Proposal to encode Mayan numerals; Jameson Quinn; 2016-09-26

[4805](#) Further emoji additions for Unicode 10, consolidated proposal; UTC Emoji Subcommittee; 2016-11-10

[4809](#) Future Additions to ISO/IEC 10646 (November 2016); Unicode Consortium; 2016-11-10

Input documents:

[SC2/N4512](#) ISO/IEC 10646 (Ed.5)/PDAM 1.2, Information technology -- Universal Coded Character Set (UCS) --Amendment 1 (replaces N 4509); Project Editor; 2016-12-13

SC2/N4518 Summary of Voting on ISO/IEC 10646 (Ed.5)/PDAM 1.2, Information technology -- Universal Coded Character Set (UCS) -- Amendment 1; SC2 Secretariat; 2017-03-10

4794 Draft disposition of comments on PDAM1.2 to ISO/IEC 10646 5th edition; Michel Suignard, Project editor; 2017-04-18

4823 Disposition of comments on PDAM1.2 to ISO/IEC 10646 5th edition; Michel Suignard, Project editor; 2017-05-19

Above documents are all for information of WG2 experts. These relate to the progression of work since last WG2 meeting. PDAM 1.3 and PDAM 2 ballot responses and the disposition of the received comments are in the following sections.

## 6.2 Amendment 1 to 10646 5th edition - PDAM 1.3

Input documents that were considered and incorporated in generating text for PDAM 1.3:

4781 Proposal to encode one historical Mongolian letter for Buryat Mongolian; Andrew West, et al; 2017-01-13

4783 Proposal to encode symbols for chess notation, revised; Michael Everson, Garth Wallace; 2017-01-21

4806 Proposal to encode Armenian Phonetic Characters in Unicode; Luc Baronian; 2017-01-19

4807 Proposal to add Hebrew YOD TRIANGLE; Mark Shoulson; 2016-10-28

4808 Proposal to encode the SANDHI MARK for Bengali; Srinidhi A, Sridatta A; 2016-11-01

4810 Future Additions to ISO/IEC 10646 (January 2017); Unicode Consortium; 2017-01-26

4811 Feedback on Extra Aspect Symbols for Astrology; Michel Suignard; 2017-01-24

4812 Additional Characters for Kharoṣṭhī Script; Andrew Glass, Stefan Baums; 2017-01-17

4813 Revised proposal to encode Hanifi Rohingya in Unicode; Anshuman Pandey; 2016-12-31

4814 Proposal to encode the Old Sogdian script in Unicode; Anshuman Pandey; 2016-12-31

4815 Revised proposal to encode the Sogdian script in Unicode; Anshuman Pandey; 2017-01-25

4816 Proposal to encode the SANDHI MARK for Newa; Srinidhi A, Sridatta A; 2016-12-23

4824 Additional repertoire for ISO/IEC 10646:2017 (5th ed.) Amendment 1.3; Michel Suignard, Project editor; 2017-06-05

Input documents:

SC2/N4529 ISO/IEC 10646 (Ed.5)/PDAM 1.3, Information technology -- Universal Coded Character Set (UCS) -- Amendment 1; Project Editor; 2017-06-06

SC2/N4546 Summary of Voting on ISO/IEC 10646/PDAM 1.3, Information technology – Universal Coded Character Set (UCS) -- Amendment 1; SC 2 Secretariat; 2017-08-31

4840 Proposal to add Tamil Nukta Character; Martin Hosken; 2015-10-26

4857 PDAM1.3 Draft Disposition of Comments; Michel Suignard, Project editor; 2017-09-11

4888 Future Additions to ISO/IEC 10646; Ireland NB; 2017-09-24

Output documents:

4905 Khitan Ad Hoc Report (Hohhot, Inner Mongolia); SEI/Deborah Anderson; 2017-09-26

4870 PDAM1.3 Disposition of Comments; Michel Suignard, Project editor; 2017-09-28

4872 Additional repertoire for ISO/IEC 10646:2017 (5th ed.) Amendment 1 (DAM1); Michel Suignard, Project editor; 2017-09-30

Of the 26 votes cast, there were: 9 ‘approval as presented’, 2 ‘approval with comments (China and USA)’, 2 ‘disapproval (Ireland and UK)’ and 13 ‘abstentions’.

*Relevant Observation:*

**M66.01 (Additions in Amendment 1 to 5<sup>th</sup> edition since meeting 65):** WG2 notes that document N4824 (PDAM 1.3) lists **1392** character additions in Amendment 1. This is an increase in the count from **1178** noted as part of PDAM 1.2 at the end of meeting 65, an increase of **214** characters.

Mr. Michel Suignard: We have gone through 3 rounds of balloting at the PDAM stage. I think we should be able to progress this document to DAM stage. We are also meeting in SC2 later in the week and should be able to progress. Comments were received from China, Ireland, UK, and USA. The following is the discussion on the draft disposition of those comments in document N4857. The disposition is organized per country.

*Note: The comments captured in the following minutes are paraphrased from the full set of comments made in the ballot responses. See document N4870 for the full set of comments along with their final dispositions at the end of this meeting.*

### 6.2.1 China: Approval

G1. China is in favor of PDAM 1.3.

*Disposition:* Noted.

G2. China does not comment on Zanabazar Square and Soyombo because we need further study.

*Disposition:* Noted. It will still be possible to comment on the next phase of this amendment (DAM).

Mr. Michel Suignard: We cannot take any action on these comments. China can still make technical comments at the DAM stage. It would be easy to add stuff at DAM stage.

### 6.2.2 Ireland: Disapproval

T1. Ireland requests moving 058B ARMENIAN SMALL LETTER TURNED AYB from 058B to 0560, and ARMENIAN SMALL LETTER YI WITH STROKE from 058C to 0588, from the group of Armenian punctuations to rest of the set. Rationale showing their use as non-punctuation characters in writing Kurdish with Armenian script is provided.

Mr. Michel Suignard: I think we can accept the proposal. The two characters were added in the punctuation section, now these will be moved to within the rest of the set.

*Disposition:* Accept to move 058B ARMENIAN SMALL LETTER TURNED AYB to 0560, and 058C ARMENIAN SMALL LETTER YI WITH STROKE to 0588.

*See relevant recommendation M66.03 item a on page 17.*

T2. Ireland requests that the invented modern radicals which have no historical attestation, and the annotations that attested Khitan Small Script characters can also be used as radicals, be removed from the PDAM, with the remaining characters shifted up to remove holes. Basic attested Khitan Small Script characters, however, are not controversial. The rationale and a proposed revised code charts and names lists were attached to the ballot response.

*See also comment T4 and E5 from UK and TE4 from US. The proposed new names list also removes the annotation for 8 characters as requested by UK (in its comment E5).*

T3. Ireland proposes to move 18CFD KHITAN SMALL SCRIPT ITERATION MARK to the beginning of the block at 18B00 – with a rationale for the proposal.

Mr. Michel Suignard: There was an ad hoc on Khitan scripts today. (*See ad hoc report in document N4905.*)

*Discussion:*

- a. Mr. Michael Everson: The result of the ad hoc was to agree with Irish comments. The iteration mark stays.
- b. Mr. Michel Suignard: Can I take the Irish comments as presented? There was another comment – that there is no rush for this script, and can we move it to Amendment 2? It will allow us to refine the script encoding further if needed. My personal preference would be that towards stability.
- c. Mr. Andrew West: I will not object to moving to Amendment 2 if needed. We discussed it with Chinese experts. There does not appear to be any changes to the repertoire.
- d. Mr. Michael Everson: The US comments is to do with clustering model itself, not with the repertoire. The ZWJ may be the only character that may be needed – after discussing with Mr. Andrew Glass. The US concern was based on potential impact on the repertoire if there is any model change. The radicals were removed because of their overlap with something else. There was no urgency for the radicals. The base set is needed by the user community. We do not see a reason to move it to Amendment 2.
- e. Mr. Peter Constable: The conjoining behaviour is not yet worked out. Moving the script to Amendment 2 will give some more time to clarify that behaviour.
- f. Mr. Michael Everson: Neither radicals nor the shaping are essential.
- g. Mr. Andrew West: Most of the use case is by scholars to describe the text behaviour(?). There may be other scholars who may be interested in clustering etc.
- h. Mr. Michel Suignard: I do not see any harm in moving the repertoire to Amendment 2.
- i. Messrs. Michael Everson and Andrew West: We agree to move it to Amendment 2.

*Disposition:* Accept the Irish comments T2 and T3.

*See relevant recommendation M66.03 items b, c and f on page 17.*

Mr. Michel Suignard: I would encourage you to minimize the number of pictographs to be added in Amendment 1 and move most additions to Amendment 2.

T4. Ireland objects strenuously to the glyph change which has been accepted for 1F3B1 BILLIARDS. Several points are raised in the rationale provided. Since vendor action has resulted in the effective removal of a character from the UCS, Ireland requests the addition of a new character, BILLIARD GAMES, with a proposed glyph, on the next available PDAM, at 1F93F in the Supplemental Symbols and Pictographs block. Document [N4888](#) contains proposals for these and other symbols.

*See also comment T7 from UK.*

Mr. Michael Suignard: It seems reasonable to entertain the possibility of encoding a new symbol, whether it should be Emoji or not is open to debate.

*Disposition:* Accept the 1F93F BILLIARD GAMES, and adding CUE SPORTS as an annotation, for Amendment 2.

*See discussion in section **Error! Reference source not found.** on page **Error! Bookmark not defined.***

T5. If Ireland's requests in E8 are not satisfied, Ireland requests the addition of three new characters, DEER IN PROFILE, GORILLA IN PROFILE, and RHINOCEROS IN PROFILE, on the next available PDAM, in the Supplemental Symbols and Pictographs block. A note about the relations between ANIMAL, ANIMAL FACE, and ANIMAL IN PROFILE should be made clear in the names list and in the Principles and Procedures document. Document [N4888](#) contains proposals for these and other symbols.

Mr. Michel Suignard: It would preferable to accept Ireland's comment E8. It should also be noted that in the platform/font used to create this comment, the deer, gorilla and rhinoceros appear as profile in their current proposed code positions.  
*Disposition:* Ireland's comment E8 was Accepted. As a result, this comment T5 was withdrawn.

T6. Ireland proposes addition of several symbols for dinosaur and other extinct creatures with their proposed glyphs and code points. Ireland also points out synchronization-related issues between SC2 and UTC in terms of accepting symbols, particularly for Emoji. Document N4888 contains proposals for these and other symbols.  
*See also comment T10 from UK.*

Mr. Michel Suignard: This comment conflates two comments made by Ireland in the ballot concerning PDAM1.2 (see document N4823 comment T4 (pages 10-11) and T9 (page 12-16). As before it covers JTC1/SC2 and Unicode/UTC synchronization process issues which should be addressed by a separate contribution outside of the ballot comment context. It should also be noted that the list proposed by Ireland differ somewhat from the list proposed by UK in its comment T10. It would be advisable for Ireland and UK to prepare a joint contribution for further discussion. Finally, one of the name in the list from Ireland has a typo: Hardrosaurid should be 'Hadrosaurid'.

*Disposition:*

*(An SC2 ad hoc group met to discuss the various expressed concerns on process and interworking with Unicode consortium.*

*See ad hoc report from section 5.3 on page 9.)*

*See discussion in section **Error! Reference source not found.** on page **Error! Bookmark not defined.**.. All the dinosaur symbols were relegated for further study.*

MAMMOTH and DODO were accepted for Amendment 2.

T7. Ireland requests the addition of a new Fantasy Being character, TROLL at 1F9CF, in the Supplemental Symbols and Pictographs block. Document N4888 contains proposals for this character and other symbols.

*Disposition:* Accept 197B TROLL under new header 'Fantasy Beings' for Amendment 2.

*See discussion in section **Error! Reference source not found.** on page **Error! Bookmark not defined.**..*

T8. Ireland requests the addition of two new Animal symbol characters, BADGER at 1F9CD and SQUIRREL at 1F9CE, in the Supplemental Symbols and Pictographs block. Document N4888 contains proposals for these and other symbols.

*See also comment T8 from UK. The UK comment includes these two symbols, plus the SWAN.*

*Disposition:* See discussion in section **Error! Reference source not found.** on page **Error! Bookmark not defined.**.. BADGER and SQUIRREL were accepted for inclusion in Amendment 2.

E1. Ireland requests that the glyph for 05EF be centered.

*Disposition:* Accept.

E2. Ireland proposes a glyph change for 26F9 (mirroring it horizontally) to better align the black-and-white chart glyphs with the rest of the glyphs in the block.

*Disposition:* Accept.

E3. Ireland recommends a number of glyph changes, in the Miscellaneous Symbols and Pictographs block, to better align the black-and-white chart glyphs with the images that most users will find in a colour-glyph environment. The rationale for most of these is related to their orientation. Others are cleanups or for better clarity. See document N4870 for the proposed glyph changes.

*Disposition:* Partially accepted. The project editor will work with Irish experts and other interested parties to determine which of these glyphs changes should be propagated and in which amendment.

E4. Ireland recommends several glyph changes for Emoticons to facilitate a support of the recent specific changes relating to gender and coloration to sequences making use of these symbols. This includes adding sleeves and making other small adjustments. See document N4870 for the proposed glyph changes.

*Disposition:* Partially accepted. It seems that 1F64C is already as requested, and it is not clear that the emotion traits conveyed in 1F647 (deep bowing) and 1F64C (celebration) should use the same upper part symbol.

E5 Ireland has reviewed several vendor glyphs in the Transport and Map Symbols block, and recommends a number of glyph changes to harmonize better with the more common vendor glyphs for these symbols. See document N4870 for the proposed glyph changes.

*Disposition:* Partially accepted. The project editor will work with Irish experts and other interested parties to determine which of these glyphs changes should be propagated and in which amendment.

E6. Ireland requests that the reference glyph for 1F92F SHOCKED FACE WITH EXPLODING HEAD be changed based upon the blast of the international warning sign for explosives.

*Disposition:* Accepted in principle. The sign should be closer to that international warning sign, with more visible black rays (refer: [clipartbest.com](http://clipartbest.com)).

E7. Ireland recommends several glyph changes in the Supplemental Symbols and Pictographs block to harmonize better with the more common vendor glyphs for these symbols. Regarding 1F94A, many vendors have the vertical orientation, but this looks more like an oven mitt than a boxing glove, and the horizontal orientation “punches” better. Several symbols representing human beings have been altered to facilitate the application of symbol sequences expressing gender and coloration. See document [N4870](#) for the proposed glyph changes.

*Disposition:* Partially accepted. The project editor will work with Irish experts and other interested parties to determine which of these glyphs changes should be propagated and in which amendment.

E8. Ireland proposes to show the glyphs for full animals instead of just their faces in the Supplemental Symbols and Pictographs block, for 1F98C DEER, 1F98D GORILLA and 1F98F RHINOCEROS. The rationale is - where the name is just that of the animal, the whole animal should be shown. Where an animal face is required, the word FACE should be part of the name. (See also comment T9 from UK.)

*Disposition:* Accepted. Use the first suggested option (full animal) for Rhinoceros.

E9. Ireland recommends annotations for two characters 1F995 SAUROPOD and 1F996 T-REX on this PDAM.

*This is related to the discussion concerning the comment T6.*

The project editor will work with other experts also to see what is the best representation for the Glyphs .. There will be an ad hoc with Mr. Michael Everson and other concerned experts – particularly on Emoji.. Not all the items may be resolved before the end of this meeting. All accepted glyph changes are based on receiving a font from Ireland with the appropriate glyphs.

Based on the above disposition of comments the Ireland vote changes to ‘Approval’.

### **6.2.3 UK - Disapproval**

G1. Emoji inclusion process; the UK describes some recent WG2 process issues related to inclusion of Emoji and synchronization with the Unicode standard version 10.0. The UK also recommends some steps to take in WG2 and request the Unicode liaison representative to communicate the concerns to the Unicode consortium towards better interworking. Mr. Michel Suignard: The cited Emoji characters were added to keep Unicode Standard and 10646 synchronized, even though these characters were officially introduced only in PDAM 1.2. The project editor is working at improving the communication between the two committees to decrease that tension for future Emoji contents. There is only so much I can do as an editor. One can always monitor the pipeline from the UTC and make comments.

*Discussion:*

- a. Mr. Andrew West: The UK national body's first opportunity to comment was the PDAM. It was not accepted by UTC because it was too late for UTC to consider.
- b. Ms. Lisa Moore: We do have a plan to discuss this process issue between UTC and WG2. We definitely want to provide opportunity for commenting. National bodies are requested to be sensitive to the different cycles of progression of the standards.
- c. Mr. Michael Everson: The characters were fast tracked in the case of many Emoji. We have fast tracked currency symbols in the past in synch between UTC and WG2. Fast tracking should be OK provided there are no serious objections.
- d. Ms. Lisa Moore: We will definitely try to improve the working between WG2 and UTC.
- e. Mr. Andrew West: I am very concerned about the whole process of inventing new characters without much justification – like we used to process the symbols in the past.
- f. Mr. Michel Suignard: The Emoji case is different – there is incredible pressure from user community. The UTC does take into consideration the concerns expressed by UK to WG2. There is also a document [N4846](#) on the agenda containing proposed Emoji additions with rationale.

*Disposition:* Noted.

*(An SC2 ad hoc group met to discuss the various expressed concerns on process and interworking with Unicode consortium. See ad hoc report in section 5.3 on page 9.)*

G2. Expressing some process related concerns on addition of characters related to Emoji characters under ballot, the UK proposes not to dismiss ballot requests to add additional symbol characters related to them.

Mr. Michel Suignard: We do take additions sometimes in amendment ballot comments. When there are a few it is not controversial. When there are large number of additions, we should be a little bit more formal. It is OK between two rounds of PDAMs. But between PDAM to DAM stage one should have some more rationale in a contribution – rather than being part of a ballot comment only.

*Discussion:*

- a. Mr. Michael Everson: The case is different with Emoji – these are invented characters unlike the others that are based on script usage. Only one committee generates these symbols – and the repertoire of such artificial characters seem to be open ended – the considerations seem to be different.
- b. Mr. Peter Constable: The original situation of Emoji was when they came in as a set from the Japanese set. Now the situation is different – the vendors are also becoming selective in the Emojis being considered. When the first set of 700 or so were accepted, the vendors had intention of those. With the new Emojis, just because it is added to the standard would not mean that the vendors are going to implement them. The Emoji selection process is now very selective.
- c. Mr. Michael Everson: Our comments have also been that the set should be amenable for removing and augmenting when it is necessary.

*Disposition:* Noted.

*(An SC2 ad hoc group met to discuss the various expressed concerns on process and interworking with Unicode consortium. See ad hoc report in section 5.3 on page 9.)*

E3. The UK proposes to add in clause 24.2, Table 6, the missing source reference files for Tangut ideographs 187ED...187F1: kTGT\_MergedSrc formats: (L2012-dddd) and (WG2N4724-d).

Mr. Michel Suignard: We may need to go for a supplementary document that gives more information rather than updating the standard all the time.

*Discussion:*

- a. Mr. Andrew West: I see what you are saying, and I agree. Perhaps a UTN would be useful. We do have a draft UTN available and will be sent to UTC shortly.
- b. Mr. Michael Everson: Does 10646 reference UTNs?
- c. Mr. Michel Suignard: Yes. We have done it for others.

*Disposition:* Accept.

T4. The UK proposes removing twelve ‘Radical’ characters from the Khitan Small script, and move the remaining characters up to fill the gaps, along with the rationale for the proposal - 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) and 18CDD (Radical-20).

*See also comment T2 from Ireland, and TE4 from US and disposition in T2 from Ireland.*

*Disposition:* Accept.

*See relevant recommendation M66.03 items b, c and f on page 17.*

E5. As it may be appropriate to disunify Khitan radicals from Khitan characters, and encode a unified block for Khitan and Jurchen radicals, the UK proposes removing the code chart annotation for characters that can also be used as radicals.

*See also comment T2 from Ireland.*

*Disposition:* Accept.

T6. The UK proposes moving 18CFD to 18B00, and move the range 18B00...18CE0 down, since 18CFD acts like an ordinary Khitan character and participates in cluster formation.

*See also comment T3 From Ireland and its disposition.*

*Disposition:* Accept.

*See relevant recommendation M66.03 items b, c and f on page 17.*

T7. The UK proposes to - add the formal alias MAGIC 8-BALL to 1F3B1, and add a new character BILLIARDS CUE AND BALLS with a glyph showing a billiards cue and a triangular set of coloured but unnumbered billiards balls and an informative alias

“snooker” to this character. The UK points out that it had pointed out that the current glyph for 1F3B1 (from PDAM 1.2) was not acceptable, along with its rationale, but was not taken up in Unicode 10.0.

*See also comment T4 from Ireland.*

Mr. Michel Suignard: The non-acceptance was based on the following argument (document [N4823](#) page 11): “A clear majority of the implementations represents this character with an eight ball. While the original glyphs of the historic sources are a good hint, they do not create an absolute reference concerning the glyph appearance, and more so given the vast growth of the Emoji concept beyond its Japanese root”. Adding a character is certainly worth considering, although not in this amendment but rather in Amendment 2.

*Disposition:* Accept in principle. A new character 1F93F BILLIARD GAMES was accepted for Amendment 2.

*See discussion in section **Error! Reference source not found.** on page **Error! Bookmark not defined.***

T8. The UK proposes to add BADGER, SQUIRREL and SWAN characters to the Supplemental Symbols and Pictographs block, along with its rationale.

*See also comment T8 from Ireland.*

*Disposition:* Accept in principle. BADGER, SQUIRREL and SWAN are accepted for Amendment 2.

*See discussion in section **Error! Reference source not found.** on page **Error! Bookmark not defined.***

T9. The UK expresses its concerns about the glyphs shown for characters depicting animals with names such as GIRAFFE FACE and ZEBRA FACE, pointing to the Emojidex designs for Giraffe Face and Zebra Face (see <https://emojipedia.org/giraffe-face/> and <https://emojipedia.org/zebra-face/>). The UK proposes to add a note to the standard stating that 1F992 (GIRAFFE FACE) and 1F993 (ZEBRA FACE) may be depicted as the head or the whole body.

*See also comments T5 and E8 from Ireland.*

Mr. Michel Suignard: The Irish comment E8 tends to prefer that animal glyphs corresponding to character names with no ‘face’ in the names, should be shown as full body, not as just face or fragment like DEER, GORILLA, and RHINOCEROS.

*Disposition:* Accept partially.

T10. The UK points out that there are several other dinosaurs besides T-REX and SAUROPOD that should be added to complete the set of major groups of dinosaurs and other extinct animals. The UK further proposes to add to the Supplemental Symbols and Pictographs block - NKYLOSAURUS, GALLIMIMUS, IGUANODON, PACHYCEPHALOSAURUS, PARASAUROLOPHUS, STEGOSAURUS, TRICERATOPS, VELOCIRAPTOR, ARCHAEOPTERYX, DIMETRODON, ICHTHYOSAUR, PLESIOSAUR, PTEROSAUR, MAMMOTH, SMILODON and DODO.

*See related comment T6 from Ireland.*

Mr. Michel Suignard: The two proposed sets from Ireland and the UK intersect, but names are sometimes different.

*Disposition:* Accept partially. MAMMOTH and DODO were accepted for Amendment 2. All the other proposed characters were relegated for further study. *See discussion in section **Error! Reference source not found.** on page **Error! Bookmark not defined.***

T11. The UK proposes to rename the characters 1FA60 ... 1FA6D by changing RED XIANGQI XXX and BLACK XIANGQI XXX to XIANGQI RED XXX and XIANGQI BLACK XXX respectively, in their names.

Mr. Michael Everson: I am OK with these names even though it should be BLACK XIANGQI SOLDIER etc. for consistency

Mr. Michel Suignard: There is consensus on these.

*Disposition:* Accept.

*See relevant recommendation M66.03 item d on page 17.*

E12. The UK proposes to change the annotation for 1FA65, from "design sometimes shows 5352 卒 (Ming dynasty)" to "design sometimes shows 5305 包 (Ming dynasty)".

*Disposition:* Accept.

E13. The UK requests to add the missing tone mark in the alias for 1FA6B - change alias "hēi ju" to "hēi jū".

Mr. Michel Suignard: The font choice for annotations is a limitation in the table production tool. Any character beyond Latin-1 repertoire would be shown with a different type face (in fact the code chart version of the character) and would be like the following: hēi jū (shown expanded).

*Disposition:* Accept.

Based on the above disposition of comments the UK vote changes to ‘Approval’.

#### 6.2.4 USA - Approval with comments

TE.1. Several new characters in the Kana Supplement, Kana Extended-A, Transport and Map Symbols, Supplemental Symbols and Pictographs, and Zanabazar Square blocks have already been published in Unicode 10.0 (Hentaigana, Emoji, and three Zanabazar Square characters). The US requests that none of these characters be removed or otherwise changed from this Amendment because of their publication status in Unicode 10.0.

*Disposition:* Noted.

TE.2. The US proposes adding “PAWNS” or “PAWN” to the chess notation names for U+2BFA through U+2BFD to clarify what the symbols mean.

Mr. Michel Suignard: If we accept this proposal, the current annotations for these symbols should also be removed.

*Discussion:*

- a. Mr. Michael Everson: I do not like these changes – the old names were based on consistent use by Chess Communities. I object to these name changes.
- b. Mr. Michel Suignard: Names do not restrict the use of these symbols.
- c. Mr. Peter Constable: This request was based on discussion between you and the proposer.
- d. Mr. Michael Everson: We discussed these. The historical preference was not to include the word ‘PAWN’ in the name.
- e. Mr. Peter Constable: We are OK in withdrawing this request.

*Disposition:* Withdrawn.

TE.3. The US proposes changing the names for three chess notation symbols (U+2BBA...U+2BBC) replacing “INTERLOCKED” to “OVERLAPPING” in their names to more accurately describe the glyphs.

Mr. Michael Everson: The rationale is correct. I agree we can accept the change.

*Disposition:* Accept.

*See relevant recommendation M66.03 item e on page 17.*

TE.4. The model for the Khitan Small script is incomplete without the format control characters. As a result, the US recommends moving it from PDAM 1.3 to Amendment 2.

*See also comments T4, E5, T6 from UK and comments T2 and T3 from Ireland.*

*Disposition:* Accept.

*See relevant recommendation M66.03 items b, c and f on page 17.*

ED.1. To more accurately describe the use of the character, the US proposes changing the subheading above A7AF LATIN LETTER SMALL CAPITAL Q to "Letter for Japanese linguistics" or "Letter for Japanese phonemic transcription" and adding an annotation: “used to represent gemination in Japanese phonetic transcription”, or simply "gemination".

*Disposition:* Accept. The subheading will read: “Letter for Japanese phonemic transcription” and the annotation will be “\* gemination”).

ED.2. To more accurately describe the use of the new characters U+058B and U+058C, the US proposes to change the Armenian heading above U+058B “Small letters” to “Lowercase letters” and add a note in the sub header that the characters are letters for phonetic notation.

*See also comment T1 from Ireland.*

*Disposition:* Accept in principle. The comment T1 from Ireland is accepted – the characters 058B and 058C have been moved to 0560 and 0588 respectively. Annotations can be added to these two moved characters.

ED.3. The US proposes adding an annotation “True Black Moon Lilith” to U+2BDE BLACK DIAMOND ON CROSS to clarify what astrological symbol it is.

*Disposition:* Accept.

ED.4. The US proposes changing the sub header above U+2BF3 from “Russian Astrological aspects” to “Russian astrological aspects” for consistency.

*Disposition:* Accept.

ED.5. The US proposes to correct the notes for U+2BF6 and U+2BF8, by changing “the letters” to “the term”.



*Disposition: Accept.*

ED.6. The US proposes to change the note for U+10D1C HANIFI ROHINGYA LETTER VA to “was not used widely and its usage has been discontinued” (to be clearer).

*Disposition: Accept.*

ED.7. The US proposes changing the heading for U+05EF HEBREW YOD TRIANGLE to “Hebrew sign”; it is not a ‘letter’.

*Disposition: Accept.*

ED.8. The US proposes changing the note for U+1133B COMBINING BINDU BELOW to: “used as Nukta for Betta Kurumba and other languages (pointing to document N4840 for the language use).

*Disposition: Accept.* Note that the original request to add a Tamil Sign Nukta in document N4840 was transformed in a request to this character “COMBINING BINDU BELOW” in the Grantha block.

ED.9. The US proposes removing quotes around 'Raqm' and 'Rakam' in the note at the top of the names list for Indic Siyaq Numbers (1EC70-1ECBF) to be consistent with the format used elsewhere.

*Disposition: Accept.*

Based on the above dispositions of comments (and those documented in N4870) Amendment 1 progresses to DAM stage.

#### *Relevant recommendation:*

**M66.03 (Disposition of ballot comments of PDAM-1.3 to 5<sup>th</sup> Edition):** WG2 recommends that SC2 accept the disposition of PDAM-1.3 ballot comments in document N4870. The following significant changes are noted:

- 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.

#### **6.3 Amendment 2 to 10646 5<sup>th</sup> edition – PDAM 2.1**

Input documents that were considered and incorporated in generating text for PDAM 2.1:

- 3487 Proposal to encode Egyptological Yod and similar characters; Michael Everson; 2008-08-04
- 4712 Revised proposal for the addition of Georgian characters; Michael Everson; 2016-05-03
- 4780 Proposal to encode the Nyiakeng Puachue Hmong script, revised; SEI/Michael Everson; 2017-01-22
- 4784 Revised proposal to encode heterodox chess symbols; Michael Everson, Garth Wallace; 2017-01-22
- 4792 Proposal for the encoding of an Egyptological YOD, revised; Michel Suignard; 2017-05-09
- 4817 Future Additions to ISO/IEC 10646 (May 2017); Unicode Consortium; 2017-05-12
- 4818 A method for encoding Egyptian quadrats in Unicode; Andrew Glass, et al; 2017-05-12
- 4819 Final proposal to encode Nandinagari in Unicode; Anshuman Pandey; 2017-05-05
- 4820 Proposal to encode a nasal character in Vedic Extensions; Anshuman Pandey; 2017-04-25
- 4821 Proposal to encode the Marca Registrada sign; Eduardo Marin Silva; 2017-03-01
- 4822 Finalized proposal to encode Tamil fractions and symbols; Government of Tamil Nadu; 2017-01-21
- 4825 Additional repertoire for ISO/IEC 10646:2017 (5th ed.) Amendment 2.1; Michel Suignard, Project editor; 2017-06-05

Input documents:

SC2/N4547 Summary of Voting on ISO/IEC 10646 (Ed5)/PDAM 2, Information technology -- Universal Coded Character Set (UCS) -- Amendment 2; SC2 secretariat, 2017-08-31.

4825 Additional repertoire for ISO/IEC 10646:2017 (5th ed.) Amendment 2.1; Michel Suignard, Project editor; 2017-06-05

4826 (SC2/N4543) Japanese National Body Contribution on Small Kana Characters; Japanese NB; 2017-04-01

4858 PDAM2 Draft Disposition of Comments; Michel suignard, Project editor; 2017-09-18

Output document:

4871 PDAM2 Disposition of Comments; Michel Suignard, Project editor; 2017-09-28

Of the 26 votes cast, there were: 10 ‘approval as presented’, 1 ‘approval with comments (USA)’, 2 ‘disapproval (Ireland and Japan)’ and 13 ‘abstentions’.

*Relevant Observation:*

**Observation M66.02 (Additions in Amendment 2 to 5<sup>th</sup> edition since meeting 65):** WG2 notes that document N4825 lists 341 character additions in Amendment 2, which was prepared and sent for ballot after M65.

Comments were received from Ireland, Japan and USA. The following is the discussion on the draft disposition of those comments in document N4857. The disposition is organized per country.

*Note: The comments captured in the following minutes are paraphrased from the comments made in the ballot responses. See document N4871 for the full set of comments along with their final dispositions at the end of this meeting.*

### 6.3.1 Ireland - Disapproval

T1. Ireland proposes to add LATIN CAPITAL LETTER THORN WITH DIAGONAL STROKE and LATIN SMALL LETTER THORN WITH DIAGONAL STROKE at A7C0 and A7C1 respectively, with a reference to document N4836 “Proposal to add LATIN LETTER THORN WITH DIAGONAL STROKE to the UCS”, with a rationale pointing to other letters with a stroke.

Mr. Michel Suignard: The characters mentioned are NOT part of this amendment. They should be discussed in the context of the agenda item related to N4836. Note that the Unicode UTC #152 reviewed this document and took no action.

*Disposition:* Accept.

*See discussion in section 9.3.5 on page 29 and relevant recommendation M66.15 item b on page 29.*

T2. Ireland proposes to add LATIN CAPITAL LETTER ANGLICANA W and LATIN SMALL LETTER ANGLICANA W at A7C2 and A7C3 respectively, with a reference to document N4838 “Proposal to add LATIN LETTER ANGLICANA W to the UCS”, with a rationale pointing to their contrastive use in Middle Cornish and Middle English manuscripts

Mr. Michel Suignard: The characters mentioned are NOT part of this amendment. They should be discussed in the context of the agenda item related to N4838. Note that the Unicode UTC #152 reviewed this document and approved these characters for future encoding.

*Disposition:* Accept.

*See discussion in section 9.3.6 on page 30, and relevant recommendation M66.15 item c on page 29.*

T3. Ireland proposes revised names for some Egyptian Hieroglyph Format 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. The stated rationale is to harmonize the names of these with control character names elsewhere in the standard.

*See also comment TE2 from USA and E2 from Ireland.*

Mr. Michel Suignard: My initial view is that these changes are not necessary for improving. I want to hear other opinions.

*Discussion:*

- a. Mr. Michael Everson: My argument is for consistency in names – the group who prepared the names have not considered the current naming conventions for various controls. None of our character names end with 'STOP' or 'END' etc.
- b. Dr. Deborah Anderson: I checked with Mr. Andrew Glass – he did not specifically comment on the names.
- c. Mr. Michel Suignard: Mr. Michael Everson has a point regarding the naming consistency. The glyphs are a different matter. We could accept the name changes.

*Disposition:* Accept the proposed name changes.

*See relevant recommendation M66.03 item a on page 17.*

T4. Ireland proposes to revise the block name ‘Egyptian Hieroglyphs Format Controls’ to ‘Egyptian Hieroglyph Format Controls’.

*Disposition:* Accept.

*See relevant recommendation M66.03 item b on page 17.*

E1. Ireland requests a glyph change for two Georgian characters, 1CBA GEORGIAN MTAVRULI CAPITAL LETTER AIN used in this block, and 10FA GEORGIAN LETTER AIN in the Georgian block. Rationale pointing to potential security issue and some evidence are given.

Mr. Michel Suignard: There is no confusability on the lowercase character's glyph. The uppercase is the one where some confusion may exist. I compared many implementations as well.

*Discussion:*

- a. Mr. Michael Everson: I engaged with the Typographers for Georgian. The glyphs we have were designed by me, based on handwritten documents we had. This glyph is not going to be used by implementers of extended set. Implementers have followed the code chart which is not what the typographers want.
- b. Mr. Peter Constable: Which character is involved – is it 10DA?
- c. Mr. Michel Suignard: What you say does make sense. I was only concerned about existing implementations.
- d. Mr. Andrew West: The typographers have been working with font groups like Monotype. Do they have any feedback from them?
- e. Mr. Michael Everson: I cannot say whether they have received any feedback.

Mr. Michael Everson: I withdraw this comment.

*Disposition:* Withdrawn.

E2. Ireland proposes revising glyphs for some Egyptian Hieroglyphs Format Controls, with dashed boxes with abbreviations in them, citing potential confusability with Ideographic Description Characters.

Mr. Michel Suignard: I think we need to have the ability to see the abbreviations inside the glyph.

Mr. Michael Everson: I will work with Mr. Andrew Glass and others in the Hieroglyphs group to improve these.

*Disposition:* Not accepted.

Mr. Michael Everson: Based on the above dispositions Ireland changes our ballot position to Approval.

### 6.3.2 Japan - Disapproval

T.1. Japan proposes deleting 9 small Kana characters on this PDAM in Small Kana Extension block 1B13..1B16F, and assign the set of small Kana characters based on the result of discussion at the next WG2 meeting, referencing document [N4826](#) (SC2 N4543). Japan also points out that there is no single WG2 reference document for the 9 small Kana characters in this PDAM.

Mr. Michel Suignard: There are two WG2 document supporting these 9 additions: [N3987](#), which proposed to encode Hiragana and Katakana Small Letter KO, and [N4803](#) "Feedback for the two proposals to encode additional small kana characters L2/16-334 and L2/16-354". The second document is a support document and as such does not contain all the references of the original Unicode UTC documents: [L2/16-334](#) (four characters) and [L2/16-354](#). The two UTC documents could have also been added to the WG2 registry. Between PDAM 1.2 and PDAM 2.0 we had some documents related to these characters. [N3987](#) was an old document. We can always start with a subset – there is nothing wrong with that. We do have evidence for 6 of these that are proposed in the PDAM. Evidence for 14 of them exists by merging several documents. People have asked for these small Kana characters, and that is why we had the subset in the PDAM. I do not have any contribution from Japan on how to progress at this meeting.

*Discussion:*

- a. Mr. Wataru Takagi: The Japanese national body had discussions. The UTC may get positive feedback from outside. However, the Japanese national body cannot agree at this time.
- b. Mr. Peter Constable: Some font vendors do have some of these already in their repertoire. How do we find the right balance between their requirements and the position of Japan?
- c. Mr. Wataru Takagi: We need to get feedback from others. Not every vendor may be in support of these, some may object.
- d. Mr. Michel Suignard: We know that not every vendor need to support all the Small Kana characters that have been encoded in every context. Vendors have a choice. I was expecting a technical contribution on Small Kana from Japan for making some progress at this meeting. However, it does not allow us to progress.
- e. Mr. Michael Everson: The evidence has been provided from 1992.
- f. Mr. Andrew West: What did Japan mean by 'next' WG2 meeting - this meeting or following one? This one. If that is the case, we should keep the characters in the amendment since we do not have a contribution here.
- g. Mr. Toshiya Suzuki: Mr. Michael Everson commented that the evidence was available from 1992 for some Small Kanas. However, the evidence was not for encoded characters – they were photographs / images. The Japanese experts' opinion is that these were not sufficient evidence for encoding. Also, I would confirm the 'next meeting' is meant to be 2018 meeting.
- h. Mr. Peter Constable: You are raising a valid question about the evidence. However, in the absence of any technical contribution on the topic, we can still keep them in Amendment 2. Keep in mind that it is still PDAM.

- i. Mr. Toshiya Suzuki: If you examine some of the contributions – one could conclude that some Small Kanas could qualify and others may not qualify.
- j. Mr. Michel Suignard: That is already the case. Again, for those we have found evidence we should encode incrementally. It is not all comprehensive. Especially for Small Kanas, if we keep getting objections from Japan it does not look well.
- k. Mr. Wataru Takagi: We meant to hear the evidence from UTC.
- l. Mr. Peter Constable: The contribution from the UTC has been submitted long time ago.
- m. Mr. Michael Everson: For the two characters I think we have the evidence and is convincing – in use since 1938. I would encourage experts from Japan to examine these documents and work with original proposers as well. One sure way of getting a focus on a topic in standardization process is to get it into a committee ballot and encourage progressing of discussions.
- n. Mr. Peter Constable: I agree with that. I encourage the experts to review all the evidences and come up with technical contributions evaluating them.
- o. Mr. Wataru Takagi: Another issue Japan came up with was that we may be able to come up with sequences for Small Kanas versus occupying code points.
- p. Mr. Michel Suignard: We already have some Small Kanas encoded. If we change the model now, we will be inconsistent. As to space we have plenty of space for the small set of Small Kanas we anticipate.
- q. Mr. Peter Constable: Japan is free to propose alternatives for encoding such as using sequences. They can make that technical proposal.
- r. Mr. Takada Tomokazu: 7 of the 9 Small Kanas in document [N4803](#) could be good. For the Small KO-s, the evidence is not good. I can support the 7 but not the other 2.
- s. Mr. Peter Constable: It would have been nice if that feedback is in a contribution to take back to the proposers.
- t. Mr. Michel Suignard: We could postpone the Small Kana Ko-s, pending further evidence, removing from the amendment.

*Disposition:* Partially accept. Remove two Small Kana KO characters from PDAM 2 for further study.

*See relevant recommendation M66.03 item c on page 17.*

ED.1. Japan proposes correcting “zzzzyyyyyyxxxxx” to “zzzzyyyyyyxxxxx” (add one missing “x”), in 3rd row of “Scalar value” column, in UTF-8 Table 2 in clause 9.2, in the standard. The error is in the text of the standard and not part of PDAM2 text.

*Disposition:* Accept.

Japan’s “disapproval” stays.

### 6.3.3 USA - Approval with comments

GE.1. The US strongly supports the inclusion of Georgian Extended, which is in modern use.

*Discussion:*

- a. Mr. Peter Constable: The Unicode Consortium is planning to publish these characters in Unicode 11.0. We would like to have this repertoire stabilized quickly even if PDAM 2 is not quite stabilized.
- b. Ms. Lisa Moore: It is based on strong requirement from the user community in Georgia.
- c. Mr. Michael Everson: This script is a priority one.

*Disposition:* Noted

TE.1. The US proposes correcting ‘FORTYFIVE’ to ‘FORTY-FIVE’ in the name of character 1FA08 in Chess symbols block.

*Disposition:* Accepted.

*See relevant recommendation M66.03 item d on page 17.*

TE.2. The US requests addition of 13436 EGYPTIAN HIEROGLYPH OVERLAY MIDDLE from document [N4818](#), to be able to render Egyptian quadrat structures fully.

*See also comments T3 and E2 from Ireland.*

*Discussion:*

- a. Mr. Michel Suignard: I do not have an objection to this. The character was part of original contribution document [N4818](#) with the name was EGYPTIAN HIEROGLYPH STACK MIDDLE.
- b. Mr. Michael Everson: Not sure whether the name should have MIDDLE or CENTER in it; but I agree we can put it into the amendment for balloting.

*Disposition: Accept.*

*See relevant recommendation M66.03 item e on page 17.*

ED.1. The US requests adding a note "Can appear either as isolated letters or circled letters" to 1F16C RAISED MR SIGN. The character U+1F16C RAISED MR SIGN can also appear in a circled glyph; add a note to indicate this.

*Discussion:*

- a. Mr. Andrew West: There is not enough evidence that the circled character exists.
- b. Mr. Michael Everson: If you go to Portuguese Wiki re: MR, there is no evidence at all for a circled MR. The original proposer had not proposed it either.
- c. Dr. Deborah Anderson: I have seen examples of circled MR. I can provide the evidence.
- d. Mr. Andrew West: I suggest we postpone this till evidence is presented to WG2.

*Disposition: Not accepted. Postponed pending evidence being provided.*

ED.2. The US proposes correcting "knightrihter" to "nightrider" in the informative aliases for Chess symbols at 1FA22, 1FA28 and 1FA2E.

*Disposition: Accept.*

ED.3. The US proposes deleting duplicated "as" in note ("used as as a base for a combining nasal sign") to Vedic Sign at 1CFA.

*Disposition: Accept.*

Updated with the above dispositions, the Amendment will be sent for one more round of balloting at PDAM level. Additional changes may be added from other discussions at this meeting.

*Relevant recommendation:*

**M66.07 (Disposition of ballot comments of PDAM-2 to 5<sup>th</sup> Edition):** WG2 recommends that SC2 accept the disposition of PDAM-2 ballot comments in document N4871. The following significant changes are noted:

- a. 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
- b. Changed 'Hieroglyphs' to 'Hieroglyph' in the block name resulting in 'Egyptian Hieroglyph Format Controls'.
- c. Removed the **two** small KOs (from the 9 Small Kanas) at code positions 1B132 and 1B155.
- d. Corrected the name for 1FA08 to NEUTRAL CHESS KNIGHT ROTATED FORTY-FIVE DEGREES.
- e. Added 1 character 13436 EGYPTIAN HIEROGLYPH OVERLAY MIDDLE (based on document N4818).
- f. 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).

#### **6.4 Roadmap Snapshot**

Dr. Umamaheswaran: For your information, the roadmaps have been updated to reflect the latest reference documents and status of the various scripts – see <http://www.unicode.org/roadmaps>.

#### **6.5 DAM1 draft code chart**

Output document:

4872 Additional repertoire for ISO/IEC 10646:2017 (5th ed.) Amendment 1 (DAM1); Michel Suignard, Project editor; 2017-09-30

Mr. Michel Suignard: Document N4872 reflects the changes in Amendment 1 from the discussion at this meeting. It will be included in the text that will be sent to SC2 secretariat for further processing as DAM 1.

*Relevant recommendation:*

**M66.06 (Progression of Amendment 1 to the 5<sup>th</sup> edition):** 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 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.

#### **6.6 Meeting #66 recommendations**

Output document:

4874 Meeting #66 Recommendations; V.S. Umamaheswaran; 2017-09-30

The recommendations drafted by the recording secretary Dr. V.S. Umamaheswaran, with assistance from the drafting committee, were reviewed on the last day of the meeting. They were edited as needed during the review and approved by WG2 to be forwarded to SC2 by the convener (see document N4874). There were **136411** characters in the 5<sup>th</sup> edition of 10646. At the end of this meeting WG2 recommended addition of **911** characters in Amendment 1 (to be progressed as DAM

1) and **1531** characters in Amendment 2 (to be progressed as PDAM 2.2), resulting in a total of **138853** allocations in the standard.

## 7 IRG status and reports

Input documents:

[4789](#) IRG Meeting #47 Recommendations and Action Items; IRG; 2016-10-21

[4828](#) IRG Meeting #48, Bundang, Greater Seoul Area, Korea, 2017-06-19~23 Recommendations and Action Items; IRG; 2017-06-23

[4829](#) Summary Reports of IRG#47, Matsuyama, Japan, 2016-10-18~21, & IRG#48, Seoul, Korea, 2017-06-19~23; IRG; 2017-08-08

[4833](#) IRG Principles and Procedures (IRG PnP) Version 10; IRG Rapporteur; 2017-07-24

Dr. Lu Qin presented the summary of IRG#47 and IRG#48 meetings contained in document [N4829](#).

*Item 1: Future meetings IRG 49 will be in San Jose.*

Dr. Lu Qin: We need the WG2 approval for the next meeting IRG#50 planned for 2018-05-21/25 in China.

IRG #51 meeting location is changed to Hanoi. An email from Mr. Lee Collins has been received, to be held 2018-10-22/28. HKSAR will be backup.

*See relevant recommendation **Error! Reference source not found.** on page **Error! Bookmark not defined.***

*Item 2: Working set 2015 is being reviewed.*

Dr. Lu Qin: IRG expects to submit Extension G to WG2 after IRG #49. The delay is due to one reviewer who has joined recently. I am yet to see the updated document.

*Discussion:*

- a. Mr. Michel Suignard: For your information, Extension G is in the title of PDAM 2. I expect to get the mapping, fonts and other information for the Extension G, charts preparation. I am planning to attend the next IRG.
- b. Mr. Andrew West: You mentioned that the final round of review is going to happen – do you expect any changes to happen?
- c. Dr. Lu Qin: Mr. Henry Chan recently sent me messages – but I have not seen any documents from him. I do not expect to see any character will be removed. If he does not send me his comments we cannot do anything about it.
- d. Mr. Andrew West: Mr. Henry Chan has his own ideas about unification – he is based in Hong Kong.

*See relevant recommendation M66.19, first bullet on CJK Extension G, on page 35.*

*Item 3: WDS Update*

Dr. Lu Qin: We are updating examples in it.

*Item 4 – Guidelines added on Stroke Count Rules.*

Dr. Lu Qin: IRG document [IRGN2221](#) is the reference.

*Item 5 – Revisions to PnP (see document [N4833](#))*

Dr. Lu Qin: Some revisions on Source references were updated to be inline with published standards; on use of IVSs etc. for compatibility ideographs; guidelines on Glyph Normalizations (RoK has been doing that; they can be used by other members of IRG). IRG rejected the IRG collections for IVD, as they are locale dependent. IRG can help review submissions on IVDs to Unicode registration.

*Items 6 and 7: For information to WG2.*

*Item 8 – Horizontal Extensions*

Dr. Lu Qin: HKSAR government is willing to deal with only the HKSCS. It has some guidelines for fonts, but is unwilling to standardize the fonts.

*Item 9 – UNCs*

Dr. Lu Qin: UNCs from China, JP and TCA were reviewed. These are in WG2 now.

*Item 10 – Working Set 2017*

Dr. Lu Qin: The original target of this set was to keep it to a max of 4000. China, ROK, SAT, TCA, UK, UTC... are requested to help meeting this limit. Vietnam has indicated they will add also. The UK has exactly 1000 submitted!

*Item 11 – CJK Supplementary Components*

D. Lu Qin: Provided naming conventions for the components to help IRG members to verify submissions to IRG. There was a collection of 500 components - some of these are already encoded. Some components can be ideographs also. The work will be to identify pure components etc. The discussion is sometimes philosophical and would like to get them encoded. It will be helpful to encode them in the future. It helps in improving the internal process within IRG.

Mr. Andrew West: In many characters the components can be unified. We can look at unifying the components when examining unification of ideographs.

## Item 12 - IRG N2219 Part B – Relaxing IVD Rules

Dr. Lu Qun: This work is related to reduction of Ideographic Variants per WG request from Meeting 64 and to use IVSs where possible. Some examples of where characters are unifiable or not are also shown. If we can prove that if a character is a cognate of the other, the relation would be established, so that the first one can be a base.

### Discussion:

- a. Mr. Michel Suignard: In the case of CJK, variants may not be looking like each other at all. They could be semantically variant. What qualifies to be variant could be something we need to look at in the case of CJK characters. Dr. Ken Lunde could be an expert you can seek an opinion from. You can try it at the next IRG meeting.
- b. Dr. Lu Qin: Under current IRG rules, the characters in the examples shown are not unifiable. But under the IVD guidance it could be by semantics etc. One does not use IVD for simplified and traditional ideographs. Can the IVD rules be relaxed? Another case is where two characters look like each other, but the component structure are Left to Right in one case and top to bottom in another. They may look alike and hence cognates.
- c. Mr. Michel Suignard: I think IRG should be given some leeway in determining when the IVS should be considered and when not.
- d. Mr. Andrew West: Characters looking alike may be a presentation related issue. I agree that the rules for IVS should be relaxed to deal with cases like what is shown in the examples.
- e. Mr. Peter Constable: If the rule for the IVS is relaxed, would it be possible to write a new rule?

### Relevant recommendation:

**M66.22 (Rules for IVD registration):** 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.

## 8 Script contributions related to ballots:

The documents that were listed under each of PDAM 1.2, PDAM 1.3, PDAM 2 are moved and listed as input documents under appropriate sub-sections on these amendments under section 6 on WG2 matters starting on page 9.

## 9 Script contributions not related to ballots

### 9.1 Carried forward in WG2 and UTC preliminary contributions

Mr. Michel Suignard: Following are items being carried forward – with mix of WG2 and UTC document references. Most preliminary proposals usually have a UTC number, whereas documents that were in progress or submitted to WG2 do have a WG2 number. We will ensure that all the documents in progress in WG2 will be in the WG2 document register.

#### 9.1.1 Scripts and new blocks

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](#)), Western Cham ([N4734](#)), Woleai ([N4146](#)), and Zou ([N4044](#)).

### 9.2 New Scripts or Blocks

#### 9.2.1 Shuowen Small Seal

Input documents:

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

[4716](#) Proposal to Apply Source-Based Variation Selector in Shuowen Small Seal Encoding; Suzuki Toshiya; 2016-04-28

[4755](#) Feedback on N4716 Shuowen small seal; TCA; 2016-09-22

[4834](#) Shuowen Seal Encoding Design Issues; Toshiya Suzuki, Richard Cook; 2017-06-18

[4843](#) Response to N4834: Shuowen Seal Encoding Design Issues; TCA and China; 2017-08-26

[4844](#) Comments on encoding Shuowen Small Seal; Selena Wei and Eiso Chan; 2017-08-25

[4852](#) Shuowen Seal Encoding Design Issues++; Richard Cook; 2017-08-24

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

[4855](#) Comments on Encoding of Small Seal Script Characters; Chinese Character Database Prg.; 2017-09-08

Ms. Lin Mei Wei: Document [N4853](#) contains the report from an ad hoc held in September 2017 in Taipei, discussing future work on Small Seals script. The 3 questions that came out from the different documents were addressed. There was agreement that it will be a separate script, independent of CJKUI. CJKUI guidelines will not apply. The name would be



Shuowen Seal. On dealing with duplicates, there was agreement to define the duplicates as exact, possible and non. If they are possible or exact, use VS scheme. There was agreement that one of the sets will serve as baseline for repertoire and single column chart. We can have multicolumn chart for showing further development of encoding etc.

*Discussion:*

- a. Mr. Andrew West: Why Shuowen is in the name of the block?
- b. Ms. Lin Mei Wei: Shuowen is used in Chinese. We want to retain it.
- c. Mr. Toshiya Suzuki: Seal can mean other symbols also - such as metal objects or stone inscriptions etc. Shuowen is a subset of all possible seals.
- d. Ms. Lisa Moore: We did discuss this at the last UTC ad hoc on this aspect. There are 3 different repertoires of seals - the larger one of these is the Shuowen. The other two smaller ones have not been studied. There will be a contribution from UTC on that.
- e. Ms. Lin Mei Wei: We can have an ad hoc meeting on the name in May 2018.
- f. Mr. Michel Suignard: If there are multiple sources, we could produce multicolumn charts like CJK.
- g. Ms. Lin Mei Wei: We are also working on the table of duplicates, and planning to submit by November.
- h. Mr. Michel Suignard: I would suggest setting the dates for the ad hoc as early as possible for experts to plan to attend.
- i. Dr. Deborah Anderson: What was the repertoire size?
- j. Ms. Lin Mei Wei: 11108.
- k. Mr. Michel Suignard: Please send any documents with more information to WG2. The seals are used everywhere.

*Disposition:* Await further input.

*Relevant recommendation:*

**M66.20 (Shuowen Small Seal script):** 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.

### 9.2.2 Wancho script

Input document:

4787 Revised proposal to encode the Wancho script, original SEI/Michael Everson 2017-07-26

4869 Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 8 on Wancho)

Mr. Michael Everson: Wancho is spoken by about 51000 speakers. In Nagaland, Myanmar, Bhutan and Assam. It is a newly devised script by a teacher Mr. Banwang Losu, in Longding District, Arunachal Pradesh. We are working with him. His orthography was not particularly suited for different variations of Wancho. The complication is due to different uses of tones. His scheme was writing once, twice and thrice to represent the three tones. It was complicated, and he considered coming up with tone marks. It did not quite work well. So, dots for Lower Wancho and feather marks for Upper Wancho were devised. There is also a keyboard. It has the new tone marks on this keyboard. It has already been introduced to, and are being used by students. I am waiting for the email feedback from the author. The revised contribution is the document to refer. We can go with the tone marks for ballot and can remove them if they are not needed.

*Discussion:*

- a. Dr. Deborah Anderson: The US would like to see the tone marks as coming in as ballot comments.
- b. Mr. Michel Suignard: From editor's point of view I would rather have the block include the tone marks and can be removed via ballot comments if they are not needed.
- c. Mr. Michael Everson: There are no previous documents to show as attestations for use of accents. The only thing we can do is to get a letter from the author.

*Disposition:* Accept for encoding in Amendment 2.

*Relevant recommendation:*

**M66.09 (Wancho script):** 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.

### 9.2.3 Shuishu script

Input document:

4839 Towards the ordering of the Shuishu script; Michael Everson; 2017-07-26

4894 Results of the ad-hoc meeting on Shuishu in Hohhot, 2017-09-21; Michael Everson, et al; 2017-09-21

Mr. Michael Everson: The results from the ad hoc meeting on Shishu is in document [N4894](#). Ms. Daisy Lài worked on devising a set of radicals for sorting the characters based on shapes. These were reviewed and revised. The names of these were also reviewed and revised. See page 12. Dr. Ken Whistler had requested to have a separate data file for the strokes etc. There is one character with special radical requirement; at the bottom of page 1. There are several animal shapes, which do not have radicals and have a proposed ordering. A separate set of 47 Shuishu radicals is proposed. I think this set is fairly complete.

*Discussion:*

- a. Dr. Deborah Anderson: Prof. Zhao Liming has some feedback. She still has some reservations.
- b. Mr. Michael Everson: There are three possible ways of sorting - by sound, by meaning or by radicals. In terms of code charts, we concluded that the Radical based sorting is the right thing to do. It is like what we can do with CJK radicals, sound etc. Prof. Zhao Liming can have any number of ways sorting – but for the code charts this is what we decided in the ad hoc.
- c. Mr. Michel Suignard: The radical stroke based ordering would be right thing to do. My only question would be the naming of these. We had done something like this elsewhere, such as removing Nushu in the names.
- d. Mr. Michael Everson: My strong preference would be NOT to use algorithm based naming of these characters.
- e. Mr. Michel Suignard: The data file can have the names – can do a better job.
- f. Dr. Umamaheswaran: Can we drop the word 'Logograms' in the block names and character names?
- g. Mr. Michael Everson: It is like using 'Letter' in Latin character names. They are not overly long.
- h. Mr. Toshiya Suzuki: Can we add more characters in this set? Is the selected repertoire taken from a limited set of source information?
- i. Mr. Michael Everson: If we do find more characters we can always add them.
- j. Mr. Toshiya Suzuki: Do you think we have covered all the sources for Shuishu?
- k. Mr. Michael Everson: Previous contributions had covered these aspects. The repertoire was presented there. This time, all we did was to reorder them.
- l. Mr. Toshiya Suzuki: The Fish facing right 55 has one glyph, and facing right 56 has two glyphs.
- m. Mr. Michael Everson: These allow to sort them since there are no radicals. These are pseudo radicals to organize the sorting order. In future if more of these mammals appear, new categories can be added.
- n. Dr. Deborah Anderson: The US has not reviewed this version of the document. I cannot say now that an algorithm based data file for radicals is better or not. There are about 500 of these.
- o. Ms. Lisa Moore: We will be reviewing this proposal at the next UTC meeting.
- p. Mr. Michael Everson: I prefer not to have algorithmic names. The user community's expectation is to have this on the ballot.
- q. Mr. Andrew West: These names have been there for some time. I would like to see these on a ballot and comments on the ballot can always be entertained.
- r. Mr. Chen Zhuang: The ad hoc report was supported by the experts from China and are in line what Everson has said.
- s. Mr. Michel Suignard: There is some efficiency to be gained by algorithmic naming. The discussion will come up again like it did for Nushu.
- t. Mr. Andrew West: I would prefer to go with what we have into the ballot and deal with ballot comments.

*Disposition:* Accept for encoding in Amendment 2.

*Relevant recommendation:*

**M66.10 (Shuishu script):** 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:

- a. A new block named 'Shuishu Logograms' in the range 1B300..1B4FF, and populate it with 486 characters
- b. A new block named 'Shuishu Radicals' in the range 1B500..1B52F, and populate it with 47 characters

with their names, code positions and glyphs from document [N4894R](#).

#### **9.2.4 Southwest China Minority Hieroglyphs – Muya, Namuz and Ersu.**

Input documents:

[4856](#) Preliminary Proposal on Encoding Southwest China Minority Hieroglyphs, Part 1 Muya, Part 2 Namuz; Zhao Liming 赵丽明, et al; 2017-09-07

[4885](#) Comments on WG2 #66 (Sept. 2017) documents; Deborah Anderson, et al; 2017-09-18 (item 3 on Muya and Namuz)

[4901](#) Preliminary Proposal on Encoding Ersu Hieroglyphs; Zhao Liming, Wang Yihua; 2017-09-24

Mr. Wang Yihua: The initial proposal on Muya and Namuz was made at the Sri Lanka WG2 meeting. Muya and Namuz are two of the various SW China scripts. The second proposal contains Ersu. We have prepared some draft charts using Open Type fonts. We only have a list for Namuz with images – we do not yet have open type fonts for this script. These are all primitive scripts – widely used in local Tibetans' general lives. They are used in Astrology, Exorcism, Auspicious days, in Almanac, in Astrology etc. Each day had a specific character – used to record for Sino Tibetan, and Qiangik languages such as Muya and Namuz. Prof. Zhao Liming had made field work with a student in different counties to find users of these scripts –

mostly they were priests (Llamas) for daily divinations, astrology etc. (Samples of books were brought to this meeting for experts to see.) I welcome your questions and comments.

*Discussion:*

- a. Mr. Andrew West: Thank you for your introduction. I do have a few questions. You mention that these are used by Priests etc. Why should we consider encoding these for text books, education material etc.? Who is the user community for the encoded characters? What is the use case for encoding these?
- b. Mr. Wang Yihua: To help the general public to be able to have something in writing to lead their daily lives.
- c. Mr. Andrew West: They want to preserve the cultural heritage – by preserving digitally? One could also digitize the manuscripts, archive them etc. Why does one need an encoding these? These are not simple text materials we are looking at.
- d. Mr. Wang Yihua: We really need to preserve the culture.
- e. Mr. Peter Constable: Visual recording can be used for preservation.
- f. Mr. Adrian Cheuk: Some lay people also use these for recording their business.
- g. Mr. Andrew West: We need to get some evidence that lay people do use these much more than just the priests.
- h. Mr. Michel Suignard: What about the other documents – do you intend to present these?
- i. Mr. Adrian Cheuk: The other document is on Ersu language ... the background is already presented. It has sample code charts using open type font. These are also used in the same areas in SW China.
- j. Mr. Michel Suignard: We can add these to the list of scripts that need more discussion and justification for encoding as text elements.
- k. Mr. Peter Constable: There are many locations in the world – where pictures have been drawn on rocks for example. That alone does not qualify them for these to be encoded. Some more evidence in use in writing would be needed.

*Disposition:* Invite a revised proposal.

*Relevant recommendation:*

**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.

### **9.2.5 Naxi Dongba script**

Input documents:

- [4043](#) Revised Proposal for Encoding Naxi Dongba Pictographic Script in the SMP; China; 2011-05-10
- [4641](#) Feedback on Naxi Dongba Supplement document (N4633); Deborah Anderson; 2014-09-28
- [4877](#) Naxi Dongba characters from Fang Guoyu's dictionary; Michael Everson, Andrew West; 2017-09-14
- [4878](#) Naxi Dongba characters from Li Lincan's dictionary; Michael Everson, Andrew West; 2017-09-16
- [4895](#) Results of the ad-hoc meeting on Naxi Dongba in Hohhot, 2017-09-21; Michael Everson, et al; 2017-09-22
- [4898](#) Revised chart of Naxi Dongba characters; China NB; 2017-09-22

Mr. Michael Everson: The ad hoc report is in document [N4895](#). Once some of the misunderstandings re: repertoire was cleared, the ad hoc meeting was smooth. There were several background documents. The user community wanted to have something to use for day to day writings. The encoding effort has been going on for almost 9 years. The previous chart document was changed. [N4641](#) had a variety of information in it. There are 1188 characters in the repertoire; they should be reordered during the review. Currently ordered by Alphabetic names in the Romanized version of the names. It would be better to have it ordered in a different way – but will take considerable work. The user community would like to use it as soon as possible, and would like to have it on the ballot. A reordered version may be across different ballots. If more characters are discovered they can be added. The ad hoc report includes a code chart and a names list in block 1A800...1ACFF.

*Discussion:*

- a. Mr. Michel Suignard: We are not going to put something on the ballot if we know ahead of time that they are going to be reordered. Minor changes to code positions can be accommodated during ballot.
- b. Mr. Andrew West: The reordered version would be the one to put on the ballot. There are three characters under item marked 452, which are atomically encoded – they could be considered as potential clustering or combination. The ad hoc recommends that encoding of Naxi Geba should be a separate consideration.
- c. Mr. Michel Suignard: I am going to have the same comment about naming of the characters. One should remember that the character names are immutable. We can fix some of these in a data file, but once they are in the names list they are fixed.
- d. Mr. Andrew West: Can we have some general guidelines about naming conventions so that we do not have name related arguments?
- e. Mr. Michel Suignard: Unfortunately, it depends on each case. Even if we have a contribution on the topic, you may get some push back.

*Disposition:* Accept the repertoire in the ad hoc report. Invite preparation of reordered chart for potential inclusion in Amendment 2.

*Relevant recommendation:*

**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.

*See also relevant recommendation M66.19, fifth bullet, on page 35.*

### 9.2.6 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: There has been no feedback on this proposal for over a year. It is an undeciphered script. We discussed this earlier. 144 characters are proposed. It may be the case that some of these are variants of others. One of the features like we have seen with Linear A (for example) is that the history of decipherment itself is of interest. Documents that discuss the characters itself is important. Dr. Ken Whistler's feedback is that it is not appropriate to encode the undeciphered script. It is not clear which ones should be left out and which ones to keep. The user community's feedback is that it would be a good idea to be able to show them in documents describing the characters themselves. Dr. Ken Whistler's suggestion to retain some and others be unified etc. was also shown to the user community. It has been waiting for almost a year, the users have not changed their mind. We cannot do anything beyond what we have done so far. The user community is extremely small and very specialized.

*Discussion:*

- c. Mr. Peter Constable: We thought we encode deciphered ones.
- d. Mr. Michael Everson: Linear A for example is not.
- e. Dr. Deborah Anderson: UTC Script ad hoc does not have input on this at this time.
- f. Mr. Michel Suignard: We can keep the conversation open. I would like to see more consensus on proceeding with it.

*Disposition:* Wait for more consensus.

### 9.2.7 Proposals that were not discussed

Input documents:

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

The above-listed documents were on the agenda, but were not discussed at this meeting.

**Action item:** National bodies and liaison organizations are to review and provide feedback.

## 9.3 Additions to Existing Scripts or Blocks

### 9.3.1 Three UNCs for Chemical Terminology from China

Input document:

4830 Proposal on 3 China's UNCs for Chemical Terminology to ISO/IEC 10646; China; 2017-07-26

Mr. Zhang Yifei: Three characters for Chinese Names of Elements Nh, Ts and Og are proposed. These are used in teaching material.

*Discussion:*

- a. Mr. Andrew West: The third character 9FED was already proposed by UTC in Extension G.
- b. Mr. Michel Suignard: China has already mentioned that. It is moved from Extension G as a horizontal extension to 9FED.

*Disposition:* Accept the 3 proposed UNCs.

*Relevant recommendation (see item a):*

**M66.08 (Urgently needed CJK ideographs):** WG2 recommends that SC2 accepts encoding the following urgently needed ideographs in the standard:

- a. 9FEB (GCE-118), 9FEC (GCE-117) and 9FED (GCE-113, UTC-01119) with their glyphs, source reference and attribute data from document N4830.
- b. 9FEE (JMJ-057449) and 9FEF (JMJ-060040) with their glyphs, source references and attribute data from document N4831.
- c. Glyphs, source references and attribute for horizontal extensions for 9FEB (T5-7C54) and 9FEC (T4-6E5D) from document N4832.

### 9.3.2 Two UNCs for Chemical Terminology from TCA

Input document:

[4832](#) Proposal on 2 TCA's UNCs for Chemical Terminology to URO+; TCA; 2017-06-20

TCA proposes two horizontal G source extensions for two of the three UNCs for chemical elements.

*Disposition:* Accept.

*See relevant recommendation M66.08 item c on page 28.*

### 9.3.3 Two UNCs for Moji\_Joho collection from Japan

Input document:

[4831](#) Proposal to add two Urgently Needed Characters from Japan; Japan NB; 2017-07-20

Mr. Wataru Takagi: Comparison of IPA Moji\_Joho (MJ) glyph collection and UCS CJK parts indicates two characters are missing and needed as part of the MJ collection.

*Discussion:*

- a. Mr. Michel Suignard: Do the other characters appear as horizontal extension? No.
- b. Mr. Shuichi Tashiro: Initially we will make it as part of IVD for MJ to Unicode. Later we can look at Annex A.
- c. Mr. Michel Suignard: The font licensing should be looked at for JP chart production. I want to be ensured that it is not overly constraining for chart production.

*Disposition:* Accept the two proposed UNCs.

*See relevant recommendation M66.08 item b on page 28.*

### 9.3.4 Three uppercase Latin letters used in early Pinyin

Input document:

[4782](#) Proposal to encode three uppercase Latin letters used in early Pinyin; Andrew West, et al; 2017-01-16

Mr. Andrew West introduced the proposal. Lowercase forms for 3 Latin characters used to write Mandarin using Pinyin are proposed. The rationale and examples of use are given in the document.

*Discussion:*

- a. Dr. Deborah Anderson: Did Mr. Chen Zhuang have any comments?
- b. Mr. Michel Suignard: He was OK with adding these. Not opposed to them.
- c. Mr. Michael Everson: Casing is a natural function of Latin use. We had several cases where we had discussion on using one case or the other. When we find evidences of use of the case we should have no controversy about adding these.
- d. Mr. Peter Constable: The statement that if one case exists the other case must exist etc. will need attestations.

<<< Some dialog went on about getting feedback from others. ...>>>

*Disposition:* Accept 3 proposed uppercase Latin Ext D letters in Amendment 2 at A7C4 and A7C6 (different from proposal).

*Relevant recommendation (see item a):*

**M66.15 (Latin character additions):** WG2 recommends to SC2 to accept for encoding in the standard the following Latin characters:

- 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.

### 9.3.5 Latin Letters 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: We have added A764 and A765 Thorns with Strokes used in Old Norse manuscripts. Two of the examples shown were from Old English manuscripts but Thorn is with diagonal strokes. Usage of T with horizontal stroke and diagonal

strokes are in Old English. The T with these strokes were not unified. We do have Thorn also with horizontal and diagonal strokes appearing in Old English manuscripts. Disunification of the Thorn with the horizontal stroke from the Thorn with diagonal stroke is the right thing to do. Two characters Thorns with Diagonal strokes are proposed to be encoded. Several examples of use are shown.

*Discussion:*

- a. Mr. Michel Suignard: Contrastive use of these is not evident.
- b. Mr. Andrew West: One could say that it is a regional thing. Overwhelming use of Diagonal stroke would require that the Glyph for the current Thorn with Horizontal Stroke would be the alternative.
- c. Mr. Peter Constable: Can you use it as a variant?
- d. Mr. Andrew West: It may be possible; but I guess there may be mapping issues with it.
- e. Mr. Michael Everson: We do have other characters with Horizontal and Diagonal strokes. The different kinds show where and when it is used – Q for example in Old Irish were used. Many of these are used in non-contrastive ways. Medievalists use the PUA for characters with both kinds of strokes.
- f. Mr. Peter Constable: The Q in the code chart – seems to be more different enough in the diagonal form versus the horizontal ones. You did not mention Q in the proposal – you talked about T.
- g. Mr. Michael Everson: That glyph was drawn by myself – came from some manuscripts where the diagonals were more contrastive than the horizontal. The English font seem not to be so visibly contrastive. We could provide more examples like the T into the proposal. We prefer to get the encoding be put into the ballot.
- h. Dr. Deborah Anderson: It would be useful. On page 11 – there are some examples which is not so contrastive.
- i. Mr. Andrew West: It is a bad example – by a Nordacist.
- j. Mr. Michael Everson: Looks like it was not a good font being used etc. One could suppress this example or provide an explanatory comment. As to the contrasting use, it is not possible to find any example with both forms being used within the same text.
- k. Mr. Andrew West: The font project, on the other hand, tries to support all the forms of use. The current solution for it is to use PUA and use the form needed.

*Disposition:* Accept two characters for Amendment 2.

*See relevant recommendation M66.15 item b on page 29.*

### **9.3.6 Latin Letter Anglicana W**

Input documents:

[4838](#) Proposal to add LATIN LETTER ANGLICANA W; Michael Everson; 2017-07-26

[4869](#) Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (Item 9)

Mr. Michael Everson: We had added characters for Paleographic use. The information about the use of letter W is also shown in the proposal. It was not always equivalent of two Vs put together. The Cornish / Welsh usage has a different version. There are several examples of use shown. The components are called ANGLICANA. These are called ANGLICANA W-s. Sometimes the Anglicana W and regular W are used within the same text. Some Cornish texts are being printed and we would like to use the UCS characters in there – there is some urgency for encoding these.

*Discussion:*

- a. Mr. Andrew West: These characters are used for both English and Cornish.
- b. Dr. Deborah Anderson: The UTC script subcommittee has reviewed and the proposal is acceptable for encoding.

*Disposition:* Accept uppercase and lowercase ANGLICANA W letters in Amendment 2.

*See relevant recommendation M66.15 item c on page 29.*

### **9.3.7 Five Latin Tironian letters**

Input documents:

[4841](#) Proposal to add five Latin Tironian letters to the UCS; Michael Everson, Andrew West; 2017-09-04

[4885](#) Comments on WG2 #66 (Sept. 2017) documents; Deborah Anderson, et al; 2017-09-18 (comment item 1b).

Mr. Michael Everson: Casing partner for one Latin character and two paired Latin letters are proposed. 204A TIRONIAN SIGN ET is in wide use and is already encoded. Several examples are included showing use of this character as a lowercase letter, and its corresponding uppercase are shown from old Irish and English manuscripts. The two cases of ET WITH HOOK and ET WITH HOOK AND STROKE are also proposed. The property of the existing character, is as a punctuation. To make use of these as letters, one cannot change the property in Unicode. Use of these as letters would make them non-usable in identifiers etc.

*Discussion:*

- a. Dr. Deborah Anderson: Script ad hoc have reviewed and provided some feedback. The Tironian Sign is not used in modern texts. The use of these as letters is not justified. Instead of using the CAPITAL LETTER form the suggestion was to move it to Supplemental Punctuation.
- b. Mr. Peter Constable: What is it used for?

- c. Mr. Michael Everson: It is a scribal abbreviation – all standing for the equivalent of the word AND in various languages. It is used within a word also. If the word is to be capitalized the sign would need a corresponding capital form also.
- d. Mr. Andrew West: It would be problematic to locate it, if it is a punctuation mark. What was the rationale for suggesting it to be a punctuation mark?
- e. Mr. Michel Suignard: This is not the first time we are encountering this kind of issue. What did we do for those? Is TIRONIAN ET sign the only one that is encoded as a punctuation character?
- f. Mr. Peter Constable: Would it cause problems if we add both the case forms for the Letters?
- g. Mr. Michel Suignard: There seems to be some difference of opinion on how to deal with the problem?
- h. Dr. Deborah Anderson: The Script ad hoc would like to see more examples of use of these in running texts of the hooked and hooked with stroke forms.
- i. Mr. Michael Everson: The publishing houses use these contrastively –but using their own devices. Figures 13 and 14 show them. The Oxford University press transcription has shown these. These are for specialists' use.
- j. Mr. Michel Suignard: The Gc property change is not wise to do. It is better to consider the ramification.
- k. Mr. Michael Everson: I will try to get more information and evidences of use of these as letters, and provide a revised document.

*Disposition:* Depending on the results of further discussion a revised proposal would be a candidate for inclusion in Amendment 2, between WG2 meetings.

*See relevant recommendation M66.19, second bullet, on page 35.*

### **9.3.8 Two Sinological Latin letters**

Input documents:

[4842](#) Proposal to add two Sinological Latin letters; Michael Everson, Andrew West; 2017-08-17

[4885](#) Comments on WG2 #66 (Sept. 2017) documents; Deborah Anderson, et al; 2017-09-18 (comment item 1a).

Mr. Michael Everson: While working on Naxi Dongba, some characters were encountered in dictionaries. IPA 02A3..02A8 in UCS are encoded. The modern IPA has deprecated their use. However, in the Sinological phonetic tradition these are used, along with two missing characters. I have some examples. I will leave it to others to find additional examples.

*Discussion:*

- a. Mr. Andrew West: Mr. Liang Chan has found some additional examples.
- b. Dr. Deborah Anderson: We are happy to see the evidences. Only comment we have is to include retroflex in the name for proposed AB67 also.
- c. Mr. Michael Everson: I think the S with Hook is used. The name will be inconsistent with TS if we use the retroflex in the name. That is why I did not use it. It was not in the S with Hook way back from Unicode 1.0.

*Disposition:* Accept 2 characters for Amendment 2.

*See relevant recommendation M66.15 item d on page 29.*

### **9.3.9 Additional Miao characters**

Input documents:

[4845](#) Proposal for additions to the Miao script; Adrian Cheuk; 2017-09-15

Mr. Adrian Cheuk: Thanks for the opportunity to present this proposal. It concerns 16 Miao characters in use by 4 language groups in China. 6 consonants, 1 modifier and 9 vowels are proposed. I had the opportunity to interact with experts in the past few days. There is a need to modify the position of modifier .. 1F64F is proposed. Some more explanation will be added in a revision to this document. It will be considered in its own class, and will come after the character and before any aspirational mark. Original Miao script should be consulted. The regular expression use will be clarified.

*Discussion:*

- a. Mr. Peter Constable: I would suggest you further classify the modifiers occurring in upper right versus the lower right positions.
- b. Mr. Adrian Cheuk: There was an older proposal from another author also on the subject. There are some consonants and some vowel sign combinations – do not have evidences of use as yet. The community of users have provided feedback that they will be using these in literature production work they are active in. These will be also added in the revised proposal. All the four language groups will be using these. The request is to add these 16 characters in the next ballot.
- c. Mr. Peter Constable: I have reviewed these – the repertoire including those that do not have the evidences yet is OK. Some information about positioning, use of the sequences etc. is missing – but will be added. It has not been reviewed by UTC yet, but I am confident that it will not cause any problems.
- d. Dr. Deborah Anderson: The UTC script ad hoc will be meeting next week and I would like Mr. Adrian Cheuk to call in for any discussion.

- e. Mr. Andrew West: What is the modifier used for? I was concerned by the name. The name for 16F4F should be probably given some thought.
- f. Mr. Peter Constable: Is there a name like the NUKTA in Indic scripts?
- g. Mr. Adrian Cheuk: It functions like NUKTA. The glyph used is like a small vertical bar on the left side.
- h. Mr. Michel Suignard: The name could be MIAO SIGN NUKTA at code position 16F4F. It is closer to the naming used for the SIGNS.
- i. Mr. Peter Constable: Can you add the usage related clarification in the revised document?

*Disposition:* Accept 16 characters for Amendment 2 in Miao block; name of 16F4F changed to MIAO SIGN NUKTA.

*Relevant recommendation:*

**M66.13 (Miao additions):** WG2 recommends to SC2 to accept for encoding in the 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.

### 9.3.10 TELUGU SIGN SIDDHAM

Input documents:

[4860](#) Proposal to encode the TELUGU SIGN SIDDHAM; Srinidhi A, Sridatta A; 2017-07-17

[4869](#) Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 10 on Telugu)

The proposal is for adding Siddham sign to Telugu block – like the Kannada Sidham sign in Amendment 1.

Mr. Peter Constable: Does the direction make any difference? Contribution talks about them.

*Disposition:* Accept 0C77 TELUGU SIGN SIDDHAM for Amendment 2.

*See relevant recommendation M66.16, item a, on page 37.*

### 9.3.11 Lao characters for Pali

Input documents:

[4861](#) Revised Proposal to Encode Lao Characters for Pali; Vinodh Rajan et al; 2017-07-19

[4869](#) Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 4 on Lao)

Dr. Deborah Anderson: This proposal had several cycles of review in UTC. Proposal is for 14 characters and 1 combining character. The proposal is mature enough for acceptance.

*Disposition:* Accept 14+1 Lao characters for Pali with names for Amendment 2.

*Relevant recommendation:*

### M66.14 (Lao additions):

WG2 recommends to SC2 to accept for encoding in the standard, 14 letters and 1 combining character for Pali, in the Lao block, with their names, code positions and glyphs from page 5 in document [N4861](#).

### 9.3.12 DOGRA VOWEL SIGN VOCALIC RR

Input documents:

[4862](#) Proposal to encode the DOGRA VOWEL SIGN VOCALIC RR; Srinidhi A, Sridatta A; 2017-06-25

[4869](#) Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 11 on Dogra)

Mr. Michel Suignard: Dogra is added in Amendment 1. It is like the Devanagari RR. The script is still in Amendment 1.

We can still INSERT the character among the combining marks. Proposal is to insert and move the rest of the characters down by 1 in Amendment 1 chart.

*Discussion:*

- a. Dr. Deborah Anderson: This seems to be the right thing to do.
- b. Mr. Michael Everson: I agree – that it is correct thing to do.

*Disposition:* Accept inserting VOWEL SIGN VOCALIC RR at 11832 in Amendment 1, and move the characters 11832...1183A down by one to 11833...1183B.

*Relevant recommendation:*

### M66.04 (Dogra addition):

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 Amendment 1, and move the characters 11832..1183A down by one to 11833..1183B in the Dogra block.

### 9.3.13 NEPTUNE FORM TWO

Input documents:

[4863](#) Revised proposal to encode NEPTUNE FORM TWO; Eduardo Marin Silva; 2017-02-08

[4869](#) Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 3 Miscellaneous Symbols and Arrows)

Mr. Peter Constable: This is from a UTC expert Eduardo Marin Silva. The symbol for Neptune is historically significant though used less. The proposal has been reviewed by UTC and we request this be accepted.

*Disposition:* Accept EBC9 – NEPTUNE FORM TWO.

*See relevant recommendation M66.16, item b, on page 37.*



### 9.3.14 HELLSCHREIBER PAUSE SYMBOL

Input documents:

4864 Character submission HELLSCHREIBER PAUSE SYMBOL; Marius Spix'2017-08-05

4869 Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 5 Miscellaneous Symbols and Arrows)

Dr. Deborah Anderson: This proposal has been reviewed, and was modified after review comments. We recommend this to be added.

*Disposition:* Accept 2BFF HELLSCHREIBER PAUSE SYMBOL.

*See relevant recommendation* M66.16, *item c*, *on page 37*.

### 9.3.15 NEWA LETTER VEDIC ANUSVARA

Input documents:

4865 Proposal to encode the NEWA LETTER VEDIC ANUSVARA; Srinidhi A, Sridatta A; 2017-04-08

4869 Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 2 on Newa)

Dr. Deborah Anderson: This proposal has been reviewed by UTC and the document has sufficient evidence. We recommend its acceptance.

*Disposition:* Accept 1145F NEWA LETTER VEDIC ANUSVARA.

*See relevant recommendation* M66.16, *item d*, *on page 37*.

### 9.3.16 TAKRI LETTER ARCHAIC KHA

Input documents:

4866 Proposal to encode 116B8 TAKRI LETTER ARCHAIC KHA; Shriramana Sharma; 2017-08-01

4869 Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 7 on Takri)

Dr. Deborah Anderson: This is a request for one character in Takri block, from Indian experts. Evidence is provided in the document.

*Discussion:*

- a. Mr. Michael Everson: I do not see any issues with the proposal.
- b. Mr. Peter Constable: What is encoded currently as LETTER KHA should be annotated as used for TAKRI LETTER SSA.

*Disposition:* Accept 116B8 – TAKRI LETTER ARCHAIC KHA. Annotate KHA.

*See relevant recommendation* M66.16, *item f*, *on page 37*.

### 9.3.17 JIHVAMULIYA and UPADHMANIYA symbols for Soyombo

Input documents:

4867 Proposal to encode JIHVAMULIYA and UPADHMANIYA for Soyombo; Anshuman Pandey; 2017-07-21

4869 Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 1 on Soyombo)

Dr. Deborah Anderson: I worked with the author on this proposal, and we had technical review in UTC. It is mature and we request that the two characters be accepted.

*Discussion:*

- a. Mr. Toshiya Suzuki: On the two characters proposed - the original submission was posted soon after the Tokyo ad hoc. Were these characters awaiting new evidence?
- b. Dr. Deborah Anderson: The author has searched various sources. The examples were presented at the ad hoc meeting. There were no additional evidences.
- c. Mr. Peter Constable: UTC had asked if there were additional evidences; there were no others.
- d. Mr. Toshiya Suzuki: Mongolian expert Mr. Otognbaatar was not aware of this proposal being made to WG2. One of these characters was on his list. It would have been better if there was better collaboration.
- e. Dr. Deborah Anderson: We should have sent this contribution to Mr. Orgonbaatar.
- f. Mr. Toshiya Suzuki: I would like to have some recommendation to communicate with the ad hoc group who worked on Syombo.

*Disposition:* Accept the two Control Characters at 11A84, 11A85. Add a note - recommending Mongolian national body to take note and inform Mongolian experts who participated in the ad hoc on Soyombo.

*See relevant recommendation* M66.16, *item g*, *on page 37*.

### 9.3.18 Southern Song forms of counting rods

Input documents:

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

4869 Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 6 on Counting Rod Numerals)

Dr. Deborah Anderson: The proposal was reviewed by UTC and had a couple of rounds. The proposal is for five Southern Song Counting Rod characters. Evidence is provided in the document. They are mature to be included in the standard.

*Discussion:*

- a. Mr. Andrew West: The author does not know Chinese. Some of the pictures are shown backwards. It should be looked at by experts and verified. The name – it is not clear that is exclusively used in Southern Song. Whether these characters should be atomic or using combining marks etc. Experts need to review it.
- b. Mr. Michael Everson: I think this should go further review – the proposal has some defects in it. They are called digits – are these used in decimal system. Otherwise, they should be called numbers.
- c. Mr. Michael Suignard: If the clarification can be provided in the next few months, we could include it in Amendment 2.
- d. Dr. Lu Qin: I am sure Chinese experts would prefer another review.
- e. Dr. Deborah Anderson: What is the best way to get WG2 experts reviewing it?

*Disposition:* Await clarification to questions. Refer to document N4868. 1D379...1D37D are proposed. This proposal is candidate for inclusion in Amendment 2.

*See relevant recommendation M66.19, third bullet, on page 35.*

### **9.3.19 Two marks for ancient Chinese texts**

Input documents:

- 4847 Proposal to encode two marks for ancient Chinese texts; Andrew West, Eiso Chan; 2017-09-07
- 4885 Comments on WG2 #66 (Sept. 2017) documents; Deborah Anderson, et al; 2017-09-18 (item 4)

Mr. Andrew West: Two characters used in transcribing old Chinese texts are proposed. One is an Iteration mark - 16FE3 OLD CHINESE ITERATION MARK. The other is a Mark to indicate end of a section - 16FE2 OLD CHINESE HOOK MARK. Several examples from manuscripts as well as in printed material are given.

*Discussion:*

- a. Dr. Deborah Anderson: The shape of the character for HOOK MARK seems to vary widely. Selection of the best one needs some explanation.
- b. Mr. Andrew West: I can work with Chinese experts and try to get some more examples to help choose the best representative glyph.

*Disposition:* Accept the two characters for Amendment 2.

*See relevant recommendation M66.16 item h on page 37.*

### **9.3.20 Old Chinese lute notation**

Input document:

- 4848 Proposal to encode old Chinese lute (pípa) notation; Andrew West, Eiso Chan; 2017-09-07
- 4885 Comments on WG2 #66 (Sept. 2017) documents; Deborah Anderson, et al; 2017-09-18 (item 5a)

For feedback.

### **9.3.21 Old Chinese flute notation**

Input document:

- 4849 Proposal to encode old Chinese flute (súzipǔ or bànzipǔ) notation; Andrew West, Eiso Chan; 2017-09-07
- 4885 Comments on WG2 #66 (Sept. 2017) documents; Deborah Anderson, et al; 2017-09-18 (item 5b)

For feedback.

### **9.3.22 Tangut character additions and glyph corrections**

Input documents:

- 4850 Glyph Corrections for 31 Tangut ideographs and one Tangut component; Andrew West, Viacheslav Zaytsev 2017-09-07
- 4851 Proposal to encode six additional Tangut ideographs; Andrew West, Viacheslav Zaytsev;; 2017-09-07
- 4885 Comments on WG2 #66 (Sept. 2017) documents; Deborah Anderson, et al; 2017-09-18 (item 2a and 2b)
- 4896 Tangut Character Additions and Glyph Corrections; Andrew West, et al; 2017-09-22

Mr. Andrew West: Some character additions and Glyph corrections are proposed for Tangut ideographs in document N4896. 6 new characters from two different sources are proposed. First two are from a manuscript source that recently materialized. It contains two characters that has not been seen in other sources. It is analogous to two other characters proposed last year – used as shorthand versions for writing Sanskrit words VAJRA. Examples of use of these characters are given. The other four characters were pointed out to us (by Prof. Arakawa Shinaro) from printed texts held in St. Petersburg. Examples of these are shown. Three of these characters are shown as single occurrences. Other character has 40 occurrences. The proposed glyph corrections are summarized in Table 2, showing the old and new glyphs. A few of these have stroke count revisions also. This may not be the last document requesting for glyph changes – hopefully less and less of these. The proposal/feedback by UTC Script Committee was that some of the details about the glyph changes and new characters be in a Unicode Technical Note; and it will be done. Some source identification references etc. will also be included in the UTN. These can be included in Amendment 2. Chinese experts are re-analyzing Tangut and may request disunifying about 6 characters in Tangut.

Mr. Michel Suignard: If you can provide the relevant text to include in Amendment 2 in the next month or so I can include it in Amendment 2. Source information for 6 new characters, and some existing ones, R/S changes and glyph corrections.

*Disposition:* Accept 6 Tangut ideographs at 18F72...18F77 with the Glyphs, Source reference information from document N4896. Accept the Glyph corrections, revised Radical Stroke counts etc. also. These are for potential inclusion in Amendment 2 before next WG2 meeting, assuming the final set will be sent to the project editor.

*Relevant recommendation (see 4<sup>th</sup> bullet):*

**M66.19 (Additions to Amendment 2 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 current PDAM 2.2 text or to a future PDAM 2.x text, after exercising due diligence. Candidates include, but are not limited to:

- a. 'CJK Extension G' being prepared by IRG,
- b. Five Latin Tironian letters (from document N4841) if clarified and consensus is reached,
- c. Five Counting Rod characters (from document N4868) at code positions 1D379...1D37D if revised and a consensus is reached,
- d. Six Tangut ideographs at 18F72..18F77 with the glyphs, source reference information, and glyph corrections from document N4896, when additional relevant information is available, and,
- e. Naxi Dongba script (see recommendation ~~M66.19~~ **M66.18** on page 28 above).

(Note: This is a correction needed to recommendation M66.19 in the meeting 66 recommendations in document N4874).

### 9.3.23 Future Additions to ISO/IEC 10646 from Ireland

Input document:

4888 Future Addition to ISO/IEC 10646; Ireland NB; 2017-09-24

Document N4888 contains some process related comments and request for several symbols also. Some of these are added to Amendment 2 as part of Amendment 1 dispositions, based on ad hoc discussions (Mr. Michel Suignard with others).

Remaining characters are for further discussion and for future contributions.

*Discussion:*

- a. Mr. Michael Everson: The glyphs have been changed by several vendors on EIGHT BALL. For the sport of BILLIARD GAMES, the easiest thing would be to create a new SYMBOL. The glyph change to Eight Ball 1F3B1 - in PDAM 1 essentially removed the semantic of Billiard Games.
- b. Mr. Andrew West: The Eight Ball is used for different purposes. Changing the glyph back again to something else will cause more confusion and will affect implementations by vendors.
- c. Mr. Peter Constable: Will you be proposing the new character submission?
- d. Mr. Andrew West: UK had a comment in Amendment 1. We would like to put the new character in Amendment 1 – the glyph got changed from what was in the standard.
- e. Mr. Michel Suignard: I will be happy to put it in Amendment 2 – putting it in Amendment 1 will potentially endanger progression of Amendment 1 to DAM stage. We prefer not to have technical comment at the DAM stage.
- f. Mr. Peter Constable: If it is in Amendment 2 and we get comment back to insert into DAM 1, what would happen? The 5<sup>th</sup> Edition, Amendment 1 and Amendment 2 is the synch point for Unicode 11.
- g. Mr. Michael Everson: The animal faces will need more discussion.

*Disposition:* Accept BILLIARD GAMES (CUE SPORTS as annotation), MAMMOTH, DODO, BADGER, SQUIRREL, SWAN and TROLL, for inclusion in Amendment 2. Remaining characters are for further study.

*Relevant recommendation:*

**M66.11 (Symbols Set 1):** 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:

1F93F BILLIARD GAMES (glyph from Irish comment in document N4870), with annotation CUE SPORTS

<Animals>:

1F9A1 MAMMOTH

1F9A2 DODO

1F9A3 BADGER

1F9A4 SQUIRREL

1F9A5 SWAN

<new header – Fantasy Being>:

1F97B TROLL

### 9.3.24 Recommendations from ESC for 2018, Part 1 (Emoji candidates)

Input documents:

4846 Recommendations from ESC for 2018, Part 1 (Emoji candidates); UTC ESC/Mark Davis et al; 2017-08-03

4869 Future Additions to ISO/IEC 10646 (July/August 2017); Unicode Consortium; 2017-08-04 (item 12 on BRICK and item 13 on SKATEBOARD, on Supplemental Symbols and Pictographs)

Ms. Lisa Moore: There were some changes. There was BRICK which got changed to BRICK WALL and has gone back to BRICK.

*Discussion:*

- a. Mr. Michael Everson: There is also head banging against a Brick Wall. The US request in document [N4869](#) for BRICK WALL and SKATEBOARD are included in this set – different code positions.
- b. Mr. Peter Constable: There was some discussion about cultural differences for Brick. As to encoding both Brick and Brick Wall, WG2 can certainly make suggestions.
- c. Mr. Michael Everson: There are four characters in this proposal that need discussion. If we take the RED HAIR as an example, we could use the Heraldic Patterns, completing the set for these patterns.
- d. Mr. Andrew West: The naming of all the symbols in [N4846](#) is problematic.
- e. Mr. Michael Everson: The name and picture could be BRICK as a new character.
- f. Mr. Michel Suignard: The contribution points to Brick Wall's picture and names it BRICK instead of BRICK WALL. You can always make a ballot comment for another character for Brick Wall with the picture of Brick Wall etc. If you want another character you could provide a contribution now.
- g. Mr. Andrew West: Picture of MAGNET was another one; should be HORSE SHOE MAGNET.

<<Comments were made on many of the symbols in the document.>>

<< discussion continued in an ad hoc. >>

A revised version of document [N4846](#) with inserting the two missing pictures will be requested by Dr. Deborah Anderson.

*Disposition:* Accept the set of 67 symbols in document [N4846](#) for Amendment 2. 1F6F9 SKATEBOARD is in Transport and Map symbols. Remaining 66 are in Supplemental Symbols and Pictographs block.

*Relevant recommendation:*

**Recommendation M66.12 (Symbols Set 2):** WG2 recommends to SC2 to accept for encoding in the standard, 67 symbols with their code positions, names and glyphs from document [N4846](#) (revised).

### 9.3.25 Two characters for Medieval Cornish

Input document:

[4902](#) Proposal to add two characters for Medieval Cornish; Michael Everson; 2017-09-26

Mr. Michael Everson: One combining character FINAL SWASH and one punctuation DOUBLE OBLIQUE HYPHEN WITH FALLING DOTS for use in Cornish are proposed. Some marks are encoded in the standard for use with m, n, a, y etc. as abbreviation marks. There are also other kind of marks which are relatively productive. They are polyvalent and readings depending on context of use. We do have a mark 035B combining zigzag above to represent abbreviation er and re. One of the proposed characters 1DFA COMBINING FINAL SWASH is to be used productively. As far as I can tell it is used with only a few letters. Cornish language died out over time. Another character that is proposed is 2E4F DOUBLE OBLIQUE HYPHEN WITH FALLING DOTS which acts as a Verse Divider. They also use a slash mark in some places. Several examples of use of these are included. Sometime the swash is used with a dotted character, single or double dot. The way to encode is to use the char + combining swash + combining single or double dot. We intend to publish transcriptions of these Cornish manuscripts and would like to have these missing characters in the standard.

*Discussion:*

- a. Mr. Michel Suignard: The reading seems familiar to me.
- b. Mr. Michael Everson: Many of the Corns were driven to Brittany, so some of it could be familiar over there.
- c. Mr. Peter Constable: Are all the instances of what you call Final Swash always final?
- d. Mr. Michael Everson: There is one instance it is not. Figure 8, for example.
- e. Mr. Peter Constable: In that instance why it cannot be considered as a ligature using 'Fermata'?
- f. Mr. Michael Everson: There are four different ways of indicating nasalization. Any one of these can be used. I am not asking for swash with dot or swash with double dot.
- g. Mr. Peter Constable: One could say that the dotted forms may be a ligated version with combining 'Fermata'? In the example with dot and swash in the middle of a sentence – not final – can we say that when it is not final, it could be the ligated version? Can you interpret use of other marks be considered to be also decorative swash?
- h. Mr. Michael Everson: Other marks are meaningless many times. The swash always is used for en. Could you consider the swashed a to be a ligated version of a with inverted breve? The paleographic representation is trying to get a facsimile of the handwritten manuscripts.
- i. Mr. Peter Constable: In handwritten form the writings may not be always consistent. So, it could be considered to be ligated or not ligated – but are the same. Some of these being not meaningless swashes, makes me wonder. If we are to encode the Swash, we should find an alternate name than COMBINING FINAL SWASH. It is a valid question of whether it could be a ligature with Fermata or inverted breve etc.

- j. Mr. Michael Everson: I would like to talk to the Oxford University paleographers about the name. As to the ligature question, it is not the case that we would need these as atomic.
- k. Mr. Andrew West: I have some doubts about the character as well. The swash to me looks like ligated form. We may have to think of possible atomic characters.
- l. Mr. Michel Suignard: Looks like we have consensus on 2E4F, but we may need some more work on the SWASH.

*Disposition:* Accept 2E4F DOUBLE OBLIQUE HYPHEN WITH FALLING DOTS for Amendment 2.

If we get more concrete information on the SWASH it is a candidate for inclusion in Amendment 2.

*Relevant recommendation (see item e):*

**M66.16 (Miscellaneous character additions):** WG2 recommends to SC2 to accept for encoding in the standard the following Latin characters:

- 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

### 9.3.26 Indalo and Ichtys symbols

Input documents:

4745 Proposal to encode an Indalo symbol; Andrew West; 2016-09-12

4746 Proposal to encode an Ichthys symbol; Andrew West; 2016-09-12

Mr. Andrew West: The Indalo symbol is a widely used symbol in Southern Spain. The feedback on Ichtys symbol was that this symbol was offensive to some cultures. As a Christian I do not find it so. It is difficult to find this symbol in running text.

*Discussion:*

- a. Mr. Michel Suignard: The question was use of these in plain text or not.
- b. Mr. Peter Constable: For both these symbols, lack of showing use of these in running text, is the difficulty. Clearly, they are symbols and do exist. But as characters in running text, the evidence is still lacking for that. If you can get these to be shown as potentially Emoji etc. may be the case will be different.
- c. Mr. Michel Suignard: I would suggest you could do more searching for its use in running text as a character before we can proceed with these.
- d. Mr. Peter Constable: Many times, we see symbols appearing on Wikipedia and the like, and people put these into fonts for placing them there. That could be indication that it is potentially appearing into the running text etc.

*Disposition:* Needs more evidence of use of these symbols in plain text.

### 9.3.27 New Japanese Era symbol

Within the next year or two, there is an expected change in Calendar – will there be a requirement for any new symbol associated with the change? If so, the vendors will be under pressure to support that – it is not only for encoding, but should be incorporated in the Locale resources etc.

*Discussion:*

- a. Mr. Wataru Takagi: The era name should be written by everyone. The customers have not advised us of any requirement for a ligated two characters now. The higher-level government sources have not come to us. We should encode the new character, if any, in Japan's standards first.
- b. Mr. Peter Constable: Are you not anticipating a requirement for a ligated character on vendors at the time of era change?
- c. Mr. Shuichi Tashiro: If the government wants to have such a character it will be of limited use.
- d. Mr. Andrew West: There is already thoughts about the era change and the potential readiness for it etc.
- e. Mr. Peter Constable: What I am hearing is that the ligature character if any would be only for legacy systems.
- f. Mr. Wataru Takagi: The era name may be hidden after the era change. PUA may be used for it.
- g. Mr. Michel Suignard: There is no place in the BMP for CJK blocks etc. It could be going to SMP. Sequence of two characters is what is expected.

## 9.4 **Miscellaneous Proposals**

### 9.4.1 **Mongolian**

Background documents:

- [1515](#) Report of ad hoc on Mongolian encoding proposal; United Nations University, China and Unicode; 1997-01-23
- [1622](#) Feedback and issues in Mongolian document N1515; Oliver Corf; 1997-07-03
- [1711](#) Mongolian encoding update to N1691; China; 1998-02-15
- [1734](#) Comments on Mongolian proposal N1711; Ken Whistler; 1998-03-20
- [1833](#) Feedback on Ken Whistler's comments ([N1734](#)) on Mongolian; Richard Moore; 1998-05-04
- [1862](#) Revision of [N1711](#) - Mongolian; China; 1998-09-17
- [1865](#) US Position - Mongolian ([N1711](#), [N1734](#) and [N1808](#)); US; 1998-09-18
- [1878](#) Report of ad hoc on Mongolian and working draft for proposed Amendment 29; Mongolia, China, UNU, U.S.; 1998-09-23
- [1917](#) Proposal for Project Subdivision - Amendment 29 - Mongolian - SC2 N3207; WG2; 1998-10-28
- [1965R](#) Draft Disposition of Comments for pDAM 15 (Kang Xi & CJK Radicals), pDAM 28 (Ideographic description char.), pDAM 29 (Mongolian), pDAM 30 (Additional Latin and other char.), and pDAM 31 (Tibetan ext.); Paterson; 1999-03-15
- [1972](#) pDAM29 Mongolian ballot response - SC2 N 3249; SC2 Secretariat; 1999-02-12
- [2011](#) Combined feedback from Richard Moore & China on pDAM29 - Mongolian; Richard Moore/China; 1999-03-10

The above is a list of the original background documents. Following lists documents from different Mongolian experts.

Input documents:

- [4880](#) Proposed additions for Mongolian in 5th edition of UCS (L2/16-309); Chen Zhuang; 2016-10-26
  - [4881](#) Preliminary comments on N4880 (this-L2/16-377); Weizhe Zheng; 2016-11-02
  - [4882](#) Script AdHoc Group Recommendations on Mongolian Text Model (L2/17-328); UTC script subcommittee; 2017-08-09
  - [4883](#) A mixed encoding scheme for the Mongolian block (L2/17-333); Weizhe Zheng, et al; 2017-09-18
  - [4884](#) Positional mismatches in Mongolian encoding (L2/17-332); SHEN Yilei (沈逸磊); 2017-08-11
  - [4889](#) A graphetic approach for the Mongolian encoding model (DRAFT); UTC script subcommittee; 2017-08-31
  - [4890](#) On migration issues of the graphetic model (L2/17-334); UTC script subcommittee; 2017-09-18
  - [4893](#) Mongolian ad hoc report, Hohhot, China, Sep 23-35 2017; Mongolian Ad hoc group; 2017-09-23
  - [4900](#) Considerations on Mongolian Code Chart; Michel Suignard, Project editor; 2017-09-24
- Mongolian Unicode 10 Core spec, Mongolian (section 13.2, page 528-536)

#### 9.4.1.1 **Proposal additions for Mongolian in 5th edition of UCS**

Document [N4880](#) contains a request from China to add Mongolian characters.

*Discussion:*

- a. Mr. Peter Constable: We cannot evaluate this request at this time and the proposal is not actionable at this time.
- b. Mr. Liang Hai: There was discussion during ad hoc meeting, to focus on modern use versus older use. We need more evidence also.
- c. Mr. Peter Constable: We need to understand the modern use versus ancient use, and the distinction is clear in this contribution.
- d. Dr. Deborah Anderson: Can we get a copy of the Phonetic keyboard for Mongolian?
- e. Mr. Peter Constable: It would be helpful to provide the information about the keyboard for information to WG2.

Dr. Deborah Anderson: A summary of the ad hoc meeting is captured in document [N4893](#). If you have any comments you can let us know.

*Discussion:*

- a. Mr. Michel Suignard: We would like to get some of the documents – improved phonetic – which was only in Chinese. It is an important contribution and should be part of WG2 doc collection. There are no guidelines on how to implement Mongolian. I will encourage ongoing work on this. We may need more face to face meetings.
- b. Mr. Andrew West: The complexity is in the implementation. The user experience should not be more complex.
- c. Mr. Liang Hai: The technical implementation has to handle the complexity.
- d. Mr. Peter Constable: If we could get the presentation that was made at the ad hoc meeting, which was only in Chinese could you get it translated and pass that to WG2.
- e. Mr. Chen Zhuang: The ad hoc report is OK.
- f. Mr. Michel Suignard: The code chart – Amd.1 has code charts with a single new character for Mongolian. There was a document at the ad hoc which mentioned that. The chart had some editorial errors. These errors were corrected removing some of non-attested font usage. Some of the forms that could be created in a font may not exist.
- g. Document [N4900](#) reflects that – contains 24 pages of Mongolian code chart.
- h. Mr. Peter Constable: I would expect the Mongolian experts to come up with which forms are correct from the orthography point of view.

*Disposition:* Endorse the corrections in Mongolian charts in document [N4900](#). Endorse the ad hoc report also.

*Relevant recommendation:*

**M66.05 (Mongolian script):** 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.

## **10 Publication issues**

### **10.1 Considerations concerning the publication of ISO/IEC 10646 5th Edition**

Input document:

4859 Considerations concerning 10646 5th edition publication, [main text](#), [code chart](#), [other parts](#); Michel Suignard, Project editor; 2017-09-18

Mr. Michel Suignard: We had some input from ITTF related to publication of Edition 5 (which was finalized in November 2016), referencing new ISO Directives. Clause 2 and Clause 3 need some editing changes. Clause 2 has several normative references with hyperlinks to external sources. We need to show the URLs explicitly. For data files we need to go that route of showing URLs also. Many of these are Unicode documents and we could point to those. The data files will be replaced with Header Files for ISO which will point to the Unicode documents. We could do these changes in Amendment 1 (perhaps too short a time), or in Amendment. 2, or in the next edition. The more we wait to get these changes in, the web site part of Unicode will be changing. Amendments can place revised docs outside the ISO site. But for edition 5 they have to be all on ISO site.

*Disposition:* The project editor will work with ITTF to come to some workable solution to publish Edition 5 and the Amendments.

## **11 Liaison reports**

### **11.1 SEI**

Input document:

4879 SEI Liaison report; SEI/Deborah Anderson; 2017-09-17

For information to experts. Check with Dr. Deborah Anderson if they have any comments or questions.

## **12 Future meetings:**

*Relevant recommendation:*

**M66.23 (Future meetings):** 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

## **13 Closing**

### **13.1 Approval of recommendations of meeting 66**

See section 6.6 on page 21.

### **13.2 Appreciations**

*Relevant items:*

**Appreciation M66.24 (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 M66.25 (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 M66.26 (Appreciation to Host):**

WG2 thanks the national body of China and the University of Inner Mongolia for hosting the meeting. WG 2 expresses its appreciation to the University of Inner Mongolia and its staff, in particular to Professor Nashunwuritu, Professor Wu Yingzhe, Dr. Kang Hongying and Dr. Daruohan, for arranging the meeting facilities and for the administrative support. WG2 also appreciates the University of Inner Mongolia for arranging the tour of the Museum of Inner Mongolia and for their kind hospitality.

### **13.3 Adjournment**

The meeting adjourned around noon on 2017-09-29.

## **14 Action items**

All the action items recorded in the minutes of the previous meetings from 25 to 59, and 61, have been either completed or dropped. Status of outstanding action items from previous meetings 60, and 62 to 65, and new action items from this meeting 66 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, 2013-06-01/04, 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) (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



<b>AI-62-6</b>	Ad hoc group on Principles and Procedures (Dr. Umamaheswaran)	
<b>a.</b>	To take note of section 2.1 in document <a href="#">N4544</a> on Representation of CJK ideograph glyphs; and update the P&P document appropriately.	In progress.
<b>b.</b>	With reference to <a href="#">N4543</a> 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 <a href="#">N4604</a> , and unconfirmed minutes in document <a href="#">N4603</a> for meeting 63 (with any corrections noted in section 3 in the minutes of meeting 64 in document <a href="#">N47xx</a> ).	Status
<b>AI-63-6</b>	Ad hoc group on Principles and Procedures (Dr. Umamaheswaran)	
<b>a.</b>	To take note of section 2.1 in document <a href="#">N4620</a> on Representation of CJK ideograph glyphs; and update the P&P document appropriately.	In progress.
<b>AI-63-7</b>	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>a.</b>	M63.15 (Khitan Large script): WG2 invites the authors of document <a href="#">N4631</a> to revise their proposal on the Khitan Large script taking into account the feedback summarized in the ad hoc report document <a href="#">N4642</a> , working with other experts interested in this script.	In progress.
<b>c.</b>	M63.17 (Naxi Dongba script): WG2 invites the authors of document <a href="#">N4633</a> 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. See agenda item 10.2.10 (documents <a href="#">N4877</a> , <a href="#">N4878</a> ).

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

Item	Assigned to / action (Reference recommendations in document <a href="#">N4701</a> , and unconfirmed minutes in document <a href="#">N4739</a> for meeting 64.	Status
<b>AI-64-6</b>	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>b.</b>	M64.10 (Small Seal script): WG2 invites the authors of document <a href="#">N4688</a> 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.	In progress. See agenda item 10.2.7 for feedbacks.

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

Item	Assigned to / action (Reference recommendations in document <a href="#">N4772</a> , and unconfirmed minutes in document <a href="#">N4873</a> for meeting 65 - this document you are reading).	Status
<b>AI-65-6</b>	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>a.</b>	M65.12 (Shuishu script): WG2 invites the authors of document <a href="#">N4758</a> to revise their proposal on the Shuishu script taking into account the feedback received at this meeting, working with other experts interested in this script.	In progress. See agenda item 10.2.5 and document <a href="#">N4839</a> .
<b>b.</b>	M65.13 (Primitive Scripts of South West China): WG2 invites the authors of document <a href="#">N4759</a> 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. See agenda item 10.2.7 and document <a href="#">N4856</a> .
<b>c.</b>	M65.19 (Small Seals script): WG2 invites the authors of document <a href="#">N4688</a> to revise their proposal on the Small Seals 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.	In progress. See agenda item 10.2.1 regarding ad hoc meeting and contributions on the subject.

#### 14.6 New action items from meeting 66, Hohhot, Inner Mongolia, China; 2017-09-25/29

Item	Assigned to / action (Reference recommendations in document <a href="#">N4874</a> , and unconfirmed minutes in document <a href="#">N4953</a> for meeting 66 - this document you are reading).	Status
<b>AI-66-1</b>	Recording Secretary - Dr. V.S. UMaamaheswaran	
<b>a.</b>	To finalize the document <a href="#">N4874</a> containing the adopted meeting recommendations and send it to the convener as soon as possible.	Completed; see document <a href="#">N4874</a> .
<b>b.</b>	To finalize the document <a href="#">N4953</a> containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed; see document <a href="#">N4953</a> .

<b>AI-66-2</b>	Convener - Mr. Michel Suignard	
	To take note of and act upon the following items:	
<b>a.</b>	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.)	
<b>AI-66-3</b>	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:	
<b>a.</b>	<p><i>M66.03 (Disposition of ballot comments of PDAM-1.3 to 5<sup>th</sup> Edition):</i> WG2 recommends that SC2 accept the disposition of PDAM-1.3 ballot comments in document N4870. The following significant changes are noted:</p> <p>f. 058B ARMENIAN SMALL LETTER TURNED AYB is moved to 0560, and 058C ARMENIAN SMALL LETTER YI WITH STROKE is moved to 0588.</p> <p>g. 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.</p> <p>h. 18CFD KHITAN SMALL SCRIPT ITERATION MARK is moved to 18B00 and 18B00..18CE0 are moved down by 1 position.</p> <p>i. 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'.</p> <p>j. 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'.</p> <p>k. 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.</p>	
<b>b.</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.	
<b>c.</b>	<i>M66.06 (Progression of Amendment 1 to the 5<sup>th</sup> 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 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.	
<b>d.</b>	<p><i>M66.07 (Disposition of ballot comments of PDAM-2 to 5<sup>th</sup> Edition):</i> WG2 recommends that SC2 accept the disposition of PDAM-2 ballot comments in document N4871. The following significant changes are noted:</p> <p>g. 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</p> <p>h. Changed 'Hieroglyphs' to 'Hieroglyph' in the block name resulting in 'Egyptian Hieroglyph Format Controls'.</p> <p>i. Removed the <b>two</b> small KOs (from the 9 Small Kanas) at code positions 1B132 and 1B155.</p> <p>j. Corrected the name for 1FA08 to NEUTRAL CHESS KNIGHT ROTATED</p>	

	<p>FORTY-FIVE DEGREES.</p> <p>k. Added 1 character 13436 EGYPTIAN HIEROGLYPH OVERLAY MIDDLE (based on document N4818).</p> <p>l. 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).</p>	
e.	<p>M66.08 (Urgently needed CJK ideographs): WG2 recommends that SC2 accepts encoding the following urgently needed ideographs in the standard:</p> <p>d. 9FEB (GCE-118), 9FEC (GCE-117) and 9FED (GCE-113, UTC-01119) with their glyphs, source reference and attribute data from document N4830.</p> <p>e. 9FEE (JMJ-057449) and 9FEF (JMJ-060040) with their glyphs, source references and attribute data from document N4831.</p> <p>f. Glyphs, source references and attribute for horizontal extensions for 9FEB (T5-7C54) and 9FEC (T4-6E5D) from document N4832.</p>	
f.	<p>M66.09 (Wancho script): 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>	
g.	<p>M66.10 (Shuishu script): 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> <p>c. A new block named 'Shuishu Logograms' in the range 1B300...1B4FF, and populate it with 486 characters</p> <p>d. A new block named 'Shuishu Radicals' in the range 1B500..1B52F, and populate it with 47 characters</p> <p>with their names, code positions and glyphs from document N4894R.</p>	
h.	<p>M66.11 (Symbols Set 1): 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> <p>f. 1F93F BILLIARD GAMES (glyph from Irish comment in document N4870), with annotation CUE SPORTS</p> <p>&lt;Animals&gt;:</p> <p>g. 1F9A1 MAMMOTH</p> <p>h. 1F9A2 DODO</p> <p>i. 1F9A3 BADGER</p> <p>j. 1F9A4 SQUIRREL</p> <p>k. 1F9A5 SWAN</p> <p>&lt;new header – Fantasy Being&gt;:</p> <p>l. 1F97B TROLL</p>	
i.	<p>M66.12 (Symbols Set 2): 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>	
j.	<p>M66.13 (Miao additions): WG2 recommends to SC2 to accept for encoding in the 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.</p>	
k.	<p>M66.15 (Latin character additions): WG2 recommends to SC2 to accept for encoding in the standard the following Latin characters:</p> <p>e. 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.</p> <p>f. 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.</p> <p>g. 2 Anglicana letters from document N 4838: A7C2 LATIN CAPITAL LETTER ANGLICANA W, and A7C3 LATIN SMALL LETTER ANGLICANA W.</p> <p>h. 2 Sinological Latin letters based on document N4842: AB66 LATIN SMALL LETTER DZ DIGRAPH WITH RETROFLEX HOOK, and</p>	

	AB67 LATIN SMALL LETTER TS DIGRAPH WITH RETROFLEX HOOK.	
<b>i.</b>	<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"> <li>i. 1 character OC77 TELUGU SIGN SIDDHAM from document N4860.</li> <li>j. 1 character 2BC9 NEPTUNE FORM TWO. Glyph is based on what is shown on page 3 of N4863.</li> <li>k. 1 character 2BFF HELLSCHREIBER PAUSE SYMBOL with glyph based on what is shown on Page 2 of N4864.</li> <li>l. 1 character 1145F NEWA LETTER VEDIC ANUSVARA from document N4865.</li> <li>m. 1 character 2E4F DOUBLE OBLIQUE HYPHEN WITH FALLING DOTS from document N4902.</li> <li>n. 1 character 116B8 TAKRI LETTER ARCHAIC KHA with glyph and annotation from document N4866.</li> <li>o. 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.)</li> <li>p. 2 marks for use with Old Chinese from document N4847: 16FE3 OLD CHINESE ITERATION MARK 16FE2 OLD CHINESE HOOK MARK</li> </ul>	
	<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>	
<b>m.</b>	<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"> <li>m. 'CJK Extension G' being prepared by IRG,</li> <li>n. Five Latin Tironian letters (from document N4841) if clarified and consensus is reached,</li> <li>o. Five Counting Rod characters (from document N4868) at code positions 1D379..1D37D if revised and a consensus is reached,</li> <li>p. Six Tangut ideographs at 18F72..18F77 with the glyphs, source reference information, and glyph corrections from document N4896, when additional relevant information is available, and,</li> <li>q. Naxi Dongba script (see recommendation M66.10 above).</li> </ul>	
<b>AI-66-4</b>	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	
	To take note of and act upon the following items:	
<b>a.</b>	<p><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.</p>	
<b>b.</b>	<p><i>M66.23 (Future meetings):</i> WG2 endorses the following schedule for future meetings:</p> <ul style="list-style-type: none"> <li>IRG Meeting 50 – 2018-05-21/25, Beijing, China</li> <li>IRG Meeting 51 – 2018-10-22/26, Hanoi, Vietnam</li> </ul>	
<b>AI-66-5</b>	Ad hoc group on roadmap (Dr. Umamaheswaran)	
<b>a.</b>	To update the Roadmaps with the results from this meeting.	
<b>AI-66-6</b>	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 <a href="#">N4893</a> ) 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 <a href="#">N4900</a> ) correcting editorial errors for Mongolian inclusion in Amendment 1.	
b.	<i>M66.18 (Naxi Dongba script)</i> : WG2 accepts the Naxi Dongba ad hoc report in document <a href="#">N4895</a> , 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 <a href="#">N4898</a> . 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.	
c.	<i>M66.20 (Shuowen Small Seal script)</i> : WG2 accepts the adhoc report on Shuowen Small Seal script in document <a href="#">N4853</a> , 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.	
d.	<i>M66.21 (Primitive Scripts of South West China)</i> : WG2 invites the authors of documents <a href="#">N4856</a> and <a href="#">N4901</a> , 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.	
<b>AI-66-7</b> 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	
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 ( <a href="#">N4292</a> ), Bagam ( <a href="#">N4293</a> ), Balti ‘B’ ( <a href="#">N4016</a> ), Balti scripts ( <a href="#">N3842</a> ), Bima ( <a href="#">L2/16-119</a> ), Brusha ( <a href="#">L2/17-183</a> ), Buginese extensions ( <a href="#">L2/16-159</a> ), Chinese Chess Symbols ( <a href="#">N3910</a> ), Dhives Akuru ( <a href="#">L2/17-292</a> ), Diwani Siyaq Numbers ( <a href="#">N4122</a> ), Ebee Hmong ( <a href="#">N4668</a> ), Egyptian Hieroglyphs Extension Old Yi ( <a href="#">N4751</a> ), Elymaean ( <a href="#">L2/17-226</a> ), Garay ( <a href="#">N4709</a> ), Jurchen ( <a href="#">N4077</a> ), Kawi ( <a href="#">N4266</a> ), Kerinci ( <a href="#">L2/16-074</a> ), Khambu Rai ( <a href="#">N4018</a> ), Khatt-i Baburi ( <a href="#">N4130</a> ), Khotanese ( <a href="#">L2/15-022</a> ), Khwarezmian ( <a href="#">L2/17-054</a> ), Kpelle ( <a href="#">N3762</a> ), Kulitan ( <a href="#">L2/15-232</a> ), Lampung ( <a href="#">L2/16-073</a> ), Landa ( <a href="#">N3768</a> ), Leke ( <a href="#">N4438</a> ), Lota Ende ( <a href="#">L2/16-076</a> ), Mandombe ( <a href="#">L2/16-077R</a> ), Moon ( <a href="#">N4128</a> ), Mwangwego ( <a href="#">N4323</a> ), Obsolete Simplified Chinese Ideographs ( <a href="#">N3695</a> ), Old Yi ( <a href="#">N3288</a> ), Oracle Bone ( <a href="#">N4687</a> ), Ottoman Siyaq ( <a href="#">N4124</a> ), Palaeohispanic ( <a href="#">L2/17-129</a> ), Pau Cin Hau Syllabary ( <a href="#">L2/16-014</a> ), Persian Siyaq ( <a href="#">N4125</a> ), Proto-Cuneiform ( <a href="#">N4760</a> ), Pungchen ( <a href="#">L2/17-181</a> ), Pyu ( <a href="#">N3874</a> ), Ranjana ( <a href="#">N4515</a> ), Sumbawa ( <a href="#">L2/16-096</a> ), Tıgalari ( <a href="#">L2/16-241</a> ), Tocharian ( <a href="#">L2/15-236</a> ), Tolong Siki ( <a href="#">N3811</a> ), Vexillology symbols ( <a href="#">L2/17-089</a> ), Western Cham ( <a href="#">N4734</a> ), Woleai ( <a href="#">N4146</a> ), and Zou ( <a href="#">N4044</a> ).	
c.	The following documents are awaiting further refinements and discussion: <a href="#">4733</a> Revised proposal to encode the Cypro-Minoan script in the SMP; SEI/Michael Everson; 2016-07-22 <a href="#">4786</a> Towards an encoding of the Loma script in the SMP; SEI/Michael Everson; 2017-02-19 <a href="#">4837</a> Cumulative chart of the Loma script; SEI/Michael Everson; 2017-07-22 <a href="#">4795</a> Towards an encoding of the Jurchen script and implications for Khitan Small Script; Andrew West, et al; 2017-05-03 <a href="#">4854</a> Preliminary proposal for encoding the Vithkuqi script in the SMP; Michael Everson; 2017-09-08	

	<p><a href="#">4886</a> Naxi Geba characters from Fang Guoyu's dictionary; Michael Everson; 2017-09-17</p> <p><a href="#">4887</a> Naxi Geba characters from Li Lincan's dictionary; Michael Everson; 2017-09-22</p> <p><a href="#">4848</a> Proposal to encode old Chinese lute (pípa) notation; Andrew West, Eiso Chan; 2017-09-07</p> <p><a href="#">4849</a> Proposal to encode old Chinese flute (súzipǔ or bànzipǔ) notation; Andrew West, Eiso Chan; 2017-09-07</p> <p>See also items under AI-66-6 above.</p>	
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\*\*\*\*\* END OF MEETING MINUTES \*\*\*\*\*