



ISO/IEC JTC 1/SC 2 N_____
ISO/IEC JTC 1/SC 2/WG 2 **N4603**
2015-09-01

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 63
Hotel Taj Samudra, Colombo, Sri Lanka; 2014-09-29/10-03

SOURCE: V.S. Umamaheswaran (umavs@ca.ibm.com), Recording Secretary
Mike Ksar (mikeksar@10646.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: 2015-10-01

DISTRIBUTION: SC 2/WG 2 members and Liaison organizations

MEDIUM: Acrobat PDF file

NO. OF PAGES: 48 (including cover sheet)

ISO
International Organization for Standardization
Organisation Internationale de Normalisation

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

ISO/IEC JTC 1/SC 2 N _____
ISO/IEC JTC 1/SC 2/WG 2 **N4603**
2015-09-01

Title:	Unconfirmed minutes of WG 2 meeting 63 Hotel Taj Samudra, Colombo, Sri Lanka; 2014-09-29/10-03
Source:	V.S. Umamaheswaran (umavs@ca.ibm.com), Recording Secretary Mike Ksar (mikeksar@10646.com), Convener
Action:	WG 2 members and Liaison organizations
Distribution:	ISO/IEC JTC 1/SC 2/WG 2 members and liaison organizations

1 Opening and roll call

Input document:
[4605](#) 2nd call - meeting 63; Mike Ksar; 2014-09-03

The meeting started at 10:00h.

Mr. Mike Ksar: Welcome everyone to Sri Lanka. The tentative agenda is on screen; we will review this later. Additional contributions will be there from TCA and China, and these will be added. For those of you who have not been to this meeting before, the most important documents will be discussed first, and then we will go through the contributions received since last meeting in February 2014 in the USA. If you have any documents to print, please give them or send them to me via email. Our host would help us to get hard copies if needed. Now I would like to ask our host Ms. Aruni Goonetilleke, from ICTA, to tell us about the logistics, tomorrow's social event etc.

Ms. Aruni Goonetilleke: Welcome to Sri Lanka everyone. We are hosting this with Sri Lankan Standards Institution (SLSI). We will have two breaks every day - with a lunch around 12:30h. On Tuesday evening we are having a social event. We will arrange for a bus to go to Mount Livona restaurant leaving around 7 p.m.; it is about 30 minutes' drive from here. If you need anything please let us know.

Mr. Mike Ksar: Thank you very much Ms. Aruni Goonetilleke. Thanks for all the arrangements you have organized for us here. Many of you know who I am. I have been the convener for the last 25 years (applause). The baton will be handed over during the SC2 plenary to the next convener. Mr. Michel Suignard will be the next convener of WG2 from here on, in addition to being the project editor.

1.1 Roll call:

Input document:
[4551](#) WG2 Experts List - updated post meeting 62; Uma; 2014-09-21

Mr. Mike Ksar: I am passing around the latest list of experts. Please enter any corrections and return to Dr. Umamaheswaran. Please give your business cards to Dr. Umamaheswaran. A reminder that WG2 is a group of experts. 'Head of Delegation' designation does not quite matter here. We can convey the national body positions, but we are here as experts.

The following **44** experts accredited by **8** national bodies and **4** liaison organizations were present at different times during the meeting.

Name	Accreditation	Affiliation
Mike KSAR	.Convener, USA	Independent
LU Qin	.IRG Rapporteur	Hong Kong Polytechnic University
Hsiu-Sheng CHI	.TCA - Liaison	Chinese Culture University
Kuang-Shun (Rick) LIN	.TCA - Liaison	Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs
Lin-Mei (Selena) WEI	.TCA - Liaison	Chinese Foundation for Digitization Technology
Suh-Chyin CHUANG	.TCA - Liaison	Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs
Alain LABONTÉ	Canada; Editor 14651;	Independent

Name	Accreditation	Affiliation
V. S. (Uma) UMAMAHESWARAN	SC35 - Liaison (acting) Canada; Recording Secretary	IBM Canada Limited
CHEN Zhuang	China	Chinese Electronics Standardization Institute
DING Biyuan	China	Department of Computer Science and Technology, Tsinghua University
HE Lifeng	China	Yunnan Minority Languages Committee
HE Lili	China	China Publishing Group Digital Media Co. Ltd.
LI Guoying	China	Beijing Normal University
NIE Hongyin	China	Institute of Ethnology and Anthropology, Chinese Academy of Social Sciences
SUN Bojun	China	Institute of Ethnology and Anthropology, Chinese Academy of Social Sciences
WU Yingzhe	China	Inner Mongolia University
XIA Jinjing	China	Department of Computer Science and Technology, Tsinghua University
YAO Qinjun	China	Institute of Ethnology
Yasen YIMING	China	Xinjiang Uyghur Autonomous Regional Working Committee of Minorities' Language and Writing
ZHANG Yifei	China	China National Database of Characters Program Leading Office
ZHAO Liming	China	School of Humanities, Tsinghua University
ZHAO Qinglian	China	Yunnan Minority Languages Committee
ZHOU Xiaowen	China	Beijing Normal University
Michael EVERSON	Ireland; Contributing Editor	Evertime
Shuichi TASHIRO	Japan	IT Promotion Agency (IPA)
Tatsuo KOBAYASHI	Japan	IT Promotion Agency (IPA)
Toshiya SUZUKI	Japan	Hiroshima University
KIM Kyongsok	Rep. of KOREA	Pusan National University, Rep. of KOREA
Yoshiki MIKAMI	SC2 Chair	University of Technology, Japan
Ayuko NAGASAWA	SC2 Secretariat	IPSJ/ITSCJ
Aruni GOONETILLEKE	Sri Lanka	ICTA
G. Balachandran	Sri Lanka	Banks' CSIRT
Hasitha KARUNARATNE	Sri Lanka	Sri Lankan Standards Institution (SLSI)
Harsha WIJAYAWARDHANA	Sri Lanka	School of Computing, University of Colombo
Jayantha FERNANDO	Sri Lanka	ICTA
M.C. FERNANDO	Sri Lanka	Sri Lankan Standards Institution (SLSI)
Ruvan WEERASINGHE	Sri Lanka	School of Computing, University of Colombo
S. SHANMUGARAJAH	Sri Lanka	Consultant
T. UTHAYAKUMAR	Sri Lanka	Sri Lankan Standards Institution (SLSI)
Viraj WELGAMA	Sri Lanka	School of Computing, University of Colombo
Andrew WEST	UK	Independent
Michel SUIGNARD	USA; Project Editor	Unicode Consortium
Deborah ANDERSON	USA; SEI, UC Berkeley - Liaison	Department of Linguistics, University of California, Berkeley
Peter CONSTABLE	USA; Unicode Consortium - Liaison	Microsoft Corporation

Drafting committee: Messrs. Mike Ksar, Michel Suignard, Peter Constable and Dr. Deborah Anderson volunteered to assist Dr. Umamaheswaran with the preparation and review of the draft meeting resolutions.

2 Approval of the agenda

Input document:

[4605-A Meeting Agenda - Meeting 63](#)

Mr. Mike Ksar: We will review the agenda now. All the documents on the agenda are on the web.

Nushu experts from China will be here on Wednesday.
 Ad hoc on Nushu can be on Wednesday morning
 There may be an ad hoc on Tangut.
 IRG matters will be on Wednesday.
 OWG-Sort will meet Thursday after lunch.

There are several items such as 5.1, 6.1 and others that are identified as FYI. These are for your information and will not be discussed.

For example, under item 5, 5.1 is the announcement of publication of 4th edition. The 4th edition publication is now under publicly available standards at the ISO site.

Disposition: The agenda is approved as presented. It 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 always align with the agenda item numbers in document N4605-A. All the changes made during the meeting are included in the appropriate sections in these minutes. Some agenda items have been regrouped, reorganized or renumbered. Agenda items that did not have any discussion 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.)

Item Number	Title	Page
1	Opening and roll call	2
1.1	Roll call:	2
2	Approval of the agenda	3
3	Approval of minutes of meeting 62	5
4	Review action items from previous meeting	5
4.1	Outstanding action items from meeting 58, Helsinki, Finland, 2011-06-06/10	6
4.2	Outstanding action items from meeting 60, Chiang Mai, Thailand, 2012-10-22/27	6
4.3	Outstanding action items from meeting 61, Vilnius, Lithuania, 2013-06-10/14	6
4.4	New action items from meeting 62, San Jose, CA, USA; 2014-02-24/28	6
5	JTC1 and ITTF matters	10
6	SC2 matters	10
6.1	10646: DAM1 (Ed 4) - Results and progression	10
7	WG2 matters	11
7.1	Possible ad hoc meetings	11
7.2	Summary of voting on PDAM2 to 10646 4th edition	11
7.3	Disposition of ballot Comments on PDAM2 to 10646 4th edition	11
7.4	Roadmap snapshot	18
8	IRG status and reports	18
8.1	IRG No. 42 Summary report	18
8.2	Inaccurate source reference for twelve HKSCS compatibility characters	20
9	Contributions related to ballots	20
9.1	Related to PDAM2	20
9.1.1	Contributions addressed and included in PDAM 2	20
9.1.2	Tangut - glyph corrections	20
9.1.3	Comments on Nushu in PDAM2	21
9.1.4	Comments on Nushu ad-hoc report WG2 N4561	21
9.1.5	Future additions to 10646	21
9.1.6	Current status of Tamil symbols naming issue	22
9.1.7	Response to the ICTA's document L2/14-048 on Tamil fractions and symbols	22
9.1.8	Moji-Joho-Kiban ideographs collection	23
9.1.9	Unification rule for similar-shaped non-cognate ideographs	23
10	Contributions not related to ballots	24
10.1	Carried forward scripts or blocks	24
10.2	New scripts or blocks	24
10.2.1	CJK Extension F	24
10.2.2	Osage script	25
10.2.3	Cyrillic additions for early Slavonic text	26
10.2.4	Combining Glagolitic letters	26
10.2.5	Naxi Dongba script	26

Item Number	Title	Page
10.2.6	Adlam script	28
10.2.7	Small Seal script	29
10.2.8	Khitan Large script	29
10.2.9	Shuishu script	30
10.2.10	Tangut radicals	30
10.3	Additions to existing scripts or blocks	31
10.3.1	Saurashtra sign Candrabindu	31
10.3.2	Kannada sign Spacing Candrabindu	31
10.3.3	Quranic mark Ar-Rub	31
10.3.4	Georgian Lari currency sign	31
10.3.5	Nomisma sign	32
10.3.6	Double suspension mark	32
10.3.7	Greek indiction sign	32
10.3.8	Warsh-based Arabic characters	32
10.3.9	Bopomofo letter I	33
10.3.10	Emoji modifiers	33
10.3.10.1	Emoji skin tone characters	33
10.3.10.2	Portrait symbols	36
10.3.10.3	Tone modifiers for emoji	38
10.4	Miscellaneous proposals	39
10.4.1	Modification of shape for 301C - WAVE_DASH	39
10.4.2	Horizontal extension of 152 Hanja characters	39
10.5	CJK ideographs - glyphs and source references	39
10.5.1	Proposal from Project Editor	39
10.5.2	Feedback from Japanese expert	40
10.6	Progression of WG2 work	41
10.7	Proposals on the agenda that were not discussed	42
11	Defect reports	42
11.1	Updates to CJK chart and source references	42
12	Liaison reports	43
12.1	Script Encoding Initiative (SEI)	43
13	Other business	43
13.1	Web site review	43
14	Future meetings	43
15	Closing	43
15.1	Approval of results of meeting 63	43
15.2	Adjournment	44
16	Action items	44
16.1	Outstanding action items from meeting 60, Chiang Mai, Thailand, 2012-10-22/27	45
16.2	Outstanding action items from meeting 62, San Jose, CA, USA; 2014-02-24/28	45
16.3	New action items from meeting 63, Colombo, Sri Lanka; 2014-09-29/10-03	45

3 Approval of minutes of meeting 62

Input document:

[4553](#) Unconfirmed minutes Meeting 62; Uma; 2014-09-16

Mr. Mike Ksar: If you have any comments on the previous meeting minutes please pass them on to Dr. Umamaheswaran.

Corrections: The minutes and resolution documents referenced in the header of the table of new action items for the San Jose meeting (meeting 62) in section 14 should be [N4553](#) and [N4554](#), instead of N4453 and N4454 respectively. The meeting numbers in the table headers should also be changed to appropriate ones (see corrected versions under Action Item Review section below). Also, delete some empty rows in the table of new action items from meeting 61.

No other feedback was received till the end of the meeting.

Disposition: Adopt the minutes as corrected.

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

4 Review action items from previous meeting

Input document:

[4553](#) Unconfirmed minutes Meeting 62; Uma; 2014-09-16 (Action Items are in section 14 of the minutes)

Dr. Umamaheswaran reviewed and updated the action items from the previous meetings. The resulting updated status for each item is shown below. All the action items recorded in the minutes of the previous meetings from 25 to 57, and 59, have been either completed or dropped. Of the total of **31** action items that were reviewed, **3** items are carried forward as 'in progress', **2** items were dropped, and **26** items have been either 'noted' or 'completed'.

4.1 Outstanding action items from meeting 58, Helsinki, Finland, 2011-06-06/10

Item	Assigned to / action (reference resolutions in document N4104 , and unconfirmed minutes in document N4103 for meeting 58).	Status
AI-58-7	Ireland (Mr. Michael Everson)	
a.	With reference to Irish proposal for replacement of Bengali chart in comment E1 on Row 098 in document N4014 (results of voting on FCD of 3 rd edition), Ireland is invited to provide more information regarding the font used for Bengali in the charts for review and comment by national bodies and liaison organizations. Also refer to similar action item AI-57-7 on Ireland. M58 to M62 - in progress.	Dropped.

4.2 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).	Status
AI-60-10	Irish national body - Mr. Michael Everson	
a.	To get more information related to the status, its stability and other clarifications based on the discussions in the meeting on document N4323 - Mwangwego script. M61 and M62 -- in progress.	In progress.

4.3 Outstanding action items from meeting 61, Vilnius, Lithuania, 2013-06-10/14

Item	Assigned to / action (reference resolutions in document N4404 , and unconfirmed minutes in document N4403 for meeting 61).	Status
AI-62-3	Editor of ISO/IEC 10646: (Mr. Michel Suignard with assistance from contributing editors)	
o.	To provide input to the IRG on the z-source related question discussed under item 9 in section 8.1 of these minutes (document N4403). M62 -- in progress.	Dropped.

4.4 New 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 - this document you are reading).	Status
AI-62-1	Recording Secretary - Dr. V.S. UMamaheswaran	
a.	To finalize the document N4454 containing the adopted meeting resolutions and send it to the convener as soon as possible.	Completed; see document N4454 .
b.	To finalize the document N4453 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed; see document N4453 .
AI-62-2	Convener - Mr. Mike Ksar	
	To take note of and act upon the following items:	
a.	<i>M62.18 (Roadmap snapshot):</i> WG2 instructs its convener to post the updated snapshot of the roadmaps (in document N4530) to the WG2 web site and communicate the same to SC2 secretariat.	Completed.
b.	<i>M62.17 (Principles and Procedures):</i> WG2 instructs its convener to post the updated Principles and Procedures (in document N4502) to the WG2 web site and communicate the same to SC2 secretariat.	Completed.
c.	To communicate to SC2 the following resolution: <i>M62.16 (Availability of enquiry drafts for WG2 experts):</i> Access to enquiry drafts are now controlled via the ISO/IEC "OpenText" content server, with many WG2 members not having sufficient rights to access these drafts in the lists of JTC1/SC2 N-documents on that system. This results in WG2 members not having access to documents that need to be discussed in ballot resolution meetings. Therefore, WG2 requests that SC2 and its secretariat explore options to enable WG2 members to have access to enquiry draft documents for review and to facilitate consideration of these drafts and ballot responses at WG2 meetings.	Completed.
d.	To add relevant contributions carried forward from previous meetings to agenda of next meeting. (See list of documents under AI-62-9, items a and d - below.)	Completed.

AI-62-3	Editor of ISO/IEC 10646: (Mr. Michel Suignard with assistance from contributing editors)	
	To prepare the appropriate amendment texts, sub-division proposals, collection of editorial text for the next edition, corrigendum text, or entries in collections of characters for future coding, with assistance from other identified parties, in accordance with the following:	
	<p>a. <i>M62.01 (Disposition of ballot comments and progression of 4th edition):</i> WG2 accepts the disposition of ballot comments on DIS 4th edition in document N4564. The following significant changes are noted:</p> <ol style="list-style-type: none"> Addition of 12399 CUNEIFORM SIGN U U, with its glyph from document N4493, to the 'Cuneiform' block. Shortening the block 'LATIN EXTENDED-E' to end at AB6F (from current ABBF), and adjusting the block description and definition of collection 165 LATIN EXTENDED-E accordingly. Changing the name for 2B81 in the 'Miscellaneous Symbols and Arrows' block to: 'UPWARDS TRIANGLE-HEADED ARROW LEFTWARDS OF DOWNWARDS TRIANGLE-HEADED ARROW', from: 'UPWARDS TRIANGLE-HEADED ARROW LEFTWARDS DOWNWARDS OF TRIANGLE-HEADED ARROW'. Change the source reference for CJK Extension C ideograph 2A92F from GZJW-00827 to GCY-0665.03 along with change in the glyph, based on document N4558. Siddham changes: <ul style="list-style-type: none"> Moving four SIDDHAM characters from 115E0-115E3 to 115D8-115DB with the following new names: (old 115E0) 115D8 SIDDHAM LETTER THREE-CIRCLE ALTERNATE I (old 115E1) 115D9 SIDDHAM LETTER TWO-CIRCLE ALTERNATE I (old 115E2) 115DA SIDDHAM LETTER TWO-CIRCLE ALTERNATE II (old 115E3) 115DB SIDDHAM LETTER ALTERNATE U Moving two 'Siddham' letter variants at 115E4 and 115E5 from the 4th edition into Amendment 1 for final technical review, with the following new names and code positions: (old 115E4) 115DC SIDDHAM VOWEL SIGN ALTERNATE U (old 115E5) 115DD SIDDHAM VOWEL SIGN ALTERNATE UU 	
	<p>b. <i>M62.02 (Additional changes in 4th edition):</i> WG2 accepts the following additional changes to the 4th edition:</p> <ol style="list-style-type: none"> Addition of 20BD RUBLE SIGN with its glyph as shown in N4529 in the 'Currency Symbols' block. Capture annotation recommendations in the Siddham ad hoc report in document N4560. Insert ", character name aliases" after "For character names" in the second paragraph in 'Clause 24.5.4 Determining uniqueness'. Add five Manichaean Standardized Variation Sequences, 10AC5 FE00, 10AC6 FE00, 10AD6 FE00, 10AD7 FE00, and 10AE1 FE00, based on documents N4029 and N4546. 	
	<p>c. <i>M62.03 (Progression of 4th edition):</i> WG2 instructs its project editor to prepare and to forward the final text of the 4th edition of the standard, which will include the changes arising from resolution M62.01 and M62.02 above, along with the final disposition of comments (document N4564) to the SC2 secretariat for processing as an FDIS ballot. The code charts for additions in the 4th edition will be in document N4571. The target starting dates are unchanged: FDIS 2014-03.</p>	Items a to c: completed; see documents N4564 and N4571 (FDIS Delta charts)
	<p>d. <i>M62.05 (Disposition of ballot comments of PDAM1 to 4th edition):</i> WG2 accepts the disposition of PDAM1 ballot comments in document N4565. The following significant changes are noted:</p> <ol style="list-style-type: none"> Moving of 1137D GRANTHA SIGN COMBINING ANUSVARA ABOVE to 11300 in the 'Grantha' block. Deletion of 'Nushu' script from Amendment 1, moving it to a future Amendment, with the following modifications recommended in the Nushu ad hoc report in document N4561: <ul style="list-style-type: none"> Changing to a 'rule based' naming system, such as NUSHU CHARACTER- <code point> Presenting the charts with an improved font, and, 	

	<ul style="list-style-type: none"> Reducing the block range from 1B100-1B2FF to 1B100-1B28F. 	
e.	<p><i>M62.06 (Additional changes in Amendment 1):</i> WG2 accepts the following additional changes in Amendment 1:</p> <ol style="list-style-type: none"> Per recommendation in document N4544, remove Note 2 in sub-clause 23.1 (Note 1 may have to be renumbered to just a 'Note', as a consequence). Based on concerns expressed on naming of Tamil fractions in document N4477, move the following Tamil characters that were added in Amendment 1, to a future Amendment for further technical review. <ul style="list-style-type: none"> the six characters 0BDF, 0BFB-0BFF in the 'Tamil' block the 'Tamil Supplement' block 11FC0-11FFF, and the forty-nine characters 11FC0-11FEF and 11FFF in that block. Since the Malayalam fractions are somewhat related, move the ten Malayalam fraction characters 0D58-0D5E and 0D76-0D78 that were added in Amendment 1 also to a future Amendment for further technical review. Delete 0D4F MALAYALAM LETTER CHILLU LLL from Amendment 1 (and add it to a future Amendment to be considered with other MALAYALM CHILLU letters being accepted for coding). Move 1032F OLD ITALIC LETTER TTE from Amendment 1 to a future Amendment for further technical review. 	
f.	<p><i>M62.07 (Cherokee additions):</i> WG2 accepts to</p> <ol style="list-style-type: none"> Add the following 7 characters to the Cherokee block: 13F5 CHEROKEE LETTER MV 13F8 CHEROKEE SMALL LETTER YE 13F9 CHEROKEE SMALL LETTER YI 13FA CHEROKEE SMALL LETTER YO 13FB CHEROKEE SMALL LETTER YU 13FC CHEROKEE SMALL LETTER YV 13FD CHEROKEE SMALL LETTER MV, with their glyphs from document N4537. Create a new block named Cherokee Supplement in the range AB70 to ABBF in the BMP, and populate it with 80 characters in code positions AB70 to ABBF, with their names and glyphs from document N4537. 	
g.	<p><i>M62.08 (Progression of Amendment 1 to the 4th edition):</i> WG2 instructs its project editor to prepare and to forward the final text of Amendment 1 to the 4th edition of the standard, which will include the changes arising from resolutions M62.01, and M62.05 to M62.07 above, along with the final disposition of comments (document N4565) to the SC2 secretariat for processing as a DAM ballot. The final code charts will be in document N4568. The target starting dates are modified to: DAM: 2014-04, FDAM: 2014-11.</p>	Items d to g: completed; see documents N4565 and N4568 (DAM1 charts).
h.	<p><i>M62.09 (Character additions for a future amendment to the 4th edition):</i> WG2 accepts the following in a future amendment to the 4th edition of the standard:</p> <ol style="list-style-type: none"> Malayalam characters: Add 0D54 MALAYALAM LETTER CHILLU M (with its glyph from document N4540). Add 0D55 MALAYALAM LETTER CHILLU Y (with its glyph from document N4539) Move 0D4F MALAYALAM LETTER CHILLU LLL (moved from Amendment 1 to a future amendment in resolution M62.06 item d, above) to new code position 0D56 Add 0D65 MALAYALAM SIGN PARA (with its glyph from document N4538). Add 2E43 DASH WITH LEFT UPTURN (with its glyph from document N4534) in the 'Supplemental Punctuation' block. Add Four Arabic characters for Bravanese, in the 'Arabic Extended-A' block: 08B6 ARABIC LETTER BEH WITH SMALL MEEM ABOVE 08B7 ARABIC LETTER PEH WITH SMALL MEEM ABOVE 08B9 ARABIC LETTER REH WITH SMALL NOON ABOVE 08BA ARABIC LETTER YEY WITH TWO DOTS BELOW AND SMALL NOON ABOVE with their glyphs from document N4498. Add Three symbols in the 'Miscellaneous Technical' block: 23FB POWER SYMBOL 23FC POWER ON-OFF SYMBOL 23FD POWER ON SYMBOL with their glyphs from document N4535. Add 1F32D BLACK WANING CRESCENT MOON in the 'Miscellaneous Symbols 	

	and Pictographs' block, with its glyph from document N4535 . f. Add A7AE LATIN CAPITAL LETTER SMALL CAPITAL I, in the 'Latin Extended-D' block, with its glyph from document N4549 .	
	i. <i>M62.10 (Marchen script)</i> : WG2 accepts to create a new block named 'Marchen' in the range 11C70 to 11CBF, and populate it with 69 characters in code positions 11C70 to 11C8F and 11C92 to 11CB6, with their names and glyphs as shown in document N4491 .	
	j. <i>M62.11 (Zanabazar Square script)</i> : WG2 accepts to create a new block named 'Zanabazar Square' in the range 11A00 to 11A4F, and populate it with 69 characters in code positions 11A00 to 11A44, with their names and glyphs as shown in document N4541 . Some of the characters are combining marks.	
	k. <i>M62.12 (Tangut script)</i> : WG2 accepts to create: a. A block named 'Tangut' in the range 17000 to 187EF, and populate the 'Tangut' block with 6125 ideographs in code positions 17001 to 187ED, with the presentation of charts and associated information in a form similar to CJK ideograph charts, following the methodology detailed in document N4543 b. A block named Ideographic Symbols and Punctuation in the range 16FE0 to 16FFF, and populate with one character 16FE0 TANGUT REPETITION MARK with their glyphs based on documents N4522 and the charts in document N4525 .	
	l. <i>M 2.13 (Addition of sub-clause on presentation of updated ideographic sources)</i> : WG2 accepts the proposed text for the sub-clause 23.2, from document N4544 .	
	m. <i>M62.14 (Project subdivision for future second amendment to the 4th edition)</i> : WG2 instructs its convener and project editor to create a project subdivision proposal document (will be document N4570) for creation of a second amendment to ISO/IEC 10646 4 th edition, to include the items moved from Amendment 1 in resolution in resolution M62.06 , and the items accepted in resolutions M62.09 and M62.13 above. The schedule for the Amendment will be determined by the project editor. WG2 notes that Bhaiksuki script (revised), and Mongolian Birga characters (from document N4542), are some additional candidates for inclusion in the text of Amendment 2.	Items h to m: completed. See documents N4570 and N4569 (PDAM2 charts).
AI-62-4	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	
	To take note of and act upon the following items:	
	<i>M62.15 (Urgently needed ideographs)</i> : WG2 instructs the IRG to add the missing urgently needed character, identified as serial number 6774, requested by China in document N4508 to the repertoire of CJK Extension F.	Completed; see document N4580 collection.
AI-62-5	Ad hoc group on roadmap (Dr. Umamaheswaran)	
	a. To update the Roadmaps with the results from this meeting.	Completed; see document N4617 .
AI-62-6	Ad hoc group on Principles and Procedures (Dr. Umamaheswaran)	
	To take note of section 2.1 in document N4544 on Representation of CJK ideograph glyphs; and update the P&P document appropriately.	In progress.
	With reference to N4543 Character Name considerations; Michel Suignard; 2014-02-20, to elaborate on character names in the P&P document working with Mr. Michael Everson.	In progress
AI-62-7	All national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
	a. The following documents were introduced at meeting 62 with a request for national body review and feedback to the authors: 4488 Preliminary proposal to encode the Adlam script; SEI - Michael Everson; 2013-10-28 N4511 IRG PnP Version 6; Lu Qin; 2013-11-22 4496 Introducing Lakhum Mossang's Script for Tangsa; SEI - Anshuman Pandey; 2013-11-08 4497 Introducing Latsam Khimhun's Script for Tangsa; SEI - Anshuman Pandey; 2013-11-08 N4499 Additional Information on the Eskaya Script of the Philippines; SEI - Anshuman Pandey; 2013-11-08 N4515 Proposal to encode Ranjana script; Devdass Manandhar; 2013-12-31 N4518 Proposal to encode archaic vowel signs O OO for Kannada; Shriramana Sharma; 2013-12-31 N4517 Proposal to encode 0D00 Malayalam Sign Combining Anusvara Above; Shriramana Sharma; 2013-12-30 (Note: Some of the above will be added to the Carried Forward list for next meeting's agenda, if no revised contributions are submitted.)	Revised or supplemental documents have been added to agenda of M63 for Adlam, Khitan and Naxi Dongba, and IRG PnP.
	b. N4566 Unicode Liaison Report to WG2; Peter Constable; 2014-02-26	Noted.
	c. N4545 SEI Liaison Report to WG2 Feb 2014; Debbie Anderson, SEI - UC Berkeley; 2014-02-13	Noted.

d.	Following items are carried forward from earlier meetings - filtered at meeting 62: Scripts, new blocks or large collections (awaiting updated proposals from the authors): Afáka (N4292), Bagam (N4293), Balti 'B' (N4016), Balti s (N3842), Chinese Chess Symbols (N3910), Dhives Akuru (N3848), Diwani Numerals (N4119), Diwani Siyaq Numbers (N4122), English Phonotypic Alphabet (EPA) (N4079), Garay (N4261), Gondi (N4291), Indic Siyaq (N4123), Jenticha (N4028), Jurchen (N4077), Kawi (N4266), Khambu Rai (N4018), Khatt-i Baburi (N4130), Khitan (N3918), Kpelle (N3762), Landa (N3768), Leke (N4438), Loma (N3756), Moon (N4128), Mwangwego (N4323), Nandinagari (N4389), Naxi Dongba (N4043), Nepaalalipi (N4322), Nepal Himalayish (N4347), Newar (N4184), Obsolete Simplified Chinese Ideographs (N3695), Old Yi (N3288), Ottoman Siyaq (N4124), Ottoman Siyaq System Numerals (N4118), Pau Cin Hau Syllabary (N4412), Persian Siyaq (N4125), Pyu (N3874), Raqm Numerals (N4117), Rohingya (N4283), Soyombo (N4414), Tolong Siki (N3811), Tulu (N4025), Woleai (N4146), Zou (N4044),	Noted. A filtered list of items will be in the Carried Forward agenda item for tracking.
e.	M62.19 (Future meetings): WG2 endorses the following schedule for future meetings of WG2: Meeting 63 - 2014-09-29/10-03, Colombo, Sri Lanka; (co-located with SC2) Meeting 64 - 2015 (late summer or early fall); looking for host (Russia?) Meeting 65 - 2016; looking for host (USA Tentative)	Noted.

5 JTC1 and ITTF matters

Input documents:

[4586](#) Result of Voting: ISO/IEC FDIS 10646 (Ed 4); SC2 Secretariat - N4342; 2014-07-10

[4618](#) Announcement of publication of the 4th edition of ISO/IEC 10646; SC2 Secretariat; 2014-09-10

The above documents were for information only and were not discussed.

The FDIS was approved with editorial changes suggested by Canada and Japan. The edits were accommodated in the final publication of the 4th edition.

6 SC2 matters

Input documents:

[4577](#) Notification of SC2 approval of SC2 N4319, request from the Unicode Consortium for changing the category of liaison from C to A; SC2 Secretariat; 2014-05-20

[4578](#) Notification of Approval of Subdivision of Work for Amendment 2; SC2 Secretariat; 2014-05-22

The above documents were for information only and were not discussed.

6.1 10646: DAM1 (Ed 4) - Results and progression

Input documents:

[4611](#) Summary of Voting on 10646 DAM 1; SC2 Secretariat SC2 4350; 2014-09-02

[4611-BSI](#) DAM1-Results-BSI Comments; SC2 Secretariat SC2 4350; 2014-09-02

[4615](#) Proposed Disposition of Ballot Comments DAM1; Project Editor - Michel Suignard; 2014-09-20

There were 15 responses (13 P members and 2 O members) and 25 Abstentions (21 P members, 3 O members and 1 other). All the 15 responses were positive. UK had voted with editorial comments.

Mr. Michel Suignard: The proposed disposition of comments is in document [N4615](#). We got editorial comments from the UK. All the comments are on the names list requesting annotations in various places in the document. I have either accepted these as proposed or in principle. The only items I propose we not accept are E.5 and E.6. We do not make cross references within the same block. We do cross references only between different blocks. I will update the Amendment 1 text with these editorial changes and we can progress it to FDAM1.

Discussion:

- Dr. Umamaheswaran: We can go straight to publication.
- Mr. Michel Suignard: Yes; there were no technical comments; only editorial.
- Mr. Andrew West: It should be OK with the UK national body.

Disposition: Project editor to edit the text and send Amendment 1 for publication.

See relevant recommendation M63.01 on page 41.

7 WG2 matters

7.1 Possible ad hoc meetings

The following two ad hoc meetings were scheduled.

Ad hoc on Wed starting at 08:30h. Chair: Dr. Deborah Anderson.

Ad hoc on Tangut - Monday evening after the meeting. Chair: Dr. Deborah Anderson.
Mr. Andrew West: We should have the ad hoc meetings first before we look at the disposition of ballot comments.

Mr. Michel Suignard: There are not too many controversial items in PDAM2 on Tangut. We should be able to make progress.

7.2 Summary of voting on PDAM2 to 10646 4th edition

Input documents:

[4614](#) Summary of Voting on 10646 PDAM 2; SC2 Secretariat - SC2/4340; 2014-09-08
[4614-ANSI](#) ANSI Comments on 10646 PDAM 2; SC2 Secretariat - SC2/4340; 2014-09-08
[4614-BSI](#) BSI Comments on 10646 PDAM 2; SC2 Secretariat - SC2/4340; 2014-09-08
[4614-JISC](#) JISC Comments on 10646 PDAM 2; SC2 Secretariat - SC2//4340; 2014-09-08
[4614-NSAI](#) NSAI Comments on 10646 PDAM 2; SC2 Secretariat - SC24340; 2014-09-08
[4614-SAC](#) SAC Comments on 10646 PDAM 2; SC2 Secretariat - SC2/4340; 2014-09-08

There were 24 SC2 members who cast their votes; 4 had not responded and 1 had commented. Of the 24 members who did vote, 8 had abstained, 11 had approved as written, 1 had approved with comment (China), and 4 (Ireland, Japan, UK and USA) had disapproved.

7.3 Disposition of ballot Comments on PDAM2 to 10646 4th edition

Input documents:

[4516](#) Tangut Meeting Summary; Debbie Anderson; 2013-12-10
[4541](#) Zanabazar Square proposal; Anshuman Pandey; 2014-01-22
[4585](#) Draft additional repertoire Amendment 2 to ISO/IEC 10646:2014 (4th edition); Michel Suignard - Project Editor; 2014-05-30
[4588](#) Tangut Glyph Corrections; Andrew West, Michael Everson, Viacheslav Zaytsev; 2014-09-21
[4592](#) Proposal to encode Quranic mark Ar-Rub used in Quran published in Pakistan; Lateef Sagar Shaikh; 2014-08-11
[4610](#) Progress Report of Nushu Code Chart Review by Japanese; Suzuki Toshiya; 2014-09-02
[4613](#) Comments on Zanabazar Square script in PDAM2; Suzuki Toshiya, Takashi Matsukawa and Hitoshi Kuribayashi; 2014-09-02
[4627](#) Response to PDAM2 ballot Comments from Great Britain on Chinese characters needed for Slavonic; Debbie Anderson; 2014-09-19
[4616](#) Proposed Disposition of Ballot Comments on PDAM2; Project Editor - Michel Suignard; 2014-09-24
[4632](#) A Letter to the Authors of 4542 (5 Birgas in Mongolian Block); China; 2014-09-23
[4640](#) Review of N4558R Tangut glyph corrections; China; 2014-09-29

Output documents:

[4516](#) (R2) Tangut Meeting Summary; Debbie Anderson; 2014-10-01
[4649](#) Disposition of Comments on PDAM 2; Project Editor - Michel Suignard; 2014-10-02
[4637](#) New charts for PDAM 2.1; Michel Suignard; 2014-10-05

Mr. Michel Suignard discussed the proposed dispositions to the ballot comments in document [N4616](#).

China - Approval with comments.

T.1 - 5 Birgas

China has objections to the current addition of only 5 Birgas. Document [N4632](#) has the rationale behind China's objection and alternative proposals.

Mr. Michel Suignard: We discussed this item in the February 2014 meeting. The input request was to fix these characters as soon as possible. China disagreed with these. The proposal on their usage was submitted. We need to look at whether these are separate characters or not.

(Several points are mentioned by the editor in the proposed disposition of comments document.)
Current situation in implementations is non ideal. The proposal from China is to use VSs. The argument from China is also that there is not enough space for all variants within the Mongolian block. However, we do have spaces elsewhere, possibly in a new block with all the 13 as separate characters. We have done these in the past. These Birgas do have different functions - VSs are not to be used for characters that have different functions. We typically use the VSs for appearance variations - not when there are functional differences. As to the names, we prefer to use descriptive names. I would suggest using the

names along the lines that UK has suggested. I would propose we add five additional characters, keeping the current 5, and move all of them to a new block. The names of these should be modified along the lines of UK suggestion.

Discussion:

- a. Mr. Peter Constable: If we are to go for another PDAM ballot, it would give China another opportunity to comment.
- b. Mr. Chen Zhuang: If we have enough space for additional characters, not only for the Birgas, but also for other Mongolian characters it would be OK.
- c. Mr. Michel Suignard: We can discuss this - we need to determine how big to make that new block. Even if we make it short, we can either add another block or during the ballot resolution we can expand the block. Initially we could restrict them for characters that are some sort of Marks. It is risky to change block sizes after publication. We could come up with a few columns to add these 13 and leave space for more.
- d. Mr. Andrew West: I basically agree with what Mr. Michel Suignard says. There are 20 spaces in the Mongolian block. Over the last 15 years we have added one character. What would be the prospect for adding other characters than these Birgas in the Mongolian block, even though the spaces are scattered. Mr. Chen Zhuang hinted that there may be other characters.
- e. Mr. Michael Everson: I would say no more than two columns.
- f. Mr. Michel Suignard: It can be named Mongolian Supplement. We will discuss the character names when we discuss the UK comments.
- g. Mr. Peter Constable: They mentioned 13 characters - do they have attestations?
- h. Mr. Michel Suignard: [N4632](#) has the basic information for these 13. We may need more attestation.
- i. Mr. Peter Constable: Two columns were suggested. Do we have indication that there is need for a second column at this time
- j. Mr. Michael Everson: We will leave only 3 holes if we select only one column.
- k. Mr. Michel Suignard: We can adjust the size of the block later. I will go for two columns. Fonts are to be sent to Mr. Michael Everson.

Disposition: Accept in principle. Move the current 5 and add 8 new Birgas from [N4632](#) into a new block - Mongolian Supplement 11660 to 1167F.

See relevant recommendation M63.03 item a, on page 17.

Action item: Ad hoc on roadmap to take note of the new block - Mongolian Supplement- 11660 to 1167F.

T.2 - Tangut

China is requesting correcting two radicals and two glyph corrections.

Discussion:

- a. Mr. Andrew West: China, Japan, HKSAR, the UK and the US experts had an ad hoc meeting in Beijing. The agreements from that meeting were submitted as document [N4516](#). One of the principles was we will encode all characters that had a headword entry regardless of whether there was a mistake in the dictionary. China is pointing out two headword entries with different characters, and is requesting for these to be encoded.
- b. Mr. Michel Suignard: If what Mr. Andrew West says is correct, these two characters cannot be unified.
- c. Mr. Andrew West: After discussion in the Tangut ad hoc group and with Chinese experts:
 - Items 1 and 4 - correcting radicals should be accepted - they are also in [N4588](#) (Ireland comment T.3 and UK comment T.10)
 - Item 2 - China withdraws comment 2 but taken up by item 3 handling.
 - Item 3 - If we add one more character with source H2004-B-0284, inserted after 17131 (and the glyph as shown in [N4637](#) chart), it will accommodate the request from China.A revised document [N4588R2](#) will be posted.
(See also [N4642](#) ad hoc report on Tangut).

Disposition: Accept correcting two radicals and inserting a new Tangut ideograph after 17131.

See relevant recommendation M63.03 item b, on page 17.

Ireland - Disapproval

T1 - Tamil

Mr. Michel Suignard: Proposes to move 6 archaic Tamil characters to Tamil Supplement block. These were suggested by other experts also. I would suggest accepting these.

Disposition: Accepted.

See relevant recommendation M63.03 item c, on page 17.

T.2 - Old Italic

Ireland wants encoding of 1032F OLD ITALIC LETTER TTE be delayed for further study.

Mr. Michel Suignard: This has been in limbo for a long time.

Discussion:

- a. Mr. Peter Constable: This character has been in limbo for 3 1/2 years. It has been opposed in SC2 ballot by the national body without any remedial action being proposed. The UTC would appreciate that an alternate proposal be made if addition of the character continues to be opposed.
- b. Mr. Michel Suignard: This character is being pushed. At some point I would like the experts to get together and get an agreement at the earliest.
- c. Mr. Michael Everson: We talked about it, and the plan is to get a meeting to discuss.

Disposition: If Amendment 2 progresses to DAM stage, the character will be postponed for next edition. If progression is to PDAM 2.1 - the character stays for another round of ballot.

(Since it was decided to send Amendment 2 for another round of committee ballot, the character will stay in the Amendment. The comment was accepted in principle.)

T.3: Tangut

Ireland requests glyph corrections and reordering proposed in document N[4588](#).

(See also T.2 from China and T.10 from UK.)

Disposition: Accepted per Tangut ad hoc group's recommendation in document.N[4642](#).

See relevant recommendation M63.03 item b, on page 17.

Japan Disapproval.

T.1 - Zanabazar Square

Japan proposes that current encoding of Zanabazar may be incomplete, based on its rationale provided in document N[4613](#).

Mr. Michel Suignard: Document N[4613](#) does not propose any concrete changes. The original proposal was quite detailed. I would request Japan to provide more substantiation and concrete proposal for specific changes.

Discussion:

- a. Mr. Toshiya Suzuki: There were two or three documents. Japan would like more time to study the proposals in detail I agree that document N[4613](#) does not have any concrete proposal; but we would like to get more time to discuss these.
- b. Mr. Michel Suignard: We can keep this script at the PDAM level till we get full consensus.
- c. Mr. Peter Constable: As you pointed out that there will be another PDAM level. As experts, we can recommend that it is kept in PDAM, providing more opportunity for experts to review, discuss and provide more concrete proposals, before the document progresses to DAM.
- d. Mr. Andrew West: The UK committee experts also have experts on Mongolian. It is hard for us to see what is missing in the current proposal.
- e. Mr. Michael Everson: It is really important that the experts from Japan do provide more concrete proposal for other experts to be able to understand what the problems are.
- f. Mr. Toshiya Suzuki: Will it be excluded from PDAM ballot?
- g. Mr. Michel Suignard: PDAM is at the committee level. We typically do not remove items from PDAM level unless there is some real controversy. For example, we had major difference of opinion with Tangut. In this case of Zanabazar Square, we can keep at the PDAM level, giving more time. If we go to DAM ballot, it will be removed from the DAM.
- h. Mr. Toshiya Suzuki: I agree.

Disposition: Keep in PDAM2.1 level providing additional time for more investigation. Accepted in principle.

T.2 - Nushu

Japan proposes that the current Nushu encoding is still incomplete; the rationale is provided in document [N4610](#). (See also UK comments T.11 and T.12).

Mr. Michel Suignard: Japan has provided details in document [N4610](#). It has provided a subset of almost 80% to progress, and identified the need for more study on remaining. There is going to be an ad hoc. We could leave a hole for the disagreed part of the repertoire and move to a supplement later. 1B1B2 (which is moved up to 1B1B1 per UK comment); has a dot missing in its glyph, which needs to be fixed.

(See Nushu discussion under section 9.1.3 on page 21.)

The Nushu ad hoc group's recommendation was to keep Nushu in the Amendment with no major changes to it.

Disposition: Accepted in principle.

E.1 to E.6 - editorial comments.

Disposition: These were all accepted as proposed or in principle. The necessary edits will be done.

Mr. Toshiya Suzuki: Our vote stays Negative.

UK - Disapproval

The UK response has a mix of technical and editorial comments.

E.1 through E.4

Disposition: They were all editorial and are accepted as requested, or accepted in principle.

T.5 - Mongolian Birgas

UK proposes to add 'Ornamental' in the names for Birgas at 181C and 181D, similar to the Birga at 181A.

Mr. Michel Suignard: UK proposes that the Birgas be named more descriptively. I like the proposal.

In the disposition to Chinese comment T.1 we have added 8 more Birgas.

For the names of the additional 8 new ones, I will work with Mr. Andrew West, along the principle behind the above name changes.

Disposition: Accept the proposed new names. The current 5 and 8 new Birgas will be consistently named.

See relevant recommendation M63.03 item a, on page 17.

T.6 - CJK Unified ideographs (for Slavonic transcriptions)

The UK notes that 9FCD to 9FE9 were included in the PDAM after the previous WG2 meeting. Of these, UK requests removal of 9FE8 and 9FE9, suggesting each of these may be two currently encoded CJK ideographs used side by side within a single ideograph's space to indicate they need to be pronounced together.

Mr. Michel Suignard: The editor has some discretion for including the characters at the PDAM level.

Several of these characters have been discussed in WG2 and others were discussed in the IRG. UK makes the comment that two of these characters may not be true characters, but are used for phonetic notation.

Discussion:

- a. Mr. Andrew West: The UK comment is stating the rationale behind why we are making the comments. UK experts do not participate at the IRG level, and we do not get to see what goes on in IRG either.
- b. Mr. Michel Suignard: Experts in SEI have provided a response to UK's comments in document [N4627](#): The feedback is "These characters have been reviewed by WG2 and in IRG, and that they are characters in their own right. They are not two characters together for phonetic reasons". UK should review this feedback document. I prefer not to remove any of these. There has been also a proposal to move them - it would be OK if there is consensus on it. No one else is asking for the move.
- c. Mr. Andrew West: There are 9 open code positions at the end of CJK B and 11 at end of CJK C. The main block has space. I prefer to see these in the SMP.
- d. Mr. Michel Suignard: It is preferable not to create a new block just for the small number of

characters.

- e. Dr. Lu Qin: Mr. Andrew West did raise a very good question. In IRG, while reviewing the original proposal we thought that these were phonetic as well. There were alternatives proposed. Some of these are already in CJK. Other members did not oppose these and nor had objections to them. The use of these is different from the general CJK characters. They are used for transliteration, not for phonetic notation.
- f. Mr. Michel Suignard: Unlike Ruby these are used for transliteration.
- g. Mr. Andrew West: We seem to have evidence of use; but in the UK we could not see what they were.

Disposition: Not accepted.

Do not remove these, nor move them. Will stay in PDAM 2.1 level. UK will get another opportunity to review.

T.7 - Zanabazar Square

UK proposes changing name for 11A29 from ZANABAZAR SQUARE LETTER SMALL A to ZANABAZAR SQUARE LETTER –A, since it is not a small letter and citing consistency with naming of similar letters in other scripts.

Dr. Deborah Anderson: The author of the script proposal has accepted the change.

Disposition: Accepted. 11A29 renamed to "Zanabazar Square Letter -A".

See relevant recommendation M63.03 item d, on page 17.

E.8 - Zanabazar Square

UK suggests that 11A29 should not be aliased to "Tibetan 'a-chung".

Disposition: Accepted.

E.9 - Zanabazar Square

UK proposes a large number of annotations, based on document N4541.

Mr. Michel Suignard: ISO/IEC 10646 tends to be terse when it comes to annotations. It may be better to move this information in a tabular form into the text on Zanabazar Square in the Unicode standard, instead of having notes and cross references to other similar characters in other blocks. Also, one cannot use non-Latin characters in aliases.

Discussion:

- a. Mr. Andrew West: Since the script is used for different languages, it would be useful for the user community to know which is used in what language etc. You mentioned a tabular form for such information. It would be OK too.
- b. Mr. Michel Suignard: Going forward, you could keep some as cross references and move the rest to a tabular information in the Unicode standard. In the next round of ballot you could provide refined comments.
- c. Mr. Andrew West: We have used the transliteration information here leading to some inconsistency you have pointed to.
- d. Mr. Michel Suignard: I would point to Dr. Anshuman Pandey's document.
- e. Mr. Michael Everson: I like the idea of cross references.
- f. Mr. Andrew West: What about Sanskrit?
- g. Mr. Michael Everson: It would be to the Devanagari script.
- h. Mr. Michel Suignard: Sanskrit is usually written in Devanagari.
- i. Mr. Andrew West: Cross references to Devanagari would be OK.
- j. Mr. Michel Suignard: Would that be too much in the opinion of original proposers?
- k. Dr. Deborah Anderson: Cross references will be OK.
- l. Mr. Michel Suignard: I will work with Mr. Andrew West, to ensure we get the correct text for cross references.

Disposition: Accepted in principle.

Editor will work with Mr. Andrew West to get the correct wording for the cross references.

T.10 Tangut

UK requests glyph changes and reordering of characters, as detailed in document N[4588](#), and to update TangutSrc.txt with modified stroke counts and radical numbers as appropriate.

(See also comments T.2 from China and T.3 from Ireland.)

Ad hoc group report on Tangut (see document N[4692](#)) recommended that the proposed changes in document N[4588](#) be accepted.

Disposition: Accepted.

See relevant recommendation M63.03 item b, on page 17.

T.11 - Nushu

UK requests changing the name of 1B100 from "NUSHU REPETITION MARK" to "NUSHU ITERATION MARK".

Mr. Chen Zhuang: Could you explain the difference between Repetition and Iteration?

Mr. Andrew West: It has the same meaning; we use 'Iteration' elsewhere.

Mr. Chen Zhuang: We agree with the change request.

Disposition: Accepted.

See relevant recommendation M63.03 item e, on page 17.

T.12 - Nushu

UK requests moving 1B100 to the new Ideographic Symbols and Punctuation block, at 16FE1, and reorder 1B101 through 1B28C to 1B100 through 1B28B.

Mr. Michel Suignard: I like this proposal. Nushu characters are named as Nushu-xxx. By moving this character out of the Nushu block and with the new name it will be consistent with the names within the Symbols and Punctuation block. There is only one character in that block now. Also if you discover another punctuation for Nushu that can go there too.

Mr. Chen Zhuang: We agree.

Disposition: Accepted the move and reordering.

See relevant recommendation M63.03 item e, on page 17.

Mr. Andrew West: UK does not want change our negative vote.

USA - Disapproval

(Erroneously marked as 'Positive with Comments' in N[4616](#))

TE 1 - Nushu

Based on the questions raised in document WG2 N[4610](#) from Mr. Toshiya Suzuki, the US requests the Nushu block be removed from the ballot until additional review and study can be conducted, and the comments from Mr. Toshiya Suzuki are resolved.

Disposition: Not accepted. Nushu ad hoc had recommended keeping it in without major changes. Also, there will be another PDAM 2 ballot.

TE 2 - New Arabic character

The US requests to add U+08D4 ARABIC SMALL HIGH WORD AR-RUB, per document N[4592](#).

Disposition: Accepted. See discussion under section 10.3.3 on page 31.

See relevant recommendation M63.03 item f, on page 17.

TE 3 - More new Arabic characters

The US requests for 3 Arabic letters used in Warsh orthography, per document N[4597](#).

Disposition: Accepted. See discussion under section 10.3.8 on page 32.

See relevant recommendation M63.03 item g, on page 17.

TE 4 - Power Symbol

The US requests to move and rename 1F32D to 23FE POWER SLEEP SYMBOL.

Mr. Michel Suignard: We had added 3 power symbols in the Miscellaneous Technical Symbols block.

Discussion:

- a. Mr. Peter Constable: When original Power Symbols proposal was examined, the UTC felt that it was appropriate to group one of those with the emoji - was 1F32D: BLACK WANING CRESCENT MOON. However, the proposers came back and strongly want to be a distinct power symbol instead of being lumped with emoji – proposing the name change and moving it along with the other POWER SYMBOLS. Some editing of the notes also would be needed.
- b. Dr. Umamaheswaran: Was there an emoji with which it was unified?
- c. Mr. Michel Suignard: Not this one. There was another power symbol that was unified with another existing symbol.
- d. Mr. Peter Constable: No. This one was just grouped with the emoji. One of the reasons is that it is called POWER STANDBY SYMBOL.
- e. Dr. Umamaheswaran: Should the name be not then the same as in IEC?
- f. Mr. Peter Constable: Let me clarify on the name question. The feedback came to the US national body from an expert (it was read out!) The word 'STANDBY' has some confusion as to whether power is on or off. Common usage is to put the device to SLEEP. Wikipedia has an entire section on STANDBY symbol and its ambiguity. Because of the ambiguity the proposal is to have a separate symbol called SLEEP to be used. There is OPEN CIRCLE WITH BAR which was STANDBY, whereas the other one defined in IEEE as SLEEP symbol.
- g. Dr. Deborah Anderson: IEEE 1621-2004 is the reference.

Disposition: Accept moving 1F32D to 23FE POWER SLEEP SYMBOL (from IEEE 1621-2004).

No change to group heading. Remove one annotation to another existing character.

See relevant recommendation **M63.03** item h, on page 17.

E.1 to E.10

Disposition: These editorial change requests were all either accepted as proposed or in principle.

E11 - Glyphs were pointed to be in error. Document N4585 points to some corrections; one character 08DD has still small mistake in it. These have been all picked as corrections in the new Font for new charts.

Disposition: Noted. The corrections noted were on a chart document and not on the ballot document.

E.12 - Under Latin Extended D

The US requests that the header in names list for U+A7AE is to be opened up for more than Gabonese -- use 'West African'.

Disposition: Accepted.

Mr. Peter Constable: The US vote remains Negative.

Miscellaneous Corrections:

Mr. Michel Suignard: The Marchen block had a production error. Combining marks were missing and they are now fixed. List of combining marks is replaced.

Dr. Umamaheswaran: I had sent you an edit error in the list of code points that were added. I suspected it was a cut and paste error from Amendment 1 into Amendment 2.

Relevant recommendation:

M63.03 (Disposition of ballot comments of PDAM2 to 4th edition):

WG2 accepts the disposition of PDAM2 ballot comments in document N4649. The following significant changes are noted:

- a. Create a new block 11660...1167F named MONGOLIAN SUPPLEMENT
Move the 5 currently encoded Birgas from 181A...181E in the Mongolian block to this new block
Accept the proposed 8 new Birgas in document N4632 and add them in this new block
Rename existing ones and name new ones per suggestion for naming proposed in comment T.5 by UK with code positions, names and glyphs as shown in the charts in document N4637
- c. Insert 1 new Tangut ideograph after 17131, correct the glyphs and reorder several of the Tangut ideographs, per document N4588R2 (final charts in document N4637) and in response to PDAM2 comment T.2 from China
- d. Move 6 Tamil archaic characters from 0BDF, 0BFB...0BFF to 11FF0...11FF5 in Tamil Supplement block
- e. Rename 11A29 to ZANABAZAR SQUARE **LETTER -A**

- f. Rename 1B100 to NUSHU ITERATION MARK and move it to 16FE1 in Ideographic Symbols and Punctuation block; reorder the Nushu block by moving up 1B101...1B28C by one code position
- g. Add 1 character 08D4 ARABIC SMALL HIGH WORD AR-RUB in Arabic Extended-A block (from document [N4592](#))
- h. Add 3 characters - 08BB ARABIC LETTER AFRICAN FEH, 08BC ARABIC LETTER AFRICAN QAF, and 08BD ARABIC LETTER AFRICAN NOON in Arabic Extended-A block (from document [N4597](#))
- i. Move 1F32D to 23FE and rename it POWER SLEEP SYMBOL, and,
- j. Several corrections to glyphs, annotations and headings in nameslists

7.4 Roadmap snapshot

Input document:

[4617](#) Roadmap Snapshot; Uma; 2014-09-22

Dr. Umamaheswaran presented and explained the changes made from the previous version of the roadmap snapshot. Pointed out the changes to the hyperlinks for all documents in 'proposal' stage. He also recommended that, for future WG2 meetings, to discontinue preparing snapshots prior to each WG2 meeting. Instead, to prepare and post a standing document on SC2 web site pointing to the roadmap pages at the Unicode site, which has been the basis for the current snapshot documents. *Disposition:* Accept the snapshot document. Send it to SC2 secretariat for circulation. Set up a standing document on SC2 site with text and a pointer to Unicode Roadmaps page.

Relevant recommendation:

M63.18 (Roadmap snapshot):

WG2 requests its convener to post the updated snapshot of the roadmaps (in document [N4617](#)) to the WG2 web site and communicate the same to SC2 secretariat.

WG2 also requests SC2 to create on SC2 LiveLink site, a standing document named 'Roadmaps', an appropriately edited version of the current '[Roadmaps](#)' page on WG2 website, with a single URL pointing to www.unicode.org/roadmaps, towards eliminating the need to create a snapshot prior to each WG2 meeting.

8 IRG status and reports

Input document:

[4579](#) IRG Principles and Procedures Version 7; Lu Qin, IRG Rapporteur; 2014-06-19

Action item: Above document is for information and national body feedback.

8.1 IRG No. 42 Summary report

Input document:

[4581](#) IRG No. 42 Meeting Summary; Lu Qin, IRG Rapporteur; 2014-05-28

[4582](#) IRG No. 42 Resolutions; Lu Qin, IRG Rapporteur; 2014-05-23

Dr. Lu Qin: Document [N4581](#) is the summary report. Document [N4582](#) is the resolutions from IRG 42 - for your information. I will go through the items in the summary report.

Item 1: Future meetings

These need WG2 approval.

IRG 44 Seoul, ROK 2015-06-15/19

IRG 45 Hong Kong SAR, HK Polytechnic University, 2015-11-16/20 (Tentative)

I had a request to move the meeting IRG 45 to an earlier date. New date is 2015-10-26/30 (backup 2015-11-16/20).

I heard that IRG and WG2 could be back to back in terms of meetings. When are we going to decide the WG2 meeting dates?

Mr. Mike Ksar: Later in this week.

See relevant recommendation **M63.19** on page 43.

Item 2: CJK Extension F

Dr. Lu Qin: Extension. F has been submitted to WG2 - see document [N4580](#). It will be discussed later (see section 10.2.1 on page 24). IRG has frozen the repertoire - 3582 was the original count. After the meeting a net of 49 characters were withdrawn from the collection. We did not have time to regenerate the updated tables. A separate mapping table is provided. The submission was for WG2 to look at the repertoire and provide feedback. IRG will review the submission at the next meeting - considering any feedback received.

Mr. Peter Constable: What is the SAT project?

Mr. Toshiya Suzuki: SAT - is a project in Japan, working on some ancient characters.

Item 3: Extension G

Dr. Lu Qin: This for your information. It is work in progress in IRG.

Item 4: Dis-unification proposal

Dr. Lu Qin: This is a proposal for dis-unification of U+4CA4

GS-224D and H-9D73 ... These were over unified at 4CA4.

4CA4 - is to be kept for GS-224D. H-973 is to be assigned new code point.

9FD0 - is added.

Mr. Michel Suignard: This is already in PDAM2.

Item 5: U+2827C T and H source dis-unification request.

Dr. Lu Qin: This request was turned down by IRG.

Item 6: Non-cognate Unification

Dr. Lu Qin: Japan requested a review of possible over-unification due to non-cognate rule. It is also in WG2 agenda (see section 9.1.9 on page 23).

Item 7: Working document series

Dr. Lu Qin: For information. Documents on examples of unification and dis-unification are available on IRG site.

Item 8: UNC from China.

Dr. Lu Qin: These were 3 characters required by China, listed in official Chinese documents. These are requested to be at the end of the CJK block. 9FCD...9FCF are suggested for these.

Two of these were in CJK extension F1, and were withdrawn from and already out of the submitted Extension. F.

See relevant recommendation M63.02 item d on page 20.

Item 9: UNC from UTC and SEI

Dr. Lu Qin: 20 UNCs for Slavonic and 5 UNCs from the UTC, were approved by IRG and sent in to WG2.

See documents [N4583](#) and [N4584](#).

These are also already in PDAM 2.

See relevant recommendation M63.02 items e and f on page 20.

Item 10: IRG P&P issue

Dr. Lu Qin: Current IRG site has a maximum size for files. The IRG P&P document were revised to be able to deal with such large files. China (Taichi) has also offered a mirror site - this is not yet permanent. China experts have difficulty accessing via Google. I have an account for a site in China and I am able to provide large files for China users.

There was also a question about what is meant by 'urgently needed'? The guideline for 'what is considered urgently needed' is provided for review. Document [N4579](#) contains the latest P&P of IRG.

Mr. Michel Suignard: WG2 also has to address some issues with a home for WG2 site. Let me know the size limitations and we may be able to find some solution.

Item 11: Representative Glyph for 8B04 T-Source.

Dr. Lu Qin: WG2 M62 discussed this. IRG's response was - an updated font has been submitted to the editor.

Mr. Mike Ksar: Thank you Dr. Lu Qin. We appreciate the work of IRG.

Action item: WG2 has to inform SC2 secretariat, and SC2 plenary has to reconfirm the IRG rapporteur.

8.2 Inaccurate source reference for twelve HKSCS compatibility characters

Input document:

[4598](#) Report of Inaccurate Source Reference for Twelve HKSCS Compatibility Characters; Lu Qin; 2014-08-19

Dr. Lu Qin: This contribution is about a source reference formatting issue. It was used originally for HK source. Then we were going to use H1, H2 etc. Professor Kyongsok Kim found some mapping issues for some characters. Some items with H3 were incorrect; those should be H sources. This is an action item on the editor - to fix in CJKC_SR.txt.

Dr. Umamaheswaran: Is it fixed in PDAM2?

Mr. Michel Suignard: I will check to see if it is already fixed in PDAM2.

Action item: Project editor to check and fix incorrect H3 source for CJK Ideographs from document [N4598](#), in CJKC_SR.txt file for PDAM2.1.

9 Contributions related to ballots

9.1 Related to PDAM2

9.1.1 Contributions addressed and included in PDAM 2

Input document:

[4573](#) Final Proposal to Encode the Bhaiksuki Script; Anshuman Pandey, Dragomir Dimitrov; 2014-04-23

[4575](#) Khojki character; Anshuman Pandey; 2014-05-05

[4583](#) Urgently needed character from SEI for the Slavonic transcription (1); Lu Qin, IRG Rapporteur; 2014-05-12

[4583A](#) Urgently needed character from SEI for the Slavonic transcription (2); Lu Qin, IRG Rapporteur; 2014-05-12

[4584](#) Urgently needed character from Unicode (1); Lu Qin, IRG Rapporteur; 2014-05-15

[4584B](#) Urgently needed character from Unicode (2); Lu Qin, IRG Rapporteur; 2014-05-15

[4584C](#) Urgently needed character from Unicode (3); Lu Qin, IRG Rapporteur; 2014-05-15

[4585](#) Draft additional repertoire Amendment 2 to ISO/IEC 10646:2014 (4th edition); Michel Suignard - Project Editor; 2014-05-30

[4589](#) Proposal to encode fourteen Pakistani Quranic marks; Roozbeh Pournader; 2014-07-27

Mr. Michel Suignard: At the last WG2 meeting some of the documents listed here were not discussed. I would like to ensure that the experts are made aware of these before we look into PDAM2 disposition of comments.

Bhaiksuki was mentioned in a WG2 resolution. We added characters from documents [N4583](#) and [N4584](#), for example. We added Nushu and Tangut that were already accepted. 13 Pakistani Quranic marks were added - they were mature enough to be included in PDAM2. At the committee level we have the leeway to add such characters considered to be mature enough to the repertoire. Some of the characters like the middle dot may get a lot of discussion at the WG2 level. The Mongolian Birgas were also discussed in February. We added these to PDAM2 for allowing more comments on them at the committee level.

We are much more careful at the DAM level. Depending on how the meeting goes, we may add more characters to Amendment 2. We may subset the stable set as DAM2 or we may go for a PDAM 2.1. All the items under 9.2.1 are in PDAM2 - We will not discuss them separately. Some items included in Amendment 2 are not listed in 9.2.1; these are FYI. We will cover them under other agenda items - for example: about five CJK characters from China. These were originally in Extension. F.

The following relevant recommendation notes what was included in PDAM 2 ballot, after the last meeting.

M63.02 (Amendment 2 additions since meeting 62):

WG2 notes that in addition to the total of **6741** characters listed under resolutions M62.14 (in document [N4454](#)) the following additions were included in the PDAM2 ballot document SC2/N4340 (preliminary charts in [N4585](#)):

- a. A new block named Bhaiksuki 11C00-11C6F populated with **97** characters from document [N4573](#)
- b. **14** Arabic Quranic marks in Arabic Extended-A block from document [N4589](#)
- c. **5** Mongolian Birga characters in the Mongolian block from document [N4542](#)
- d. **4** CJK unified ideographs 9FCD...9FD0 requested per IRG resolutions IRG 42.4 and IRG 42.8 (document [N4582](#))
- e. **5** urgently needed CJK unified ideographs from Unicode Consortium in document [N4584](#)
- f. **20** CJK unified ideographs for Slavonic transliteration from document [N4583](#) (Table 1), and,
- g. **1** character 1123E KHOJKI SIGN SUKUN from document [N4575](#)

9.1.2 Tangut - glyph corrections

Input document:

[4588](#) Tangut Glyph Corrections; Andrew West, Michael Everson, Viacheslav Zaytsev; 2014-08-12

[4642](#) Tangut ad hoc report; Ad hoc chair - Debbie Anderson; 2014-09-29

An ad hoc group met to discuss the Tangut related documents and ballot comments. See ad hoc report in document [N4642](#). Messrs. Michael Everson, Andrew West, Toshiya Suzuki, Chen Zhuang, Nie Hongyin, Wu Yingzhe (for Khitan discussion) and Dr. Sun Bojun participated. Dr. Deborah Anderson was the chairperson.

Dr. Deborah Anderson: The ad hoc recommended to accept the changes and re-ordering as described in [N4588](#)-R Tangut Glyph Corrections, incorporating three additional glyph changes as noted by Dr. Sun Bojun.

Mr. Michel Suignard: Document N4588 has multiple versions - N4588R is to be used.

The ad hoc recommendations were used to resolve the ballot comments T.2 from China, T.3 from Ireland and T.10 from the UK, on PDAM2 ballot (see discussion under section 7.3 on page 11).

9.1.3 Comments on Nushu in PDAM2

Input documents:

[4569](#) PDAM2; Michel Suignard; 2014-02-26

[4610](#) Progress Report of Nushu Code Chart Review by Japanese; Suzuki Toshiya; 2014-09-02

[4639](#) Theory and Rules of Nushu Character Unification; China; 2014-09-24

[4647](#) Nushu ad hoc report; Ad hoc chair - Debbie Anderson; 2014-10-02

An ad hoc met to consider above input documents and PDAM2 ballot comments related to Nushu from Japan, the UK and the USA.

Dr. Deborah Anderson: The ad hoc report is in document [N4647](#). The ad hoc discussed the unification rule in [N4639](#). Specific questions were answered. Explicit requests for changes in code charts will be needed to make any modifications to the chart but no specific changes have been requested for the Amendment 2 at this time. There is one glyph change for current 1B1B1.

The recommendation is that the script remains in PDAM, without any major changes. National bodies can provide such requests in the future. The ad hoc highly recommends that Nushu experts review the input from Japan.

Mr. Toshiya Suzuki: Mr. Orié Endo from Japan submitted document [N4626](#) commenting on last meeting's Nushu ad hoc meeting report - it is yet to be addressed.

Action item: Nushu experts to review feedback document [N4610](#) on Nushu from Japanese expert.

9.1.4 Comments on Nushu ad-hoc report WG2 N4561

Input documents:

[4561](#) Nushu ad hoc report; Tero (ad hoc chair); 2014-02-25

[4626](#) Comment on Nushu ad-Hoc report WG2 N4561; Orié Endo; 2014-09-19

This document was not discussed in the ad hoc on Nushu at this meeting. It has some comments on the Nushu proposal in [N3463](#) and on some items discussed in previous meeting's ad hoc report.

Action item: Japanese expert is encouraged to make associated comments on the text in PDAM2.1.

Nushu experts are requested to consider the comments in document [N4626](#).

9.1.5 Future additions to 10646

Input document:

[4612](#) Future additions to 10646; Debbie Anderson et al; 2014-08-08

Document [N4612](#) is a request for a number of additions to Amendment 2. Each item had a request, and a referenced document. These requests were discussed in separate agenda items in these minutes.

Item 1: Documents N4592 and N4597: see discussions under section 10.3.3 on page 31, and section 10.3.8 on page 32.

Item 2: Document N4590 - see discussion under section 10.3.1 on page 31.

Item 3: Document N4591 - see discussion under section 10.3.2 on page 31.

Item 4: Document N4608 - see discussion under section 10.2.4 on page 26.

Item 5: Document N4607 - see discussion under section 10.2.3 on page 26.

Item 6: Documents N4596 and N4594 - see discussions under section 10.3.7 on page 32 and section 10.3.5 on page 32.

Item 7: Document N4595 - see discussion under section 10.3.2 on page 32.
Item 8: Document N4609 - see discussion under section 10.3.9 on page 33.
Item 9: Document N4606 - see discussion under section 10.4.1 on page 39.
Item 10: Document N4593 - see discussion under section 10.3.4 on page 31.
Item 11: Document N4599 - see discussion under section 10.3.10.1 on page 33.

Item 12: (Document N4589) (already in Amendment 2, post meeting M62)
Item 13: (Document N4542) (already in Amendment 2, post meeting M62)
Item 14: (Document N4573) (already in Amendment 2, post meeting M62)
Item 15: (Document N4575) (already in Amendment 2, post meeting M62)

9.1.6 Current status of Tamil symbols naming issue

Input document:

[4622](#) Current status of Tamil symbols naming issue; Shriramana Sharma; 2014-09-10

Mr. Peter Constable: All the Tamil symbols we have added recently had annotations. The document is a report on a meeting that was discussing how to transliterate characters to be used in names and annotations. No firm recommendations have been made yet. It is a status report for information.

9.1.7 Response to the ICTA's document L2/14-048 on Tamil fractions and symbols

Input document:

[L2/14-048](#) Comments on the Proposals to Encode Tamil Symbols and Fractions; ICT Sri Lanka; 2014-01-31

[4623](#) Response to the ICTA's doc L2/14-048 on Tamil fractions and symbols; Shriramana Sharma; 2014-09-10

Mr. G. Balachandran: I am from ICTA. Dr. Shriramana Sharma has provided a response to our concerns. The discussion regarding Tamil fractions and symbols has been going on for about 2 years. We had three recommendations.

The first one: we strongly recommend not to encode Tamil ancient symbols in the BMP. Most of the Tamil symbols in the BMP are not in current use. Several more symbols are coming forward. We are suggesting that these should be all in the SMP.

Our Second comment was about Tamil fractions. We had made the statement that we discourage encoding these as standalone symbols. Most of these look like the vowels and consonants. We are also thinking if these can be handled by fonts. Fractions of the form 1/32 encoded in the sequence form can be an atomic glyph in the font.

Our third comment was that we may not have uncovered all the symbols for all the fractions.

Our opinion remains the same even after the response from Dr. Shriramana Sharma.

Discussion:

- a. Mr. Peter Constable: Request to add symbols only in SMP and not in BMP is not an unreasonable request. We should be able to accommodate that. As to the fractions, were not the symbols used traditionally?
- b. Mr. G. Balachandran: Yes they were used traditionally by a small group of users. But they are not used any more.
- c. Mr. Peter Constable: You had suggested using sequences with fraction slash. The response from Dr. Shriramana Sharma on using fraction slash is correct. If the sequence is to be used we may have to find another character to act as a fraction slash. That would result in an open ended set of glyphs to be supported in fonts. As a font implementer I would be faced with an open ended set of joint glyphs. It is preferable to have a closed set.
- d. Mr. Michael Everson: We have plenty of evidence for symbols for fractions both in BMP and SMP encoded as atomic symbols in other scripts. It is likely to be closed set.
- e. Mr. G. Balachandran: There are 13 characters in the script that look like symbols in fractions. We don't have objections to encoding of fractions. But we were thinking perhaps sequences would be better.
- f. Mr. Andrew West: How many more symbols are expected?
- g. Mr. G. Balachandran: Currently researchers have captured from text books. We have to examine the Ola (Palm Leaf) material for discovering any more. In Tamil musical notations, there are other symbols used with numeric values. It is yet to be determined if these have fractional values etc. They do have periodic time associated with playing the music. For fractions it will be 64.
- h. Mr. Peter Constable: We look forward to getting more information on other symbols.

- i. Mr. Michel Suignard: At this meeting, during disposition of comments on PDAM2, we moved some new symbols into the SMP from BMP. The ones under ballot have all been moved in response to comments from Ireland.

Disposition: Accept the recommendation of no more new Tamil symbols in the BMP. Fractions will not be split into sequences.

9.1.8 Moji-Joho-Kiban ideographs collection

Input document:

4625 Proposal to add a new extended collection named 'MOJI-JOHO-KIBAN IDEOGRAPHS' (tentative name) in Annex A; Japan NB; 2014-09-19

Mr. Shuichi Tashiro: This is a request for a new extended collection of characters and variation sequences named "Moji-Joho-Kiban ideographs". About 60000 ideographs or variants are needed for resident registration etc. Currently 58000 are in the UCS. Some of these are registered in IVD as Moji-Joho collection. Other 2000 are part of CJK Extensions F1 and F2.

Discussion:

- a. Mr. Peter Constable: Is there a precedent for including any variation sequence in a collection? An extended collection can have sequences. The note 3 under clause 4.25 says Named Sequences.
- b. Mr. Michel Suignard: We can drop the note 3 to allow any sequence. Note 3 under 4.25 will be reworded to permit non-named sequences as well. We will need introductory text for the collection. We also need the data defining the collection.

Disposition: Accept including a new extended collection: MOJI-JOHO-KIBAN IDEOGRAPHS.

Japanese expert is requested to prepare the introductory text for the collection and send it to the editor.

Editor is to modify the Note 3 under section 4.25 to permit non-named sequences in extended collections.

See relevant recommendation M63.11 item 'i' on page 42.

9.1.9 Unification rule for similar-shaped non-cognate ideographs

Input document:

<<< Note: Document N4624 was withdrawn by Japanese expert at the end of this discussion; it has been removed from the document register and the document number has been reassigned. >>>

Request for Confirmation of the Unification Rule for the Similar-Shaped Non-Cognate in CJK Unified Ideographs; Japan NB; 2014-09-19

Mr. Toshiya Suzuki: In the Japanese CJK Extension F contributions, a number of ideographs are similar to existing characters, but they are non cognates. Their sources are different. Current rule under S.1.1, essentially states that these are not unified. However, in the IRG, there is some discussion that the non-cognates should be unified. Japan wants to get some clarification with this rule.

Discussion:

- a. Dr. Lu Qin: I am strongly against this request. The assumption is incorrect. The non-cognates' first assumption is that they look similar to start with. Japan has very similar characters and want them to be dis-unified because the meanings are different. There was no agreement within IRG. IRG experts were asked to go back and study the issue.
- b. Mr. Michel Suignard: If you go to the G source, between 4E8C and 2011E, they are slightly different shapes.
- c. Mr. Andrew West: In Kangxi dictionary, they are different. It would be bad idea to encode characters with the same shape.
- d. Dr. Lu Qin: Originally there was clear example of SOIL and SOLDIER. If you look at the components they are very similar. The term non-cognate was to differentiate between SOIL and SOLDIER being not the same.
- e. Mr. Andrew West: Japan seems to be suggesting that they look the same, but they are from different sources. The Japanese proposal could lead to thousands of CJK dis-unifications. One of the IRG principles would be - two similar looking characters should be unifiable.
- f. Mr. Tatsuo Kobayashi: SC2 is not encoding glyphs, but characters. In that sense I support the Japanese request. It is difficult to clearly show that same shapes are non-cognates or not. In the history of IRG, we have already unified some doubtful non-cognates. The principle has not changed.
- g. Mr. Mike Ksar: It is important to follow the rules as specified in Annex S. IRG is using these for their work.

- h. Mr. Michel Suignard: Annex S is not normative.
- i. Mr. Peter Constable: The principles are not purely theoretical in nature. If visually indistinct characters are duplicated it can lead to huge interoperability problems for data. I would like to understand the practical advantage that Japan sees in having the similar ones coded twice.
- j. Mr. Tatsuo Kobayashi: It is hard to tell when the glyphs are non-cognates or not. In some cases, in a given dictionary there are two characters that look alike. We would like to be able to distinguish the two.
- k. Mr. Peter Constable: Dictionary duplicates are common in Latin based dictionaries also.
- l. Mr. Kobayashi: If the characters are to be treated differently, then one needs to have the ability to distinguish.
- m. Mr. Mike Ksar: The request is to clarify and affirm the current rule. I think you have heard from others.
- n. Mr. Michel Suignard: The rule in Annex S currently is less precise. In some cases - not being in black and white - you can run into borderline cases even if the glyphs are identical. It is not easy to fix the rule in Annex S. If Japan has a problem with some specific cases, when IRG does not agree with the request the way Japan would like to see as the result, then it is OK for Japan to bring it up to WG2. I do not think we can fix the text as is. If you want new text please suggest what you would like changed and we can discuss.

Disposition: No action.

Japan requested withdrawal of document N4624.

10 Contributions not related to ballots

10.1 Carried forward scripts or blocks

Afáka script [N4292](#); Bagam script [N4293](#); Balti 'B' [N4016](#); Balti scripts [N3842](#); Chinese Chess [N3910](#); Dhives Akuru [N3848](#); Diwani Numerals [N4119](#); Diwani Siyaq Numbers [N4122](#); English Phonotypic Alphabet EPA [N4079](#); Eskaya [N4499](#); Garay script [N4261](#); Gondi script [N4291](#); Indic Siyaq [N4123](#); Jenticha [N4028](#); Jurchen [N4077](#); Kawi script [N4266](#); Khatt-i Baburi [N4130](#); Khambu Rai [N4018](#); Kpelle [N3762](#); Landa [N3768](#); Leke [N4438](#); Loma [N3756](#); Moon [N4128](#); [N4323](#); Nandinagari [N4389](#); Nepaalalipi script [N4322](#); Nepal Himalayish [N4347](#); Newar script [N4184](#); Old Yi [N3288](#); Obsolete Simplified Chinese Ideographs [N3695](#); Ottoman Siyaq System Numerals [N4118](#); Ottoman Siyaq [N4124](#); Pau Cin Hau Syllabary [N4412](#); Persian Siyaq [N4125](#); Pyu [N3874](#); Raqm Numerals [N4117](#); Rohingya [N4283](#); Soyombo script [N4414](#); Tangsa Lakhum Mossang script [N4496](#); Tangsa Latsam Khimhun [N4497](#); Tolong Siki [N3811](#); Tulu [N4025](#); Woleai [N4146](#); Zou [N4044](#).

10.2 New scripts or blocks

10.2.1 CJK Extension F

Input documents:

[4580summaryform.pdf](#) Ext. F (1); Lu Qin, IRG Rapporteur; 2014-08-18
[4580p1.zip](#) Ext. F (2); Lu Qin, IRG Rapporteur; 2014-08-18
[4580p2.zip](#) Ext. F (3); Lu Qin, IRG Rapporteur; 2014-08-18
[4580p3.zip](#) Ext. F (4); Lu Qin, IRG Rapporteur; 2014-08-18
[4580p4.zip](#) Ext. F (5); Lu Qin, IRG Rapporteur; 2014-08-18
[4580p5.zip](#) Ext. F (6); Lu Qin, IRG Rapporteur; 2014-08-18
[4580CJKFv3.xls](#) Ext. F (7); Lu Qin, IRG Rapporteur; 2014-08-18
[4580SATWithdrawnCharacters.xls](#) Ext. F (8); Lu Qin, IRG Rapporteur; 2014-08-18

Dr. Lu Qin: The summary form is just that. It says that there are some number of characters in the proposal.

Discussion:

- a. Mr. Michel Suignard: I have some questions. There are quite a few new sources for Extension F. Are all these new sources documented? See clause 23. I want that information.
- b. Dr. Lu Qin: It is not in the current file. They are from China, Korea, Japan and the SAT project.
- c. Mr. Michel Suignard: Are the sources from China, Korea and Japan new for Extension F?
- d. Mr. Chen Zhuang: There are some from China. Don't know about Japan and Korea.
- e. Mr. Michel Suignard: The spread sheet has some information, but that is not what we need.
- f. Dr. Lu Qin: We will supply that information to you. When the submitters provided the information we had that. However, we have not compiled that for you.
- g. Mr. Michel Suignard: Are there any new source references that are in Extension F?

- h. Dr. Lu Qin: We used z for SAT sources. They are not a national body. It is a consortium.
- i. Mr. Michel Suignard: My default position was to work with Messrs. John Jenkins and Ken Lunde to get them into U sources, to be able to manage the potentially multiple sources beyond what we have now.
- j. Dr. Lu Qin: You are giving us a solution; having U for the standard and that identifying the actual source. Can Japanese experts speak on behalf of SAT?
- k. Mr. Toshiya Suzuki: We have not spoken with SAT on this issue. We will take this back to SAT.
- l. Dr. Lu Qin: Our question was not just for SAT, but for potentially multiple multinational consortia or other organizations. For SAT it would be z- for now. We can change it to U-.
- m. Mr. Michel Suignard: I would also need the mapping file.
- n. Dr. Lu Qin: Can we generate after the next IRG or you want to get it done now?
- o. Mr. Michel Suignard: If you follow the current ordering for the mapping file, then I can manage it. I browsed the spreadsheet and it seems to have all the information I need. ‘_SAT’ is the format you have. I may edit the information - we use dash and not underscore.
- p. Dr. Umamaheswaran: What is the time frame we are looking at? Is it for inclusion in PDAM 2.1? Do we have the final count besides the editorial requests for the charts? We heard about adjusting by 49 form the proposal this morning.
- q. Mr. Michel Suignard: We will go with the character count as is proposed in current documentation. All adjustments can come via ballot comments on PDAM 2.1.
- r. Mr. Michel Suignard: We could move the two Chinese UNC into Extension F, if you want. Because of the SAT entries, I have to re-do the charts anyway.
- s. Mr. Chen Zhuang: We prefer to keep the two UNCs where they are currently in PDAM2.

Disposition: Accepted CJK Extension F for inclusion in Amendment 2.

Relevant recommendation:

M63.06 (CJK Unified Ideographs Extension F):

WG2 accepts to create a new block named 'CJK Unified Ideographs Extension F' in the range 2CEB0...2DDBF in the SMP, and populate it with the **3852** ideographs proposed in document [N4580](#) (summary form and its attached files), for inclusion in Amendment 2.

Action item: IRG (Dr. Lu Qin) is to supply the project editor all the information needed to be able to produce the Extension F charts for PDAM 2.1.

10.2.2 Osage script

Input documents:

[4587](#) Proposal to encode Latin characters for Osage in the UCS; Michael Everson, Herman Mongrain Lookout, Cameron Pratt; 2014-07-30

[4619](#) Final proposal to encode the Osage script; Michael Everson, Herman Mongrain Lookout, Cameron Pratt; 2014-09-21

Mr. Michael Everson: This is the third proposal on this script. Document [N4587](#) proposed this be considered as a separate script. A second document was in response to UTC and proposed as an extension to Latin. Further discussion reversed that view and document [N4619](#) is the result. An existing combining mark was suggested and is now used for some nasalized sounds. Section 7 gives a rationale why this should be a separate script as opposed to extending Latin. Information about confusable characters is given. Properties are listed. Examples of use are provided. The user community is happy with the code positions, names and glyphs, and being a separate script. I think it is mature for a committee ballot.

Discussion:

- a. Mr. Peter Constable: UTC has reviewed the previous drafts and this proposal. We think it is mature to proceed to ballot.

Disposition: Accepted for inclusion in next edition (It went into Amendment 2 in the recommendation!).

Relevant recommendation:

M63.07 (Osage script):

WG2 accepts to create a new block named 'Osage' in the range 104B0...104FF in the SMP, and populate it with **72** characters in code positions 104B0...104D3 and 104D8...104FB, with their names and glyphs as shown in document [N4619](#), for inclusion in Amendment 2.

Mr. Michael Everson: The user community will be very pleased.

10.2.3 Cyrillic additions for early Slavonic text

Input document:

[4607](#) Proposal to encode additional Cyrillic characters used in early Church Slavonic printed books; Aleksandr Andreev, Yuri Shardt, Nikita Simmons; 2014-08-20

Dr. Deborah Anderson: This proposal is for adding 9 Cyrillic characters used in early Slavonic text between 1500 and 1700. Background information is given. The proposal is brought down to 9 characters from the earlier proposal. The source is Ponomar project on Slavonic studies. These are used in Church documents such as in Russian Orthodox Church.

Disposition: Accepted. New block 1 column 1C80...1C8F Cyrillic Extended-C; populate with 9 characters.

Relevant recommendation:

M63.08 (Cyrillic characters):

WG2 accepts to create a new block named 'Cyrillic Extended-C' in the range 1C80...1C8F in the BMP, and populate it with 9 characters in code positions 1C80...1C88, with their names and glyphs based on document [N4607](#), with updated names and charts shown in document [N4637](#), for inclusion in Amendment 2.

10.2.4 Combining Glagolitic letters

Input document:

[4608](#) Proposal to encode Combining Glagolitic Letters; Aleksandr Anreev, Heinz Miklas, Yuri Shardt; 2014-08-20

Dr. Deborah Anderson: The proposal is for adding 38 Combining Glagolitic letters. Glagolitic letters are used for Church writings. This is part of the Ponomar project on Slavonic computing initiative. It is used in transcriptions of Cyrillic. Cyrillic has several combining marks. A new block 'Glagolitic Extended' is proposed. Superscript letters are specifically used for Abbreviations. It is requested to be included in Amendment 2.

Discussion:

- a. Mr. Mike Ksar: There is a mention of Urgency in the proposal.
- b. Mr. Peter Constable: It is used for printing in the project on these characters. The stability is more of a concern.
- c. Mr. Michael Everson: I think the block should be named Glagolitic Supplement.
- d. Mr. Michel Suignard: Would there be additional Glagolitic characters later?
- e. Mr. Michael Everson: It is possible; we can call it Extension A when needed.

Disposition: Accepted for Amendment 2.

Relevant recommendation:

M63.09 (Combining Glagolitic letters):

WG2 accepts to create a new block named 'Glagolitic Supplement' in the range 1E000...1E02F in the SMP, and populate it with 38 characters (all are combining letters) in code positions 1E000...1E02A, with their names and glyphs as shown in document [N4608](#), for inclusion in Amendment 2.

10.2.5 Naxi Dongba script

Input documents:

[4043](#) Revised Proposal for Encoding Naxi Dongba Pictographic script; China NB; 2011-05-08

[4060](#) Comments on Proposal for encoding Naxi Dongba Pictographic script (4043); USNB; 2011-05-13

[4097](#) Comments on N4060 - US comments Naxi Dongba; China NB; 2011-06-06

[4112](#) Ad hoc report on Naxi Dongba; Tero Aalto; 2011-06-08

[4633](#) Supplement on Proposal for Encoding Naxi Dongba Pictograph script; China; 2014-09-22

[4641](#) Feedback on Naxi Dongba Supplement document (N4633); SEI - Debbie Anderson; 2014-09-28

Ms. Lifeng He: Supplemental information to the main proposal is provided in document [N4633](#). In document [N4043](#) we had some examples of use. Per recommendations in the ad hoc report in document [N4112](#), we have provided more examples from user community. Modern use related questions from the ad hoc are also addressed.

Dr. Deborah Anderson has provided some feedback and has the following questions in document [N4641](#):

Q1 is about the image 1. Is Naxi Dongba script a syllabary or logography? The response is that it is both syllabary and logography.

Q2 is about variants. The response is that there are lots of variants in Naxi Dongba.

Q3 requests for more information. We do have some detailed information in our proposal. Do all the questions raised in the feedback need to be answered for the proposal?

Discussion:

- a. Dr. Deborah Anderson: To Q3 - yes, all the questions need to be answered. As to the variants, why not have just one? Is there a difference if one is used versus another?
- b. Ms. Lifeng He: The reason for the variants is their usage in different regions; and different people write in different shapes. In our proposal we use only one.
- c. Mr. Peter Constable: If a font had only one variant for each pictograph, is it OK that we provide only one variant for each? Or do you expect implementations to support multiple variants for each pictograph?
- d. Mr. Chen Zhuang: We have reviewed all the variants, and have normalized them. 505 groups of variants -- there were 2 to 7 in each group.
- e. Mr. Peter Constable: Do you expect a mechanism to select different variant in the font? I understand we will encode the normalized form.
- f. Mr. Chen Zhuang: One type of font is sufficient.
- g. Mr. Andrew West: I am not sure about the ordering. There is a large number of characters. Ordering them alphabetically is not going to help the users. A better ordering would be by shapes.
- h. Mr. Michael Everson: I agree with that. A dictionary I have, which has a large number of these pictographs, orders them by shapes. Since the source material orders them by shapes, I would suggest ordering them by the shapes. While you are using it only for a single language, and ordering by sound is what you are proposing, ordering by shape would be OK.
- i. Mr. Peter Constable: It was not clear whether ordering was on the basis of Inputting of text or when you are looking up in a dictionary? User Interface can provide the information in orders more useful to the input process. We are not talking about an alphabetical script; so what is meant by alphabetical (in N4633 bullet 3 on page 1)?
- j. Mr. Chen Zhuang: As we understand the term - it is order by pronunciation. Current proposal uses that order.
- k. Mr. Peter Constable: Would you create a dictionary in that order? Hypothetically, if you were to create a phone book using this script, which order will you use? The default order you have used, would that be the order that is best for the user community?
- l. Mr. Andrew West: For inputs, it is easy to provide user interfaces based on pronunciation etc. It would be hard to find a character if it not ordered in the dictionary order.
- m. Mr. Peter Constable: Is it for the user community or for someone from outside who wants to understand the script?
- n. Mr. Andrew West: It would be for learners of the script within the user community as well as users outside.
- o. Mr. Peter Constable: People outside the primary user community should not be the main consideration for how the script is ordered.
- p. Mr. Michael Everson: The existing dictionary is by shapes. Whether you are a native speaker or not, you will be still learning the script. It is more useful to have similar looking pictures next to each other for pictographic scripts. I think we should follow what is already the practice.
- q. Mr. Peter Constable: There are two people in the room from the user community - and I am inclined to give them more weight. All the other experts here are secondary users.
- r. Mr. Mike Ksar: An existing dictionary is by pictures, and what I hear from Mr. Chen Zhuang is that there does not seem to be an intent to create a new one. Is there such an intent?
- s. Mr. Chen Zhuang: Yes. We intend to produce a new dictionary.
- t. Mr. Andrew West: From input method point of view I understand alphabetization is useful. That does not mean the code charts have to be that way also. By ordering by shapes, it is easy to find in a code chart by the glyphs which are grouped together. The input method can always be organized to suit the users by sounds etc. I am not suggesting any one method over the other. I am asking the proposers to consider the two aspects of ordering the information - should it be by shapes or by alphabetically?
- u. Mr. Peter Constable: The user community would normally be looking at primers rather than looking at code charts. Your questions are valid for the proposers to consider.
- v. Mr. Andrew West: Are all the variant characters going to have a single pronunciation?
- w. Mr. Chen Zhuang: Yes.

- x. Mr. Mike Ksar: Where do you take the proposals from here? Do you want to respond to the questions in Dr. Deborah Anderson's feedback document plus the discussion here?
- y. Mr. Chen Zhuang: We will create a revised/new document based on the feedback.

Action item: Naxi Dongba experts are invited to provide a revised document.

10.2.6 Adlam script

Input document:

[4628](#) Proposal for encoding the Adlam script; Everson; 2014-09-23

Mr. Michael Everson: The preliminary proposal was from October 2013. It was discussed at the UTC and I got some feedback. In May this year I met with the user community in Bronx, New York. I met with the creators of this script, which was invented in 1989. Like other new scripts, it has evolved. It is a casing script with RTL directionality. The letters could be separate or cursively joined. Cursive joining is not obligatory unlike other RTL scripts. Cursive fonts are used. It is used mainly in religious texts. There are a number of diacritical marks. There is a special symbol for Alef, when it is written over Alef itself or others. Glottal stop and a couple of modifiers are used to extend for foreign sounds. They have upper and lower cases. Collation order is given in the proposal. Line breaks are similar to N'Ko, different from Hebrew or Arabic. Some alternate shapes for font developers are shown. I reviewed the character names etc. with the users. The user community have changed the shapes between older ones and new ones. Calligraphic versions have changed. Examples are given. Figure 8 is an example where they had used a font hack with Arabic and there are examples showing joining, use of Tatweel etc.; but it is an after effect of using the font hack. They don't need the Tatweel behaviour. The script is used in several African countries and in the USA. I don't think I can add any more on this script.

Discussion:

- a. Mr. Peter Constable: There was some discussion of this in the UTC. Experts feel that some more discussion is needed with some aspects in this proposal. The example 8 showing conjoining behaviour suggests that such behaviour may not be optional. We would prefer to have some more discussion on this and it could go into the PDAM at a later date.
- b. Mr. Michael Everson: On the conjoining behaviour, they could have used a font hack using Hebrew instead of Arabic. The user community have answered this question. They have emphasized that conjoining is optional - cursive style is only for writing religious texts. Casing is also needed - as was designed. The Alef mark is specifically designed for working with both cases.
- c. Dr. Deborah Anderson: What would be more helpful is to get more modern examples with cases.
- d. Mr. Peter Constable: I can't list all the questions the UTC experts have. I have mentioned a couple of them. UTC will discuss this at its October 2014 meeting. The earliest this can go into Unicode would be in 2016 - Unicode 9.0. There is still a chance for this to go in to Amendment 2.
- e. Mr. Michael Everson: I do not know what is being asked of me. The example is handwritten - the only computerized version was using the font hack. It prevented them from showing the casing behaviour. We had a similar situation with Cherokee - with a massive amount of literature but with no casing examples.
- f. Mr. Michel Suignard: I would suggest that it is a candidate for inclusion in PDAM2.1. I would also encourage a discussion with the UTC. Is there an issue with adding capital letters later?
- g. Mr. Peter Constable: Adding capital letters later would be OK. There are experts in the UTC who feel that there is not sufficient evidence that this is a bicameral script.
- h. Mr. Michael Everson: Adding capital letters later would be OK, though user community would like them included now.
- i. Dr. Umamaheswaran: Can we accept the repertoire without the capital letters?
- j. Mr. Michael Everson: Creator of the script in 2006 shows both cases.
- k. Mr. Peter Constable: There are other examples also. No matter how many examples from the proposal we look at now, I have to say that there are other experts in UTC still having concerns about the script.
- l. Dr. Deborah Anderson: Can you discuss the evolution of the script?
- m. Mr. Michael Everson: See Figure 2 caption.

Disposition: Accept as a candidate for potential inclusion in PDAM2.1 with information from document [N4628](#).

See relevant recommendation **M63.12** on page 42.

10.2.7 *Small Seal script*

Input document:

[4634](#) Proposal to encode Small Seal Script; TCA & China; 2019-09-30

Ms. Wen Lin-Mei introduced the document. Read the introductory section / background from the document.

Discussion:

- a. Mr. Andrew West: Does the current proposal include Radicals for the script?
- b. Ms. Wen Lin-Mei: Yes, there are about 500+ radicals.
- c. Mr. Andrew West: Are they intermixed? If so, would that be a good idea rather than a separate block for the radicals?
- d. Ms. Wen Lin-Mei: Yes - we agree that the radicals should be separated.
- e. Mr. Andrew West: The repertoire is static, as in dictionary. Are there any small seal characters attested outside the use in dictionaries, that you may want to include? Some seals are not included - some from another source are included.
- f. Ms. Wen Lin-Mei: We do not have any other sources.
- g. Mr. Andrew West: Where does this go in the roadmap?
- h. Mr. Michael Everson: In the TIP. It needs 3 rows for approximately 540 radicals and 40 rows for remaining (from 10516).
- i. Mr. Mike Ksar: This is the first contribution joint from TCA and China.

Action item: National bodies to review and feedback.

10.2.8 *Khitan Large script*

Input documents:

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

[4631 1of5](#) Proposal on Encoding Khitan Large Script - Table 1 of 5 of Khitan Large characters; China; 2014-09-23

[4631 2of5](#) Proposal on Encoding Khitan Large Script - Table 2 of 5 of Khitan Large characters; China; 2014-09-23

[4631 3of5](#) Proposal on Encoding Khitan Large Script - Table 3 of 5 of Khitan Large characters; China; 2014-09-23

[4631 4of5](#) Proposal on Encoding Khitan Large Script - Table 4 of 5 of Khitan Large characters; China; 2014-09-23

[4631 5of5](#) Proposal on Encoding Khitan Large Script - Table 5 of 5 of Khitan Large characters; China; 2014-09-23

[4642](#) Tangut ad hoc report; Ad hoc chair - Debbie Anderson; 2014-09-29

See ad hoc report on Tangut and Khitan in document [N4642](#).

Dr. Deborah Anderson: The following experts were in attendance: Messrs. Michael Everson, Andrew West, Toshiya Suzuki, Chen Zhuang, Nie Hongyin, Wu Yingzhe (for Khitan discussion), Dr. Sun Bojun, and Dr. Deborah Anderson.

Dr. Deborah Anderson: The ad hoc group discussed the proposal for the Khitan Large Script. There was a discussion on the idea of unifying the Khitan Large script with CJK Unified Ideographs. The unification was proposed to minimize the security issues caused by co-existence of similar shaped characters in the CJK Unified Ideograph block and Khitan Large script block.

The group agreed that the proposal should be revised, and the new version will include:

- any additional characters (not already in the proposed repertoire) that appear in 3 new inscriptions
- a new column identifying any CJK character whose shape matches the Khitan character
- add arguments for and against CJK unification of the above characters, with examples
- provide the percentage and exact number of Khitan characters which have CJK shape equivalents
- provide a recommendation from the authors regarding unification of CJK characters with Khitan characters
- comment on how to handle common characters that are found across Jurchen and Khitan Large.

Discussion:

- a. Mr. Michel Suignard: What is the expected time line for the next version?
- b. Mr. Andrew West: Possibly in one year's time.
- c. Mr. Michel Suignard: In a way it would be ideal to have IRG co-located with WG2 to facilitate discussions on items such as this.

Relevant recommendation:

Recommendation M63.15 (Khitan Large script):

WG2 invites the authors of document [N4631](#) to revise their proposal on the Khitan Large script taking into account the feedback summarized in the ad hoc report document [N4642](#), working with other experts interested in this script.

10.2.9 *Shuishu script*

Input Document:

[4638](#) Proposal for encoding Shuishu; China; 2014-08-20

Mr. Ding Biyuan introduced the contribution. Described the origin, current use and how this is categorized to arrive at a set of characters into a proposal table.

Discussion:

- a. Mr. Toshiya Suzuki: Are there any existing dictionaries for Shuishu to compare?
- b. Ms. Xia Jinjing: We do have a number of dictionaries - under references there is a list.
- c. Mr. Toshiya Suzuki: Do you have a comparison to CJK ideographs?
- d. Ms. Xia Jinjing: We can provide that information.
- e. Mr. Michel Suignard: There are about 218 characters in the repertoire. Is this set complete or still growing?
- f. Mr. Ding Biyuan: In our research we do have more characters still under study. There is only one character not yet included.
- g. Ms. Xia Jinjing: The Shuishu is used for religious purposes. Only 200 to 300 characters would be enough to cover these. Even if we add more it will not be large numbers we are likely to discover.
- h. Mr. Michael Everson: I have a font. It has 2000+ glyphs in it. I am sure there are some glyph variants in it. Would we be able to get copies of the dictionaries for review?
- i. Ms. Xia Jinjing: The dictionaries that we have referenced in our document, we can certainly provide to anyone interested on this subject.
- j. Mr. Michel Suignard: When I hear big difference between 2000 and 200, it would concern me, even if we consider all possible glyph variants. One has to evaluate and ensure that variants are something that don't have to be coded. Is this script still in use?
- k. Mr. Andrew West: In limited use.
- l. Mr. Michel Suignard: You would need to work on the glyphs. Some are still shown as pictures.
- m. Ms. Xia Jinjing: We have made a font for it and we can provide better glyphs later on.
- n. Mr. Mike Ksar: You can take the feedback from this discussion and provide an updated document.
- o. Mr. Michel Suignard: Since WG2 may not meet as frequently, probably once a year, we may co-locate with IRG in between, to make progress on such proposals.

Relevant recommendation:

M63.16 (Shuishu script):

WG2 invites the authors of document [N4638](#) 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.

10.2.10 *Tangut radicals*

Input document:

[4636](#) Proposal to encode Tangut radicals; Andrew West, Viacheslav Zaytsev, Sun Bojun, Michael Everson; 2014-09-30

Mr. Andrew West: The proposal is for 753 Tangut radicals and components in Tangut Radicals block - currently 18900 to 18CFF (populating 18900 to 18BF0). The radicals are used for indexing to facilitate lookup of Tangut ideographs. This proposal is a superset of all the Radicals used in important modern scholarship on Tangut. We have not included those used by a single Russian source on Tangut. There are some radicals that are same as Tangut characters. Should they be coded again? If the radical's shape differs from the corresponding strokes in the ideograph we would need to encode them. Figures 3 and 4 show examples, illustrating stroke differences, size etc. While radicals are used for indexing, they are also often used by scholars to talk about the structural compositions of ideographs. Examples are shown. Components are themselves open ended. We carry all the elemental ones. Ordering of the 753 is by nominal stroke count and nominal stroke order. We are proposing names like Tangut Radical-001 ... Radical-753. Experts are welcome to propose better names. Table 3 lists the glyph, example characters, stroke count, stroke order, corresponding ideograph if one exists, and usage. (See also ad hoc report in document [N4642](#) (that addresses Tangut radicals also).

Discussion:

- a. Mr. Michel Suignard: How do you like the radicals to be presented?
- b. Mr. Andrew West: I will send a draft names list to you. Where do you want the stroke count etc. for Tangut? Such information is not in the names list.
- c. Mr. Michel Suignard: You are sort of mixing Radicals and components. 730 are radicals and 20 are not used as radicals. The components are like regular characters.

d. Mr. Andrew West: I had very good help from Chinese and Russian experts in creating this draft. *Disposition:* Accepted for PDAM 2.1. The editor will work with the authors to sort out how the charts are to be presented.

Action item: Roadmap ad hoc to take note of the new range for Tangut Radicals - reduced by 1 column from 18CFF to 18BFF.

Relevant recommendation:

M63.10 (Tangut radicals):

WG2 accepts to create a new block named 'Tangut Radicals' in the range 18900..18BFF in the SMP, and populate it with 753 characters in code positions 18900..18BF0, with their names and glyphs as shown in document N4636, for inclusion in Amendment 2.

10.3 Additions to existing scripts or blocks

10.3.1 Saurashtra sign Candrabindu

Input document:

4590 Proposal to encode Saurashtra Sign Candrabindu; Vinodh Rajan; 2014-08-07

Dr. Deborah Anderson: This is a request from Mr. Vinodh Rajan, for a character that was missed in the original Saurashtra proposal. The glyph shown is correct. UTC has reviewed the proposal and found the proposal to be mature to be added to the standard.

Disposition: Accepted for PDAM 2.1

See relevant recommendation M63.11 item a on page 42.

10.3.2 Kannada sign Spacing Candrabindu

Input document:

4591 Proposal to encode Kannada Sign Spacing Candrabindu; Vinodh Rajan; 2014-08-07

Dr. Deborah Anderson: This is a request from Mr. Vinodh Rajan for another missing Candrabindu - this time for Kannada. Although Kannada already has a Combining one, this is for a SPACING one. The UTC has reviewed this and several examples in the document and think it is a mature proposal.

- a. Dr. Umamaheswaran: Has the SPACE+Combining Candrabindu been considered as an option.
- b. Mr. Peter Constable: Use of SPACE+Combining Mark would cause a WORD BREAK. This character is used within the word.

Disposition:

Accepted for PDAM 2.1.

See relevant recommendation M63.11 item b on page 42.

10.3.3 Quranic mark Ar-Rub

Input document:

4589 Proposal to encode fourteen Pakistani Quranic marks; Roozbeh Pournader; 2014-07-27

4592 Proposal to encode Quranic mark Ar-Rub used in Quran published in Pakistan; Lateef Sagar Shaikh; 2014-08-11

Dr. Deborah Anderson: Document N4592 requests adding a single Arabic character, used in Quranic text in Pakistan. It has been reviewed by many experts. Experts in UTC and US national body have reviewed this. This character was also requested in comment TE.2 from the US in the PDAM2 ballot response.

Discussion:

- a. Mr. Peter Constable: This is related to N4589. In May 2014, the UTC had approved the 14. This character was missed and ended up being a new document.
- b. Mr. Mike Ksar: It is another decorative character.
- c. Mr. Michel Suignard: There is a production issue with the charts for the earlier set.

Disposition: Accepted for PDAM2.1.

See relevant recommendation M63.03 item f, on page 17.

10.3.4 Georgian Lari currency sign

Input document:

4593 Adding Georgian Lari Currency Sign; George Melashvili; 2014-08-14

The document is a request from the National Bank of Georgia for encoding a new currency sign - the Lari Sign. It is to be used for banking in business.

Discussion:

- a. Dr. Umamaheswaran: Is their currency changing? No.
- b. Mr. Michael Everson: The glyph is not supposed to be used by us. This is based on the Logo for Euro sign. What they have done is to take the letter that looks like a C with an under bar, with the two bars. It is similar to the issue we went through for Euro.
- c. Mr. Peter Constable: We can modify the glyph - but it gets appropriately reviewed by them.
- d. Dr. Umamaheswaran: Whatever we come up with should be acceptable to the National Bank of Georgia.
- e. Mr. Peter Constable: It is reasonable to consider the appropriate glyph that could be used in different fonts instead of being just a logo. But whatever that is accepted for the charts should be also OK with Georgia. This is also a character with some interest to the UTC members to be stable at the earliest.

Disposition:

Accepted. 20BE LARI SIGN in the Currency block, with a glyph based on the Logo in document N4593, and acceptable to the proposers.

See relevant recommendation **M63.11** item c on page 42.

10.3.5 Nomisma sign

Input document:

[4594](#) Future additions: Nomisma Sign; Joel Kalvesmaki, Dumbarton Oaks; 2014-07-18

Dr. Deborah Anderson: This is the second of three characters from Mr. Dumbarton Oaks et al. It is a sign for standard gold coin - Nomisma - from Byzantine Empire's currency system. It is similar to the single glyph used for any currency symbol used today.

Disposition: Accepted for PDAM 2.1.

See relevant recommendation **M63.11** item d on page 42.

10.3.6 Double suspension mark

Input document:

[4595](#) Future additions: Double Suspension Sign; Joel Kalvesmaki, Dumbarton Oaks; 2014-07-18

Dr. Deborah Anderson: This is a proposal from Mr. Dumbarton Oaks et al, for DOUBLE SUSPENSION MARK. It is used in Greek seals and coins for the letters in a word that could be omitted. The suspension mark replaces the characters that are omitted.

Disposition: Accepted for PDAM 2.1.

See relevant recommendation **M63.11** item e on page 42.

10.3.7 Greek indiction sign

Input document:

[4596](#) Future additions: Greek Indiction sign; Joel Kalvesmaki, Dumbarton Oaks; 2014-07-18

Dr. Deborah Anderson: This is one of three proposals by Mr. Dumbarton Oaks et al. It is used for timekeeping in 14th to 15th century, in the Byzantine era for marking an indiction cycle of 15 years. It is proposed to be added in Ancient Greek Numbers block.

Disposition: Accepted for PDAM 2.1.

See relevant recommendation **M63.11** item f on page 42.

10.3.8 Warsh-based Arabic characters

Input document:

[4597](#) Proposal to encode Warsh-based Arabic script characters; Lorna Evans; 2014-08-15

Mr. Peter Constable: Document N[4597](#) shows characters that are used in West Africa, originally called Warsh-based document. The orthography is not limited only to Warsh. UTC experts proposed to change the names to AFRICAN FEH etc. instead of WARSH xxx. The justification is in document N[4597](#). The original proposers would have preferred to keep WARSH as more appropriate. However, UTC experts preferred to use AFRICAN because of expected usage beyond WARSH. This is also requested in comment TE.3 from the US, in the PDAM2 ballot response from the US.

Discussion:

- a. Mr. Michel Suignard: If we do a group header for these what would be your recommendation? Arabic Letters for African orthography? In similar proposals, it would be helpful if the name to be used for group headers is also proposed.

Disposition: Accepted 3 proposed letters for PDAM 2.1.

See relevant recommendation M63.03 item g, on page 17.

10.3.9 Bopomofo letter l

Input document:

[4609](#) Bopomofo letter; Ken Lunde; 2014-08-20

Mr. Michel Suignard: The proposal is to rotate the glyph for U+3127 Bopomofo Letter l, from vertical bar to a horizontal bar. The contribution is from Dr. Ken Lunde.

Discussion:

- a. Dr. Lu Qin: The convention was to use in vertical text in one way. If the text is written horizontally it would be different.
- b. Mr. Peter Constable: In the context of Vertical layout, the character property discussion led to a question on this character.
- c. Mr. Andrew West: The Chinese part of the document says - vertical glyph should be used with horizontal text and horizontal glyph with vertical text.
- d. Mr. Michel Suignard: In practice it is the other way; in existing fonts used in Taiwan.
- e. Ms. Wei Lin-Mei: In Taiwan we use both. The Ministry of Education in Taiwan would like to have both the Bopomofo forms encoded.
- f. Mr. Andrew West: A few years back, there was a proposal from TCA for another form of Bopomofo bar. That was rejected at that time by WG2.
- g. Mr. Michel Suignard: The chart says today that the forms are considered to be rendering variants. The current practice of using horizontal forms in glyphs even in horizontal text is what is being reflected in the charts. A vast majority of the fonts today use the horizontal form. I can put the reverse of the current notation along with changing the glyph from vertical to horizontal.

Disposition: Accepted for PDAM2.1.

See relevant recommendation M63.11 item g on page 42.

10.3.10 Emoji modifiers

Note: There was one input document N4599 on 'Emoji skin tone characters' from the Unicode consortium at the start of the meeting. The discussion on this document triggered two additional expert contributions -- document N4644 on 'Portrait Symbols' from Mr. Michael Everson, and document N4646 on 'Tone Modifiers' from Japanese experts. The following subsections minute the discussion on these three documents.

10.3.10.1 Emoji skin tone characters

Input document:

[4599](#) Emoji skin tone characters; Unicode Consortium; 2014-09-11

Mr. Peter Constable: A few years ago, we added a number of Emoji characters. They went into the standard as well as to Unicode 6.0. After it got implementation by several vendors, they got adopted outside Japan and became popular. Many of the users started complaining that the Emoji as they were encoded did not reflect the cultural diversity in these Emoji. The UTC members had to address the user communities' concerns. The need to get some solution out quickly became important for UTC members. There are two kinds of issues - the general case of Emoji such as food items that are unique to Japan but not from other regions. There are also items such human faces, other body parts etc., with different skin tones etc. to accommodate diversity. This proposal addresses the second kind. A table comparing different implementations from different vendors highlighting the different colours representing the different skin tones etc. was used as the example. Users are complaining they would like to have their own culturally acceptable skin tones. There are other possible variations such as hair styles. For example, pig tail is not appropriate to be used to indicate African American girls. Implementers may change hair style along with skin tones. But only skin tone characters are proposed. Five skin tone characters are proposed.

Discussion:

- a. Dr. Lu Qin: Could you not use Variation Selector?
- b. Mr. Peter Constable: We did discuss Variation Selectors. However, they are default ignorable. These will not be ignorable. They are Modifier Symbols.
- c. Dr. Umamaheswaran: Can more than one modifier symbols be used together?
- d. Mr. Peter Constable: They are to be used as a single modifier applicable to the emoji, but cannot be combined.
- e. Mr. Toshiya Suzuki: Can you use in combination with any Emoji?
- f. Mr. Peter Constable: Any sequence of characters can be used in Unicode/10646. But you would use only in the context of using with only those Emoji which can have any skin tone variation possibility.
- g. Mr. Toshiya Suzuki: Characters changing the colour for everything are not in the standard. These are not candidates for encoding.
- h. Mr. Peter Constable: These are meant to be used only in context of Emoji to indicate skin tones.
- i. Mr. Andrew West: Do you have a definite set like the standardized variation sequences?
- j. Mr. Peter Constable: We did discuss that possibility of standardized skin tone sequences. But there will be a technical report explaining their use.
- k. Mr. Andrew West: It seems to be sort of restrictive in that users can be satisfied with just skin tones, but not with ability to change other appearance aspects.
- l. Mr. Peter Constable: It is like how we started with Emoji, and it is taking off outside of Japan. If there is a demand for things like Blue skin tones etc. we may not entertain that. But if some community's cultural expectation is not satisfied we will look into it.
- m. Mr. Michael Everson: This is not the right way to do it. Invariably there will be combinations ending up in different unexpected results. The right thing to do would be to take a block of about 128 characters and get all the required characters. Some of the emoji symbols with human parts would be candidates, possibly not all. The solution proposed is going to cause more trouble. The thing not to do would be to treat the skin tone as a kind of diacritic. Since we have plenty of code positions we should not be composing these things. For example when we backspace and lose a modifier symbol, the resulting implementation would bring surprising results. The right thing would be to get a collection and code them as single characters.
- n. Mr. Peter Constable: The vendors are very motivated to get things working, as far as implementation is concerned. It is fair to say that different vendors, in terms of base emoji, may choose to show different glyphs. Impact of backspacing is fair to raise. The UTC will need to take some action before the next WG2. It is a reality for the vendors in Unicode. I would encourage something going into the PDAM 2.1 and that is the fastest way to get some national body feedback.
- o. Dr. Lu Qin: One could consider this as an aspect of a picture. But a picture can have more than one aspect. Are you planning to also cater to other aspects?
- p. Mr. Peter Constable: We are not looking at all possible variations or aspects on the same emoji. Additory aspects are not contemplated. Implementation have a choice to render the glyph appropriate to the culture most likely to be using the skin tone.
- q. Mr. Michael Everson: I can support adding a block of combined symbols, but not these 5 modifier letters.
- r. Mr. Peter Constable: The US is asking for these 5 letters to be included in the PDAM 2.1.
- s. Mr. Michel Suignard: We have done in the past - giving some more time for interested experts to discuss a little bit more. For example, the UTC could consider the feedback at their next meeting, before it gets into PDAM 2.1. We can hold these from going into the PDAM 2.1 now and I can exercise the option to add them later, without making any recommendation at this meeting.
- t. Dr. Lu Qin: This is a quick and dirty solution. For example, do you want the Santa Clause to be in different cultures or skin tones?
- u. Mr. Peter Constable: If we had gone in the direction of selecting a few Santa Clauses, and if some were missing, then we would have to add more Santa Clauses.

Further Discussion:

- a. Mr. Peter Constable: There were some opinions and questions etc. earlier. I would like to know if there are others who have further comments.
- b. Dr. Umamaheswaran: Perhaps the words 'skin tone' is causing some sensitivity etc. Perhaps some other term such as 'physical grouping' etc. might help.
- c. Mr. Peter Constable: Perhaps some other term could be used. Speaking of ethnicity would be much more problematic. You could use 'emoji swatch' to be more generic etc. and other questions pop up.
- d. Mr. Andrew West: The approach taken may not address the complexity, such as in a multicultural family with multiple possible skin tones etc.
- e. Mr. Peter Constable: Cases of multiple people with multiple skin tones etc. would be always a problem with any approach. Combinations of emoji is common and that would be the only workable for multiple people with mixed skin tones etc.
- f. Mr. Andrew West: People joining hands, with multiple tones of hands etc.
- g. Mr. Peter Constable: That may not be a requirement at all. People using emoji use combinations of emoji to express an idea and leave a lot to the context.
- h. Mr. Mike Ksar: One could remove the word 'skin' out.
- i. Mr. Andrew West: The tone could be applied to any character if you leave skin out. It would open up the problem even wider. People have Skins. That is something not to be hung up about.
- j. Mr. Michael Everson: I am not comfortable with the approach, and I am working on an alternative proposal to take to the UTC. The example collection has 162 of these covering only 4 tones. There are symbols representing sports etc. which are also included. I think all we need is 13 of these characters and four varieties of each and it will at least address the stated problem. I would be uncomfortable to go into ballot as it is.
- k. Mr. Alain LaBonté: Thinking about it, the problem is similar to using different fonts for such purposes. If you open it up, you would get into colour differences etc.
- l. Mr. Peter Constable: As to the Fonts, they may not be the same in sender's side and recipient's side. In plain text the meaning does not change. People would like to communicate their ethnicity in context of emoji and it should not be lost. The font use was discussed by the UTC.
- m. Mr. Alain LaBonté: I would use the font. They should be more generic and should remove the ethnicity aspect from the character coding.
- n. Prof. Yoshiki Mikami: Changing colour could be used by switching the displays -- for games etc.
- o. Mr. Peter Constable: Mr. Michael Everson's alternate proposal was to have atomic characters. Will that solution take away your concern?
- p. Mr. Andrew West: These characters can be used for racial abuses etc.
- q. Mr. Michael Everson: People can misuse even with other techniques for such abuses.
- r. Mr. Peter Constable: This particular mechanism or any other technique would have different effects?
- s. Mr. Andrew West: Mr. Michael Everson's claim is not to apply colour variations for anything other than faces. Someone wants to use black fist, index fingers etc. versus white only etc. What would be his solutions be for multi-coloured body parts etc.
- t. Mr. Michael Everson: The recommendation I am putting forward to UTC is for their consideration. The requirement originated from iPhone putting out some of these emoji. We can come up with simpler solution for the identified needs in various discussion lists.
- u. Mr. Shuichi Tashiro: Risk of using skin colour is far bigger. If you remove the word Skin the risk would be less. Atomic characters are more risky. Some people think that using these the way it is proposed could be used for discrimination.
- v. Mr. Michael Everson: The requests from users is to get the intent correct; the fonts used do not present exactly always. There is also fall back etc. Risk of misrepresentation is higher with modifier letters than others.
- w. Dr. Lu Qin: None of the emoji in fonts are friendly even to people in Asia. We had similar problem even with HKSCS encoding. Our response was that the character coding is not for teaching etc. Was the original emoji in colour?
- x. Mr. Peter Constable: When we started it we had the coloured ones from Japanese carriers, but were non-coloured when we encoded them.
- y. Dr. Lu Qin: One possible way would be to have a neutral tone and try to avoid this.

- z. Mr. Harsha Wijayawardhana (?): Most of the people in Sri Lanka are my tone. If we are producing codes like this it can create cultural issues.
- aa. Prof. Kyongsok Kim: I have no particular expertise in this area.
- bb. Mr. Peter Constable: We could get UTC to look at the feedback from here and see what they can do. There is also what should our project editor do with the request from USA / UTC is to get it in PDAM 2.
- cc. Dr. Umamaheswaran: Even though there is some question as to whether the requirement should be even be entertained from the character coding perspective, we are facing one or two possible solutions. One is using the modifier marks and the other using atomic character solution. I would encourage UTC to at least seriously evaluate the atomic approach, at least to avoid the potential for black and white etc. being interchanged in case of loss of the modifiers.
- dd. Mr. Michel Suignard: Any one can participate in the UTC discussion. Even though I do not have clear direction at this time. But I would not underestimate the urgency from the industry side.
- ee. Mr. Peter Constable: UTC has to take some action in Unicode 8.0 due to their implementation requirement as a hot topic. There is a lot of media attention and pressure. Vendors do have to respond to the user community. The one opportunity to have national body feedback would be to have this within the next PDAM 2.1 ballot. It could be this solution using the modifier letter or the atomic one.
- ff. Prof. Kyongsok Kim: In Korea, as far as I know, most emoji are not used widely. I understand that they use pictures and not much of emoji. The other issue touched upon is the Amendment 2 ballot - I think to add something to include in a ballot we need some consensus.
- gg. Mr. Peter Constable: The consensus to include in a ballot is not the same as trying to get consensus from the national ballot on the committee draft.
- hh. Mr. Michel Suignard: As the project editor, I do have the discretion to add to PDAMs, as long as I am satisfied that it is worth going ahead for committee level ballots. Obviously, I do it very responsibly. In this case, I do not have a clear idea as to how we should go, even though there is an urgency to get a solution.
- ii. Mr. Mike Ksar: I agree that since the Helsinki WG2 meeting, we have recognized the discretionary options for the project editor.
- jj. Mr. Andrew West: National bodies would like to make their views known at the earliest. Otherwise events from UTC would overtake things.
- kk. Dr. Umamaheswaran: I would like to have one more step of due diligence be taken. I would encourage Mr. Michael Everson's alternate proposal be evaluated by the UTC as an alternative proposal and whatever consensus comes out of it we can recommend to the project editor to include that in PDAM2.1.
- ll. Mr. Peter Constable: What are time scales?
- mm. Mr. Michel Suignard: The short answer is - yes it is possible to include it in the text of PDAM2.1 that goes out for ballot. It is a two months ballot.

10.3.10.2 Portrait symbols

Input document:

[4644](#) Proposal to encode Portrait Symbols in the SMP of the UCS; Michael Everson; 2014-10-02

Mr. Michael Everson: I tried to focus on the actual problem. It deals with a handful of characters - faces. There were criticisms in the press, blogs etc. that these faces do not render to suit their cultures. It should be addressed. How it should be addressed and the scope and the technical solutions is what we are struggling with. We have seen the Skin Tone modifier proposal -- technically it will work. They have picked up all emoji adding up to 167 containing any body part. The user community has not been complaining about parts other than faces. Unicode Technical Report #51 has various sets of Emoji to which these may apply also. Users are complaining about only a few of these. So it seems to me that having an extensible solutions with five modifier letters is problematic, with the potential for loss of these swatches and the resulting things like the black face could become white etc. The users have asked for 'give us some brown faces', not for extensible ones. The current ones (appears as pink) that I have termed type 1 would remain.

Use of modifiers as a control character is a pseudo encoding. I think we should restrict the set to a small set to meet the complaints from user communities. We should also refrain from adding more human being Emoji. I don't think it is a good idea and it draws more culturally sensitive issues. We could

possibly entertain something like a 'pregnant woman'.

Discussion:

- a. Mr. Mike Ksar: In the proposal you have used the word SKIN.
- b. Mr. Michael Everson: The names can be adjusted. We know humans come in different colours. The main thrust of my proposal is to have a closed set.
- c. Mr. Peter Constable: I agree with refraining from adding more human beings. We had added more human symbols beyond what was in the original set from Japan. In the US we had a need to deal with racial preferences. A need from other countries exist to 'not to focus' on racial entities. The proposal from Mr. Michael Everson is that it is very explicit about the racial preferences. I would like to hear from other experts from other national bodies etc.
- d. Mr. Michael Everson: In Ireland, we thought problems of racial differences were fixed.
- e. Mr. Peter Constable: We already have vendors in the US that have symbols showing different body parts in different shades. It is not just faces that are needed.
- f. Mr. Andrew West: I agree with Mr. Peter Constable that we need more discussion. I agree also not to entertain any more symbols that are realistic; perhaps we should live with stick people. I assume the implementers are making them more realistic. None of them seem to be an ideal solution. The issue of backspacing was raised. With the use of modifier symbols. Implementations are expected to treat these as a cluster. It will take a while before implementers to catch up to do it right - in short term it could cause problems. I disagree that it should be restricted only to faces. I have seen that it could apply to other body parts as well.
- g. Mr. Alain LaBonté: We should not encode such symbols. All are bad.
- h. Ms. Aruni Goonetilleke: Our personal views - we would be comfortable not introducing such distinctions. We do not have any colour related issue. We have not discussed within our country.
- i. Mr. Michael Everson: What about the recommendation that not to assign human skin colour to any emoji? The best practice should be perhaps that.
- j. Mr. Andrew West: Perhaps that colour should not be there at all.
- k. Mr. Peter Constable: There is also a demand from user communities in the US to have the distinction. Does Sri Lanka have any thoughts about using modifiers versus atomic symbols?
- l. Ms. Aruni Goonetilleke: You have a set of symbols here. Others may come up with more requirements. Where do you draw a line here?
- m. Mr. Andrew West: We do not know how people going to be satisfied or not. If more skin tones are required, the modifier symbols are extensible.
- n. Mr. Toshiya Suzuki: Everson's approach is easy to implement. It requires an agreement that we do not encode human symbols any more. We cannot guarantee that. If more tones are required or symbols are needed can we go ahead?
- o. Prof. Yoshiki Mikami: I am not prepared to say which alternative is better. Faces are open ended way of communication, without any dictionaries etc. This kind of discussion could continue endlessly. How can we bind our hands - we will be limiting our ability to add more Emoji.
- p. Mr. Peter Constable: If we want, we could have an SC2 resolution that we will not encode any more characters that depict realistic human beings. Some of these symbols originated from symbols for items such as Restrooms etc. We could claim that these are not intended to depict realistic human beings. But implementers might still use realistic renditions.
- q. Mr. Alain LaBonté: Any rendering is legitimate. We should not embody any racial human being symbols.
- r. Mr. Peter Constable: Mr. Michael Everson's proposal is up front with racial features. The UTC proposal is trying to accommodate the variety in a different way. Japanese experts' proposal is to defuse the cultural aspects by applying tones on any emoji.
- s. Mr. Toshiya Suzuki: The solution we proposed was to remove any sensitivity to political aspects.
- t. Mr. Alain LaBonté: The next thing would be have someone with a ring on the nose etc.
- u. Mr. Michael Everson: I am up front with my proposal addressing just the requirements that have been expressed in the public.
- v. Dr. Umamaheswaran: We are going around in circles. In my understanding of the requirement is that it is a closed subset. The modifier letter solutions are open ended and we are passing the responsibilities to the font vendors. Current stated requirements could be met by the Mr. Michael Everson's approach.
- w. Mr. Peter Constable: In my view the approach from Japan's modifier approach is probably the

best. It is least open up front. It meets the US requirement.

- x. Mr. Andrew West: In my view the Japanese proposal is the most open ended.
- y. Mr. Mike Ksar: Can we come up with some solution?
- z. Mr. Peter Constable: We could perhaps limit the set of characters with Japanese proposal. It defuses the sensitivity about use of Skin.
- aa. Mr. Michel Suignard: I do not agree that it is open ended. People may not implement every combination. So it may not exist in the font if people do not like it. It is similar to the combining character problem. The combination with some modifiers that do not make sense will not be implemented.
- bb. Mr. Peter Constable: I agree with that. People asking for a blue modifier is also possible. The difference between this set and others is that we will not get enough bad publicity with Blue skin etc.
- cc. Mr. Andrew West: Future requirement could come up with faces with nose rings. We can choose to ignore those. I don't think that it needs to be extended beyond skin tones.
- dd. Mr. Peter Constable: In terms of consensus, we may continue discussing this more and we may or may not come to a consensus. We will take the discussion and comments back to the UTC and the UTC will make some decision to meet our requirements and will come back to SC2. Names may be changed and the UTC will take the feedback into consideration.
- ee. Mr. Andrew West: UTC should be posting the item for public review process. I guess it will be put into PDAM 2.1 and the national bodies could consult within their user communities for feedback.
- ff. Mr. Michel Suignard: The solution could be like Japanese proposal, for example. Whatever comes out of the UTC after their public review process or in parallel may go into PDAM 2.1.

10.3.10.3 Tone modifiers for emoji

Input document:

[4646](#) Proposal of Tone Modifier Symbols for Emoji; Suzuki Toshiya, Tatsuo Kobayashi, Shuichi Tashiro; 2014-10-01

Mr. Toshiya Suzuki: This is an expert contribution from Japanese experts. It is a proposal for TONE MODIFIER similar to SKIN TONE. While Skin Tone was restricted to human related emoji, this one is for any emoji symbol. In the discussion on Skin Tone, comments were made that it is too controversial. Our proposal is similar to the Skin Tone 5 levels. The difference is the pixel levels in the glyph. Examples are provided on how this new TONE MODIFIER could be used. It is applicable to emoji, miscellaneous symbols and pictographs, emoticons and transport and map symbols. This character will be non-ignorable. The symbol has no political sensitivity.

Discussion:

- a. Mr. Peter Constable: Your thinking is that it improves on the Skin Tone proposal by removing the Political Sensitivity.
- b. Mr. Michael Everson: It is a terrible idea. We are not in the business of providing colours or shading on symbols. It leads to open ended set of symbols to be handled by Font providers. This mechanism could be applied to any one of the thousands of Emoji we have or will come in the future.
- c. Mr. Toshiya Suzuki: Our contribution is not applicable to other scripts. We have a suggested list of items to which this would apply. Are you suggesting this is an open ended stuff?
- d. Mr. Andrew West: You have suggested a subset - but there is no rationale. It is more than the one in the subset associated with human parts symbols.
- e. Mr. Michael Everson: The original requirement was based on human skin shades. We should not be pursuing an open ended solution to the stated problem. This is just trying to be politically correct.
- f. Mr. Peter Constable: We have had heard concerns about political sensitivity on several things that SC2 does. Why is it inappropriate for SC2 to try to be politically correct?
- g. Mr. Mike Ksar: The gist of this proposal - is the removal of the word skin.
- h. Mr. Peter Constable: it proposes to remove the word Skin and allow it to be applicable to emoji related, not just emoji with skin.

Disposition: If a consensus is reached before the PDAM 2.1 text is sent out for ballot, the editor has the option to include the agreed upon solution.

Ask SC2 to request the UTC to have a public review issue on the topic of encoding to satisfy 'tones on human being Emoji', to enable national bodies to get public feedback from their countries/regions.

National bodies are asked to keep a lookout for the Public Review announcement.

Relevant recommendation:

M63.13 (Tones for human being emoji):

WG2 requests SC2 to communicate to Unicode Consortium that SC2 would like UTC to have a public review issue on the encoding to satisfy 'tones on human being emoji' to enable national bodies to get public feedback from their countries or regions. SC2 is requested also to alert national bodies to keep a lookout for the announcement of such a public review issue on the Unicode web site.

See also relevant recommendation **M63.12** on page 42.

10.4 Miscellaneous proposals

10.4.1 *Modification of shape for 301C - WAVE_DASH*

Input document:

[4606](#) Proposal for the modification of the sample character layout of WAVE_DASH (U+301C); Hiroyuki Komatsu; 2014-08-06

Dr. Deborah Anderson: This is a request to change the shape of Wave dash at 301C from current shape to its reverse - to match the glyph in the source JIS C6226-1978 1-33.

Discussion:

- a. Mr. Michel Suignard: At some point we changed the font used for production of the charts. I think this error was introduced at that time. The question I have is whether the annotation is still valid or not -- especially for the wordings about 'mapping'.

Disposition: Accepted. Reverse the shape of current glyph for 301C.

See relevant recommendation M63.11 item h on page 42.

Action item: UTC to review and clarify the wording of the associated annotation for 301C Wave Dash - especially about the 'mapping'.

10.4.2 *Horizontal extension of 152 Hanja characters*

Input document:

[4630](#) A proposal requesting a horizontal extension of 152 Hanja char; KIM Kyongsok; 2014-09-24

Prof. Kyongsok Kim: The proposal is based on a research project carried out by the National Institute of the Korean Language in 2011. ROK finalized the text for KS X 1027-5 (This new source will be named "K6") which accommodates these 152 Hanja characters. KS X 1027-5 is expected to become a KS by the end of Dec. 2014. The document has a table showing the source Hanja character and the corresponding CJK code position for which the horizontal extension is requested. It is a request for feedback from WG2 experts.

Discussion:

- a. Mr. Toshiya Suzuki: K6 characters - what encoding scheme do you use to exchange? Did you have a non-UCS encoding scheme?
- b. Prof. Kyongsok: It is UCS. They cannot be represented in EUC-KR. These are only in UCS but the K column is not there in the current UCS.
- c. Mr. Peter Constable: Does it require review by IRG to verify the Hanja column extension?
- d. Prof. Kyongsok Kim: It is for review with IRG in November 2014 meeting.
- e. Mr. Michel Suignard: We have to validate unification. We have to introduce a new source for K6 along with the data associated with the 150 plus entries.
- f. Prof. Kyongsok Kim: We would like to get these in the standard by end of this year.
- g. Mr. Michel Suignard: It will not be a candidate for PDAM2.1. It can go into the next PDAM (2.2 if there is one) or the next edition.

Disposition: Accepted.

Action item: IRG and WG2 experts to provide feedback.

10.5 CJK ideographs - glyphs and source references

10.5.1 *Proposal from Project Editor*

Input document:

[4620](#) CJK ideograph glyphs representation and sources references; Project Editor, Michel Suignard; 2014-07-15

Mr. Michel Suignard: At the last meeting we discussed this topic in document [N4544](#). Recommendation M62.13 accepts the proposed text from the previous meeting regarding the glyph changes. Document [N4620](#) is a major replacement. It goes deeper beyond the glyph replacement. The proposal is to clarify

the identification of CJK Ideographs, in terms of glyphs as well as the source references. In Japan, for example, both the source standard and glyphs associated with these are being updated. Glyphs were significantly changed even though you do recognize the character. Current charts in ISO/IEC 10646 do not reflect currently used fonts. In Mongolian, for example, the glyphs are changed to reflect what is happening today. In CJK the glyphs we had in the standard are based on what they were when they were accepted and included in the standard.

Section 1 details the current status and associated issues.

For example: 167 out of 6536 in J0 had glyph changes, 31 in J1 with new glyphs and sources, 7 in JA with new glyphs and sources, 2743 in J1 had new sources and 85 with new JA sources. This has created some confusion. Only some of these, for example in 0213:2004, are reflected in ISO/IEC 10646, worsening the situation. Using current glyphs from ISO/IEC10646 is less than optimal.

Section 2 describes the proposed solution.

Section 2.1 is proposing changes to the P&P document. Section 2.2 is proposing text changes in the standard itself. Section 2.3 proposes changes to the text changes in the Unicode standard.

Appendix shows the old and the new glyphs for each code point from different Japanese sources.

10.5.2 Feedback from Japanese expert

Input document:

[4643](#) Comment on WG2 N4620; Suzuki Toshiya; 2014-09-30

Mr. Toshiya Suzuki: Document [N4643](#) is some feedback on document [N4620](#).

The mapping table from UCS to JIS X0213:2014 -- this could be included in a future version.

The other proposal from the editor is to use the font reflecting 2014. But X0213 is not the base for many of current fonts. The JIS people believe that shapes of the glyphs are only nominal. If refinements are needed to the glyph then it can be handled by the font technology. If there is such a requirement Japanese experts would like to see that documented.

Discussion:

- a. Mr. Peter Constable: The mapping part is not what the project editor is pointing out. He is pointing out to the shapes used in the Japanese standards that have changed and the source references that have been changed for some reason. I think it will be desirable to be consistent with the national standards' choice.
- b. Mr. Michel Suignard: Sometimes we end up in changing the source and glyph. But in Japanese standards' case the identity is not in question. Why can't ISO/IEC 10646 be consistent with what the Japanese standards have done? The differences are for a relatively small number of ideographs. It is not necessarily true that we take the sources that we use in the mappings. I am not trying to redo mapping tables here. What I have proposed is a superset of what we had discussed at the last meeting.
- c. Mr. Mike Ksar: If you accept what the editor has proposed there is no need for an IRG review and input. IRG can look at the PDAM2 and review these.
- d. Mr. Toshiya Suzuki: In Extension B in particular there are too many ideographs, and I think IRG should review this.
- e. Mr. Tatsuo Kobayashi: The wordings may confuse the discussion. There are two different uses of the source references. One of them is to be able to trace the original source for the character. The other one is to use that information for mapping tables between UCS and the referenced source standards. We need to discuss first what is needed and then the solution.
- f. Mr. Michel Suignard: We need to preserve the tracing ability to original source. I propose that information is preserved in Unihan data, because we do not have ability to reference older versions of national standards in ISO/IEC 10646. In Unihan we have most of them. I agree we need that ability. Some changes are needed in Unihan to preserve that information.
- g. Mr. Tatsuo Kobayashi: The source has to be appropriately identified.
- h. Mr. Michel Suignard: Extension B has similar issues as well as quality issues. They have been updated in the standard over time. Obviously if we find such issues in Extension B we will fix them as needed. The glyphs proposed in Appendix in document [N4620](#) are the ones from Kanji fonts in use today and will be used in the standard. IVD database has such differences in glyphs, and they are registered.

- i. Mr. Toshiya Suzuki: The information about mapping information I probably agree. I do not understand the requirement for the representative glyphs.
- j. Mr. Michel Suignard: You may not find the requirement stated. It is more of a good practice to be consistent and up to date with industry practice for glyphs. It is applied for all the writing systems of the world - more recently for Kannada. I could probably write such a desire to be current for glyphs into my proposal if that would help. Such update requests come for non CJK scripts. For the members of Unicode consortium it is annoying that the charts do not reflect what is used in current fonts.
- k. Mr. Michael Everson: I have to say I agree completely with our editor. Over the years, we do update the fonts for several of the non CJK scripts to improve and be closer to the latest fonts. In this case, especially because Japanese national standards themselves have used a set of changed glyphs, the best modern material should be what we use for these glyphs.
- l. Mr. Michel Suignard: By using the modern glyphs, they would still exist in the older versions of Japanese standards.
- m. Mr. Toshiya Suzuki: If you think of JIS x0208: 1990 is already outdated, there is a misunderstanding.
- n. Mr. Michel Suignard: I did not mean that it is.
- o. Mr. Toshiya Suzuki: The Japanese standard is being maintained; they are living standards.
- p. Mr. Tatsuo Kobayashi: Historically saying that example glyphs were reflected from original source standards is correct. From this discussion I understand that the example glyphs are shifting towards what is reflected in the national standards.
- q. Mr. Michel Suignard: The source references and glyphs are used to identify where it came from and also to map. The latter use is being questioned and there have been some call for another property based mapping rather than just the source reference for code point in the source standard. The prime usage in the standard is to identify its source and identify.
- r. Mr. Peter Constable: I can think of three purposes -- its identity, which is essential part of the standard, to document its origin, and third is to assist implementers as to what they should do? For last question, the right thing to do is to be consistent with modern practice. The first one is needed for identity. Second one is a less common need. If both source and glyph can change, we need to ensure that character identity does not change.
- s. Mr. Toshiya Suzuki: Even if there is no technical change, when the code chart is updated, I would like to get that reviewed by IRG to ensure there is no error in the code chart.
- t. Mr. Michel Suignard: I can do that. The Amendment 2 did not include the full chart with the new glyphs. I can produce the chart that is affected reflecting the production version. There is an embedded .txt file showing the relevant information for the ideographs.

Disposition: Accepted – refer to document [N4620](#)

Item 2.1 to be acted on by P&P; item 2.2 to be included in Amendment 2.1; item 2.3 to be acted on by Unicode liaison representative. No collections are to be created.

Relevant recommendation:

M63.04 (Changes to sub-clauses related to presentation of CJK ideograph sources):

WG2 accepts the proposed changes to sub-clause 23.1, sub-clause 23.2, and the updated glyphs for 205 J column ideographs, described in section 2.2 from document [N4620](#), for inclusion in Amendment 2. WG2 further requests SC2 to communicate to Unicode Consortium to take note of recommendation in section 2.3 of document [N4620](#). WG2 additionally requests the IRG to review the resulting CJK Unified Ideographs charts that will be in document [N4624](#).

Action items:

- Ad hoc on Principles and Procedures to take note of section 2.1 and include in the P&P document.
- UTC liaison rep to take note of section 2.3 and take the needed action with respect to Unihan.

10.6 Progression of WG2 work

Following are the relevant recommendations on progressing Amendment 2 with accepted additions, and creating a project subdivision for the fifth edition of ISO/IEC 10646 for future additions to the standard.

Output documents:

[4637](#) New charts for pdam 2.1; Michel Suignard; 2014-10-05

[4649](#) Disposition of Comments on PDAM 2; Project Editor - Michel Suignard; 2014-10-02

M63.01 (Disposition of DAM1 ballot comments):

WG2 accepts the disposition of ballot comments for DAM1 to the 4th edition in document [N4615](#). All the comments being editorial, WG2 further recommends that the updated text of DAM1 be sent to SC2 to forward to ITTF for publication.

M63.11 (Additional changes in Amendment 2):

WG2 accepts the following additional changes in Amendment 2:

- f. Add A8C5 SAURASHTRA SIGN CANDRABINDU with its glyph from document [N4590](#) in the Saurashtra block
- g. Add 0C80 KANNADA SIGN SPACING CANDRABINDU with its glyph in document [N4591](#) in the Kannada block
- h. Add 20BE LARI SIGN in the Currency Symbols block, with a glyph based on the Logo in document [N4593](#) that is acceptable to the proposers
- i. Add 1018E NOMISMA SIGN in the Ancient Greek Numbers block; with the 'default' form for the glyph shown in document [N4594](#)
- j. Add 2E44 DOUBLE SUSPENSION MARK in the Supplemental Punctuation block, with glyph similar to the one in document [N4595](#)
- k. Add 1018D GREEK INDICTION SIGN in Ancient Greek Numbers block, with 'default' form for the glyph from document [N4596](#)
- l. Rotate the glyph for 3127 BOPOMOFO LETTER I by 90 degrees, with an appropriate change in the annotation, per request in document [N4609](#), and,
- m. Reverse the shape of current glyph for 301C WAVE DASH as requested in document [N4606](#)
- n. Add a new extended collection named MOJI-JOHO-KIBAN IDEOGRAPHS based on document [N4625](#), introductory text for collection from Japanese expert and an appropriate modification by the editor to Note 3 under section 4.25 to permit non-named sequences in extended collections.

M63.12 (Progression of PDAM2):

WG2 recommends that its project editor prepares and forwards the final text of Amendment 2 to the 4th edition of the standard, which will include the changes arising from recommendations **M63.03** to **M63.11** above, along with the final disposition of comments (document [N4649](#)) to the SC2 secretariat for processing as a PDAM 2.1 ballot. The final code charts will be in document [N4637](#). The target starting dates are modified to: PDAM 2.1 2014-10 DAM: 2015-05, FDAM: 2015-11.

WG2 notes that a possibly revised Adlam script and characters to satisfy 'tones on human being emoji', are some additional candidates for inclusion in the text of Amendment 2.

M63.14 (Project subdivision for future 5th edition of the standard):

Recognizing the need to amalgamate the content of 4th edition with Amendments 1 and 2, and to enable further additions to the standard that have been proposed once they are mature, WG2 recommends to its convener and project editor to generate a new project subdivision proposal for the next (5th) edition of the standard, along with a suitable schedule, and submit it to SC2 for approval.

10.7 Proposals on the agenda that were not discussed

Input documents:

[4574](#) Gujarati signs used for the transliteration of Arabic; Anshuman Pandey; 2014-05-02

[4572](#) Preliminary Proposal to Standardize Variation Selectors for U+3013; Suzuki Toshiya; 2014-03-31

WG2 experts can review and provide feedback to the authors. Unlike proposals for scripts or large blocks of characters, these proposals will *not* be carried forward to future meetings.

11 Defect reports

11.1 Updates to CJK chart and source references

Input document:

[4621](#) CJK chart and source references update; Project Editor, Michel Suignard; 2014-09-15

Mr. Michel Suignard: Issues associated with CJK charts are summarized along with proposed changes to remedy the issues. I will go through these one by one.

- *Item 1: Extension C - 2B08F*

It has two glyphs with source references TD-6162 and UCI-00840

The proposal is to change the glyph for TD-6162 to that of UCI-00840 and remove UCI-00840 altogether. IRG documents N2021 and N2037 identified the error; and later Taiwan determined that the glyph for TD-6162 actually looks like the one for the UCI.

- *Item 2: Extension C - 2AD12*

Replace UCI reference by TE353F and change the glyph to the one introduced in Amendment 5 to the 1st (2003) edition.

Somewhere along the line the glyph got changed to what it is today and a UCI was created and its glyph was found to be error later, rather than looking like what was in Amendment 5.

Taiwan has now determined that the originally glyph for TE-353F should be like the glyph from Amendment 5.

- *Item 3: Main block: 7921 - has GE, HB2 and T2 sources.*

The proposal is to replace the glyphs for H and T sources to look similar to the G source. This error was originally in T source for 7921 from the first edition. It got compounded with error from CNS 11643-2007 having the error. The H source is part of Big 5 and not HKSCS.

Dr. Lu Qin: HA HB and HC are used in HK. HA is for HKSCS?

Mr. Michel Suignard: We can do that ... but later. We already talked about errors in using H3 for some ideographs.

- *Item 4: CJK Compatibility code point 2F949*

The proposal is to replace T source by a new UCI source -01199.

4039 and 2F949 have the same T source value T6-4B7A, resulting from dis-unification of 4039 and that of 9FC3. See WG2 N[3196](#).

- *Item 5: Main block code point 9FCF*

The radical should be corrected from 167.7 (traditional gold) to 167'.7 (simplified gold).

- *Item 6: Extension A code point 4CA4 and new code point 9FD0*

The proposal is to remove the H-source reference (both glyph and value) for 4CA4, and replace by a new character 9FD0 that is proposed in Amendment 2 to the 4th edition.

- *Item 7: Extension A code point 3D1D*

The proposal is to move the H-source H-91B5 and its glyph from 3D1D to 2A3ED to which it was dis-unified. An alternative is also described.

Disposition: Accept the 7 changes to source references and glyphs as proposed in N4621.

Relevant recommendation:

M63.05 (Updates to CJK chart and source references):

WG2 accepts the proposed changes to the seven source references and glyphs as proposed in document N[4621](#) for inclusion in Amendment 2.

12 Liaison reports

12.1 Script Encoding Initiative (SEI)

Input document:

[4629](#) SEI Liaison Report - Sept 2014; SEI - Debbie Anderson; 2014-09-21

There was no discussion. WG2 experts are encouraged to review and provide any feedback to Dr. Deborah Anderson.

Action item: National bodies to review and provide feedback.

13 Other business

13.1 Web site review

14 Future meetings

Following future meeting schedules were agreed to during review of draft recommendations:

Relevant recommendation:

M63.19 (Future meetings):

WG2 endorses the following schedule for future meetings:

WG2 Meeting 64 - 2015-10-19/23, Matsue, Japan (location is tentative) (co-located with SC2)

WG2 Meeting 65 - 2016-10 (tentative), Russia (tentative), USA (backup) (co-located with SC2)

WG2 Meeting 66 - 2017-10 (tentative), China (pending confirmation) (co-located with SC2)

IRG Meeting 44 - 2015-06-15/19, Seoul, Korea (Republic of)

IRG Meeting 45 - 2015-10-26/30 (2015-11-16/20 as backup), HK Polytechnic Univ., Hong Kong SAR

15 Closing

15.1 Approval of results of meeting 63

Output document:

[4604](#) Recommendations of WG2 meeting 63; WG2; 2014-10-03

Draft recommendations prepared by Dr. Umamaheswaran, with assistance from the drafting committee, were discussed. Some draft recommendations were edited reflecting the discussion at the meeting. The adopted set of recommendations are in document N4604. There was a character name error in one of the recommendations and a corrected document was posted after the meeting.

After the recommendations were adopted, the counts of characters in the standard are as follows:

Character count 120585 in 4th edition

101 additions in DAM1 to the 4th edition

11630 in PDAM2.1 (end of meeting 63)

Character count 132316 (total allocated till end of meeting 63)

Appreciations:

Following are the relevant recommendations adopted by WG2:

M63.20 (Appreciation to DKUUG for web site support):

WG2 thanks DKUUG and its staff for its continued support of the web site for WG2 document distribution and the e-mail server.

M63.21 (Appreciation to Host):

WG2 thanks the Sri Lankan Standards Institution (SLSI) and Information and Communication Technology Agency (ICTA) of Sri Lanka, in particular, Dr. Senaweera, Mr. Reshan Dewapura, Ms. Aruni Goonetilleke, Ms. Chamali Perera, Ms. Rita Kern, Mr. Athula Pushpakumara, Mr. Malth Galketiya and Mr. Dinesh Fernando, for hosting the meeting, providing excellent meeting facilities, and for their kind hospitality and dinner.

The current term of the current convener ends with this meeting of WG2. His role is being handed over to the next convener (to be confirmed at the SC2 meeting) Mr. Michel Suignard.

M63.22 (Appreciation to the Convener):

WG2 expresses its profound gratitude for the expert guidance and leadership provided to WG2 over the past 25+ years in the progression and development of ISO/IEC 10646 by our convener Mr. Mike Ksar, and wishes him all the best in his future endeavours.

15.2 Adjournment

The meeting was adjourned at 11:30h on Friday 2014-10-03.

16 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, and new action items from this meeting 63 are listed in the tables below.

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

Meeting 53, 2008-10-13/17, Hong Kong SAR (document N3553)
 Meeting 54, 2009-04-20/24, Dublin, Ireland (document N3603)
 Meeting 55, 2009-10-26/30, Tokyo, Japan (document N3703)
 Meeting 56, 2010-04-19/23, San José, CA, USA (document N3803)
 Meeting 57, 2010-10-04/08, Busan, Korea (Republic of) (document N3903)
 Meeting 58, 2011-06-06/10, Helsinki, Finland (document N4103)
 Meeting 59, 2012-02-13/17, Mountain View, CA, USA (document N4253)
 Meeting 60, 2012-10-22/27, Chiang Mai, Thailand, (document N4353)
 Meeting 61, 2013-06-01/14, Vilnius, Lithuania, (document N4403)
 Meeting 62, San Jose, CA, USA; 2014-02-24/28, (document N4553)
 Meeting 63, Colombo, Sri Lanka, 2014-09-29/20-03, (document N4603) (this document)

16.1 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.

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

Item	Assigned to / action (reference resolutions in document N4554, and unconfirmed minutes in document N4553 for meeting 62 with any corrections noted in section 3 in the minutes of meeting 63 in document N4603).	Status
AI-62-6	Ad hoc group on Principles and Procedures (Dr. Umamaheswaran)	
a.	To take note of section 2.1 in document N4544 on Representation of CJK ideograph glyphs; and update the P&P document appropriately.	In progress.
b.	With reference to N4543 Character Name considerations; Michel Suignard; 2014-02-20, to elaborate on character names in the P&P document working with Mr. Michael Everson.	In progress

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

Item	Assigned to / action (Reference resolutions in document N4604, and unconfirmed minutes in document N4603 for meeting 63 - this document you are reading).	Status
AI-63-1	Recording Secretary - Dr. V.S. UMaaheswaran	
a.	To finalize the document N4604 containing the adopted meeting resolutions and send it to the convener as soon as possible.	Completed; see document N4604.
b.	To finalize the document N4603 containing the unconfirmed meeting minutes and send it to the convener as soon as possible.	Completed; see document N4603.
AI-63-2	Convener - Mr. Mike Ksar	
	To take note of and act upon the following items:	
a.	M63.04 (Changes to sub-clauses related to presentation of CJK ideograph sources): ... WG2 further requests SC2 to communicate to Unicode Consortium to take note of recommendation in section 2.3 of document N4620.	Completed.
b.	M63.18 (Roadmap snapshot): WG2 requests its convener to post the updated snapshot of the roadmaps (in document N4617) to the WG2 web site and communicate the same to SC2 secretariat. WG2 also requests SC2 to create on SC2 LiveLink site, a standing document named 'Roadmaps', an appropriately edited version of the current 'Roadmaps' page on WG2 website, with a single URL pointing to www.unicode.org/roadmaps , towards eliminating the need to create a snapshot prior to each WG2 meeting.	Completed. See SC2 standing document SD1 SC2 Roadmaps.
c.	M63.13 (Tones for human being emoji): WG2 requests SC2 to communicate to Unicode Consortium that SC2 would like UTC to have a public review issue on the encoding to satisfy 'tones on human being emoji' to enable national bodies to get public feedback from their countries or regions. SC2 is requested also to alert national bodies to keep a lookout for the announcement of such a public review issue on the Unicode web site.	Completed.
d.	To add relevant contributions carried forward from previous meetings to agenda of next meeting. (See list of documents under AI-63-x, items xx and xx below.)	Completed.
AI-63-3	Editor of ISO/IEC 10646: (Mr. Michel Suignard with assistance from contributing editors)	
	To prepare the appropriate amendment texts, sub-division proposals, collection of editorial text for the next edition, corrigendum text, or entries in collections of characters	

	for future coding, with assistance from other identified parties, in accordance with the following:	
a.	<i>M63.01 (Disposition of DAM1 ballot comments):</i> WG2 accepts the disposition of ballot comments for DAM1 to the 4th edition in document N4615 . All the comments being editorial, WG2 further recommends that the updated text of DAM1 be sent to SC2 to forward to ITTF for publication.	Completed.
b.	<p><i>M63.03 (Disposition of ballot comments of PDAM2 to 4th edition):</i> WG2 accepts the disposition of PDAM2 ballot comments in document N4649. The following significant changes are noted:</p> <p>k. Create a new block 11660...1167F named MONGOLIAN SUPPLEMENT Move the 5 currently encoded Birgas from 181A...181E in the Mongolian block to this new block Accept the proposed 8 new Birgas in document N4632 and add them in this new block Rename existing ones and name new ones per suggestion for naming proposed in comment T.5 by UK with code positions, names and glyphs as shown in the charts in document N4637</p> <p>l. Insert 1 new Tangut ideograph after 17131, correct the glyphs and reorder several of the Tangut ideographs, per document N4588R2 (final charts in document N4637) and in response to PDAM2 comment T.2 from China</p> <p>m. Move 6 Tamil archaic characters from 0BDF, 0BFB...0BFF to 11FF0...11FF5 in Tamil Supplement block</p> <p>n. Rename 11A29 to ZANABAZAR SQUARE LETTER -A</p> <p>o. Rename 1B100 to NUSHU ITERATION MARK and move it to 16FE1 in Ideographic Symbols and Punctuation block; reorder the Nushu block by moving up 1B101...1B28C by one code position</p> <p>p. Add 1 character 08D4 ARABIC SMALL HIGH WORD AR-RUB in Arabic Extended-A block (from document N4592)</p> <p>q. Add 3 characters - 08BB ARABIC LETTER AFRICAN FEH, 08BC ARABIC LETTER AFRICAN QAF, and 08BD ARABIC LETTER AFRICAN NOON in Arabic Extended-A block (from document N4597)</p> <p>r. Move 1F32D to 23FE and rename it POWER SLEEP SYMBOL, and,</p> <p>s. Several corrections to glyphs, annotations and headings in nameslists</p>	
c.	<i>M63.04 (Changes to sub-clauses related to presentation of CJK ideograph sources):</i> WG2 accepts the proposed changes to sub-clause 23.1, sub-clause 23.2, and the updated glyphs for 205 J column ideographs, described in section 2.2 from document N4620 , for inclusion in Amendment 2.	
d.	<i>M63.05 (Updates to CJK chart and source references):</i> WG2 accepts the proposed changes to the seven source references and glyphs as proposed in document N4621 for inclusion in Amendment 2.	
e.	<i>M63.06 (CJK Unified Ideographs Extension F):</i> WG2 accepts to create a new block named 'CJK Unified Ideographs Extension F' in the range 2CEB0...2DDBF in the SMP, and populate it with the 3852 ideographs proposed in document N4580 (summary form and its attached files), for inclusion in Amendment 2.	
f.	<i>M63.07 (Osage script):</i> WG2 accepts to create a new block named 'Osage' in the range 104B0...104FF in the SMP, and populate it with 72 characters in code positions 104B0...104D3 and 104D8...104FB, with their names and glyphs as shown in document N4619 , for inclusion in Amendment 2.	
g.	<i>M63.08 (Cyrillic characters):</i> WG2 accepts to create a new block named 'Cyrillic Extended-C' in the range 1C80...1C8F in the BMP, and populate it with 9 characters in code positions 1C80...1C88, with their names and glyphs based on document N4607 , with updated names and charts shown in document N4637 , for inclusion in Amendment 2.	
h.	<i>M63.09 (Combining Glagolitic letters):</i> WG2 accepts to create a new block named 'Glagolitic Supplement' in the range 1E000...1E02F in the SMP, and populate it with 38 characters (all are combining letters) in code positions 1E000...1E02A, with their names and glyphs as shown in document N4608 , for inclusion in Amendment 2.	
i.	<i>M63.10 (Tangut radicals):</i> WG2 accepts to create a new block named 'Tangut Radicals' in the range 18900..18BFF in the SMP, and populate it with 753 characters in code positions 18900..18BF0, with their names and glyphs as shown in document N4636 , for inclusion in Amendment 2.	
j.	<i>M63.11 (Additional changes in Amendment 2):</i> WG2 accepts the following additional	

	<p>changes in Amendment 2:</p> <ul style="list-style-type: none"> o. Add A8C5 SAURASHTRA SIGN CANDRABINDU with its glyph from document N4590 in the Saurashtra block p. Add 0C80 KANNADA SIGN SPACING CANDRABINDU with its glyph in document N4591 in the Kannada block q. Add 20BE LARI SIGN in the Currency Symbols block, with a glyph based on the Logo in document N4593 that is acceptable to the proposers r. Add 1018E NOMISMA SIGN in the Ancient Greek Numbers block; with the 'default' form for the glyph shown in document N4594 s. Add 2E44 DOUBLE SUSPENSION MARK in the Supplemental Punctuation block, with glyph similar to the one in document N4595 t. Add 1018D GREEK INDICTION SIGN in Ancient Greek Numbers block, with 'default' form for the glyph from document N4596 u. Rotate the glyph for 3127 BOPOMOFO LETTER I by 90 degrees, with an appropriate change in the annotation, per request in document N4609, and, v. Reverse the shape of current glyph for 301C WAVE DASH as requested in document N4606 w. Add a new extended collection named MOJI-JOHO-KIBAN IDEOGRAPHS based on document N4625, introductory text for collection from Japanese expert and an appropriate modification by the editor to Note 3 under section 4.25 to permit non-named sequenced collections. 	
	<ul style="list-style-type: none"> k. To check and fix incorrect H3 source for CJK Ideographs from document N4598 in CJKC_SR.txt file for PDAM2.1. 	
	<ul style="list-style-type: none"> l. <i>M63.12 (Progression of PDAM2):</i> WG2 recommends that its project editor prepares and forwards the final text of Amendment 2 to the 4th edition of the standard, which will include the changes arising from recommendations M63.03 to M63.11 above, along with the final disposition of comments (document N4649) to the SC2 secretariat for processing as a PDAM 2.1 ballot. The final code charts will be in document N4637. The target starting dates are modified to: PDAM 2.1 2014-10 DAM: 2015-05, FDAM: 2015-11. WG2 notes that a possibly revised Adlam script and characters to satisfy 'tones on human being emoji', are some additional candidates for inclusion in the text of Amendment 2. 	
	<ul style="list-style-type: none"> m. <i>M63.14 (Project subdivision for future 5th edition of the standard):</i> Recognizing the need to amalgamate the content of 4th edition with Amendments 1 and 2, and to enable further additions to the standard that have been proposed once they are mature, WG2 recommends to its convener and project editor to generate a new project subdivision proposal for the next (5th) edition of the standard, along with a suitable schedule, and submit it to SC2 for approval. 	
AI-63-4	IRG Rapporteur and IRG Editor (Dr. Lu Qin)	
	To take note of and act upon the following items:	
	<ul style="list-style-type: none"> a. <i>Recommendation M63.19 (Future meetings):</i> WG2 endorses the following schedule for future meetings: IRG Meeting 44 - 2015-06-15/19, Seoul, Korea (Republic of) IRG Meeting 45 - 2015-10-26/30 (2015-11-16/20 as backup), HK Polytechnic Univ., Hong Kong SAR 	
	<ul style="list-style-type: none"> b. <i>M63.04 (Changes to sub-clauses related to presentation of CJK ideograph sources):</i> ... WG2 additionally requests the IRG to review the resulting CJK Unified Ideographs charts that will be in document N4624. 	
	<ul style="list-style-type: none"> c. To supply the project editor all the information needed to be able to produce the Extension F charts for PDAM 2.1. 	
	<ul style="list-style-type: none"> d. To review and provide feedback on document N4630 on horizontal extension of 152 Hanja char; KIM Kyongsok; 2014-09-24 	
AI-63-5	Ad hoc group on roadmap (Dr. Umamaheswaran)	
	<ul style="list-style-type: none"> a. To update the Roadmaps with the results from this meeting. 	Completed. See SC2 standing document SD1 SC2 Roadmaps .
AI-63-6	Ad hoc group on Principles and Procedures (Dr. Umamaheswaran)	
	<ul style="list-style-type: none"> a. To take note of section 2.1 in document N4620 on Representation of CJK ideograph 	

	glyphs; and update the P&P document appropriately.	
AI-63-7	Expert from Unicode consortium (Mr. Peter Constable)	
a.	To review and clarify the wording of the associated annotation for 301C Wave Dash - especially about the 'mapping'.	
AI-63-7	Experts from China (Chen Zhuang), UK (Mr. Andrew West), Japan (Toshiya Suzuki), Ireland (Mr. Michael Everson)	
	To take note of and act on the following items.	
a.	<i>M63.15 (Khitan Large script):</i> WG2 invites the authors of document N4631 to revise their proposal on the Khitan Large script taking into account the feedback summarized in the ad hoc report document N4642 , working with other experts interested in this script.	
b.	<i>M63.16 (Shuishu script):</i> WG2 invites the authors of document N4638 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.	
c.	<i>M63.17 (Naxi Dongba script):</i> WG2 invites the authors of document N4633 to revise their proposal on the Naxi Dongba script taking into account the feedback received at this meeting, working with other experts interested in this script.	
d.	Nushu experts to review feedback document N4610 and document N4626 on Nushu from Japanese expert. Japanese experts are invited to provide comments on PDAM 2.1 along the lines of their contribution on Nushu in document N4626 .	
AI-63-8	Experts from all national bodies and liaison organizations	
	To take note of and provide feedback on the following items.	
a.	<i>Recommendation M63.19 (Future meetings):</i> WG2 endorses the following schedule for future meetings: WG2 Meeting 64 - 2015-10-19/23, Matsue, Japan (location is tentative) (co-located with SC2) WG2 Meeting 65 - 2016-10 (tentative), Russia (tentative), USA (backup) (co-located with SC2) WG2 Meeting 66 - 2017-10 (tentative), China (pending confirmation) (co-located with SC2)	
b.	Following items are carried forward from earlier meetings - filtered at meeting 63: Scripts, new blocks or large collections (awaiting updated proposals from the authors): Afaka script N4292 ; Bagam script N4293 ; Balti 'B' N4016 ; Balti scripts N3842 ; Chinese Chess N3910 ; Dhives Akuru N3848 ; Diwani Numerals N4119 ; Diwani Siyaq Numbers N4122 ; English Phonotypic Alphabet EPA N4079 ; Eskaya N4499 ; Garay script N4261 ; Gondi script N4291 ; Indic Siyaq N4123 ; Jenticha N4028 ; Jurchen N4077 ; Kawi script N4266 ; Khatt-i Baburi N4130 ; Khambu Rai N4018 , Kpelle N3762 ; Landa N3768 ; Leke N4438 ; Loma N3756 ; Moon N4128 ; N4323 ; Nandinagari N4389 ; Nepaalalipi script N4322 ; Nepal Himalayish N4347 ; Newar script N4184 ; Old Yi N3288 ; Obsolete Simplified Chinese Ideographs N3695 ; Ottoman Siyaq System Numerals N4118 ; Ottoman Siyaq N4124 ; Pau Cin Hau Syllabary N4412 ; Persian Siyaq N4125 ; Pyu N3874 ; Ranjana (N4515), Raqm Numerals N4117 ; Rohingya N4283 ; Soyombo script N4414 ; Tangsa Lakhum Mossang script N4496 ; Tangsa Latsam Khimhun N4497 ; Tolong Siki N3811 ; Tulu N4025 ; Woleai N4146 ; Zou N4044 .	
c.	The following documents (that were flagged for experts' feedback at meeting 63): N4572 Preliminary Proposal to Standardize Variation Selectors for U+3013; Suzuki Toshiya; 2014-03-31 N4574 Gujarati signs used for the transliteration of Arabic; Anshuman Pandey; 2014-05-02 N4579 IRG Principles and Procedures Version 7; Lu Qin, IRG Rapporteur; 2014-06-19 N4629 SEI Liaison Report to WG2 - Sep 2014; Debbie Anderson, SEI - UC Berkeley; 2014-09-21 N4630 A proposal requesting a horizontal extension of 152 Hanja char; KIM Kyongsok; 2014-09-24 N4634 Proposal to encode Small Seal Script; TCA & China; 2019-09-30 (See also documents under action AI-63-7 above.)	

===== END OF DOCUMENT =====